

Joan M. Rosen

Précis:

In this paper a conceptual framework for the functions of reduplication is given. These functions are: 1) diffuseness, or indefiniteness, 2) simile, and 3) intensity or the idea of approaching a limit. The different types of diffuseness are: subject reduplication, multiple actor and reciprocal verbs; verbs with multiple goals; aspectual reduplication, or repetitiveness and continuousness; multiple locations and lexical decomposition. It is demonstrated through the use of the redundancy test that reduplication is used to indicate diffuseness and not plurality. The second function, simile, deals with words that mean "to be like something", "to pretend to be like something", and metaphor. (The former two are not discussed here since they have been discussed in another paper.) There are three types of metaphor. They include cases in which: 1) the concrete meaning of an attributive is used non-literally, 2) the action of verb is applied non-literally, and 3) animal terms are used to refer to people. The third function is intensity. A definition of reduplication, which it is hoped will be useful for typological studies, is given.

1.0 INTRODUCTION

Reduplication has three basic semantic functions in Indonesian: 1) Distributive Force or Indefiniteness (which can also be called Diffuseness), 2) Simile, and 3) Intensiveness. Distributive force involves cases in which the goal of the verb is not definite, and indefinite pronouns like "someone" and "anyone" which do not refer to a specific person. Simile involves cases in which the verb means "to be like something" or "to pretend to be like something" which contain the idea that the subject is not really the something referred to. Intensiveness includes cases that convey the idea of approaching a limit (se-adj-adj-nya 'as adjective as possible'). I should like to suggest, although it is not the purpose of this paper to prove it, that these three functions--distributive force, simile and intensiveness--are really manifestations of the same underlying process in which diffuseness and negation are intrinsically related, and that diffuseness, negation and the idea of approaching a limit (not quite attaining a certain state or being a certain thing) are semantic products of reduplication.

Reduplication also has other grammatical functions in various Austronesian languages, and specifically has the function of creating "adverbs" in Indonesian. An example of this type is as follows:

- (1) Ia masuk diam-diam  
 she enter quiet RED  
 'She enters quietly.'

The unreduplicated form of sentence (1) is not acceptable, as can be seen in sentence (2):

- (2) \*Ia masuk diam  
 she enter quiet  
 \*'She enters quiet.'

The word diam 'quiet' must be reduplicated in this context. Examples of this type will not be dealt with here because of lack of space, and because many of these grammatical functions, i. e. functions which involve changing the particular class to which a word belongs, do not involve the problems of semantics with which I propose to deal.

1.1 Definition of Reduplication

In this paper we should like to make the distinction between functional reduplication and accidental reduplication. Functional reduplication is that in which the word base is completely or partially reduplicated and the form produced has a semantic relation to one of the three functions of reduplication mentioned above. Accidental reduplication is that in which the word base is reduplicated, but there seems to be no semantic relation to the three functions of reduplication above. There are forms such as se-olah-olah 'as if', se-akan-akan 'as if', and ber-pura-pura 'pretend' which do not seem to be derived from the words olah 'manner', akan 'will' or pura 'bag', and therefore some linguists would say that these are not true cases of reduplication (Soenjono Dardjowidjojo personal communication). However, since these forms seem to have a strong semantic relation with other verbs which when reduplicated have the meaning "to pretend", we include them in the category of functional reduplication. (This point is discussed in more detail in "Reduplication and Negation in Indonesian," section 4.2, NUSA, volume 4, pp. 1-14, 1977.) There are, however, other words which refer to animals which are frequently reduplicated in Indonesian, such as kunang-kunang 'firefly' and kupu-kupu 'butterfly'. We would not include these in functional reduplication, but would rather put them under the category of accidental reduplication, because 1) there seems to be no semantic relation between these words and the three functions of reduplication mentioned above, and 2) similar words for animals are not reduplicated in other Indonesian languages (the Javanese word for "butterfly" is kupu and some Florenese languages do not seem to reduplicate terms for animals, for example.)

1.2 Typological Note

I should like to suggest that functional reduplication may be useful in typological studies of the Austronesian languages, since it seems to be a widely occurring grammatical process which, as far as I know, has similar functions in many languages of the Malayo-Polynesian family. Other reduplicated forms which do not conform to functions 1), 2) and 3) of reduplication mentioned above also occur in many languages of the world, but in the opinion of this writer such accidental forms would probably not be as widespread nor as useful as functional reduplication for typological and comparative purposes.

In the first section of this paper I will discuss the distributive function of reduplication in a framework in which the agent or actor, the direct object, locative and time statements are conceived of as NP's related to the verb, or as arguments of the verb. When reduplication applies to the verb, one of these various aspects becomes diffuse, depending on which

argument of the verb is affected by the reduplication process.

In the second section of this paper we will discuss a function of reduplication, which can be called "simile". This function can be manifested in Indonesian by different combinations of grammatical processes. One process is that in which the affix pair ke- -an and reduplication are applied to concrete nouns and adjectives, the second is that in which reduplication and the affix -an are applied to concrete nouns. These two types of reduplication are similar to the English forms "pseudo-noun", "-ish", and "to pretend to do or be verb". The use of reduplication in forming metaphors will also be discussed in this section.

In the third section we will discuss intensive functions of reduplication, which include: 1) so-called "adverbial" forms which give a superlative or intensive sense to the verb and 2) forms in which a sense of intensity or emotional immediacy is conveyed.

## 2.0 DISTRIBUTIVE FORCE

In this section we propose to illustrate the first function of reduplication as it manifests itself in a relatively straight forward way. In these cases when reduplication is applied to a verb, it has the function of either making the immediate arguments of the verb either multiple or diffuse. The possible arguments (or related NP's) a verb can have are the agent or actor, the direct object, a statement of time or aspect, objects which are incorporated into the basic meaning of the word (which would be implied by the lexical decomposition of the word.)<sup>1</sup>

### 2.1 Subject Reduplication: Reciprocal or "Multiple Actor" Verbs

When reduplication applies in such a way that the subject is the argument affected, the result will be a reciprocal or "multiple actor" verb. The following is an example of a "multiple actor" verb:

- (3) Kelompok anak itu ber-sembur-sembur-an.  
group child that spray spit RED  
'That group of children is spraying spit together.'

We can also say:

- (4) Kelompok anak itu sembur-menyembur.  
group child that spray spit RED RECIP  
'That group of children is spraying spit at each other.'

Examples (5), (6), (7) and (8) indicate that either verb-men-verb or ber-verb-verb--an may be used for multiple actor verbs.

- (5) Mereka peluk-memeluk.  
they embrace RED RECIP  
'They embrace each other.'
- (6) Mereka ber-peluk-peluk-an.  
they embrace RED  
'They embrace each other.'
- (7) Mereka saing-mensaing-i.  
they compete RED  
'Two people or two groups of people compete.'

- (8) Mereka ber-saing-saing-an.  
they compete RED  
'Two or more people (or groups of people) compete'

Another example in which the reduplication of the verb conveys the meaning that there are many actors is (9).

- (9) Saya dapat melihat dengan jelas orang  
I can see with clear person  
itu, karena sama sekali tidak ada  
that because at all not exist  
yang meng-aling-aling-i.  
which block RED

'I can see that person clearly, because none of a number of possible things is blocking the way.'

For contrast let us look at sentence (10) which is the unreduplicated form of (9).

- (10) Saya dapat melihat dengan jelas orang  
I can see with clear person  
itu, karena sama sekali tidak ada  
that because at all not exist  
yang mengalingi.  
which block

'I can see that person clearly, because nothing is blocking the way.'

Both (9) and (10) mean "I can see that person clearly, because there is nothing blocking the way". However, in (9) the reduplicated form conveys the idea that there could be many things blocking the way, whereas in (10) the unreduplicated verb tells us that there could only be one thing blocking the way. The contrast of a reduplicated and an unreduplicated verb in the same sentence-frame is taken as evidence that what is claimed above, i. e. that reduplication conveys the idea that there are many actors, is the actual function of reduplication in that particular environment or context. Therefore, substitution of reduplicated and unreduplicated forms in the same sentence-frame is used in this paper as a criterion for proof.

### 2.2 Verb with Multiple Goals

Reduplication can be used to give the meaning that the verb has multiple goals. In the following sentence (sentence (11)) reduplication with vowel variation conveys the meaning that the cane has many curves in it, whereas the unreduplicated verb in sentence (12) conveys the meaning that the verb has only a single goal.

- (11) Tongkat itu bengkok-bengkok.  
cane that curvy RED  
'That cane is crooked.'
- (12) Tongkat itu bengkok.  
cane that curve  
'That cane has a single curve in it.'

### 2.3 Redundancy Test

People often seem to think that the reduplication of nouns makes those nouns plural. This idea is not quite accurate. Reduplication of a noun tends to make the number associated

with the noun diffuse or indefinite. In order to support this point we will apply below what I call the redundancy test. The purpose of this test is to try to ascertain whether a grammatical process has a particular function by making this function lexically explicit in a sentence. Let us combine sentence (11) with a specific statement of number and see what the result will be.

- (13) \*Tongkat itu bengkok-bengkok tiga tempat.  
cane that curve RED 3 place  
'That cane is curved in three places.'

We can see from sentence (13) that the function of reduplication in sentence (11) is indeed diffuseness or indefiniteness, since reduplication cannot occur in this case with a number that indicates the specific number of curves that occur in the cane. The unreduplicated form can occur, however, with a specific statement of number as is illustrated in sentence (14)

- (14) Tongkat itu bengkok tiga tempat.  
cane that curve 3 place  
'That cane is curved in three places.'

The same contrast between reduplicated and unreduplicated forms of the verb can be seen in the following sentences.

- (15) Meja ini ber-tonjol.  
table this bump  
'This table has a single bump in it.'

The unreduplicated form of the verb is used to refer to a single item.

- (16) Meja ini ber-tonjol-tonjol.  
table this bump RED  
'This table is bumpy.'

The reduplicated form is used to refer to an indefinite number of bumps.

- (17) \*Meja ini ber-tonjol-tonjol tiga.  
table this bump RED 3  
'This table has three bumps in it.'

As in sentence (13) above the reduplicated form cannot occur with a specific statement of number.

The redundancy test may have two results. 1) A sentence may become completely unacceptable as in (13) and (17) above. 2) Another result of the redundancy test can be a change in the emphasis and intonation of a sentence, and recognition by speakers of the language that the sentence is redundant, but in an acceptable fashion. This is what happens in the following sentence where a specific statement of number can occur with reduplication when it is used to indicate repetition.

- (18) Ia meng-geleng-geleng-kan kepalanya  
he shake RED head-his  
tiga kali menandakan ia tidak setuju.  
three time show he not agree  
'He shook his head repeatedly three times to indicate he did not agree.'

The redundancy test seems to indicate that there is an

absolute incompatibility between reduplication and definite number to indicate plurality, but aspectual redundancy can be combined with definite number without the complete loss of grammaticality.

#### 2.4 Aspectual Reduplication: To do something many or several times

Reduplication of the word-base can also mean to do something many or several times. This can be taken as an example of the property of distributive force applying to the time argument of the verb.

- (19) Ia meng-geleng-geleng-kan kepalanya  
she shake RED head-her  
menandakan ia tidak setuju.  
show she not agree  
'She shook her head several times to indicate that she did not agree.'

If the verb in (19) is not reduplicated, there will be no idea of repetition associated with it, as is illustrated in sentence (20).

- (20) Ia meng-geleng-kan kepalanya  
she shake head-her  
menandakan ia tidak setuju.  
show she not agree  
'She shook her head once to indicate she did not agree.'

The same holds true for examples (21) and (22).

- (21) meng-ungkit-ungkit  
pry open RED  
'to pry open several times'

- (22) meng-ungkit  
pry open  
'to pry open once'

The use of reduplication to indicate repetition and continuousness is very productive in Indonesian.

#### 2.5 Locative Aspect of the Verb: Reduplication implies alternation in the direction of the action of the verb

When reduplication is applied to the locative facet of the underlying meaning of the verb, it often implies alternation in the direction of the action. Some examples follow:

- (23) Dia mencoba meng-unggut-unggut  
he try shake loose RED  
tanaman itu supaya dapat  
plant that so that be able  
dicabutnya.  
to be pull(ed) up  
'He tried to loosen that plant by shaking it back and forth several times, so that it could be pulled up.'

The use of the reduplicated verb in (23) conveys the idea that the subject is working the plant back and forth so

that it can be pulled out of the ground. If the verb is not reduplicated, the idea conveyed is that the action of shaking occurred just once and there was no back and forth movement of the plant.

- (24) Dia mencoba meng-unggut tanaman itu  
 he try shake loose plant that  
 supaya dapat dicabutnya.  
 so that be able to be pull(ed) up  
 'He tried to loosen that plant by shaking it (once), so that it could be pulled up.'

Other examples in which the reduplication of the verb implies alternation of direction (having multiple locations as the "goal" of the verb) are as follows:

- (25) Saya me-nimbang-nimbang buku itu.  
 I weigh RED book that  
 'I am testing the book's weight by moving it up and down.'
- (26) Saya menimbang buku itu.  
 I weigh book that  
 'I weigh the book.'

In sentence (25) the use of the reduplicated verb conveys the idea that the book is being moved up and down to test its weight. There is no such idea of movement in sentence (26).

- (27) Sakit itu ber-pindah-pindah.  
 sick that move RED  
 'That illness moved to many different places on a person's body.'
- (28) Sakit itu ber-pindah.  
 sick that move  
 'That illness spread.'

Again in (27) reduplication gives the idea that the action of the verb has many locations, whereas this idea is not conveyed in (28).

## 2.6 Lexical Decomposition: Objects or arguments seem to be incorporated into the basic meaning of the verb

Examples in which arguments or objects seem to be incorporated into the basic meaning of the word are:

- (29) Mereka datang ber-ratus-ratus.  
 they come hundred RED  
 'They come in hundreds.'
- (30) Gedung itu ber-tingkat-tingkat.  
 building that level RED  
 'That building has many stories.'

These and other examples of this type could be analyzed by the lexical decomposition of the word.

## 2.7 Indefiniteness or Diffuseness

The discussion thus far has been made with the intention of giving the reader some uncomplicated examples of the

various ways in which "distributive force" can manifest itself in the different arguments of the verb. In this section we will give some examples which indicate that "distributive force" is related to "diffuseness" or "indefiniteness". We should like to make the following points in this section: 1) As mentioned on page 2, diffuseness is not the same as plurality, and the function of reduplication in Indonesian is not to mark the plural. Reduplication of a noun does not mean the noun is plural, but diffuse. This fact can be clearly seen in the following example (sentence (32)) where reduplication cannot be used with a specific number marking the plural:

- (31) Ia mempunyai tiga anak.  
 she have three child  
 'She has three children.'
- (32) \*Ia mempunyai tiga anak-anak.  
 she have three child RED  
 \*'She has three children.'

(These examples correspond to examples (13), (14), (16) and (17).) 2) Reduplication is used to form indefinite pronouns, such as siapa-siapa 'whoever' and ke-mana-mana 'everywhere'. 3) When speaking of verbs, diffuseness can mean the action is done without serious intent, indirectly or that the action is done in a somewhat random way. For example, in (33) the person goes directly to his goal, but in (34) the person takes a round-about way and his actual purpose might not be to go to the market at all, but he could really intend to use walking as a medium for meditation or relaxation.

- (33) Ia ber-jalan ke pasar.  
 she walk to market  
 'She walks to the market.'
- (34) Ia ber-jalan-jalan ke pasar.  
 she walk RED to market  
 'She is taking a stroll to the market.'

The relation of reduplication to definiteness can be seen by two additional facts: 1) As seen in sentences (13) and (32), reduplicated forms are sometimes completely incompatible with grammatical items, such as numbers, which make words specific. This is also true with certain verbs whose meaning becomes "diffuse" when reduplicated. An example would be mem-beli which when unreduplicated means "to buy", and which when reduplicated (mem-beli-beli) means "to go shopping". The diffuse form cannot be used with a specific object, as is illustrated in sentence (35).

- (35) \*Ia mem-beli-beli tiga barang.  
 she buy RED three thing  
 \*'She goes shopping for three things.'
- (36) Ia mem-beli tiga barang.  
 she buy three thing  
 'She bought three things.'

In sentence (36) above we can see that the unreduplicated form of the verb beli can take an object. 2) Just as there are cases where a reduplicated verb cannot take an object, as in sentence (37) below, conversely there are cases

where an unreduplicated verb must have an object, as in (41).

(37) \*Ia mem-buat-buat kursi.  
 he make RED chair  
 \*'He makes (repetitive or diffuse) a chair.'

(38) Ia mem-buat kursi.  
 he make chair  
 'He makes a chair.'

In the following sentence the reduplicated verb can occur without an object.

(39) Dia me-raba-raba dalam gelap.  
 he grope RED in dark  
 'He gropes in the dark.'

The unreduplicated verb in sentence (40) must have an object. Since there is no object, the sentence is unacceptable.

(40) Dia me-raba dalam gelap.  
 he grope in dark  
 'He gropes in the dark.'

If the unreduplicated form of the verb is followed by an object, the resulting sentence will be acceptable.

(41) Saya me-raba benda itu dalam gelap.  
 I feel thing that in dark  
 'I feel that thing in the dark.'

The examples above suggest that many reduplicated forms cannot take specific grammatical objects.

### 3.0 SIMILE

In the first section of this paper we discussed the first function of reduplication, i. e. "distributive force", as it relates to multiple and reciprocal subjects, the possession of non-specific properties (such as bumpiness in sentences (15), (16) and (17)), repetitiveness, alternation in the direction of the action of the verb and diffuseness. There are many cases in which the reduplication of a word tends to give the word a meaning like "to be like something" or "to pretend to be like something". Since forms of this type have already been discussed extensively in another paper ('Reduplication and Negation in Indonesian' section 3 and 4, NUSA volume 4, pp. 1-14), we will not discuss them again here but will confine our discussion here to metaphor which is a type of simile.

#### 3.1 Metaphor

In this section we will discuss the relation between reduplication and metaphor, which often seem to be associated in Indonesian. Metaphor can be regarded as a negation of the literal meaning of a word, so that it can be extended to non-concrete contexts in which a word can be used. Metaphor and simile seem to be manifestations of a similar phenomenon. The negation of the non-literal meaning of a word in metaphor is mentioned by Bolinger (in George Lakoff, "Hedges: A Study in Meaning Criteria

and the Logic of Fuzzy Concepts", in Papers from the Eighth Regional Meeting of the Chicago Linguistic Society, pp. 197-198.)

There seem to be three types of metaphoric usage of verbs in Indonesian: 1) those cases in which the concrete meaning of an attributive is used in a non-literal context. In these cases the non-reduplicated form of the verb can be used in the same sentence frame in which the metaphoric usage occurs, but cannot have the same meaning. For example:

(42) Matanya ber-kaca-kaca.  
 eye-his glass RED  
 'His eyes shone with tears.'

(43) \*Matanya ber-kaca.  
 eye-his glass  
 \*(sentence has no meaning).

(44) Matanya ber-nyala.  
 eye-his shine  
 'His eyes are fiery.'

(45) Matanya ber-nyala-nyala.  
 eye-his shine RED  
 'His eyes are brightened in anger.'

2) The second type of metaphoric usage is that in which the action of the verb is applied in a non-literal sense.

(46) Saya harus mencuri untuk dapat  
 I must steal for-to be able  
 membaca buku cabul.  
 read book pornographic  
 'I have to steal the pornographic book in order to read it.'

Sentence (46) is an example in which the unreduplicated verb curi 'steal' must be interpreted literally. If the m-verb in this context is reduplicated, it takes on a non-literal meaning, as can be seen in sentence (47).

(47) Saya harus men-curi-curi untuk  
 I must steal RED for-to  
 dapat membaca buku cabul.  
 be able read book pornographic  
 'I am trying to read this pornographic book stealthily without being observed.'

Sentence (48) is similar in its metaphorical properties to sentence (47). Please notice that (49), the unreduplicated form of (48), is unacceptable.

(48) Dia ber-lari-lari anjing.  
 he run RED dog  
 'He trots (runs like a dog does).'

(49) \*Dia ber-lari anjing.  
 he run dog  
 \*(no meaning).

3) Another type of metaphor is one in which there seem to be fixed terms that attribute certain properties of

plants or animals to people. There are many such uses of animal and food terms in English, for example: "He's a real fruitcake." Edmund Leach has written an article on "Anthropological Aspects of Language: Animal Categories and Verbal Abuse," (in Eric Lenneberg, ed., New Dimensions in the Study of Language) in which he also deals with this idea. Some examples of this type are as follows:

- (50) Panas-panas tahi ayam.  
hot RED shit chicken  
'Hot as chicken shit.'

Sentence (50) means something is hot one moment and cool the next.

- (51) Dia malu-malu kucing.  
he shy RED cat  
'He acts shy, but he's as sassy as a cat.'

Sentence (51) is a mild insult and is used in teasing.

- (52) Dia jinak-jinak merpati.  
she tame RED dove  
'She's as tame as a dove.'

Sentence (52) can also mean "she seems easy to get, but if you really want to have her, she doesn't want you". This is closer to praise than to being an insult. In the examples above, the properties mentioned could be contradictory in that the person discussed seems to be one way, yet really is another, or they could also be regarded as multiple properties in that the person discussed has multiple facets.

There are many questions about metaphor, i.e. the choice of animals used, the formation of metaphor and the restrictions on metaphor in Indonesian, and also restrictions on the predictability and productivity of metaphor, which we cannot go into here. In addition to the examples given above many onomatopoeic words and words for tools seem to be based on a metaphoric extension of the meanings of their word bases. For reasons of time and space these will also have to be omitted here.

#### 4.0 INTENSIVENESS: Introduction

In the preceding sections we have discussed the first two functions of reduplication which were mentioned on the first page of this paper, i.e. distributive force and simile. In this section we will briefly discuss the third function of reduplication, intensiveness. There are several different ways in which reduplication occurs with this function: 1) the reduplication of "adverbial" forms which give a superlative on intensive sense to the verb. Examples of this type are habis-habis-an 'completely', and se-adjective-adjective-nya or se-modal-modal-nya which means "as adjective as possible" or "as modal as possible". These examples seem to represent the idea of approaching a limit, but not quite reaching it. 2) Another type of emphasis is that in which the verb is reduplicated and a sense of intensity or emotional immediacy is conveyed. 3) Reduplication can be used to convey annoyance and the sense that events are contrary to the speaker's expectation.

#### 4.1 "Adverbial" Forms are Reduplicated and Indicate the Idea of Approaching a Limit

Some examples of this type are as follows:

- (53) Ia bekerja habis-habis-an.  
she work finish RED  
'She's using all her energy on her work.'

Some speakers prefer (54) or (55) to (53). This seems to be a matter of the choice of one particular lexical item instead of another.

- (54) Ia bekerja sungguh-sungguh.  
he work really RED  
'He's really working.'

- (55) Ia bekerja mati-mati-an.  
she work die RED  
'She's working for dear life.'

One may ask, "How are these forms related to the idea of approaching a limit?" Sentences (53) and (55) could be paraphrased as "she is working so hard she has almost used up all her energy" and as "she is working so hard she is almost dead", respectively. If the person worked an infinitesimal amount more, she would reach another state, i.e. death. However, the state indicated by the adjective is never quite reached. (Therefore, these forms seem also to have a sense of negation in them.)

Another similar example is given in sentence (56).

- (56) Tak habis-habis-nya ia makan.  
no finish RED he eat  
'There's no end to his eating.'

According to Harimurti Kridalaksana, an Indonesian linguist, forms of the type se-adj-nya, se-adj-adj-nya, se-adj mungkin ('possible') and adj-adj have the same meaning, i.e. "as adjective as possible". There may be some exceptions to this statement, however. If we look at the forms se-modal-modal-nya and se-modal-nya, we will see that they do not always have the same meaning, as is illustrated in sentences (57) and (58).

- (57) Perhatikanlah gambar itu se-bisa-bisa-nya.  
pay attention to picture that able RED  
'Pay attention to that painting as much as you are able.'

- (58) Perhatikanlah gambar itu se-bisa-nya.  
pay attention to picture that able  
'Pay attention to that painting whenever you can, whenever circumstances permit you.'

In (57) the reduplicated form seems to be associated with a root or personal modal, whereas the unreduplicated form seems to be associated with an epistemic or impersonal modal.

In the examples that follow a relation can be seen between reduplicated forms and the superlative degree:

- (59) Se-tinggi-tinggi-nya pangkat yang bisa  
high RED level which able

dicapai oleh seorang keluaran  
 be reach(ed) by person graduate  
 sekolah rendah biasanya hanyalah  
 school low usually only-emph. pt.  
 sampai penilik saja.  
 reach inspector just  
 'The highest level that a graduate of grammar school can achieve is usually only that of inspector.'

The meaning of sentence (59) is the same as that of (60).

(60) Paling tinggi pangkat yang bisa  
 most high level which able  
 dicapai oleh seorang keluaran  
 be reach(ed) by person graduate  
 sekolah rendah biasanya hanyalah  
 school low usually only  
 sampai penilik saja.  
 reach inspector just  
 'The highest level that a graduate of grammar school can achieve is usually only that of inspector.'

In the example that follows the reduplicated adjective has the same meaning as the adjective that occurs with the word terlalu 'too', provided that the sentence is a negative imperative.

(61) Janganlah mengangkat anak bayi itu  
 do not lift child baby that  
 tinggi-tinggi.  
 high RED

'Don't lift that baby too high.'

(62) Janganlah mengangkat anak bayi itu  
 do not lift child baby that  
 terlalu tinggi.  
 too high

'Don't lift that baby too high.'

(61) and (62) have the same meaning. In the context of the negative imperative tinggi-tinggi is equivalent to terlalu tinggi 'too high'. An example in which the adjective itself can be reduplicated and get the meaning "very adjective" is as follows:

(63) Keluarga saya semua sehat-sehat.  
 family I all healthy RED  
 'My family is all really fine.'

The unreduplicated form of the verb does not have an intensive meaning.

(64) Keluarga saya semua sehat.  
 family I all healthy  
 'My family is all healthy.'

#### 4.2 Verb Reduplication Conveys Emotional Intensity or Immediacy

Simple intensity or emotional immediacy can be conveyed

by reduplication. In the following sentence the unreduplicated verb conveys the sense of a neutral statement, whereas the reduplicated form (66) is more intensive.

(65) Hukum tidak akan mem-beda-kan  
 law not fut. -distinguish  
 orang berkulit hitam dan orang  
 people skin black and people  
 yang berkulit putih.  
 who skin white

'The law does not distinguish between people whose skins are black and those whose skins are white.'

(66) Hukum tidak akan mem-beda-beda-kan  
 law not fut. distinguish RED  
 orang berkulit hitam dan orang  
 people skin black and people  
 yang berkulit putih.  
 who skin white

'The law does not distinguish between people whose skins are black and those whose skins are white.'

Examples (67) and (68) are similar to (65) and (66).

(67) Saya meng-harap-kan kedatangannya.  
 I expect coming-his  
 'I hope he will come.'

(68) Saya meng-harap-harap-kan kedatangannya.  
 I expect RED coming-his  
 'I am really hoping he will be coming.'

Sentences (67) and (68) are both presuppositionally neutral, i.e. the complement sentence is not presupposed to be either true or false in either sentence and the speaker does not actually know whether the person spoken about will come or not. However, these two sentences differ in that (67) is just a statement, whereas in (68) there is a greater sense of intensity and expectation. Greater emotionality is conveyed in (67) than in (68). In many cases of reduplication the use of reduplication conveys a sense of emotional immediacy, a sense that the speaker and listener are experientially close to the event or events being discussed. Sometimes this usage is translated as the present participial in English by Gonda and others.

(69) Pertandingan sepakbola antara UM  
 contest football between name  
 dan Mich State sangat seru.  
 and name name very exciting  
 Sedang serunya pertandingan itu  
 while excitement contest that  
 berjalan tiba-tiba hujan lebat.  
 go on suddenly RED rain heavy

'The football game between U of M and Mich State was very exciting. At the moment when the game was exciting suddenly it started to rain heavily.'

(70) Pertandingan sepakbola antara UM  
 contest football between name  
 dan Mich State sangat seru.  
 and name name very exciting  
 Sedang seru-serunya pertandingan itu  
 while excitement RED contest that  
 berjalan tiba-tiba hujan lebat.  
 go on suddenly RED rain heavy  
 'The football game between U of M and Mich  
 State was very exciting. At the moment when  
 the game was exciting suddenly it started to  
 rain heavily.'

Sentence (69) is less stressed than (70). In (70) you can feel the excitement of the game. Another example of the way in which reduplication can convey a sense of emotional immediacy, which might find its equivalent in the English participial, can be seen in (71) and (72).

(71) Ada sepotong kayu ter-apung di atas air.  
 exist a piece wood float on water  
 'There is a piece of wood floating on the water.'

(72) Ada sepotong kayu ter-apung-apung  
 exist a piece wood float RED  
 di atas air.  
 on water  
 'There is a piece of wood floating on the water.'

In (72) the listener gets the sense that he can see the many floating movements of the piece of wood.

#### 4.3 Reduplication Can be Used to Convey Annoyance

The third type of reduplication in this section is that which is associated with expressions of annoyance. In these cases the presupposition is that the situation as discussed should not be as it is. Reduplication conveys the annoyance and impatience of the speaker, for example:

(73) Ia berjanji datang jam sebelas,  
 she promise come hour eleven  
 tapi sampai jam duabelas kita  
 but until hour twelve we  
 tunggu ia juga tidak muncul.  
 wait she also not appear  
 'She promised to come at eleven o'clock, but  
 we have waited until twelve o'clock and she  
 has not shown up yet.'

The sentence above (73) is a statement of fact without emotion. In the following sentence where reduplication occurs a sense of annoyance is conveyed, and the presupposition of (74) is that she, the person spoken about, should have been able to show up many many times.

(74) Ia berjanji datang jam sebelas,  
 she promise come hour eleven

tapi sampai jam duabelas kita  
 but until hour twelve we  
 tunggu ia juga tidak muncul-muncul.  
 wait she also not appear RED  
 'She promised to come at eleven o'clock, but  
 we have waited until twelve o'clock and she  
 still has not shown up.'

The facts of (75) and (76) are similar to those of (73) and (74).

(75) Pekerjaan itu tidak selesai, meskipun  
 work that not finished although  
 sebetulnya saya mengharapkan bisa  
 actually I hope able  
 selesai.  
 finished  
 'That work is not finished, although I really  
 hoped it could be finished.'

(75) is statement of fact which does not convey any strong emotion.

(76) Pekerjaan itu tidak selesai-selesai,  
 work that not finished RED  
 meskipun sebetulnya saya mengharap-  
 although actually I hope  
 kan bisa selesai.  
 able finished  
 'That work is not finished, although I really  
 hoped it could be finished.'

In (76) where the verb is reduplicated the speaker is expressing annoyance.

## 5.0 CONCLUSION

### 5.1 Theoretical Implications

In this paper we have presented three functions of reduplication: 1) diffuseness, or indefiniteness, 2) simile, and 3) intensity or the idea of approaching a limit. This is not meant to be an exhaustive analysis, but a conceptual framework into which most cases of reduplication seem to fall. We should like to suggest that these three functions are actually semantically related to each other in a deep way, and could be regarded as manifestations of the same underlying concept. This underlying concept could perhaps be given the title diffuseness-negativity, since all of the three functions of reduplication above seem to be related to negativity. The idea of approaching a limit contains the negative idea of not quite attaining a certain state, and simile of course means "to be like something" or "not to really be a certain thing, but just to appear to be like it", and diffuseness seems to contain a general negative idea or blurring of boundaries. Therefore, we should like to hypothesize that negation and diffuseness are semantically related concepts and that functions 1), 2) and 3) of reduplication are actually semantically akin to each other and are not disparate concepts.



## 5.2 Specific Problems

In closing we should also like to mention that many things about reduplication remain unexplained. One thing which is as yet unexplained is how the native speaker knows which words can be reduplicated and which cannot, and how he or she knows what a particular word will mean when reduplicated. The native speaker is obviously guided by clues which probably depend on the semantic and morphological nature of specific words. It seems a detailed study of the underlying semantic nature of Indonesian words, especially verbs, would be in order.

Another aspect of reduplication which could bear investigation is that which has to do with specific morphological problems such as "multiple actor" verbs. There are some speakers for whom ber-verb-verb-an implies multiple actors and verb-meN-verb implies reciprocity. However, as Professor Dardjowidjojo has pointed out (personal communication) this is not true for all speakers.

Department of Linguistics  
University of Michigan

### N O T E S

\* 1. The present paper is a revised version of one presented to the First International Conference on Comparative Austronesian Linguistics, Hawaii, 1974. It is a sequel to my paper "Reduplication and negation in Indonesian", in: Soepomo Poedjosoedarmo (ed.), Miscellaneous Studies in Indonesian and Languages in Indonesia, Part III, Badan Penyelenggara Seri NUSA, Jakarta 1977 (Series NUSA, Linguistic Studies in Indonesian and Languages in Indonesia, vol. 4), pp. 1 - 14.

2. My thanks to my Indonesian friends at the University of Michigan who acted as my informants and without whose help I could not have written this paper. They were Monica Djohansyah and I Gusti Ngurah Oka, Harun and Diah Al Rasjid, Professor Wojowasito, Danielo Ajamiseba, and Diyan Surjotjondro. I should also like to thank Professor Harimurti Kridalaksana of the University of Indonesia, and Professor Alton Becker of the University of Michigan for their criticism and advice. In addition I should like to thank Professor Soenjono Dardjowidjojo of the Department of Indo-Pacific Linguistics of the University of Hawaii and Bambang Kaswanti Purwo, who have been kind enough to criticize the paper for me,

and my fellow students at the University of Michigan, Ann Borkin and Fred Lupke, who criticized it from the theoretical point of view. My thanks also to other friends and associates who have helped with this paper.

3. Copyright 1974 Joan Marice Rosen.

1. The writer is aware of Lakoff and others' analysis of adverbs as higher predicates, and has not presented that analysis here, since how adverbs work in Indonesian has not yet been investigated. If the analysis of adverbs as higher predicates fits Indonesian, than it should be possible to adjust the framework given here to that analysis.

### BIBLIOGRAPHY

- Gonda, Jan. "The Functions of Word Duplication in Indonesian Languages," Lingua II (1950), pp. 170 - 197.
- Lakoff, George. "Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts," in Papers from the Eighth Regional Meeting of the Chicago Linguistic Society," Chicago: University of Illinois Press, 1972.
- \_\_\_\_\_. "Pronominalization, Negation and the Analysis of Adverbs," in Jacobs and Rosenbaum, eds. Readings in English Transformational Grammar. Waltham, Mass.: Ginn and Company, 1970.
- \_\_\_\_\_. David Perlmutter, and John Robert Ross. "Why are Negatives Like Factive Predicates?" (unpublished paper University of Michigan).
- Lakoff, Robin. "If's, And's and But's About Conjunction," in Fillmore and Langendoen, eds. Studies in Linguistic Semantics. New York: Holt, Rinehart and Winston, 1971.
- Leach, Edmund. "Anthropological Aspects of Language: Animal Categories and Verbal Abuse," in Eric Lenneberg, ed. New Dimensions in the Study of Language. Cambridge, Massachusetts: MIT Press, 1964.
- Oeman, Suzanne. "Theories of the Linguistic Field," Word (1953), 9.123-34.
- Uhlenbeck, E. M. "Verdubbelingsprocédés bij het Javaanse Werkwoord." Bijdragen tot de Taal-, Land- en Volkenkunde. Vol. 110. 's-Gravenhage, 1954: 369-387.
- \_\_\_\_\_. "Woordverdubbeling in het Javaans," Bijdragen tot de Taal-, Land- en Volkenkunde. Vol. 109. 's-Gravenhage, 1953: 52-61.

\* \* \*

Stephanus Djawanai

I. INTRODUCTION

Nga'da<sup>1)</sup> is a language spoken in the West-Central part of the island of Flores, Indonesia, by an ethnic group also called Nga'da, which consists of about forty thousand people. The Nga'da people usually refer to the language as 'bajava'<sup>2)</sup>, while I prefer to use the word Nga'da, following Arndt (1933) who spells it as Ngad'a or Ngadha (1961). Nga'da is also the name of a clan and a nearby hill. In the Dutch colonial days and up to the early years of Independence the name Nga'da (spelled Ngada) was used for the area in which the language is spoken, the capital of which was 'bajava' (spelled Bajawa). Now the name Nga'da is used to refer to a larger area covering the areas of Nagekeo and Riung which during the colonial days, were two separate small kingdoms.

There is currently only one published description of Nga'da which was written by Dr. Paul Arndt about fifty years ago. There is also a dictionary of Nga'da-German done by the same author who was a Catholic missionary in Flores. Since Dr. Arndt's books are not widely available, and in certain respects inaccurate, this paper attempts to present a more detailed description of the sound-system and the basic segmental phonology of Nga'da, along with the treatment of borrowings that have been incorporated in Nga'da vocabulary. Owing to limitations on the length of this paper, I am not including the discussion on supra-segmental features; however, I will touch upon some notions on syllable and morpheme structures, stress, and length of phonemes in the discussion about allophones.

The description which follows is largely based upon my recollection, judgement, and intuition as a native speaker of Nga'da which is my first language; besides, I am taking the liberties of using ideas I got from the Field-Method classes at The University of Michigan (Fall 1975, Winter 1976) where I acted as informant of Nga'da, as well as discussions with various other people. As a comparison to my own speech, I am using a thirty-minute recording of a conversation in Nga'da which was taped in a natural setting, in which ten native speakers of Nga'da were involved.

II. THE PHONEMES<sup>3)</sup>

Consonants	bilabial					labio-dental		dental		alveolar		alveo-palatal (retroflex)		velar		glottal	
nasals	m				n												
voiced stops	b			d													
voiceless stops	p				t												
voiced implosives	ɓ							ɗ									
glottal stop																	ʔ
voiced fricatives		v															ʝ
voiceless fricatives		f															x
voiced affricate																	ɟ
tap																	ɽ
lateral																	l

Vowels	front	mid	back
high	i		u
mid	e	ə	o
low		a	

For practical purposes the phonemes are represented orthographically in this paper as:

Consonants	bilabial		labio-dental		dental		alveolar		alveo-palatal (retroflex)		velar		glottal	
nasals	m						n					ŋ		
voiced stops	b			d									g	
voiceless stops	p						t						k	
voiced implosives	ɓ											ɗ		
glottal stop														ʔ
voiced fricatives		v											gh	
voiceless fricatives		f											x	
voiced affricate													j	
tap													r	
lateral													l	

Vowels	front	mid	back
high	i		u
mid	e	ə	o
low		a	

For the sake of comparison as well as the reader's information, I am including here the orthographies as used by Arndt in the dictionary of Nga'da-German (1961) and as currently used in a 'Prayer and Hymn Book' in Nga'da (1972).<sup>4)</sup>

The orthography used by Arndt (1961): m, n, ng (velar nasal), b, d, g, p, t, k, bh (voiced bilabial implosive), dh (voiced alveo-palatal implosive), y (voiced velar fricative), v, z, f, s, x, dz (voiced alveolar affricate), r, l, i, u, é (mid front vowel), e (schwa), o, and u. Arndt uses /c/ to represent voiceless approximant /h/ for words beginning with a vowel which is not preceded by a glottal closure. He also uses /c/ in medial positions that is, between vowels where a vowel sequence is involved, to mark that it is not diphthong. Where there is a glottal closure between the vowels he just writes them in a row.

The orthography as currently used in a 'prayer and hymn book' in Nga'da (1972) which is written and published by the Catholic mission in Flores: m, n, ng (velar nasal), b, d, g, p, t, k, b' (voiced bilabial implosive), d' (voiced alveo-palatal implosive), g' (voiced velar fricative), w (voiced labio-dental fricative), f, s, h (voiceless velar fricative), dj (voiced alveolar affricate), r, l, i, u, é (mid-front vowel), e (schwa), o, and u. No diacritic is used in word initial position to distinguish words that start with a glottal closure and those that do not. Where a glottal stop occurs in medial position between two vowels, a diacritic mark (·) similar to

the German umlaut, is put on top of the second vowel. Where there is a vowel sequence, the vowels are written in a row.

### III. THE DISTRIBUTION OF PHONEMES

The following are examples of the phonemes as they are distributed in Nga'da native words with glosses. Due to the limitations to the length of this paper, I will only give some examples without accounting for the complete possible combinations of phonemes or those combinations that are not permitted in Nga'da.

/m/	mata	'die', 'eye'	/k/	too	'contribute food[usually rice]for a feast'
	sama	'same'		kasa	'shoulder', 'side'
	sonu	'onion'		saka	'ride'
	mama	'rice plant'		kabu	'root'
	miu	'you' (plural, or singular[to show deference])		kau	'yqu (singular)'
	emu	'they'		kami	'we (exclusive)'
	mma <sup>5)</sup>	'father'		aku	'foreign'
/n/	naji	'say', 'reprimand', 'to mean'		kaa	'eat'
	tana	'ask', 'ground', 'earth'	/b/	?aa	'a crow' [bird]
	nana	'weave' [as a mat]		'bada	'domesticated animals' [excluding fowl]
	benu	'full of'		'beto	'bamboo'
	ine	'mother'		'ba?i	'no, not' (negation)
	nna	'sand'		'bo'bo	'fat'
/ng/	ngaza	'name'		e'bo	'disappear'
	zanga	'look carefully at'	/d/	'bee	'summon'
	nganga	'open one's mouth' [as when in admiration]		'da'do	'lift', 'carry'
	zenge	'hear'		'dola	'uvula'
	denge	'listen'		la'do	'exceed'
	ngnga	'person's name' (female)		i'du	'avoid a blow', 'swing'
/b/	bana	'warm', 'hot', 'fast'		'da'di	'give birth' [usually for animals]
	ngaba	'ravine'		'duu	'until, till'
	bebe	'eat or work together' [eat from one plate]	/?/	gha?o	'carry' [as a child]
	babo	'nick-name for those who have identical names'		ja?o	'I'
	buu <sup>6)</sup>	'blind', 'drunk'		lu?a	'uncover or lift the cover'
	bbu	'grand-parents'		?a?o	'to crow' [by a rooster]
/d/	dala	'star'		?ea	'cry' [by a baby]
	sada	'loin-cloth'	/v/	vavo	'on, on top'
	dada	'far'		valo	'answer'
	ada	'a structure from which one watches for birds in a garden'		voso	'plenty'
/g/	daa	'to stretch one's legs'		vəli	'buy'
	goli	'roll on the ground'		vivi	'a mouthful', 'utterance', 'lead by the hand'
	aga	'cave'		ova	'untie'
	gogo	'stare'		vii	'pull', 'lead' [as a horse]
	gəge	'to order', 'advise'		vae	'water'
	gazi	'he, she'	/z/	zale	'south', 'down'
/p/	goo	'gong'		laza	'road', 'sore muscle'
	pama	'receive with both hands'		zoze	'kill' [by cutting the throat]
	kapa	'thick', 'dense'		zio	'bathe'
	papa	'reciprocal' (also shows plurality of actants)		azi	'younger sibling' (male or female)
	ipa	'brother or sister-in-law'		zoo	'hand a long object'
	paa	'distribute'	/gh/	ghogho	'bark' [by a dog]
/t/	tara	'branch'		ghoro	'drag'
	nata	'betel leaf'		rogho	'dry'
	titi	'to beat' [as a drum]		ghe?o	'tell a lie'
	təto	'and then'		ghoa	'straight'
	kita	'we (inclusive)'	/i/	ghoo	'reach with one's hand' [like into a hole]
	utu	'gather', 'assemble'		futa	'husk' [coconut or maize]
				təfa	'spit'
				foi	'pipe' [musical instrument made of bamboo]
			/s/	faa	'refreshing' [as cool air]
				sala	'wrong'
				lisu	'regret', 'remorse'
				məsu	'have pity on'
				sese	'yellow'
				iso	'look'
				?əsa	'one' [when counting]
				limassa	'six'
			/x/	sii	'become swollen'
				xae	'maize', ['exclamation used as a greeting or prohibition']
				xala	'fence made of bamboo splits'
				xale	'a fly'
				xii	'noon', 'quiet'

/j/	jaʔi	'dance'	meu	'move one's head to the side'
	juju	'grope in the dark'	meʔu	'grumble [to show disappointment or jealousy]'
	lojo	'lazy'	bei	'witness'
	iju	'person's name (female)'	beʔi	'lean on one's back'
	jaa	'cold'	ieu	'left', 'make a rope'
/r/	vara	'wind'	leʔu	'door'
	ro'do	'naughty'	beo	'up to someone', [an expression meaning 'you'll see']
	rio	'painful'	beʔo	'know', 'person's name (male or female)'
	riri	'sprinkle' [as sand or seeds]	doi	'insist', 'money'
	aro	'charcoal'	doʔi	'pour'
	rro	'sun'	moa	'thirsty'
	roo	'spicy hot', 'hate'	moʔa	'out-side', 'spacious'
/l/	nilu	'sour', 'pain in the bone'	koe	'dig'
	melu	'wither'	koʔe	'not yet', 'remainder'
	ləlu	'boast'	kou	'undress'
	lelu	'cotton', 'thread'	koʔu	'stuff used to ferment palm-wine'
	lole	'enter'	koi	'scrape [coconut meat]', 'shave'
	ieʔu	'door'	koʔi	'promise [by hooking two little fingers]'
	ele	'although'	pui	'sweep'
	luu	'wipe'	puʔi	'pick [fruit]'
	luʔu	'tear'	tua	'palm-wine'
			tuʔa	'parents-in-law'
			lue	'person's name (male)'
			luʔe	'an article of dress' [blanket worn over the shoulders to cover upper part of the body]
			'dio	'hit on target'
			'diʔo	'appropriate'
			kɪu	'wrench, twist'
			kiʔu	'break'
			pia	'put'
			piʔa	'break by hitting', 'slap'
			rie	'cicada' [insect]
			liʔe	'fruit', 'classifier for roundish objects'

#### IV. ALLOPHONIC STATEMENT

1. Separate examples of the distribution of vowels are not given as they have been included in the examples in section III. However, certain characteristics of the vowels need some mention here namely, (a) the schwa /ə/ never occurs in the second syllable of a word except in compounds; (b) where there is a sequence of two vowels, /ə/ never occurs in combination with other vowels; (c) where a vowel occurs at the beginning of utterances, there is a contrast between the one preceded by a glottal closure and the one that is not; (d) morphemes beginning with a schwa /ə/ is always preceded by a glottal closure just like English stressed vowels at the beginning of utterances. The following are some minimal or near-minimal pairs:

inu	'drink'
ʔinu	'small, tiny'
itu	'person's name (female)'
ʔitu	'small, tiny'
ee	[exclamation meaning 'yes']
ʔee	[exclamation used in calling pigs]
uu	[exclamation meaning 'I hear you']
ʔuu	'a grunt [to show disagreement or disappointment]'
ana	'child'
ʔano	'also, too' [a variant of the word <u>dano</u> ]

Here are some more examples in minimal pairs where there is a glottal stop between vowels or its absence in a vowel sequence:

vai	'but'
vaʔi	'foot, leg', 'time' [as in once or one time]
pao	'feed' [as a baby or a sick person]
paʔo	'help'
mae	'soul'
maʔe	'don't'
mau	'person's name (female)'
maʔu	'coast'
mea	'ashamed', 'bashful'
meʔa	'alone', 'quantifier denoting unspecified number'

2. The glottal stop /ʔ/ is always a stop in word initial position, while in slow or emphatic speech it may be articulated as a stop or just a friction in medial as well as initial positions. Examples have been given in Sections III, and IV.1. Sequences of CVʔV tend to become CV in rapid speech when the vowels are identical, in which case, the vowel tends to be long as in

puʔu	'from', 'trunk', 'base of a tree'
puu	id.
neʔe	'with'
nee	id.
nuʔu	'chew' [as bits of sugar-cane]
nuu	id.
boʔo	'full' [as after eating]
boo	id.
laʔa	'go', 'walk'
laa	id.
kiʔi	'be mean'
kii	id.

3. Monosyllabic morphemes tend to have long vowels, represented with double vowels in this paper. Some examples have been cited in section III. However, there are cases where I observe a contrast of long and short vowels as the following examples in minimal pairs show.

muu	'kiss', 'warm and comfortable'
-----	--------------------------------

mu	'very', 'insist'
ngaa	'stop by', 'visit', 'check'
nga	'modal to show futurity' [short form of <u>nəŋga</u> ]
daa	'stretch one's legs or arms'
da	'predicate relater' (grammatical word)
gee	'count'
ge	'every'
vii	'pull', 'lead [as a horse]'
vi	'at', 'for' (instrumental or consumptive)
ghoo	'reach with one's hand' [like into a hole]
gho	'or', 'a particle used as tag'
buu	'blind', 'drunk'
bu	'on account of'
poo	'give advice'
po	'owl'

In rapid speech, the vowels here represented with one vowel tend to reduce to schwa /ə/.

The contrast of long and short vowels when not reduced, is lost in rapid speech where all appear to be short, and in slow speech or emphatic enunciation where they all tend to be long. Moreover, the contrast with morphemes where the glottal stop /ʔ/ is dropped as discussed in IV.2. above is also lost. The following are examples in which the three-way contrast is neutralized.

saa	'mention or pronounce the name of someone'
sa	'cloud'
saʔa	'carry long objects on the shoulder'
poo	'give advice'
po	'owl'
poʔo	'cook [rice or meat] by putting the stuff into a bamboo node and roast it over a fire'
vii	'pull', 'lead [as a horse]'
vi	'to', 'for' (instrumental or consumptive)
viʔi	'large bamboo splits'
moo	'insist on keeping'
mo	'jack-fruit'
moʔo	'jump', 'leap over'

4. The schwa /ə/ is usually very short and causes the lengthening of the following consonants as in

[bət <sup>h</sup> .a]	'broken' [as a string]
[bək <sup>h</sup> .a]	'have pity on'
[səp <sup>h</sup> .a]	'eat leaves'

As discussed in IV.1. and IV.3. the schwa /ə/ may be a manifestation of the reduction of /a, o, i, u/. The following are examples of a contraction involving /ə/.

ba nəŋga	>	bəŋga	'is going to'
da nəŋga	>	dəŋga	'is about to'
vi nəŋga	>	vəŋga	'about to'

(nəŋga may mean 'will', 'plan', or simply shows futurity).

5. The fricative aspect of /v/ is more prominent before unrounded vowels than before rounded ones. Examples:

vəta	'sister'
veta	'spill' as water
vii	'pull', 'lead [as a horse]'

vae	'water'
vua	'burn', 'person's name (female)'
volo	'hill, mountain'
avu	'earth, dirt'

6. /r/ usually consists of one or more taps as in

[vari]	'to dry' [in the sun]
[rua]	'bee', 'two'

It appears as a trill only in emphatic speech or enunciation.

7. Voiceless stops are strongly aspirated in initial position, while in medial position they are slightly preaspirated and aspirated. The aspiration and preaspiration are most noticeable with velar and alveolar consonants, and less with labial. Examples:

[t <sup>h</sup> əm.o]	'suck'
[k <sup>h</sup> a:]	'eat'
[p <sup>h</sup> ao]	'feed' [as a child or sick person]
[t <sup>h</sup> e <sup>h</sup> k <sup>h</sup> a]	'sell'
[su <sup>h</sup> p <sup>h</sup> u]	'send on an errand', 'order'
[me <sup>h</sup> t <sup>h</sup> e]	'hope'

8. /'b/ and /'d/ are articulated as implosives or as J. C. Catford (1977) describes them, 'voiced glottalic suction implosion'. The lab-tests (palatograms and glottograms) done by J. Harris and myself as informant, at the foreign language lab, The University of Hawaii (1977) lead to the conclusion that /'b/ and /'d/ are a co-articulation of glottal closure and implosion. The palatograms show that /'d/ is a retroflex. Examples:

[bara]	'white'
[domi]	'only'
[roba]	'morning'
[boda]	'must'

9. The fricative aspect of /x/ is more prominent before high vowels than before mid and low vowels. Examples have been given in section III.

10. The obstruent aspect of /gh/ is more prominent in initial and stressed positions, while it is less prominent in medial and unstressed positions, as in

bəghá	'to fly'
'bagho	'not' (negation)
ghóbo	'cut with a knife'
ghúbu	'roof'

11. Sequences of two vowels are, strictly speaking, comprised of two vowels without a glide or semi-vowel in between. They are not diphthongs, as a diphthong is usually part of one syllable where one segment is more prominent than the other. Vowel sequences in Nga'da belong to a sequence of two different syllables of which the vowels are the nuclei. Examples have been cited in section IV.1.

Nevertheless, in ordinary speech one may encounter instances of glide and semi-vowel. [y] may be inserted when the first vowel in a vowel sequence is unrounded /a, i, e/, while the semi-vowel [w] may be inserted when the first vowel is rounded /o, u/. Some examples:

[fi <sup>y</sup> e]	'wet'
[so <sup>w</sup> a]	'water-fall'

In addition, when the final vowel is /i/ it may be articulated as a glide, while when the final vowel is /u/ it may be articulated as a semi-vowel [w] as in,

[sa <sup>y</sup> ]	'arrive', 'until'
[bo <sup>w</sup> ]	'assemble'

12. Stress is not phonemic and it appears as greater vowel length and possibly higher pitch as the spectrograms done by P. Moore and myself as informant at the phonetics lab, University of Michigan (1975) show. The stress is always on the next to the last syllable (penultimate), which is the first syllable in most words. However, the stress may be shifted to the last syllable when the first syllable contains a schwa. Here are some examples:

béli	'witness'
vəlí	'buy'
zéle	'west'
zelé	'eat greedily'

13. The syllable structure of Nga'da is open and mostly of the form (C)V. Words are formed of one or two syllables. Instances of three-syllable words are rare and they are mostly frozen compounds or borrowings. Section V of this paper will deal with borrowings. Some examples of word structures follow:

CVCV	laka	'help', 'person's name (male)'
VCV	uge	'mother'
CVV	fua	'hornet'
VV	ua	'rattan'
CVCVCV	kapala	'chief' (borrowing from Indonesian <u>kepala</u> 'head', 'chairman')
	'bajava	'place name' [the village of java where java is the founder]

14. There are morphemes in Nga'da that appear to have the structure of CCV and look like geminates. Dr. Arndt (1961) treats the first C as a manifestation of schwa, perhaps, taking into account that Nga'da does not permit consonant clusters. J. Harris and myself as informant made a glotto-gram at the Foreign Language Lab, University of Hawaii (1977) of which the result showed that the CC sequence is a sequence of two similar segments manifest in voicedness and possibly with glottal friction in between. One might also treat the first C as an instance of a syllabic segment manifest in a heavily voiced onset. A complete list of such morphemes given in minimal pairs follows:

mma	'father'
maa	'chicken bacteria' [organism that causes itching]
mmu	'mosquito'
muu	'kiss', 'warm and comfortable'
nna	'sand'
na	'pointer' (grammatical word)
nne	'person's name (female)'
ne	'intimate title' [used for women]
bba	'cloth used to carry a baby'
ba	'about to' (grammatical word)
bbu	'grand-parents'
bu	'on account of'

bbo	'person's name (female)'
bo	'blister'
ngnga	'person's name (female)'
ngaa	'stop by', 'visit', 'check'
rro	'sun'
roo	'spicy hot [like pepper]', 'hate'
limassa	'six' (compound)
sa	'cloud'

15. /z/ is sometimes dropped in fast speech when occurring initially. This is most common in the bolonga (a small area to the North of 'bajava) dialect where people also substitute /r/ for /z/ in initial position of morphemes that have the structure of CVV. Examples:

'bajava dialect		'bolonga dialect	
zili	> ili	ili	'down'
zeta	> eta	eta	'up'
zua		rua	'two'
zio		rio	'bathe'

16. Note: There is no derivational or inflectional morphology in Nga'da; however, one might speculate that a number of affixes may have become part of the morphemes or have developed into separate morphemes in Nga'da as Indonesian for example, has quite a few affixes. A comparative historical study is needed to clarify the matter.

## V. THE TREATMENT OF BORROWINGS<sup>7)</sup>

### A. Criteria for defining borrowings

Nga'da, the people and language, have relatively very little contact with other languages even on the island of Flores due to very bad transportation beside the fact that Nga'da social system is based on a caste-system which was very rigid in the past. The people mainly travel on foot or on horse-back and often it takes hours to walk from one village to another or even to their gardens as the area is very hilly. Moreover, the languages and cultures of other ethnic groups living in neighboring areas do not differ much from Nga'da.

Most of the Nga'da people are illiterate and it follows that language contact through reading is minimal. Only in the past thirty-two years since Indonesia became independent, has the younger generation got the opportunity to get education, mostly only through the elementary level though.

Indonesian is the main source of borrowings as it is the national and official language of the country, as well as the language of instruction in schools. To a certain extent, one might claim that Indonesian, like Malay in the past, serves as a contact language among the various ethnic groups in Flores who speak unintelligible languages. Although there are people from other areas or ethnic groups who live in Nga'da like the Javanese, even foreigners (mostly missionaries), there is little evidence that Nga'da borrows directly from the languages spoken by these people as communication is usually done in the vernacular or Indonesian.

The discussion that follows is based on an assumption that borrowings have entered Nga'da vocabulary from Indonesian or through Indonesian.

### B. The Treatment of Borrowings

Borrowings are treated in line with the phonemes of Nga'da. And since the syllable structure of Nga'da is open, the main

process involved is dropping the final consonant in closed syllables of borrowed words. Where there is a consonant cluster, the process of dropping the final consonant or adding an epenthetic vowel to form a new syllable, depend on how the words are broken into syllables. In some cases it seems to be that the process involves avoiding homophony with native words, while in other cases homophony seems to be tolerated or preferred.

Certain group of words appear to practically, follow fixed patterns and consequently could be grouped easily into sets; while there are others that are simply unexplainable,

perhaps, due to restrictions on phoneme combinations. The following are the sets into which I group the borrowings. For practical purposes, I present the data in five columns: column 1 is the Indonesian words spelled in the standard orthography; column 2 is the borrowings as they occur in Nga'da, spelled in accordance with the orthography suggested in section II; column 3 is the gloss for words in column 1 and 2; column 4 is the Nga'da native words which resemble or are identical with the borrowings; column 5 is the gloss for words given in column 4. Where an additional explanation is more suggestive it is given within the set.

Set 1. The general and main process is dropping the final consonant in a closed syllable as in

(1) Indonesian	(2) Borrowings in Nga'da	(3) Gloss of (1) & (2)	(4) Native words in Nga'da	(5) Gloss of (4)
hukum	xuku	'law', 'punish'	xuki	'skin'
kapal	kapa	'ship'	kapa	'thick, dense'
sehab	səba	'cause, because'	seba	'blanket worn over the shoulder to cover the upper part of one's body'
			səbo	'hit using a small stick or branch'
tuan	tua	'sir'	tua	'palm-wine'
gambar	gaba	'painting'	kaba	'water-buffalo'
			gama	'too'
pindah	pida	'move to another place'	pita	'look for'
rombongan	robonga	'group of people [dignitaries]'	robo	'anus'
			ngaa	'stop by', 'visit'
			ngana	'pig'

Set 2. Voiceless stops are borrowed as voiced ones possibly to retain voicedness of deleted consonants, as in

(1)	(2)	(3)	(4)	(5)
gunting	gudi	'scissors'	gu die	'exclamation used to summon dogs'
kantor	gado	'office'	ka'o	'urine'
lampu	labu	'lamp'	labu	'squash'
			lapu	'fire-place where people cook food'
lempar	leba	'throw, toss'	ləba	'extinguish fire by hitting it with a branch and leaves'
			lepe	'fire-bug'
mint	mida	'ask for'	mite	'black'
			mido	'tight' [as a string]
pintar	bida	'clever'	pita	'look for'
			pida	'move to another place' (borrowing)
			pəti	'tie'
sekolah	səgola	'school'	sə	'one' (when occurring with a classifier)
			gola	'roll on the ground'
			kole	'lie down', 'place-name'
(Nga'da does not have the affricate /č/ and it is borrowed as /j/)				
cina	jina	'Chinese'	sina	'person's name (male)', 'place-name'
ccba	joba	'try'	soba	'person's name (male)', 'place-name'
kecap	geja	'soy-sauce'	geje	'squint'
<u>unexplained</u>				
ampun	abo	'forgiveness'	apu	'dew'
			abo	'a kind of singing and dance'
(Vowel lowering will be discussed in set 5)				
pompa	popa	'pump'	boba	'place-name'
			pobo	'talk in sleep'
simpan	sipa	'keep, store'	siba	'and then'
sendiri	səniri	'alone'		

Set 3. Voiced stops are sometimes borrowed as implosives. When the stops, in a two-syllable word, are the same, both may change into implosives; if, they are different sometimes only one is substituted by an implosives as in

(1) [Indonesian]	(2) [Borrowings in Nga'da]	(3) [Gloss of (1) & (2)]	(4) [Native words in Nga'da]	(5) [Gloss of (4)]
bubur	'bu'bu	'porridge'	'bu'bu	'plum', 'oval'
or	bubu	id.		
duduk	'du'du	'sit'	'du'du	'stuff used to make a fire when using flint'
bodoh	bo'do	'stupid'	bə'do	'collapse'
bikin	'biki	'do, make'	'biki	'remove coconut meat from shell using a pointed object'
			'bigi	'half of a coconut'
dapur	'dapo	'kitchen'	'dapi	'along with'
			'dabu	'contribute'
(Vowel lowering will be discussed in Set 5)				
jadi	ja'di	'so'	je'de	'limp'
bendera	'badera	'flag'	'baa	'plate'
			dəra	'drum'
belanda	balada	'Dutch'	'bəla	'really, true'
			'bala	'person's name (female)'
(/ə/ is substituted by /a/ will be discussed in Set 7)				
<u>unexplained</u>				
sendok	se'do	'spoon'	se'du	'hat'
			sə'do	'hiccup'

**Set 4.** When there is a consonant cluster in initial position an epenthetic vowel /ə/ may be inserted to form a new syllable; if the consonant cluster occurs word-finally it may be dropped altogether. Different from the process in Set 2, there are words containing a consonant cluster word-medially that undergo a process of vowel insertion where the inserted vowel is usually a copy of the one that occurs earlier in the word. Examples:

(1)	(2)	(3)	(4)	(5)
stop	səto	'stop'	səto	'please', 'go ahead'
bruder	bərude	'monk'	bəru	'a kind of pine tree'
frans	fəra	'person's name'	fəre	'a kind of locust'
pastor	pasado	'priest'	pasa	'patrilocal marriage', 'shoot'
suster	susude	'nun'	susu	'breast, milk'
			dee	'where'
(/t/ is substituted by /d/ possibly because Indonesian /t/ is not aspirated)				
cons	ko	'person's name'	koo	'reach one's hand as into a hole'
			ko	'net' [used to hold things]
wens	ve	'person's name'	vee	'go and live in a far place', 'wander'
robert	robe	'person's name'	robe	'musical instrument made of bamboo split'
				'a nick-name'

**Set 5.** Vowel lowering; /u/ changes to /o/ when occurring in word-final position in a closed syllable. Perhaps the dropping of the final consonant causes the lowering of the vowel /u/. There are cases where /u/ is borrowed as /u/ when the final syllable is open. Examples:

(1)	(2)	(3)	(4)	(5)
atur	?ato	'arrange'	latu	'exist', 'be', 'have'
belum	bəlo	'not yet'	belo	'look carefully'
			bəlu	'place name', 'last'
hidup	i'do	'alive', 'live'	i'du	'avoid a blow', 'swing'
(/d/ is substituted by /'d/ has been discussed in Set 3)				
ampun	abo	'forgiveness'	abo	'singing and dance'
kampung	kapo	'village'	kapu	'give birth' (human)
			kapo	'servant'
masuk	maso	'enter'	masu	'place name'
minum	mino	'drink'	inu	'drink'
			məno	'tight'
sabun	sabo	'soap'	sabu	'while', 'meet and welcome guests'
tanggung	tago	'bear responsibility'	dəgo	'strong'



(1) [Indonesian]	(2) [Borrowings in Nga'da]	(3) [Gloss of (1) & (2)]	(4) [Native words in Nga'da]	(5) [Gloss of (4)]
lampu	labu	'lamp'	bago	'throw away'
jambu	jabu	'fruit' [wild-apple]		
<u>unexplained</u>				
duit	doi	'money'	doi	'insist'
			do?i	'pour'

**Set 6.** Vowel lowering; /i/ is substituted by /e/ in final closed syllable, especially when there is a vowel sequence (/a/ and /i/). Like Set 5, the lowering of /i/ to /e/ is possibly caused by the dropping of final consonants. There are cases where /i/ is borrowed as /i/ when the final syllable is open. Examples:

(1)	(2)	(3)	(4)	(5)
lain	lae	'different'	lae	'got cut by crisp grass or bamboo split'
main	mae	'play'	lai	'person's name' (male)
baik	bae	'good'	mae	'soul'
naik	nae	'ride, climb'	mai	'come, arrive'
			bai	'too [much]'
			bae	'be ahead', 'hung over the shoulder'
			nae	'act clumsily' [when confused]
			nai	'person's name (male)', 'classifier for cloth'
paling	pale	'most' (superlative)	pale	'walk around the slope of a hill'
kawin	kave	'marry'	pali	'place-name'
mari	mari	'come'	kavi (kao)	'web'
pagi	pagi	'morning'	mari	'place name'
			page	'stride'

**Set 7.** /ə/ is substituted by /a/ when it occurs in the first syllable of a three or four-syllable word. This is probably caused by the placement of a secondary stress. Examples:

(1)	(2)	(3)	(4)	(5)
belanda	'bàláda	'Dutch'	'bèla	'really', 'true'
bendera	'bàdéra	'flag'	'baa	'plate'
			dèra	'drum'
gereja	gàréja	'church'	gare	'scrape around for food'
			geru	'gako' [a kind of lizard]
jembatan	jàbáta	'bridge'	jaa	'cold'
			bata	'sea', 'entrance to a village'
kepala	kàpála	'head, chief'	kaa	'eat'
			kapa	'thick, dense'
pemerintah	pàmaréta	'government'	pala	'person's name (male)'
			pama	'receive with both hands'
			reta	'person's name (female)'
merdeka	màradéka	'free', 'independent'	mara	'do something casually'
			deka	'dried betel-nut'
			dèka	'time [as in one time]'

(the insertion of an epenthetic vowel is probably due to syllable division)

**Set 8.** Where there is a glide /y/ involved, it may change to /i/ in medial position.<sup>8</sup> In initial position it may be substituted by /j/ or /z/. Moreover, when there is /r/ at the end of the syllable, it may be retained and an /a/ is added to form a new syllable. Examples:

(1)	(2)	(3)	(4)	(5)
bayar	baIara	'pay'	bai	'too [much]'
			ara	'spirit' [alcoholic drink]
biar	biara	'don't bother'	bii	'increase in number or volume'
yesus	zesu	'Jesus'	zee	'additional food added to the main'

(1) [Indonesian]	(2) [Borrowings in Nga'da]	(3) [Gloss of (1) & (2)]	(4) [Native words in Nga'da]	(5) [Gloss of (4)]
	jesu	id.	suu	course'
yosef	zose	'Joseph'	joo	'thrust'
	jose	id.	see	'step a foot forward'
luar	lua	'out-side'	lua	'spread things using one's feet'
				'fur', 'hairs'

Set 9. There is only one instance that I can find of /o/ substituted by /i/ when the final syllable is closed, i.e.

(1)	(2)	(3)	(4)	(5)
botol	boti	'bottle'	boti	'spinach'
			boto	'be rotten' [as fruit]

### C. Summary

The main strategy and problems in the treatment of borrowings are the dropping of final consonants in closed syllables of the borrowed words. Where the phonemes and the distribution as well as the combinations of phonemes conform with those of Nga'da, words may be borrowed without any change. The restriction on phoneme combinations in Nga'da is perhaps responsible for unexplained cases. Indonesian words that begin with vowels are usually stressed and preceded by a glottal stop and when these words are borrowed, the glottal stop may be retained. Besides, Indonesian also distinguishes /e/ from /ə/ schwa and this contrast may be retained in borrowed words. In most cases, borrowings are connected with relatively new things, ideas, practices, as well as new ways of life that are introduced to Nga'da culture.

### VI. CONCLUSION

The description of Nga'da phonology presented in this paper as well as the overview of the treatment of borrowings are not a full-fledged discussion, however, they cover the basic sound-system and the major processes of the treatment of loan-words. The reason why I include the discussion on loan-words in the description of the basic phonology of Nga'da is to present a larger picture of the sound-system of Nga'da in an attempt to allow for a better and clearer explanation concerning the phonology of Nga'da.

The University of Michigan, Ann Arbor

### NOTES

\*I thank K. C. Hill (University of Michigan), J. W. M. Verhaar (University of Indonesia), J. Harris (University of Edinburgh), Anton M. Moeliono (University of Indonesia), P. Moore (University of Michigan), C. Pyle (University of Michigan) for their ideas, help, and many relevant suggestions. I have greatly benefited from their ideas and comments: if there are mistakes, they are mine.

1) ng stands for velar nasal; the apostrophe (') is used as diacritic to mark that d is an implosive stop.

2) The apostrophe (') is used as a diacritic to mark that b is an implosive stop.

3) The phonemes arrived at and presented in this paper are a result of discussions by and with K. L. Hill, P. Moore, and J. Harris where I myself is the informant.

4) The orthography used in the 'Prayer and Hymn Book' in Nga'da is probably based on works done by Dr. Paul Arndt, or by Arndt himself.

5) The discussion on double consonants is given in section IV.14. J. W. M. Verhaar suggested to treat the first C as syllabic.

6) The discussion on double vowels (long vowel) is given in section IV.3.

7) Borrowings are discussed in an attempt to find better explanations on the phonology of Nga'da.

8) There is an innovation to add the phoneme /y/ to Nga'da as it is now used in the 'Prayer and Hymn Book' in Nga'da (1972) to account for loan-words like percaya 'believe' spelled persaja. Different from the discussion in section V. set 2., the affricate /tʃ/ is borrowed as /s/.

### REFERENCES

- Arndt, Paul. 1933. Grammatik der Ngad'a-Sprache; Bandung, A. C. Nix & Co.
- \_\_\_\_\_. 1961. Wörterbuch der Ngadhasprache; Poisieux FR, Paulus-Verlag, Auslieferung.
- Catford, J. C. 1977. Fundamental Problems in Phonetics; Bloomington, Indiana University Press.
- Don Djagom S. V. D., Mgr. (Imprimatur). 1972. Sura Ngasi neë Sura Meb'o; Ende-Flores, Percetakan Arnoldus.
- Ladefoged, Peter. 1975. A Course in Phonetics; New York, Harcourt Brace Jovanovich, Inc.
- Trubetzkoy, N. S. 1969. Principles of Phonology translated by C. A. M. Baltaxe; Los Angeles, University of California Press, Ltd.
- Pike, Kenneth L. 1947. Phonemics; Ann Arbor, The University of Michigan Press.

\* \* \*