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# Bantik Morphology: Postulating Subclasses of Bases

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# The Bantik Language

- ◆ Spoken in North Sulawesi, Indonesia
- ◆ Less than 10,000 speakers, highly endangered
- ◆ It belongs to Sangiric micro-group, Philippine languages, WMP
- ◆ Word formation: Base, Base + Affixes

# Base and Word

- ◆ Base and word in the Philippine languages:
  - ◆ (A) Base-only words
  - ◆ (B) A base + affix(es) = a word
- ◆ Rich morphology, various affixes
- ◆ Word can be categorized into word classes.
- ◆ How about bases? Precategorial? Are they precategorial in Bantik as well?

# Bases that can form both a noun and a verb

- ◆ Noun-forming base? [Class N]
  - ◆ *suha?* “poison (from a kind of plant)”
  - ◆ *bahiga* “language”                                    *bahanei* “courage”
  - ◆ *bunajan* “flower”,                                    *baro* “announcement”
  - ◆ *iŋka?* “order”    *sinage?* “friend, people”
  - ◆ *tintudo?* “advice”                                    *undajan* “medicine”
  - ◆ *simaka* “one side”
  - ◆ (*kandu?* “group work” (takes *ma-/na-*)
- ◆ Verb-forming base? [Class 3]
  - ◆ *paŋkon* “hue”    *bariuŋ* “axe”
  - ◆ *soso?* “tabacco”                                        *saŋkoi* “field”
  - ◆ *opasa?* “fish hook”                                    *kinsuru?* “fist”
  - ◆ *supu* “dart (of a blowpipe)”

# Bantik words

- ◆ Base-only words
  - ◆ conjunction, prepositions
  - ◆ numerals, adverbs
  - ◆ pronouns
  - ◆ nouns (base-only nouns)
  - ◆ **adjectives** (base-only adjectives, around 10% of all the adjectives)
- ◆ Base + Affix(es) words
  - ◆ **adjectives** with the prefix ma-
  - ◆ **verbs** (almost always appear with affix(es))
  - ◆ derivational nouns

# Base Classes

- ◆ Functional words: base-only  
(Is the notion “base” can be applied here?)
- ◆ Noun-forming bases
  - ◆ bases that form nouns without affixation
- ◆ Adjective-forming bases
  - ◆ Class A: bases that form adjectives by themselves
  - ◆ Class B: bases that form adjectives with the prefix ma-
- ◆ Verb-forming bases
  - ◆ Five subclasses
  - ◆ bases that form verbs
  - ◆ can form a noun with derivational affix(es) / reduplication

# Categorization of Bases

- ◆ Can a base be categorized?
  - ◆ Ex. *tahiti* “rain” NOUN
  - ◆ *ma-nahiti* “to rain” VERB
  - ◆ Ex. *ma-ihap* “hot” ADJECTIVE
  - ◆ *ŋ-um-ihap* “to become hot” VERB
- ◆ Morphological features differs depending on the base classes/ subclasses.
  - ◆ Selection of allomorphs of derivational affixes
  - ◆ Possibility of the attachment of derivational affixes
- ◆ Noun forming base, adjective-forming bases, and verb-forming bases show different paradigms when they form a verb.
- ◆ It is necessary to postulate “base classes”.

# Class A adjective-forming bases

Adjectives	Meaning
<i>nasa</i>	many
<i>genei</i>	exhausted
<i>riŋ</i>	crazy
<i>bagai</i>	big
<i>darai</i>	bad
<i>gehe?</i>	be torn
<i>penkon</i>	bent
<i>kokore?</i>	thick (liquid)
<i>sagede?</i>	difficult (people)
<i>tamata</i>	raw
<i>rebo?</i>	poor

# Class B adjective-forming bases

Adjectives	Meaning
<i>ma-iha?</i>	hot
<i>ma-bida</i>	white
<i>ma-pedeke?</i>	short
<i>ma-kapara</i>	thick
<i>sahioko?</i>	fast
<i>ma-togasa?</i>	blunt
<i>ma-sahioko?</i>	fast
<i>ma-suaya</i>	bright
<i>ma-rogo?</i>	fat
<i>ma-misi?</i>	sweet

# Class A and Class B: Different formations

Base	Adjective form	Reduplicated forms		Meaning
		Plurality	Comparison	
Class A				
<i>bagai</i>	<i>bagai</i>	<i>b-a-bagai</i>	<i>baga-bagai</i>	big
<i>ηenei</i>	<i>ηenei</i>	<i>η-a-ηenei</i>	<i>ηene-ηenei</i>	dirty
<i>rebo?</i>	<i>rebo?</i>	<i>r-a-rebo?</i>	<i>rebo-rebo</i>	poor
Class B				
<i>iha?</i>	<i>ma-iha?</i>	<i>ma-a-iha?</i>	<i>ma-iha-iha?</i>	hot
<i>sahioko?</i>	<i>ma-sahioko?</i>	<i>ma-s-a-sahioko?</i>	<i>ma-sahi-sahioko?</i>	fast
<i>togasa?</i>	<i>ma-togasa?</i>	<i>ma-t-a-togasa?</i>	<i>ma-toga-togasa?</i>	blunt

# Class A and Class B: Shared formations 1

	<b>Basic Adjectives</b>	<b>Adjectives expressing Excessiveness</b>	<b>Meaning</b>
<b>Class A</b>	<i>bagai</i>	<i>na-baga-bagai</i>	too big
	<i>ŋasa</i>	<i>na-ŋasa-ŋasa</i>	too many
<b>Class B</b>	<i>ma-sahioko?</i>	<i>na-sahi-sahioko?</i>	too fast
	<i>ma-raŋkasa?</i>	<i>na-raŋka-raŋkasa?</i>	too tall
	<b>Basic Adjectives</b>	<b>Adjectives expressing higher degree</b>	<b>Meaning</b>
<b>Class A</b>	<i>bagai</i>	<i>iŋka-bagai</i>	very big
	<i>ŋenei</i>	<i>iŋka-ŋenei</i>	very tired
<b>Class B</b>	<i>ma-igaha?</i>	<i>iŋka-igaha?</i>	very fast
	<i>ma-kapara</i>	<i>iŋka-kapara</i>	very thick

# Class A and Class B: Shared formations 2

	<b>Basic Adjectives</b>	<b>Adjectives expressing Favorableness</b>	<b>Meaning</b>
<b>Class A</b>	<i>bagai</i>	<i>makika-bagai</i>	like st to be big
	<i>ηasa</i>	<i>makika-ηasa</i>	like st to be many
<b>Class B</b>	<i>ma-suaya</i>	<i>makika-suaya</i>	like st to be bright
	<i>ma-hagan</i>	<i>makika-hagan</i>	like st to be bright
	<b>Basic Adjectives</b>	Derived noun Exclamation	<b>Meaning</b>
<b>Class A</b>	<i>darai?</i>	<i>manka-darai?</i>	How bad!
<b>Class B</b>	<i>suaya</i>	<i>manka-suaya</i>	How bright!

# The verb paradigm

- ◆ Three grammatical voices
- ◆ Voices are indicated by  
**“Voice-indicating affixes”**
  - ◆ Actor Voice *-um-/im-, ma-/na-, maN-/naN-*
  - ◆ Goal Voice: *-AN (-an, -en, -n), NI-/IN-* (past tense)
  - ◆ Conveyance Voice: *ZERO, NI-/IN-* (past tense)
- ◆ The number of voices that a verb can take is fixed
  - ◆ **Single-voiced verbs:** Actor Voice
  - ◆ **Double-voiced verbs:** Actor Voice + one Undergoer Voice
  - ◆ **Triple-voiced verbs:** Actor Voice, Goal Voice, Conveyance Voice

# Basic verbs and Derivational Verbs

- ◆ Basic and derivational verbs
  - ◆ Basic verbs: only with Voice-indicating affixes
    - ◆ *d-um-uhəŋ* (UM-increase) AV
    - ◆ *ma-tiki* (MA-sleep) AV
    - ◆ *ma-moaga?* (MAN-beat) AV
    - ◆ *boag-en* (beat-AN) GV, non-past tense
    - ◆ *ni-boag-en* (NI-beat-AN) CV past tense
    - ◆ *bihei* (give) CV non-past tense
    - ◆ *ni-bihei* (NI-give) CV past tense
  - ◆ Derivational verbs: derivational affix(es) and voice-indicating affix
    - ◆ *ma-ka-tiki* (MA-KA-sleep) ‘can sleep’ AV
    - ◆ *pa-mohe?* (PAN-write) ‘write’ CV

# Noun-forming base? Or verb-forming base?

- ◆ Noun-forming base? [Class N]
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# The verb paradigm 1

## Class 1 and Class 2

	Actor Voice	Goal Voice	Conveyance Voice
<b>-Um/-im- infixed Verb, Class 1 verb, doble-voiced: ex. Sakei “ride”</b>			
<b>Non-past form</b>	UM-Base <i>s-um-akei</i>	Base-AN <i>sake-an</i>	*
<b>Past form</b>	IM- Base <i>s-im-akei</i>	NI-Base-AN <i>ni-sake-an</i>	*
<b>Ma-/na- prefixed Verb, Class 2 verb, single-voiced: ex. tiki “sleep”</b>			
<b>Non-past form</b>	MA-Base <i>ma-tiki</i>	*	*
<b>Past-form</b>	NA-Base <i>na-tiki</i>	*	*

# The verb paradigm 2

## Class 3

**MaN-/naN- prefixed-Verb, Class 3 verb, double-voiced: ex. buno  
“kill”**

<b>Non-past form</b>	MAN-Base <i>ma-muno</i>	Base-AN <i>buno-n</i>	*
<b>Past-form</b>	NAN-Base <i>na-muno</i>	*	NI-Base <i>ni-buno-n</i>

**MaN-/naN- prefixed verb, Class 3 verb, triple-voiced: ex. bihei  
“give”**

<b>Non-past form</b>	MAN-Base <i>ma-mihei</i>	Base-AN <i>buno -n</i>	Base <i>buno</i>
<b>Past-form</b>	NAN-Base <i>na-mihei</i>	NI-Base-AN <i>ni-buno-n</i>	NI-Base <i>ni-buno</i>

# The verb paradigm 3

## Class N

MaN-/naN- prefixed verb, Class N verb, single-voiced: ex. *tahiti*  
“rain”, *du* “spit”, *bahanei* “courage”

Non-past form	maN-Base	*	*
	<i>ma-nahiti</i> “to rain”		
	<i>maŋu-du</i> “to spit”		
	<i>ma-mahanei</i> “to have courage”	*	*
Past form	naN-Base		
	<i>na-nahiti</i>		
	<i>naŋu-du</i>		
	<i>na-mahanei</i>		

# The verb paradigm 4

## Class N

**MaN-/naN- prefixed verb, Class N verb, double-voiced: ex. *bunyan* “flower”, *suhə?* “poison (from a specific plant)”, *undam* “medicine”**

<b>Non-past form</b>	maN-Base	Base-AN	*
	<i>ma-munyan</i> “to decorate”	<i>bunyan-en</i>	
	<i>ma-nuhə?</i> “to poison”	<i>suhə?-en</i>	
	<i>ma-ŋundam</i> “to medicate”	<i>undam-en</i>	
<b>Past-form</b>	naN-Base	NI-Base-AN	*
	<i>na-munyan</i>	<i>ni-bunyan-en</i>	
	<i>na-nuhə?</i>	<i>ni-suhə?-en</i>	
	<i>na-ŋundam</i>	<i>ni-undam-en</i>	

# The verb paradigm 5

## Class ADJ

-Um-/im- infixed verb, Class ADJ verb, single-voiced: ex. *iha?*  
“hot”, *heta?* “wet”, *pedeke?* “short”

Non-past form	-um-Base	*	*
	<i>ŋ-um-iha?</i> ‘to get hot’		
	<i>h-um-eta?</i> ‘to get wet’		
Past-form	<i>ŋ-um-ededeke?</i> ‘to get short’	*	*
	-im-Base		
	<i>ŋ-im-iha?</i>		
	<i>h-im-eta?</i>		
	<i>ŋ-im-ededeke?</i>		

# The progressive aspect

- ◆ Two ways to indicate the progressive aspect
  - ◆ kahagasa + nu- (linker) + verb form
    - ◆ Ex. *kahagasa nu ma-neno* 'be bathing' Actor Voice
    - ◆ *kahagasa nu ma-ki-buno* 'be ordering to kill' causative verb
    - ◆ *kahagasa nu boag-en* 'be being beaten' , Goal Voice
  - ◆ ka-/kapa-/kapaN- + -NE
    - ◆ This form is allowed only for Actor Voice basic verbs.
- ◆ There are three types of formation (or three allomorphs) concerning the progressive aspect.
- ◆ The prefix ka-/kapa-/kapaN- + -NE
  - ◆ ka-: Class 1
  - ◆ kapa-: Class 2 (+ Class 1 base beginning with /k/)
  - ◆ kapaN-: Class 3
  - ◆ Class N and Class ADJ: no progressive aspect

# Examples of the progressive aspect

- ◆ *ka-regei-ne* “be laughing” [Class 1]
- ◆ *kapa-kompoʔ-ne* “be jumping” [Class 1, a base begins with /k/]
  - ◆ This exception occurs because the language wants to avoid the confusion with the nominalized form with ‘C1 + /a/ + base’ reduplication. (cf. *k-a-kompoʔ-ne* ‘the way of jumping’)
- ◆ *kapa-dadinjihīʔ-ne* “be listening” [Class 2]
- ◆ *kapa-moheʔ-ne* “be writing” from the base “*boheʔ*” [Class 3]

# The reciprocal verbs

- ◆ There are two formations of reciprocal verbs. The prefix hiN- is used in both cases.
- ◆ (1) hiN- + Base + -AN
  - ◆ Class 1
  - ◆ Emotional verbs belonging to Class 2
- ◆ (2) hiN- + ‘C1 + /a/ + Base’ reduplication
  - ◆ Class 2
  - ◆ Class 3
- ◆ Class N and Class ADJ bases never take the reciprocal form

# Reciprocal verbs: examples

- ◆ *ma-hin-kahaʔ-en* “to cry together” (cf. *k-um-ahaʔ* “to cry”) [Class 1]
- ◆ *ma-hin-girid-an* “to love each other” (cf. *g-um-iridi?* “to love”) [Class 1]
- ◆ *ma-hin-takuʔ-an* “to fear each other” (cf. *ma-taku?* “to fear”) [Class 2, emotional verb]
- ◆ *ma-him-b-a-bahiga* “to quarrel” (cf. *ma-bahiga* “speak”) [Class 2]
- ◆ *ma-hin-t-a-tiahaʔ* “to share with each other” (cf. *ma-nihaʔ* “to share”) [Class 3]
- ◆ *ma-hin-s-a-suhe* “to dress each other” (cf. *ma-nuhe* “to put on, to dress”) [Class 3]

# *ka*- attached verbs: four paradigms

Class 1 non-past 2-voiced past	ma-ka-Base na-ka-Base	ka-Base-AN ni-KA-Base-AN	* *
Class 2 non-past single-voiced past	ma-ka-Base na-ka-Base	*	*
Class 2 non-past 2-voiced past	ma-ka-Base na-ka-Base	*	KA-Base NI-KA-Base
Class 3 non-past 2-voiced past	na-ka-Base na-ka-Base	*	KA-Base NI-KA-Base
Class 3 non-past past	na-ka-Base na-ka-Base	ka-Base-AN ni-KA-Base-AN	KA-Base NI-KA-Base
Class ADJ non-past past	ma-ka-Base na-ka-Base	ka-Base-AN ni-KA-Base-AN	* *
Class N non-past past	*	*	*
	*	*	*

## Derivational affixes and verb-forming base subclasses: Differences in which level are observed?

Affix	productivity	Subclasses	morphology	syntax	semantic
<i>hiN-</i>	×	Class 1, 2, 3	yes	none	none
<i>tiŋka-</i>	×	Class 1, 2, 3	none	none	yes
<i>kipa-</i>	△	Class 1, 2	none	yes	yes
<i>ka-</i>	○	Class 1, 2, 3, Class ADJ	yes	yes	none
<i>pa/paN-</i>	○	Class 1, Class 2 intr	yes	yes	yes
	×	Class 3			
Locative	○	Clas 1, 2, 3	yes	none	none
Instrumental	△	Class 3	yes	none	none
<i>ka-</i>	○	Class 1, 2, 3, Class ADJ	yes	none	none

Affix	morphology	syntax	semantic
<i>hiN-</i>	yes Class 1 → hiN-+AN Class 2, 3 → hiN-+RED	none	none
<i>tiŋka-</i>	none	none	Class 1, Class 2 (intr) → deliberate/ volitional  Class 3, Class 2 (tr) → reflexive
<i>kipa-</i>	none	yes Class 1 ACTOR-ASSISTANT Class 2, 3 CAUSER-THEME-CAUSEE	yes Class 1 → assistance Class 2, 3 → polite causative
<i>ka-</i>	yes Paradaigm	yes number of Object number of voices	none

# Conclusion

- ◆ It is necessary to posit base classes and subclasses for simple description.
- ◆ The distribution of allomorphs are explained by the notion of base subclasses.
- ◆ The paradigm of basic verbs and derivational verbs in Bantik may differ according to the subclasses of verb-forming bases.
- ◆ Syntactic features may differ according to the subclasses of bases.
- ◆ Semantic features also may differ.