Analysis and Synthesis of the Semantic Functions of Reduplication in Malay

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Abstract

This paper discusses reduplication in Malay, which is one of the productive methods that create new meanings. Two prior studies that are relevant to this study are reviewed in Section 2, following which the morphological types of reduplication are described. Reduplicated words are roughly divided into four types according to their morphological features: reduplicated wholly or partially, and with or without affixes. The semantic functions of reduplication are discussed in Section 3. The categories of derived meanings, such as "plurality", "variety", "similarity", "entirety" for nouns, are shown with their instances. Section 4 critically reviews the categories of the semantic functions proposed in the two previous studies. I intend to reanalyze and synthesize these semantic categories, and make clear the relationships among them. The semantic features produced by reduplication are related to one another. This implies family resemblance.

1. Introduction

Reduplication is one of the morphological methods of producing new meanings that is present in many languages. In Malay, this method is still highly productive, and enables to derive new words from the so-called "root words".

This paper aims to reanalyze the semantic functions of reduplication in Malay; some prior studies had attempted to clarify the features of these derived meanings. I will not only provide analyses and descriptions of the semantic functions in detail, but also synthesize them and clarify the relationship among them from a cognitive semantics perspective.

2. Reduplication in Malay

In earlier studies, such as Asmah Haji Omar (1973), Nik Safiah Karim et al. (1997), and Abdullah Hassan (2006), reduplication in Malay was analyzed from morphological, syntactic, and semantic aspects. In Section 2.1, the semantic categories proposed in previous studies are reviewed. Next,

Section 2.2, I give descriptions of the various morphological types of reduplication.

2.1. Previous Studies

Two prior studies are discussed here: Asmah Haji Omar (1973) and Abdullah Hassan (2006). Asmah Haji Omar (1973) discusses reduplication from the perspective of morphology, syntax and semantics. Moreover, the study shows the frequency scores as well using statistics, based on the corpus data.

Related to the semantic functions, Asmah Haji Omar (1973) claims that reduplication in Malay has "a total of 10 meanings", excluding "zero-meaning" that is said "not to bear any meaning at all". These categories are listed below.

Plural

Intensity

· Similar to

· Continuity of Action

Reciprocity

· Repetition of Action

EnumerationAimlessness

Unspecified Total Change of Meaning

Abdullah Hassan (2006) also discusses the morphological and semantic features of reduplication. Unlike Asmah Haji Omar (1973), Abdullah Hassan (2006) describes them according to each syntactic feature, i.e., the various parts of speech. The semantic categories cited in this study are listed below¹.

Noun

Plurality

Similarity

Variety

· Animals and Insects

Verb

Repetition

Continuity

Similarity

Reciprocity

· At One's Best

Exceed

· Intensity

Adjective

Exceeding Quality

· Limit of Comparative Norm

These two prior analyses have similar as well as different points. This study deals with two issues here: 'what kinds of meanings can be produced by reduplication in Malay' and 'how those meanings are related to one another'.

¹ The names of these categories are originally in Malay; in this paper, they have been translated into English for ease of citation (see Abdullah Hassan (2006: 246-267) for original Malay names). Abdullah Hassan (2006) also lists "Adverb" and "Function Words" categories. This study is limited to nouns, verbs and adjectives; therefore, these two categories are not included here.

2.2. Morphological Features

As has often been discussed in previous studies, the morphological patterns of reduplication vary from language to language. In Malay, the reduplicated forms can be roughly divided into two types: 'whole reduplication' and 'partial reduplication'. Each type has two sub-types depending on whether or not an affix is attached to the reduplicated words. Figure 1 presents some instances of the morphological types of whole reduplication.

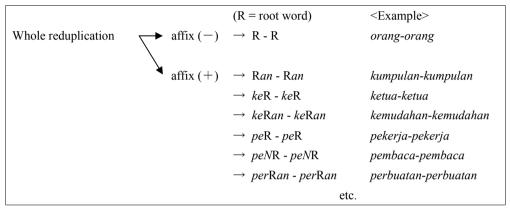


Figure 1: Morphological types of whole reduplication

Whole reduplication without an affix is highly productive and is the simplest process of reduplication, while the types involving affixation are also found to be fully productive. Malay has many derivational affixes like the prefixes 'ke-', 'pe-', and 'peN-'², and the suffix '-an' shown in Figure 1 above. The whole reduplication types with affixes indicate the reduplication of derivatives. All of these types work as nouns syntactically, whereas the forms belonging to the R - R without an affix type function as nouns, verbs, adjectives, and adverbs.

Figure 2 presents some instances of the morphological types of partial reduplication. Although a lot of types exist, some of them are less productive than the others.

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² The capital N in 'peN-' and 'meN-' (in Figure 2) indicates a nasal variant that depends on the initial phoneme of the root word.

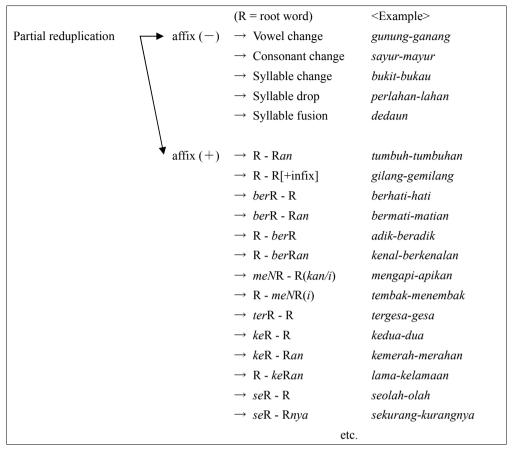


Figure 2: Morphological types of partial reduplication

Partial reduplication without affixes has five morphological patterns as shown in Figure 2. Vowel change and consonant change are the reduplication types where the root words undergo a partial vowel change and a partial consonant change respectively. For example, the vowel /u/ in the root word gunung is changed to /a/ in gunung-ganang; the consonant /s/ in the root word sayur is changed to /m/ in sayur-mayur. Syllable change involves the change of one or more syllables in the root word. The reduplicated word bukit-bukau consists of the root word bukit and bukau, which is derived from bukit by a change in the second syllable. There are other instances of this type of reduplication where the first syllable is changed. The syllable drop and syllable fusion types have a small number of the instances in fact. The root word of perlahan-lahan may be regarded as perlahan from a synchronic standpoint³, and its first syllable per- looks like it is dropped in the second component of perlahan-lahan. In the syllable fusion type, such as dedaun, lelaki, and tetikus, the first syllable indicates the first syllable of the root word with the vowel changed to the schwa /ə/.

³ The origin of *perlahan* can be debated from a historical standpoint, owing to the existence of the prefix '*per-*' in Malay. However, at present *perlahan* is listed in the dictionary as it is.

These last two types of reduplication are relatively weak in productivity.

As shown in Figure 2, there are various types of partial reduplication with affixation, though the productivity varies from type to type. The R - R[+infix] type is quite limited because all kinds of infixies are no longer productive in Malay. According to the statistical data provided in Asmah Haji Omar (1973), berR - R, $meNR - R(kan/i)^4$, and terR - R are found to be rather highly productive. As a matter of fact, these partial reduplication types are often combined with each other; for instance, berbukit-bukau is derived by the processes of syllable change and berR - R.

Regarding the syntactic functions, Asmah Haji Omar (1973) claims that reduplication has "class-maintaining" or "class-changing" effect. However this paper does not discuss this issue. It is because that some reduplicated words are never used as single forms: moreover, the derivational affixes, not reduplication, determine the syntactic functions of the reduplicated forms (e.g., in the reduplication types with affixes).

3. Semantic Functions

In this section, the semantic functions of reduplication will be taken as a target of discussion. I try to make clear what kinds of meanings that can be produced by reduplication, by comparing the meaning of the reduplicated word with that of its root word.

This study intends to describe the semantic functions of reduplicated words that work as nouns, verbs, and adjectives. However, the original reduplicated words, such as *kura-kura* "tortoise", *labah-labah* "spider", *paru-paru* "lung", and *masing-masing* "each other", are not dealt with, because they are irrelevant to the functions of reduplication that will be discussed.

All the instances cited below are from three novels published in Malaysia⁵, and are used for linguistic description only. This paper does not intend to present statistical data similar to "the frequency scores" in Asmah Haji Omar (1973).

3.1. Noun

Reduplicated words that function as nouns have four types of derived meanings: plurality, variety, similarity, and entirety. Some examples of nouns conveying plurality are given below.

Plurality

Root = kawan "friend"

(1) Mahukah kamu dan kawan-kawan kamu mencari harta?

"Do you and your friends want to seek treasures?"

⁴ Some words such as *menangis-nangis* have another morphological feature. The root word of *menangis-nangis* is *tangis*; the initial consonant is changed because a nasal N is inserted. The first component and the second component are both influenced by this nasal insertion.

⁵ The novels from which the data are sourced are "Di Hadapan Pulau (henceforward referred to as DHP)", "Misteri Orang Mati (MOM)", and "Misteri Burung Merpati Berjari Dua (MBM)".

(MOM p.2)

Root = *pekerja* "worker"

(2) Pekerja-pekerja Jepun menghilangkan diri ke dalam salah satu pondok.

"The Japanese workers entered one of the cottages."

(MBM p.74)

The sentences in (1) and (2) contain *kawan-kawan* and *pekerja-pekerja* respectively as plural nouns. In Malay, there is no grammatical rule that requires the change of the word forms to indicate number. Hence, if *kawan-kawan* and *pekerja-pekerja* were changed into the root words *kawan* and *pekerja* respectively, it would not affect their grammaticality.

Root = tempat "location"

(3) Cik Maria menunjukkan *tempat-tempat* dia menemui bangkai itu.

"Ms. Maria pointed out the *spots* where she had found those carcasses."

(MBM p.28)

Root = *kata* "word, speech"

(4) Saya fikir ada benarnya kata-kata kamu itu.

"I think there is some truth in your words."

(MOM p.21)

There can be seen abstract nouns in (3) and (4). These sentences would be grammatical even if *tempat-tempat* and *kata-kata* were not reduplicated, which implies that non-reduplicated forms can convey the meaning of plurality in this context.

Some examples that convey variety are shown below.

Variety

Root = savur "vegetable"

(5) Dia menjual sayur-sayurannya di pasar Jepun ...⁶

"He used to deal in *vegetables* at the market in Japan..."

(MBM p.56)

Root = semak "bush"

(6) Selepas itu dia berpaling dan berlari ke arah semak-samun.

"After that, he turned and ran towards the bushes."

(MBM p.32)

⁶ In Malay, there are two types of '-nya'. One is a suffix, and the other is a clitic that indicates a 3rd singular pronoun. The latter is not italicized in this paper.

These instances (5) and (6) contain reduplicated words whose meanings imply a variety (i.e., a large number) of what their root words stand for. The root word *sayur* is the hypernym used to refer to any kind of plant used for food; however, reduplication explicitly adds 'plurality' and 'variety' to its meaning. The instance *gerak-geri* in 7) also means various *gerak*.

Root = gerak "behavior, action"

(7) Kita mesti awasi setiap *gerak-geri*nya.

"We must watch all of his actions."

(MOM p.45)

Similarity

Root = hati "heart"

(8) Dan kita telah mengira dengan hati-hati...

"And we counted with much care..."

(MOM p.70)

Next, I deal with data indicating similarity. In (8) above, reduplication produces a new meaning that is similar to the root word's original meaning. The meaning of *hati-hati* may arise from the meaning of *hati* extended by a metaphor. The corpus data used for this study did not contain any other proper instances where reduplication produced similar results. Hence, I give a few instances from a dictionary, *Kamus Pelajar: mata* means "eye" while *mata-mata* means "police", and *orang* means "human" while *orang-orangan* means "scarecrow". Both of these meanings are derived by metaphorical semantic extension.

The data involving nouns that convey entirety are cited next.

Entirety

Root = apa "what"

(9) ...tetapi mereka tidak menemui apa-apa.

"... but they didn't find anything."

(MOM p.39)

Root = siapa "who"

(10) Ingat, jangan beritahu sesiapa, tahu?

"Remember, don't tell it to anybody, you understand?"

(DHP p.156)

The reduplicated forms in (9) and (10) imply inclusion of all the referents that the root words indicate. The instances *mana-mana* "anywhere" and *bila-bila* "anytime" also include all the referents that the root words refer to, though they do not function as nouns syntactically.

3.2. Verb

Reduplicated words that function as verbs have five types of derived meanings: repetition, continuity, plurality, reciprocity and similarity. Some instances of verbs conveying repetition are given below.

Repetition

Root = tendang "to kick"

(11) Kyoto pula menendang-nendang belon.

"Then Kyoto kicked that balloon repeatedly."

(MBM p.83)

Root = geleng "to shake"

(12) Sarjan Kasim menggeleng-gelengkan kepalanya.

"Sergeant Kasim shook his head repeatedly."

(MOM p.18)

These instances show that the reduplicated form implies a repetition of the action. In (11), the verb *menendang-nendang* expresses the repeated action of "kicking". If the non-reduplicated form *menendang* were used, its meaning would usually imply that the action was done only once. Among these types, some are more likely to be used in reduplicated forms than the others, owing to the particular semantic features of their actions as in (12) above.

Root = *sampai* "to arrive"

(13) Mengapa Zubir tidak sampai-sampai lagi.

"Why hasn't Zubir arrived yet?"

(DHP p. 12)

In (13), the reduplicated verb *sampai-sampai* originally implies the repeated action; however, when this form is used with the negative word *tidak* "not", the phrase means that the action was not done even once. The repeated action derived by reduplication can convey the meaning that the action is repeated habitually or customarily.

Some instances of verbs that convey continuity are shown below.

Continuity

Root = *legar* "to circle"

(14) ...satu objek yang ganjil berlegar-legar di atas kepala mereka.

"... a strange object kept circling above us."

(MOM p.65)

Root = bayang "to imagine"

- (15) ... Tuk Marzuki terbayang-bayang juga desanya di Merlimau.
 - "... Mr. Marzuki kept imagining his countryside in Merlimau."

(DHP p.84)

The reduplicated words in (14) and (15) indicate that each action continued to be done for some time; in fact, the action may occur continuously for a few seconds, minutes, hours, or even for days.

Root = tanya "to ask"

(16) Tuk Marzuki bertanya-tanya sendirian di dalam hati.

"Mr. Marzuki kept asking himself in his mind."

(DHP p.85)

Root = cari "to seek"

(17) Mereka mencari-cari selama beberapa minit.

"They kept searching for several minutes."

(MOM p.41)

The reduplicated forms in (16) and (17) appear to indicate a continuation of the action; however it is not easy to determine whether these verbs imply continuous actions or repeated actions. According to Asmah Haji Omar (1973), the distinction between continuity and repetition are quite vague and in fact depend on the linguistic context.

Some instances of verbs indicating plurality are shown below.

Plurality

Root = *lihat* "to look"

(18) Mereka terus ke kebun buah-buahan dan melihat-lihat keadaan di situ.

"They went straight to the fruit garden and *observed* the situation there."

(MOM p.34)

The reduplicated word in (18) implies plurality not only of the actions but also of the agents. In other words, this semantic function produces a meaning of 'multiple-agents' that arises based on the 'plurality' of the actions.

Root = sembunyi "to hide"

(19) Dengan datuk pun kau orang nak sembunyi-sembunyi?

"Do you all want to conceal it even from grandpa?"

(DHP p.87)

Root = siap "to prepare"

(20) Sewaktu mereka bersiap-siap, telefon berdering.

"When they were getting ready, the telephone rang."

(MOM p.27)

In these above sentences, reduplication indicates a plurality of the actions and the agents. The subjects in (19) and (20), *kau orang* "you" and *mereka* "they", respectively indicate plurality. However, this fact is irrelevant to grammatical agreement or verb paradigms because such a grammatical rule, often seen in Indo-European languages, does not exist in Malay.

Reciprocity

Root = *peluk* "to embrace"

(21) Mak Ketong, Joyah dan Latiffah *berpeluk-pelukan* dengan Wan Rohani dan Rosiah.

"Ms. Ketong, Joyah and Latiffah embraced Wan Rohani and Rosiah."

(DHP p.133)

Except for the sole instance in (21), other instances of reduplication that produce the meaning of reciprocal action were not found in the data used for this study. In (21), berpeluk-pelukan refers to the action of "embracing" which is done by one person to another. Some examples from the dictionary Kamus Pelajar are shown here: pukul means "to hit" whereas pukul-memukul means "to hit each other", and salam means "greeting" while bersalam-salaman means "to greet one another".

Next, some examples of reduplication that conveys the meaning of similarity are discussed.

Similarity

Root = *beli* "to buy"

(22) ...Pak Cik Mudin membawa Mak Cik Mariam ke bandar untuk membeli-belah.

"... Mr. Mudin brings Ms. Mariam to the city for shopping."

(MBM p.86)

Root = jalan "road"

(23) Menurut Puan Rohaya, Rashid sedang berjalan-jalan di taman...

"According to Ms. Rohaya, Rashid was going for a walk in the park..."

(MOM p.61)

The data in (22) and (23) show that reduplication produces a new meaning based on similarity to its root word or derivative. The verb *membeli-belah* in (22) is derived from *beli* or *membeli* "to buy". Reduplication changes the original meaning "to buy" into a reading that implies conventional daily action "to do shopping". In the case of (23), *berjalan-jalan*, which is assumed to have been derived from *berjalan* "to walk", derives the meaning "to go for a walk" by metaphorical extension. The

next sentence in (24) is also created by a metaphor.

Root = *jadi* "to be, to take place"

(24) Pada ketika itulah pula tangisannya menjadi-jadi...

"At that time, her crying became much louder..."

(DHP p. 134)

The verb *menjadi-jadi* "to become better (or bigger, worse)" is considered to be derivation of *menjadi* "to become". In cognitive semantics, such a change of meaning is thought to be based on a conceptual metaphor.

3.3. Adjective

Reduplicated words that work as adjectives have four types of derived meanings: intensity, plurality, entirety, and similarity. Some instances of adjectives that show intensity are given below.

Intensity

Root = sakit "sick, painful"

(25) Jalil terasa badannya sakit-sakit apabila bangun pagi esoknya.

"Jalil's body felt quite painful when he woke up the next morning."

(MBM p.81)

Root = cepat "fast"

(26) Cepat-cepat meniarap di mana saja yang sempat.

"Lie down *quickly* wherever there is space."

(DHP p.27)

These sentences contain reduplicated words which have the implication of an intensified state. In (26), *cepat-cepat* seems to modify the verb *meniarap* "to lie prone". Uzawa (2003, 2004) claims that adjectives in Malay can modify both nouns and verbs. The R - R types in these sentences can be changed into the corresponding non-reduplicated forms (i.e., *sakit* and *cepat*), from a syntactic point of view

Root = satu "one"

(27) Lagipun, inilah *satu-satunya* kolam yang terdapat di sini.

"Moreover, this is the *only* pond around here."

(MOM p.39)

In (27), the meaning of the root word "one" is intensified by the process of reduplication and a new meaning "only one" is generated.

Plurality

Root = marah "angry"

(28) Kamu juga tentu telah putus asa, seperti mereka itu, *marah-marah* dan rasa tertipu... "Maybe you will also give up as they did, *all* get *angry* and feel cheated..."

(MOM p.29)

Root = kecil "small"

(29) Belakangnya tiga orang anak lagi, semuanya kecil-kecil.

"There are three more children after him, and they are all small."

(DHP p.107)

The sentences in (28) and (29) contain reduplicated words that indicate plurality of the state, which implies more than one person like 'multiple-agents' in (18), (19) and (20). This type of reduplication does not mean grammatical agreement.

Root = sendiri "oneself"

(30) Mereka diam, ..., mencari jawapan *sendiri-sendiri*. "They kept quiet, ..., and sought *their own* answers."

(DHP p.171)

In the instance (30), *sendiri-sendiri* implies plurality of person concerned. These three examples would remain grammatical if each of the reduplicated words were replaced by their root words.

Entirety

Root = tiga "three"

(31) Dengan memeluk kotaknya, dia menghampiri *ketiga-tiga* penyiasat itu. "Holding his box, he came near *all the three* detectives."

(MBM p.7-8)

Root = dua "two"

(32) Syed Fikri menghamipiri mereka, memegang bahu *kedua-dua* kanak-kanak itu. "Syed Fikri approached them, and held *both of* the children by their shoulders."

(DHP p.132)

The data in (31) and (32) are examples of reduplicated instances that imply a sense of entirety. This type of reduplication does not involve a large number of morphological types; rather, in the data examined in this study, *ke*R - R was the only instance of this type.

Finally, some instances of reduplication conveying similarity are given below.

Similarity

Root = kelam "dark, dim"

(33) Keadaan menjadi kelam-kabut beberapa ketika.

"The situation became *chaotic* in a few minutes."

(MOM p.41)

Root = bukan "not"

(34) Empat hari kau orang tak pulang, aku dah fikir yang bukan-bukan.

"For four days, you all hadn't come back, so I had a nonsensical idea."

(DHP p.135)

These instances (33) and (34) contain reduplicated words whose meanings are produced by the changes based on similarity. In (33), for example, the root word *kelam* means "dark, dim": after metaphorical extension, the reduplicated word means "chaotic". In (34) also, the adjective *bukan-bukan* which signifies "nonsense" is derived through the process of metaphorical extension.

4. Reanalysis and Synthesis

In this section, I will re-examine the categories discussed in the previous studies, Asmah Haji Omar (1973) and Abdullah Hassan (2006), and critically review the semantic functions of reduplication. Then, I attempt to make clear how these meanings are related to one another.

4.1. Critical Review

As discussed in 2.1, Asmah Haji Omar (1973) claims that reduplication in Malay has ten types of semantic functions. Some of them are the same as those that were I proposed in the earlier section of this study, but the others are not.

According to Asmah Haji Omar (1973), the data in (30) exemplifies "numeration", moreover examples *dua-dua* "in twos", and *hari-hari* "day by day", are also included in this category. However, these are all included under the category of "plurality" in this study.

Next, the category "unspecified" is not required. As was suggested in Section 3.1, *apa-apa* and *sesiapa*, which are treated as "unspecified" in Asmah Haji Omar (1973), are included in the category of "entirety". Further, *bila-bila* "whenever" and *mana-mana* "wherever" have the same semantic feature "entirety", although these are not regarded as nouns.

Finally, Asmah Haji Omar (1973) considers *berjalan-jalan* "to go for a walk" to be an instance of "aimlessness", while *jejari* "radius" and *tetangga* "neighbor" are treated as "total change of meaning". As was discussed above, *berjalan-jalan* in (23) should be included in the category of "similarity", not "aimlessness". The reduplicated words *jejari* and *tetangga*, each of which has a root word *jari* "finger" and *tangga* "stairs", also belong to the category of "similarity", although both these words function as nouns, not as verbs.

It is clear that all the semantic functions of reduplication that were discussed in Asmah Haji Omar (1973) can be dealt with adequately by the categories proposed in this paper.

The three categories for verbs "at one's best", "exceed" and "intensity" that were proposed in Abdullah Hassan (2006) are not required, because the relevant data can be included in the categories of "repetition", "similarity" or "plurality". For instance, *mati-matian* "(to do something) with great energy", which is derived from *mati* "to die", was included under the "at one's best" category in the earlier study. However, this change of meaning can be explained by the process of metaphorical extension in the category of similarity; that is, "to the utmost extent as deserving one's death" produces the meaning "with great energy". In addition, although it is obvious that *lalu-lalang* "to pass repeatedly" and *bolak-balik* "to go and come back many times" have the meaning of "repetition" inherently, Abdullah Hassan (2006) includes these words under the "exceed" and "intensity" categories respectively.

In fact, it can also be concluded that the syntactic categories (i.e., the parts of speech) that were proposed in both these previous studies, were not suitable for the grammar of Malay: for example, the differences between verbs and adjectives, or the distinctions between adjectives and adverbs.

The data classified as belonging to the category of "exceeding quality" should be included in the category "intensity" proposed in this study: the category of "limit of comparative norm", on the other hand, is difficult to comprehend from the data provided in Abdullah Hassan (2006).

Root = jahat "bad"

(35) ...beberapa orang yang semulanya demikian baik, berubah menjadi *sejahat-jahat* orang. "... some that at first are very nice will turn to become *quite bad* guys."

(DHP p.161)

Root = besar "big"

(36) ...kemudian menggeliat sambil menguap sebesar-besar mulut.

"... then stretched himself, opening his mouth wide, in a sleepy mood."

(DHP p.131)

The instances (35) and (36) involve the seR - R type of reduplication. The meanings of these reduplicated forms belong to the category "intensity" in this study, although sebesar-besar in (36) seems to imply the maximum width in fact. However, this implication can be inferred to be due to the function of the prefix se-, and is not due to reduplication. If this prefix were attached to adjectives followed by nouns, that phrase would then imply the same extent of what is indicated by the nouns. For example, secantik Aminah means "as pretty as Aminah" (the adjective cantik means "pretty"). Hence, the reduplicated words in these sentences are included in the category "intensity", even though the implication of maximum extent is denoted.

Thus, the semantic functions proposed in this study can deal with the semantic features of reduplicated words, such as nouns, verbs, and adjectives presented in Abdullah Hassan (2006).

4.2. Relation of Semantic Functions

In this section 4.2, I attempt to synthesize the functions or semantic categories that were recognized through the descriptions and the analyses presented in this study. I will clarify the relationships among the semantic features as synchronic relations across nouns, verbs and adjectives. This approach is occasionally used in the study of polysemous lexical items. This attempt is quite important in that it can prove the polysemy of reduplication not to be created randomly if the mutual relationships among them are explicitly described.

I first discuss the case of nouns. Reduplicated words that function as nouns have four types of meaning —"plurality", "variety", "similarity" and "entirety"— that are generated by the semantic functions of reduplication. There are mutual relations among the meanings from the perspective of cognitive semantics. The morphological method of reduplication naturally implies the plurality of what was originally meant by the root word. "Plurality" can also have implications about the variety of the referents; from a micro viewpoint, all the substances (including creatures) in this world are more or less different from one another. From the semantic features of all these numbers and various kinds, the notion of "entirety" can be produced to account for all of them. The meaning of "similarity" is most closely related to "variety". The various things represented by "variety" share common points that make them members of the same group. Metaphorical extension is realized based on such points, which produces new meanings as "similarity". These relationships are represented in Figure 3.

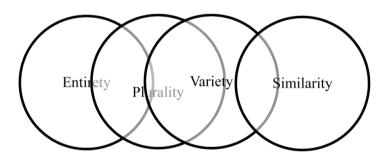


Figure 3: Image of Semantic Relations – Nouns

Figure 3 only shows the relationship from a synchronic standpoint, and does not take productivity into consideration.

Next, I will examine the case of verbs. Reduplicated verbs have five types of meaning — "repetition", "continuity", "plurality", "reciprocity" and "similarity"— that are related to one another. The reduplication of verbs naturally implies plurality of action, that is, "repetition" and "plurality". "Repetition" is closely related to "continuity" because there are slight differences

between repeated actions and continuous actions in the real world. Hence, the meaning of either "repetition" or "continuity" that the reduplicated words express cannot be independent of their contexts. In addition to that, these two types can occur with a single agent, while the type "plurality" cannot. Since multiple-agents are required, "reciprocity" is related to "plurality", although it implies actions in mutual directions. The data in (22), (23), and (24) above indicate that repeated actions can produce new meanings such as "similarity" through metaphorical extension. Figure 4 shows the semantic relationships among verbs.

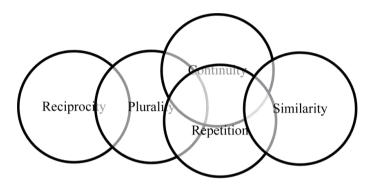


Figure 4: Image of Semantic Relations – Verbs

In the end, I discuss the semantic functions of adjectives. Reduplicated words that function as adjectives can convey four types of meaning —"intensity", "plurality", "entirety", and "similarity". The reduplicated adjectives naturally imply an intensified state or plurality of the people in that state. The former is "intensity" whereas the latter is "plurality". The meaning of "entirety", which refers to all in the member of a certain group, may be related to "plurality", in that multiple-people or multiple-objects are required. As for "similarity", it is considered to be related to "intensity". The meaning of an emphasized state could produce new meanings through the metaphorical process, although the meaning of similarity can be directly generated from the meaning of the root word. The relationships among the semantic functions of adjectives are shown in Figure 5.

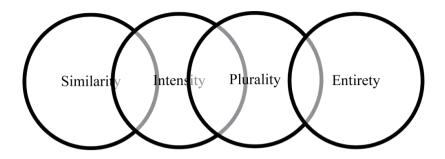


Figure 5: Image of Semantic Relations – Adjectives

As shown in Figures 3, 4, and 5, the semantic functions of reduplication in Malay bear a 'family resemblance' relationship, as suggested in Wittgenstein (1958). Each semantic function is never independent of the other meanings.

5. Conclusion

It can be concluded that reduplication in Malay has some unique features in morphology (see Figures 1 and 2), as well as several features in semantics. Each part of speech has its own semantic functions, such as "plurality", "variety", "similarity", "entirety" for nouns, "repetition", "continuity", "plurality", "reciprocity", "similarity" for verbs, "intensity", "plurality", "entirety", and "similarity" for adjectives. Regarding the prototypical function, nouns rely on the meaning of "plurality", while verbs depend on "repetition". In the case of adjectives, "intensity" and "plurality" can be regarded as the functional prototypes. As I claimed in Section 4, these semantic categories can properly account for the data discussed in the two prior studies. Additionally, the polysemy of reduplication is found to be related to one another, under the concept of family resemblance. The images of each semantic relation are visualized in Figures 3, 4, and 5.

A few questions need to be resolved in further studies. For instance, the semantic functions of reduplicated words that function as adverbs are not dealt with in this paper. In addition, relations between reduplication and the various affixes are not described in detail.

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