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EDITOR

Benjamin F. Elson

EDITORIAL COMMITTEE

Kenneth L. Pike

Robert E. Longacre

Viola Waterhouse

**STUDIES IN
PERUVIAN
INDIAN LANGUAGES: I**

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Editor's Note

The seven articles which comprise this volume describe, in part, the structures of some of the languages spoken in eastern Peru. The data were gathered and the articles written as part of the Summer Institute of Linguistics field program in that country. The Institute currently has 31 languages under investigation in eastern Peru, so additional studies of these languages will be forthcoming.

Five of the articles are syntactic studies cast in the tagmemic format developed by Kenneth L. Pike; indeed, his influence is apparent in all of the articles. The last two articles deal with the phonology of the languages under attention.

Mary Ruth Wise served as consultant on many of the articles. Viola Waterhouse has served as Assistant Editor for the volume, and Lucille Schneider gave valuable assistance in preparing the manuscripts for printing.

For convenience of composing the book the symbol Δ has been used where the authors of the manuscripts used \bar{i} .

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1

EMIC CLASSES WHICH MANIFEST THE OBLIGATORY TAGMEMES IN MAJOR INDEPENDENT CLAUSE TYPES OF AGUARUNA (JIVARO)

by

Mildred L. Larsen

0. Introduction

1. Emic verb root classes
2. Emic independent verb affix classes
3. Emic verb base classes
4. Emic verb stem classes
5. Emic independent verb margin classes
6. Emic independent verb classes
7. Emic independent clause classes

0. Introduction. Aguaruna, a dialect of Jivaro, is spoken by some 8,000 Indians living in the jungle of northern

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Peru on the upper Marañon River and its many tributaries.¹

This presentation is concerned with the emic classes which manifest the obligatory tagmemes of major independent clause types in Aguaruna. Each major independent clause type has an obligatory predicate tagmeme manifested by a different class of verbs. For this reason the focus of attention is on the internal structure of independent verbs. Etic variants and restrictions of distribution are not described in this paper. The advantage of this approach is that in dealing first with the emic contrasts a clear picture of the patterns can be seen while the details and indeterminancies are relegated to descriptions of the variants.

In presenting the contrastive materials which determine emic classes in a hierarchical sequence, this presentation begins with the smaller unit and works up to the larger units. Specifically, verb root classes and verb affix classes are discussed first, next the verb base classes and the verb stem classes in which roots occur with derivational affixes. Verb margins, which consist of inflectional affixes in sequence are discussed and then verbs which consist of verb stem or verb base plus verb margin. Finally the independent clauses are discussed in which independent verbs occur manifesting the obligatory predicate tagmemes.

Charts are given to show the emic classes and sub-

¹For a description of the phonemic system see Pike and Larson (n.d.).

The symbols used here to represent the phonemes of Aguaruna are as follows: a, i, ʌ, and u for the vowels; p, t, k, ʔ, b, d, ɟ, ʈ, s, ʃ, h, n, m, ɠ, w, and y for the consonants, accent mark for phonemic stress; and a hook under the vowel for nasalization.

For descriptions of the phonemics and grammar of other dialects of Jívaro see Beasley and Pike (1957) and Turner (1957). Also for additional vocabulary see Larson (1957).

I am indebted to Kenneth L. Pike for many helpful suggestions during the preparation of this paper.

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classes. Although the labels on the charts are drawn from meaning components, they are based on the contrasts in formal structure paralleling these semantic labels. Minimal contrastive features of form and meaning which determine emic classes of verb roots, verb affixes, verb bases, verb stems, independent verb margins, independent verbs, and independent clauses are described.

In the charts, the major classes are those in the vertical column at the left. If subclasses of these major classes occur they are labelled in succeeding vertical columns. The classes named horizontally across the top are minor subclasses. Note for example in Charts I and IV (pages 4 and 15) transitive-intransitive contrast sets up major classes of roots and stems. However in Charts VI and VII (pages 24 and 29) this contrast sets up only minor subclasses of verbs and clauses.² At verb and clause level the greater contrasts reflect the verb margin classes and therefore the four major verb margin classes--imperative, stative, active, and equative--are shown as parallel in the major classes of verbs and of clauses. Compare Charts V, VI, and VII (pages 20, 24 and 29).

In the following sections a summary of the emic classes is given first and these classes are shown on a chart. Contrastive formulas are given for all classes if some of the classes on the chart have complex internal structure. Finally a description of the contrasts which determine the emic classes is given with illustrations. Illustrations have been chosen to show contrast rather than variety.

1. Emic verb root classes. The two major classes of

²This differs considerably from other Peruvian languages such as Cashibo where transitive-intransitive contrast sets up major verb classes. See Shell (1957).

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verb roots, transitive and intransitive, are divided into minor subclasses singular, plural, and neutral as shown on Chart I.

	Singular	Plural	Neutral
Transitive	SgTVR	PITVR	NeTVR
Intransitive	SgItVR	PIItVR	NeItVR

CHART I: EMIC VERB ROOT CLASSES

Transitive singular roots indicate singular object whereas intransitive singular roots indicate singular subject. Transitive plural roots indicate plural object whereas intransitive plural roots indicate plural subject. Note the following illustrations of contrast between the class SgTVR (singular transitive verb roots) and the class PITVR (plural transitive verb roots) in which the singular-plural contrast is in the object: *agkaáta* 'put it in!' (*agkaá-* 'put in singular object', *-ø* 'third person referent', *-ta* 'second person imperative'), *čimpiáta* 'put them in!' (*čimpiá-* 'put in plural object', *-ø* 'third person referent', *-ta* 'second person imperative'); *ahápata* 'throw it out!' (*ahápa-* 'throw out singular object', *-ø* 'third person referent', *-ta* 'second person imperative'), *uááta* 'throw them out!' (*uáa-* 'throw out plural object', *-ø* 'third person referent', *-ta* 'second person imperative'); *akámsata* 'put yourself down!' (*aká-* 'put down singular object', *-m* 'reflexive', *-sa* 'personal action', *-ta* 'second person imperative'), *pakámsata* 'put yourselves down!' (*paká-* 'put down plural object', *-m* 'reflexive', *-sa* 'personal action', *-ta* 'second person imperative').

Note also the following illustrations of contrast between the class SgItVR (singular intransitive verb roots) and the class PIItVR (plural intransitive verb roots) in which the

singular-plural contrast is in the subject: puháwai 'he is staying' (puhá- 'singular subject stays', -wa 'third person', -i 'declarative'), bačátui 'they stay' (bačát- 'plural subject stays', -u 'third person', -i 'declarative'); taáwai 'he is arriving' (taá- 'singular subject arrives', -wa 'third person', -i 'declarative'), kaunáwai 'they are arriving' (kauná- 'plural subject arrives', -wa 'third person', -i 'declarative'); šináwai 'it's making noise' (šiná- 'singular subject makes noise', -wa 'third person', -i 'declarative'), pampáwai 'they are making noise' (pampá- 'plural subject makes noise', -wa 'third person', -i 'declarative').

Neutral transitive verb roots have one root for both singular and plural objects. If the object is plural this is indicated in the noun phrase manifesting the clause-level object tagmeme rather than by the verb root. Note the following illustrations: dapín wainkábiahai 'I saw a snake' and kuášat dapín wainkábiahai 'I saw many snakes' (kuášat 'many', dapí- 'snake', -n 'objective case', wain- 'see', -ø 'third person referent', -ka 'unit action', -bia 'distant past', -ha 'first person', -i 'declarative'); makíčik itáta 'bring one!' (makíčik 'one', itá- 'bring', -ø 'third person referent', -ta 'second person imperative'), kuášat itáta 'bring many!' (kuášat 'many', itá- 'bring', -ø 'third person referent', -ta 'second person imperative').

Neutral intransitive verb roots do not indicate number. In a verb construction with these roots plural subject is indicated by a plural subject manifesting the clause-level subject tagmeme and/or by a pluralizing suffix in the verb margin construction. The following are illustrations of the class NeItVR (neutral intransitive verb roots): čičastá 'talk!' (čiča- 'talk', -s 'personal action', -ta 'second person imperative'), čičastáhũm 'you all talk!' (čiča- 'talk', -s 'personal action', -ta 'second person imperative', -hũ 'plural', -m 'second person'); níí kanágmaka

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'did he sleep?' (nfi 'he', kaná- 'sleep', -g 'segmented action', -ma 'recent past', -ka 'interrogative', -ø 'third person'), díta kanágmaka 'did they sleep?' (díta 'they', kaná- 'sleep', -g 'segmented action', -ma 'recent past', -ka 'interrogative', -ø 'third person').

Transitive roots manifest the core tagmeme (the obligatory tagmeme in all verb base constructions) in transitive verb bases. Intransitive roots manifest the core tagmeme in intransitive verb bases (see 3).

2. Emic independent verb affix classes. Major independent verb affix classes, as indicated in Chart II, are derivational and inflectional.³ The derivational class has subclasses verbalizing, voice, and aspect. Voice has further subclasses causative, referent plural, referent, and referent person. The inflectional class has subclasses negative, imperative, stative, equative, tense, plural, person, and mode. Mode has subclasses declarative, interrogative, and subjunctive.

In Chart II each class is given a class number as well as a class name. Classes are identified by number in the formulas in later sections. Decade numbers, as given on the chart, indicate emic classes and are somewhat related to the order in which the tagmemes they manifest occur in relation to one another in verb constructions. Since affixes do not have the same order in all constructions a higher number may sometimes precede a lower number in a given construction. In the list of morphemes in the following paragraphs digit numbers are assigned the members of each class.

³ Only the inflectional classes which manifest tagmemes of the margins of independent verbs are given here. There are other classes which manifest the tagmemes of the margins of dependent verbs.

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Derivational	Verbalizing		VerDeVAf	10
	Voice	Causative	CaVoDeVAf	20
		Ref. Plural	RefPlVoDeVAf	30
		Referent	RefVoDeVAf	40
		Ref. Person	RefPerVoDeVAf	50
	Aspect		AsDeVAf	60
Inflectional	Negative		NegIfVAf	70
	Imperative		ImpIfVAf	80
	Stative		StIfVAf	90
	Equative		EqIfVAf	100
	Tense		TenIfVAf	110
	Plural		PlIfVAf	120
	Person		PerIfVAf	130
	Mode	Declarative	DMoIfVAf	140
		Interrogative	InMoIfVAf	150
		Subjunctive	SjMoIfVAf	160

CHART II: EMIC INDEPENDENT VERB AFFIX CLASSES

Derivational affixes occur with verb and noun roots to form verb bases and verb stems. Inflectional suffixes manifest the tagmemes of the verb margin constructions.

Since each of the affix classes has a very limited membership all of the members found in the data are given below with an example showing their occurrence in a verb construction. Etc variants are listed for ease of identification in other illustrations; however the distribution of the allomorphs is not given since the focus of attention is on emic contrasts.

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Class 10, verbalizing suffixes, occurs with certain noun roots to form verb bases as described in 3: 11 -ma ~ -m 'to do' as in tamašmágtá 'comb it!' (tamáš 'comb', -ma, -g 'segmented action', -ta 'second person imperative'); 12 -maa ~ -baga 'to become' as in učimáhai 'I'm becoming a child' (učí 'child', -maa, -ha 'first person', -i 'declarative'); 13 -na ~ -n 'to make' as in nuwánau 'he married' (núwa 'his woman', -na, -u 'past stative').

Class 20, causative affix, manifests the causative tag-meme in causative verb stems as described in 4: 21 V- (in which V is a reduplication of the initial vowel of the root in most instances but of a quality only morphologically predictable in others) ∞ (-mti ~ -mit) as in aháata 'cause him to arrive!' (a-, haa- 'arrive', -∅ 'third person referent', -ta 'second person imperative'); dušímtihata 'make him laugh!' (duši- 'laugh', -mti, -∅ 'third person referent', -ha 'segmented action', -ta 'second person imperative').

Classes 30, 40, and 50--referent plural, referent, and referent person suffixes⁴--manifest the referent plural, referent, and referent person tagmemes respectively in verb stems as described in 4: 31 -ka 'plural referent' as in sukágtusta 'give to us!' (su- 'give', -ka, -g 'referent', -tu 'first person referent', -s 'personal action', -ta 'second person imperative'); 41 (-g ~ -h_u) ∞ (-t ~ -tu ~ -ta) 'referent' as in dukúg suh_ut_sáta 'give it to my mother!' (dukúg 'my mother', su- 'give', -h_u, -t 'first person referent', -sa 'personal action', -ta 'second person imperative'); 51 (-t ~ -ta ~ -tu ~ -ti) ∞ (-g ~ -h_u ~ -ha) 'first person referent' as in agátui 'he is looking for me' (agá- 'look for', -t, -u 'third person', -i 'declarative'); 52

⁴Morphemes of class 50 have a meaning of person. However, whether the person indicated is the referent-object or the direct-object depends on the construction as a whole (see 4).

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-pa \in (-tam \sim -tpa) \in (-ham \sim -gpa) 'second person referent' as in agápawai 'he is looking for you' (agá- 'look for', -pa, -wà 'third person', -i 'declarative'); 53 - \emptyset 'third person referent' as in agáwai 'he is looking for him' (agá- 'look for', - \emptyset , -wa 'third person', -i 'declarative'); 54 -mam \sim -maa \sim -m 'reflexive' as in takágmamhai 'I'm working for myself' (taka- 'work', -g 'referent', -mam, -ha 'first person', -i 'declarative'); 55 -dai \sim -ni 'reciprocal' as in takagdáisata 'work for each other!' (taka- 'work', -g 'referent', -dai, -sa 'personal action', -ta 'second person imperative').

Class 60, aspect suffixes, manifests the aspect tagmeme in completive verb stems as described in 4: 61 -sa \sim -s 'personal action' as in aúsabiahai 'I read it' (au- 'read', - \emptyset 'third person referent', -sa, -bia 'distant past', -ha 'first person', -i 'declarative'); 62 -ma \sim -m 'augmented action' as in puhúmata 'stay staying!' (puhu- 'stay', -ma, -ta 'second person imperative'); 63 -ka \sim -k 'unit action' as in sumákta 'buy it!' (sumá- 'buy', - \emptyset 'third person referent', -k, -ta 'second person imperative'); 64 -ha \sim -g 'segmented action' (action made up of several smaller actions) as in inágmaka 'did he hang them up?' (iná- 'hang up plural object', -g, -ma 'recent past', -ka 'interrogative', - \emptyset 'third person'); 65 -ki \sim -k 'action away from or over a large area' as in tupikákiu 'he ran' (tupiká- 'run', -ki, -u 'past stative').

Inflectional subclasses have the following contrastive distribution within the verb margin tagmemes discussed in 5.

Class 70, negative suffix, manifests the negative tagmeme in all verb margins: 71 (-ču \sim -ča \sim -čaa \sim -č \sim -ču \sim -ča \sim -š) \in (-i \sim -ig) 'negative' as in wáčat-tahai 'I'll not go' (wa- 'go', -ča, -tta 'future', -ha 'first person', -i 'declarative').

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Class 80, imperative suffixes,⁵ manifests the imperative tagmeme in imperative verb margins: 81 (-ta ~ -ata) ∞ -pa 'second person imperative' as in wata 'go!' (wa- 'go', -ta); 82 -ti ∞ -ka 'third person imperative' as in wat_i 'that he go!' (wa- 'go', -ti); 83 -mi 'plural inclusive imperative' as in wami 'let's go!' (wa- 'go', -mi).

Class 90, stative suffixes, manifests the stative tagmeme in stative verb margins: 91 -u 'past stative' and 'narrative past' as in wáu 'he went' (wa- 'go', -u); 92 -a 'past perfect stative' as in wáa 'he has gone' (wa- 'go', -a); 93 -tin ~ -tnu 'future stative' as in wátin 'he will go' (wa- 'go', -tin).

Class 100, equative suffixes,⁶ manifests the equative tagmeme in equative verb margins: 101 -i ~ -it ~ -ai ~ -ait ~ -aita ~ -ita ~ -wait ~ -waita ~ -yai 'to be' as in takáuwaithai 'I'm a worker' (taka- 'work', -u 'habitual

⁵ Note that 115 -ta ∞ -ti 'desirable future' has the same phonemic shape as morphemes 81 and 82. An alternate analysis might consider 115 as two morphemes and thus the same morphemes as 81 and 82, especially since the allomorphs of 115 are morphological alternates, -ta occurring with 'second person' morphemes and -ti occurring with 'third person' morphemes. Then morphemes 81 and 82 would be members of both imperative and tense affix classes with the meaning of 'second person desirable future' and 'third person desirable future'. Note, however, that the forms -ta and -t of 115 also occur with first person morphemes.

Similarly morpheme 71, listed above, has a morphological alternate (-i ~ -ig) which has the same phonemic shape as 116 'undesirable future' and which occurs manifest. *g* the negative tagmeme in imperative margin constructions only, but also manifests the tense tagmeme in other constructions. I have arbitrarily chosen to consider these different morphemes with slightly different meanings in spite of the similarity in phonemic shape and some overlap in meaning.

See Turner (1957) for an alternate analysis.

⁶ Class 100, equative suffixes, are listed here as inflectional. However an alternate analysis might consider them derivational. This would change the formulas of item verb bases in 3 to include an addi-

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doer', -wait, -ha 'first person', -i 'declarative'); 102 - Λ 'to have been' as in yá Λ 'who was it?' (ya 'who', - Λ).

Class 110, tense suffixes, manifests the tense tagmeme in active verb margins: 111 -ma ~ -m 'recent past' as in wámaka 'did he go?' (wa- 'go', -ma, -ka 'interrogative', - \emptyset 'third person'); 112 -yi ~ -ya 'remote past' as in wáyí 'he went long ago' (wa- 'go', -yi); 113 -mayi⁷ ~ -bia ~ -mia ~ -bi ~ -may 'distant past' as in wáagmayi 'they went some while ago' (wa- 'go', -ag 'plural person', -mayi, - \emptyset 'third person'); 114 -tat ~ -tta 'future' as in wátatmak 'will you go?' (wa- 'go', -tat, -ma₂ 'second person', -k 'interrogative'); 115 -t ~ -ta ∞ -ti₂ 'desirable future' as in takastáhaš 'I might work (wanting to)' (taka- 'work', -s 'personal action', -ta, -ha 'first person', -š 'dubitative'); 116 -in 'undesirable future' as in takasáinhaš 'I might work (not wanting to)' (taka- 'work', -sa 'personal action', -in, -ha 'first person', -š 'dubitative').

Class 120, plural suffix, manifests the plural tagmeme in imperative, stative, and active verb margin constructions: 121 (-ag ~ -h₂ ~ -h ~ -ug) ∞ (-ina ~ -na) ∞ -ma 'plural person' as in wáagmaka 'did they go?' (wa- 'go', -ag,

tional obligatory tagmeme, verbalizer, manifested by class 100 suffixes. In 5 equative verb margins would no longer have an obligatory equative tagmeme.

I have here chosen to consider class 100 as manifesting a margin tagmeme because no other stem forming affixes occur after the negative tagmeme which is the first margin tagmeme. Also in all other verb constructions there is a clear break between nucleus and margin which is also preserved for equation verbs by considering class 100 inflectional rather than derivational.

⁷I consider -mayi a morpheme idiom made up of -ma 'recent past' and -yi 'remote past'. The meaning of the idiom is then 'distant past' a time between the other two. The term morpheme idiom is a suggestion of Lorrie Anderson. For additional discussion of complex morpheme idioms see Pike (1961).

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-ma 'recent past', -ka 'interrogative', - \emptyset 'third person').

Class 130, person suffixes, manifests the person tag-meme in imperative, active, and equative verb margins: 131 -ha ~ -g 'first person' as in wámahai 'I went' (wa- 'go', -ma 'recent past', -ha, -i 'declarative'); 132 -m_Δ ~ -m ~ -um_Δ 'second person' as in wámaum_Δ 'you went' (wa- 'go', -ma 'recent past', -um_Δ); 133 (-wa ~ -u) ∞ - Δ ∞ - \emptyset 'third person' as in wáma 'he went' (wa- 'go', -m 'recent past', - Δ); 134 -hi 'first person plural inclusive' as in wámahi 'we went' (wa- 'go', -ma 'recent past', -hi); 135 -ham_Δ ~ -ham 'first person to second person singular'⁸ as in uhaktáham_Δ 'I'll tell you' (uha- 'tell', -k 'unit action', -ta 'desirable future', -ham_Δ); 136 -him_Δ ~ -him 'first person to second person plural' as in uhaktáhim_Δ 'I'll tell you all' (uha- 'tell', -k 'unit action', -ta 'desirable future', -him_Δ).

Class 140, declarative mode suffix, manifests the mode tagmeme in declarative active verb margins and in declarative equative verb margins: 141 -i 'declarative' as in takástathai 'I will work' (taka- 'work', -s 'personal action', -tat 'future', -ha 'first person', -i).

Class 150, interrogative mode suffixes, manifests the mode tagmeme in interrogative 1 active verb margins and in interrogative 1 equative verb margins: 151 -ka ~ -k 'interrogative' as in takástathak 'shall I work?' (taka- 'work', -s 'personal action', -tat 'future', -ha 'first person', -k); 152 -pi ~ -pita ~ -api ~ -p 'hypothetical interrogative' as

⁸ First person subject to second person object is the only object relation shown in the margin. In 135 the morphemes break down easily into -ha 'first person', 131, and -m_Δ 'second person', 132. However, in 136 -hi 'first person plural inclusive', 134, plus -m_Δ 'second person', 132, does not result in 'first person plural inclusive to second person' but rather means 'first person singular to second person plural'. Therefore they are treated as a unit or morpheme idiom.

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in takástathapi 'I'll work, won't I?' (taka- 'work', -s 'personal action', -tat 'future', -ha 'first person', -pi).

Class 160, subjunctive mode suffixes, manifests the mode tagmeme in subjunctive active verb margins: 161 -stai 'optative' as in takastáhastaI 'I'll probably work' (taka- 'work', -s 'personal action', -ta 'desirable future', -ha 'first person', -stai); 162 -š ~ -ša ~ -aš 'dubitative' as in takasáinhaš 'I might work (not wanting to)' (taka- 'work', -sa 'personal action', -in 'undesirable future', -ha 'first person', -š).

3. Emic verb base classes. There are two major classes of verb bases, activity and item. Activity bases have subclasses transitive and intransitive. Both major classes have minor subclasses verbal and nominal. These classes are indicated on Chart III.

		Verbal	Nominal
Activity	Transitive	VeTAyVB	NomTAyVB
	Intransitive	VeItAyVB	NomItAyVB
Item		VeImVB	NomImVB

CHART III: EMIC VERB BASE CLASSES

Verb base classes are symbolized by the formulas given below. Manifesting classes indicated by abbreviations are found on Charts I and II. Noun classes are not described in this paper and are given here by name without further definition. An equal sign is to be read 'consists of', a colon 'manifested by', a plus sign indicates an obligatory tagmeme, and a bar indicates that a tagmeme may be manifested by one or another emic class and is to be read 'or'. For example the first formula reads 'Verbal transitive activity verb bases consist of an obligatory core tagmeme manifested by transitive verb roots'.

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VeTAyVB = + Core:TVR

NomTAyVB = + Core:Noun Root Class x + Verbalizing:10

VeItAyVB = + Core:ItVR

NomItAyVB = + Core:Noun Root Class z + Verbalizing:10

VeImVB = + Core:VR + Nominalizing:Nominalizers

NomImVB = + Core:Subject Nouns/Locative Nouns/Subject
Pronouns/Adjectives

Activity bases consist of either a verb root or a noun root plus a verbalizer. They manifest the base tagmemes in verb stems: mačcabiahai 'I didn't kill' (mač- 'kill', -ča 'negative', -bia 'distant past', -ha 'first person', -i 'declarative'); tamašmáhta 'comb it!' (tamáš 'comb', -ma 'to do', -g 'segmented action', -ta 'second person imperative').

Item bases consist of either a verb root plus a nominalizer or of certain classes of nouns, pronouns and adjectives. They manifest the nucleus tagmeme in nominative equative verbs: takatáigkai 'is it used for working?' (taka- 'work', -ta 'abstract', -ig 'agent', -ka 'interrogative', -i 'to be'); atášskai 'is it a chicken?' (atáš 'chicken', -ka 'interrogative', -i 'to be').

Subclass transitive of activity bases consists of either transitive verb roots or noun root class x plus a verbalizing suffix. They manifest the base tagmeme in transitive verb stems: huuktá 'take it!' (huu- 'take singular object', -ø 'third person referent', -k 'unit action', -ta 'second person imperative'); pamáu tagkumáhai 'I'm taming a tapir' (pamáu 'tapir', tátku 'domesticated animal', -ma 'to do', -ha 'first person', -i 'declarative').

Subclass intransitive consists of either intransitive verb roots or noun root class z plus a verbalizing suffix.

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They manifest the base tagmemes in intransitive verb stems: kanágtathai 'I'll sleep' (kaná- 'sleep', -g 'segmented action', -tat 'future', -ha 'first person', -i 'declarative'); suntagmáawai 'he's becoming a soldier' (suntág 'soldier', -maa 'to become', -wa 'third person', -i 'declarative').

Minor subclass verbal bases have the obligatory core tagmeme manifested by a verb root: hagáčaabi 'he didn't arrive' (haga- 'arrive', -čaa 'negative', -bi 'distant past', -ø 'third person'); takáuwaithai 'I'm a worker' (taka- 'work', -u 'habitual doer', -wait 'to be', -ha 'first person', -i 'declarative').

Minor subclass nominal bases have the obligatory core tagmeme manifested by a noun root or by certain classes of nouns, pronouns, or adjectives: taníšmagmi 'let's build a fence' (taníš 'fence', -ma 'to do', -g 'segmented action', -mi 'plural inclusive imperative'); págkahaitma 'you are good' (págkah- 'good', -ait 'to be', -ma 'second person').

4. Emic verb stem classes. There are two major classes of verb stems--transitive and intransitive. Both major classes have subclasses simple and causative and minor subclasses completive and continuative. These classes are indicated on Chart IV.

		Completive	Continuative
Transitive	Simple	CmSiTVSm	CnSiTVSm
	Causative	CmCaTVSm	CnCaTVSm
Intransitive	Simple	CmSiItVSm	CnSiItVSm
	Causative	CmCaItVSm	CnCaItVSm

CHART IV: EMIC VERB STEM CLASSES

Verb stem classes are symbolized by the formulas given below. The minor subclass contrast of completive-continuative is not shown in the formulas. However, a plus

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choice of the aspect tagmeme constitutes a completive stem whereas a minus choice of the aspect tagmeme constitutes a continuative stem. Manifesting classes indicated by abbreviations are found on Charts II and III.

$$\text{SiTVSm} = + \text{Base:TVB} \quad \underline{+} (\underline{+} \text{Plural:30} \quad \underline{+} \text{Referent:40} \\ + \text{Person:50}) \quad + \text{Aspect:60}$$

$$\begin{array}{l} \text{CaTVSm} = + \text{Causative:20} \quad + \text{Base:TVB} \quad + \text{(+ Plural:30)} \\ \quad \quad \quad \uparrow \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \uparrow \\ \quad \quad \quad + \text{Referent:40} \quad + \text{Person:50} \quad + \text{Aspect:60} \end{array}$$

$$\begin{aligned} \text{SiItVSm} = & + \text{Base:ItVB} \quad + (+ \text{Plural:30} \quad + \text{Referent:40} \\ & + \text{Person:50}) \quad + \text{Aspect:60} \end{aligned}$$

$$\begin{array}{l} \text{CaitVSm} = +\text{Causative:20} + \text{Base:ItVB} + (\pm \text{Plural:30}) \\ \quad \quad \quad \uparrow \qquad \qquad \qquad / \qquad \qquad \qquad \uparrow \\ \quad \quad \quad +\text{Referent:40} + \text{Person:50} \quad + \text{Aspect:60} \end{array}$$

Transitive verb stems have an obligatory base tagmeme manifested by transitive verb bases. Transitive stems manifest the nucleus tagmeme of transitive verbs: *yaigtá* 'help him!' (*yaĩ-* 'help', *-Ø* 'third person referent', *-g* 'segmented action', *-ta* 'second person imperative'); *waĩnkašta* 'don't see it!' (*wain-* 'see', *-Ø* 'third person referent', *-ka* 'unit action', *-š* 'negative', *-ta* 'second person imperative').

Intransitive verb stems have an obligatory base tagmeme manifested by intransitive verb bases. Simple intransitive stems manifest the nucleus tagmeme of intransitive verbs: puhúyí 'he stayed' (puhú- 'singular subject stays', -yí 'remote past', -Ø 'third person'); mařthastai 'I'll probably bathe' (mai- 'bathe', -t 'desirable future', -ha 'first person', -stai 'optative').

In an intransitive verb stem the referent precedes the

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referent person tagmeme and they are mutually obligatory and refer either to the possessor of the clause-level subject tagmeme filler as in *atáŝ puhúgtawai* 'I have a chicken' or 'a chicken is in reference to me' (*atáŝ* 'chicken', *puhú-* 'singular subject is', *-g* 'referent', *-ta* 'first person referent', *-wa* 'third person', *-i* 'declarative'), or it may refer to the person of the filler of the clause-level referent-object tagmeme as in *kantamhútuata mína* 'sing for me!' (*kantam-* 'sing', *-hú* 'referent', *-tu* 'first person referent', *-ata* 'second person imperative', *mína* 'for me').

In a transitive verb stem the referent and referent person tagmemes are not mutually obligatory, and with certain roots the referent person tagmeme may precede the referent tagmeme. If only referent person tagmeme occurs the person indicated is the direct-object: *agátui* 'he is looking for me' (*agá-* 'look for', *-t* 'first person referent', *-u* 'third person', *-i* 'declarative'); *ikantúкта* 'take me across!' (*i-* 'causative', *kan-* 'go across', *-tu* 'first person referent', *-k* 'unit action', *-ta* 'second person imperative'). However, if the referent tagmeme also occurs, the person indicated is either the owner of the direct-object or the referent-object person: *agathukatatui* 'he will look for mine' or 'he will look for me (on my behalf)' (*agá-* 'look for', *-t* 'first person referent', *-hú* 'referent', *-ka* 'unit action', *-tat* 'future', *-u* 'third person', *-i* 'declarative'); *ikantúgkata* 'take mine across!' or 'take it across for me (on my behalf)!' (*i-* 'causative', *kan-* 'go across', *-tu* 'first person referent', *-g* 'referent', *-ka* 'unit action', *-ta* 'second person imperative').

Causative stems contrast with simple stems in that they have an additional obligatory causative tagmeme which, with some bases, precedes the base tagmeme, and with others, follows the base tagmeme: *amagkáknahai* 'I caused it to become lost' (*Λ-* 'causative', *magka-* 'lose', *-ø* 'third

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person referent', -k 'action away from', -ma 'recent past', -ha 'first person', -i 'declarative'); kánumtikhai 'I caused him to sleep' (kanu- 'sleep', -mti 'causative', -k 'unit action', -ha 'first person', -i 'declarative').

As stated above, transitive stems manifest the nucleus tagmeme of transitive verbs and simple intransitive stems the nucleus tagmeme of intransitive verbs. However, causative intransitive stems manifest the nucleus tagmeme of transitive verbs. A verb with a causative intransitive stem manifesting the nucleus has only one direct-object; a transitive verb with a causative transitive stem manifesting the nucleus may have two direct-objects. Note the following clauses in which the first has a causative transitive stem in the verb and the last has a causative intransitive stem in the verb. wi učín agámtikmahai papín 'I caused the child to look for the paper' (wi 'I', učí 'child', -n 'objective case', agá- 'look for', -mti 'causative', -Ø 'third person referent', -k 'unit action', -ma 'recent past', -ha 'first person', -i 'declarative', papí 'paper', -n 'objective case'); wi učín puhúmtikmahai 'I caused the child to stay' (wi 'I', učí 'child', -n 'objective case', puhú- 'stay', -mti 'causative', -k 'unit action', -ma 'recent past', -ha 'first person', -i 'declarative').

Both transitive and intransitive stems have minor subclasses completive and continuative. If the aspect tagmeme is manifested the resulting stem is a completive stem, if not, it is a continuative stem: takásmahai 'I worked' (taka- 'work', -s 'personal action', -ma 'recent past', -ha 'first person', -i 'declarative'), takámhai 'I was working' (taka- 'work', -m 'recent past', -ha 'first person', -i 'declarative'); wainkáttahai 'I'll see it' (wain- 'see', -Ø 'third person referent', -ka 'unit action', -tta 'future', -ha 'first person', -i 'declarative'), wáintathai 'I'll be seeing

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it' (wáin- 'see', - \emptyset 'third person referent', -tat 'future', -ha 'first person', -i 'declarative').

There are some verb roots which are never followed by an aspect suffix but have different root forms for completive and continuative stems: támahai 'I was saying' (ta- 'say', -ma 'recent past', -ha 'first person', -i 'declarative'); tímahai 'I said' (ti- 'say', -ma 'recent past', -ha 'first person', -i 'declarative'). There are a very few stems which have homophonous forms for completive and continuative stems since they never take an aspect suffix following and do not have a different root form for continuative and completive stems: mábiahai 'I killed' or 'I was killing' (ma- 'kill', -bia 'distant past', -ha 'first person', -i 'declarative').

Completive and continuative stems also contrast as to external distribution. Only completive stems manifest the nucleus tagmeme of imperative verbs (see 6). takastá 'work!' (taka- 'work', -s 'personal action', -ta 'second person imperative'). Completive stems manifest the nucleus tagmeme of stative verb with all members of class 90; continuative stems manifest the nucleus tagmeme of stative verbs only when the stative tagmeme is manifested by suffix 91: takástin 'will work' (taka- 'work', -s 'personal action', -tin 'future stative'); takasú 'worked' (taka- 'work', -s 'personal action', -u 'past stative'); takáu 'was working' (taka- 'work', -u 'past stative').

Both completive and continuative stems manifest the nucleus tagmeme of active verbs: takásmahai 'I worked' (taka- 'work', -s 'personal action', -ma 'recent past', -ha 'first person', -i 'declarative'); takámhai 'I was working' (taka- 'work', -m 'recent past', -ha 'first person', -i 'declarative'). If the tense tagmeme is not manifested in the margin (see 4), the nucleus tagmeme is manifested by a continuative stem and the verb is in the

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present tense: takáhai 'I am working' (taka- 'work', -ha 'first person', -i 'declarative').

5. Emic independent verb margin classes. There are four major classes of independent verb margins--imperative, stative, active, and equative. Active margins have subclasses declarative, interrogative 1, interrogative 2, and subjunctive. Equative margins have subclasses declarative, interrogative 1, and interrogative 2. Verb margin classes are indicated on Chart V.

Imperative		ImpVM
Stative		StVM
Active	Declarative	DAVM
	Interrogative 1	In ₁ AVM
	Interrogative 2	In ₂ AVM
	Subjunctive	SjAVM
Equative	Declarative	DEVM
	Interrogative 1	In ₁ EVM
	Interrogative 2	In ₂ EVM

CHART V: EMIC INDEPENDENT VERB MARGIN CLASSES

The independent verb margin classes may be symbolized by the formulas given below. The order of margin tagmemes is not completely fixed, for imperative and tense may sometimes follow plural. For simplicity, this fact is not indicated in the formulas. Classes manifesting the margin tagmemes are found on Chart II.

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ImpVM = + Negative:70 + Imperative:80 + Plural:120
+ Person:130

StVM = + Negative:70 + Plural:120 + Stative:90
+ Mode:152

DAVM = + Negative:70 + Tense:110⁹ + Plural:120
+ Person:130 + Mode:140

In₁AVM = + Negative:70 + Tense:110 + Plural:120
+ Person:130 + Mode:150

In₂AVM = + Negative:70 + Tense:110 + Plural:120
+ Person:130

SjAVM = + Negative:70 + Tense:115/116 + Plural:120
+ Person:130 + Mode:160

DEVM = + Negative:70 + Equative:100 + Person:130
+ Mode:140

In₁EVM = + Negative:70 + Mode:151 + Equative:100
+ Person:130

In₂EVM = + Negative:70 + Equative:100 + Person:130

Imperative margins have an obligatory imperative tag-meme manifested by a class 80 verb affix. They manifest the margin tagmeme in imperative verbs: diistá 'look!'

⁹When the tense tagmeme is not manifested by a member of class 110 the resulting construction is in the present tense. Since a zero manifestation of the tense tagmeme (combined with the occurrence of the continuative form of the stem--see 4) carries the meaning of 'present tense', I consider the tagmeme as obligatory.

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(dii- 'look', -s 'personal action', -ta 'second person imperative'); takasáigpa 'don't you all work!' (taka- 'work', -sa 'personal action', -i 'negative', -g 'plural', -pa 'second person imperative').

Stative margins have an obligatory stative tagmeme manifested by a class 90 verb affix. They manifest the margin tagmeme in stative verbs: tfu 'he said' (ti- 'say', -u 'past stative'); tuínau 'they said' (tu- 'say', -ina 'plural', -u 'past stative'); tĩcau 'he didn't say' (ti- 'say', -ča 'negative', -u 'past stative'); takasáapi 'he has worked, surely?' (taka- 'work', -s 'personal action', -A 'past perfect stative', -api 'hypothetical interrogative').

Active margins have obligatory tense and person tagmemes manifested by class 110 and class 130 respectively. Active margins manifest the margin tagmemes in active verbs: wakítkimhai 'I returned' (wakít- 'return', -ki 'action away from', -m 'recent past', -ha 'first person', -i 'declarative'); wakítkičmaugmāk 'did you all not return?' (wakít- 'return', -ki 'action away from', -č 'negative', -ma 'recent past', -ug 'plural', -mā 'second person', -k 'interrogative').

Equative margins have obligatory equative and person tagmemes manifested by classes 100 and 130 respectively. They manifest the margin tagmemes of equative verbs: účiithai 'I am a child' (úči 'child', -it 'to be', -ha 'first person', -i 'declarative'); učúčiuthai 'I'm not a child' (učú- 'child', -ču 'negative', -it 'to be', -ha 'first person', -i 'declarative').

The class of active independent verb margins is subdivided into declarative, interrogative 1, interrogative 2 and subjunctive by contrast of the mode tagmeme which is obligatory in declarative,¹⁰ interrogative 1, and subjunctive

¹⁰ The mode tagmeme is indicated as obligatory. However, it is obligatory only when 'first person' suffixes manifest the person tagmeme,

margins but never occurs in interrogative 2 margins. In declarative margins it is manifested by class 140 suffix, in interrogative 1 by class 150 suffixes, and in subjunctive by class 160 suffixes. Declarative active margins manifest the margin tagmeme of declarative active verbs, interrogative 1 active margins the margin tagmeme of interrogative 1 active verbs, interrogative 2 active margins the margin tagmeme of interrogative 2 active verbs, and subjunctive active margins the margin tagmeme of subjunctive active verbs. Note the following illustrations. DAVM: takástathai 'I will work' (taka- 'work', -s 'personal action', -tat 'future', -ha 'first person', -i 'declarative'); In₁AVM: takástathak 'shall I work?' (taka- 'work', -s 'personal action', -tat 'future', -ha 'first person', -k 'interrogative'); In₂AVM: tuŋ takástatha 'where shall I work?' (tuŋ 'where', taka- 'work', -s 'personal action', -tat 'future', -ha 'first person'); S_jAVM: takastáhasai 'maybe I'll work' (taka- 'work', -s 'personal action', -ta 'desirable future', -ha 'first person', -sai 'optative').

The class of equative independent verb margins is subdivided into declarative, interrogative 1, and interrogative 2 by contrast of the mode tagmeme, which is manifested by class 140 and occurs margin final in declarative margins, is manifested by morpheme 151 and precedes the equative and person tagmemes in interrogative 1 margins, and never occurs in interrogative 2 margins. Declarative equative margins manifest the margin tagmeme of declarative equative verbs, interrogative 1 equative margins the margin tagmeme of interrogative 1 equative verbs, and interrogative 2 equative margins the margin tagmeme of interrogative 2 equative verbs. Note the following illustrations. DEVM: taka-

and with 'third person' except when 'third person' is manifested by the -β allomorph. It never occurs with 'second person'.

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máinaithai 'I am able to work' (taka- 'work', -main 'potential doer', -ait 'to be', -ha 'first person', -i 'declarative'); In₁ EVM: takamáinčukaitam 'are you not able to work?' (taka- 'work', -main 'potential doer', -ču 'negative', -ka 'interrogative', -ita 'to be', -m 'second person'); In₂ EVM: wahína takáuwaita 'what does he work?' (wahí 'what', -na 'objective case', taka- 'work', -u 'nabitual doer', -waita 'to be', -ø 'third person').

6. Emic independent verb classes. There are four major classes of independent verbs--imperative, stative, active, and equative. Active verbs have subclasses declarative, interrogative 1, interrogative 2, and subjunctive. Equative verbs have subclasses declarative, interrogative 1, and interrogative 2. All major classes have minor subclasses transitive and intransitive. Equative verbs have an additional minor subclass called nominative. Independent verb classes are shown on Chart VI.

		Transitive	Intransitive	Nominative
Imperative		TImpCl	ItImpCl	
Stative		TStCl	ItStCl	
Active	Declarative	TDACl	ItDACl	
	Inter. of Pred.	TInPACl	ItInPACl	
	Inter. of Item	TInIACl	ItInIACl	
	Subjunctive	TSjACl	ItsjACl	
Equative	Declarative	TDEC1	ItDEC1	NoDEC1
	Inter. of Pred.	TInPEC1	ItInPEC1	NoInEC1
	Inter. of Item	TInIEC1	ItInIEC1	

CHART VI: EMIC INDEPENDENT VERB CLASSES

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Emic independent verb classes may be symbolized by the following formulas. Minor subclasses are not formalized since the only internal difference is in the base or stem class manifesting the nucleus tagmeme (see 4). The classes manifesting the tagmemes of verb stems are found in Charts III, IV, and V.

ImpV = + Nucleus: CmVSm + Margin: ImpVM

StV = + Nucleus: VSm + Margin: StVM

DAV = + Nucleus: VSm + Margin: DAVM

In₁AV = + Nucleus: VSm + Margin: In₁AVM

In₂AV = + Nucleus: VSm + Margin: In₂AVM

SjAV = + Nucleus: VSm + Margin: SjAVM

DEV = + Nucleus: NomVB + Margin: DEVM

In₁EV = + Nucleus: NomVB + Margin: In₁EVM

In₂EV = + Nucleus: NomAyVB + Margin: In₂EVM

Imperative verbs contrast with all other major emic verb classes in that the nucleus tagmeme is manifested by a completive verb stem and the margin tagmeme by an imperative verb margin. Imperative verbs manifest the predicate tagmeme in imperative clauses: takastáhum 'you all work!' (taka- 'work', -s 'personal action', -ta 'second person imperative', -h_u 'plural', -m 'second person'); anantáim-hat_i 'may he think!' (anantái 'heart', -m 'to do', -ha 'segmented action', -t_i 'third person imperative').

Stative verbs contrast with all other major emic verb classes in that the margin is manifested by stative verb margins. Stative verbs manifest the predicate tagmeme in stative clauses: dfta pampaáhu 'they wrapped it' (dfta 'they', pampaá- 'wrap singular object', -ø 'third person

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referent', -h 'plural', -u 'past stative'); wi wáčau 'I didn't go' (wi 'I', wa- 'go', -ča 'negative', -u 'past stative').

Active verbs contrast with all other major emic verb classes in that the margin is manifested by active verb margins. Active verbs manifest the predicate tagmeme in active clauses. Active verbs are divided into subclasses declarative, interrogative 1, interrogative 2, and subjunctive. The margin tagmemes of these verbs are manifested by declarative, interrogative 1, interrogative 2, and subjunctive margins respectively. Declarative active verbs manifest the predicate tagmeme in declarative active clauses, interrogative 1 verbs the predicate tagmeme in interrogative of predicate clauses, interrogative 2 verbs the predicate tagmeme in interrogative of item clauses, and subjunctive verbs the predicate tagmeme in subjunctive clauses.

DAV: súsačabiahai 'I didn't give it' (su- 'give', -ø 'third person referent', -sa 'personal action', -ča 'negative', -bia 'distant past', -ha 'first person', -i 'declarative'); unuímawai 'he is learning' (unuíma- 'learn', -wa 'third person', -i 'declarative').

In₁AV: wákathik 'are we going back?' (wakat- 'go back', -hi 'plural inclusive', -k 'interrogative'); puhústhapi 'I'll stay, won't I?' (puhu- 'singular subject stays', -s 'personal action', -tat 'future', -ha 'first person', -pi 'hypothetical interrogative').

In₂AV: yanák ikankáyawa 'whom did he take across?' (ya 'who', -na 'objective case', -k 'definite', i- 'causative', kan- 'go across', -ø 'third person referent', -ka 'unit action', -ya 'remote past', -wa 'third person'); tuí takastáha 'where shall I work?' (tuí 'where', taka- 'work', -s 'personal action', -ta 'desirable future', -ha 'first person').

SjAV: dakumkáthastai 'I'll probably imitate him'

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(dakum- 'imitate', -Ø 'third person referent', -ka 'unit action', -t 'desirable future', -ha 'first person', -stai 'optative'); antúktahaš 'I might listen' (antú- 'listen', -k 'unit action', -ta 'desirable future', -ha 'first person', -š 'dubitative').

Equateive verbs contrast with all other major emic verb classes in that the margin is manifested by equative verb margins and the nucleus tagmeme is manifested by nominal verb bases. Equative verbs manifest the predicate tagmeme in equative clauses. Subclasses declarative, interrogative 1, and interrogative 2 contrast in that the margin tagmeme is manifested by declarative, interrogative 1, and interrogative 2 margins respectively and in that they manifest the predicate tagmeme of declarative clauses, interrogative of predicate clauses, and interrogative of item clauses respectively.

DEV: namákiačui 'it's not from the river' (namák 'river', -ia 'from', -ču 'negative', -i 'to be', -Ø 'third person'); agkuántai hínai 'he comes out in the afternoon' (agkuántai 'afternoon', hii- 'singular subject comes out', -n 'habitual doer', -ai 'to be', -Ø 'third person').

In₁ EV: págkagkai 'is it good?' (págkag 'good', -ka 'interrogative', -i 'to be', -Ø 'third person'); ikám áinkai 'does it exist in the jungle?' (ikám 'jungle', a- 'singular subject exists', -in 'habitual doer', -ka 'interrogative', -i 'to be', -Ø 'third person').

In₂ EV: ukukuí wahínma puhúwaita 'in what does an eagle live?' (ukukuí 'eagle', wahí 'what', -nma 'locative case', puhú- 'singular subject stays', -w 'doer', -aita 'to be', -Ø 'third person'); tu imá págkahaita 'which is best?' (tu 'which', imá 'more', págkah- 'good', -aita 'to be', -Ø 'third person').

All classes have minor subclasses transitive and intransitive. The nucleus tagmeme of transitive verbs is

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manifested by transitive stems or by causative intransitive stems. Transitive verbs manifest the predicate tagmeme of transitive clauses: *ya wakáhawa papín* 'who wants paper?' (*ya* 'who', *wakáha-* 'want', \emptyset 'third person referent', *-wa* 'third person', *papí* 'paper', *-n* 'objective case'); *wi ayúhabiahai éáásan yawán* 'I caused the dog to eat poison' (*wi* 'I', *a-* 'causative', *yu-* 'eat', \emptyset 'third person referent', *-ha* 'segmented action', *-bia* 'distant past', *-ha* 'first person', *-i* 'declarative', *éáása-* 'poison', *-n* 'objective case', *yawá* 'dog', *-n* 'objective case'); *wi ućín aháamhai* 'I caused the child to arrive' (*wi* 'I', *űci* 'child', *-n* 'objective case', *ə-* 'causative', *háa-* 'arrive', *-m* 'recent past', *-ha* 'first person', *-i* 'declarative').

The nucleus tagmeme of intransitive verbs is manifested by simple intransitive stems. Intransitive verbs manifest the predicate tagmeme of intransitive clauses: *wamí* 'let's go!' (*wə-* 'go', *-mi* 'plural inclusive imperative'); *antúkagmaka* 'did they listen?' (*antu-* 'listen', *-k* 'unit action', *-ag* 'plural', *-ma* 'recent past', *-ka* 'interrogative', \emptyset 'third person').

Minor subclass nominative consists of a nucleus tagmeme manifested by item verb bases and a margin tagmeme manifested by declarative and interrogative equative margins. They manifest the predicate tagmeme of nominative clauses: *tagkúkai* 'is it tame?' (*tágku* 'domesticated animal', *-ka* 'interrogative', *-i* 'to be', \emptyset 'third person'); *patayíyai* 'he is his relative' (*patə-* 'relative', *-yi* 'third possessive', *-yai* 'to be', \emptyset 'third person').

7. Emic independent clause classes. Emic independent clause classes are shown on Chart VII. All major independent clause classes have an obligatory predicate tagmeme manifested by a class of verbs. Since each clause class has a different verb class manifesting the obligatory predicate

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		Transitive	Intransitive	Nominative
Imperative		TImpV	ItImpV	
Stative		TStV	ItStV	
Active	Declarative	TDAV	ItDAV	
	Interrogative ₁	TIn ₁ AV	ItIn ₁ AV	
	Interrogative ₂	TIn ₂ AV	ItIn ₂ AV	
	Subjunctive	TSjAV	ItSjAV	
Equative	Declarative	TDEV	ItDEV	NoDEV
	Interrogative ₁	TIn ₁ EV	ItIn ₁ EV	NoInEV
	Interrogative ₂	TIn ₂ EV	ItIn ₂ EV	

CHART VII: EMIC INDEPENDENT CLAUSE CLASSES

tagmeme, Charts VI and VII are identical except for the symbol V (Verb) substituted for by the symbol Cl (Clause), Interrogative 1 replaced by Interrogative of Predicate, and Interrogative 2 replaced by Interrogative of Item.

Since the focus of this paper is the obligatory tagmeme, or predicate, formulas of clause expansions are not given. The minimum formula for each clause class is the predicate tagmeme manifested by a different class of verbs.

Interrogative-of-item clauses have an additional obligatory tagmeme called interrogative. It is manifested by a class called interrogatives and always precedes the predicate tagmeme. The interrogative tagmeme is always portmanteau with some other clause-level tagmeme, i.e. it has a double function¹¹ of indicating question and of functioning in the place of some clause-level tagmeme such as

¹¹ The suggestion of treating clause-level interrogative tagmemes as tagmemes having a "double function of indicating question and functioning in the place of some clause-level tagmeme" comes from Pickett (1960, page 78).

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subject, object, time, location, or manner. Note the following minimum interrogative of item clauses: *ya puháwa* 'who is there?' [*ya* 'who' (Interrogative-Subject), *puháwa* 'he is, stays' (Predicate)]; *tuf áwa* 'where is it?' [*tuf* 'where' (Interrogative-Location), *áwa* 'it is, stays' (Predicate)]; *wahína yúam* 'what are you eating?' [*wahína* 'what' (Interrogative-Direct-Object), *yúam* 'you are eating' (Predicate)].

Clause classes further contrast as to optional satellite tagmemes. These include time (T), subject (S), accompaniment (Acc), direct-object (DO), referent-object (RO), manner (Ma), location (L), and agent (Ag). Satellite tagmemes may precede or follow the predicate (P) tagmeme but tend to keep the same relative order from the predicate tagmeme. Time is usually farthest from the predicate whether preceding or following. Manner is more often the satellite closest to the predicate. Note the satellite tagmemes in the following expanded transitive declarative clause: *yáu santús učihñaj dapín šíg maáma mína hagahúñyan numfi* 'yesterday Santos and his son completely killed a snake in my house with a stick' [*yáu* 'yesterday' (T), *santús* 'Santús' (S), *učihñaj* 'with his son' (Acc), *dapín* 'snake' (DO), *šíg* 'well' (Ma), *maáma* 'he killed it' (P), *mína* 'my', *hagahúñyan* 'in my house' (L), *numfi* 'by means of a stick' (Ag)].

Equative clauses have an additional optional subject tagmeme which may precede the first subject tagmeme and is in equational relationship to the rest of the clause. Note, for example, the clause *púmpuk makíčik čígki wakáanai káši* 'the owl is a bird that walks at night' in which *púmpuk* 'owl' is in equational relation to the rest of the clause [*makíčik* 'one', *čígki* 'bird' (S), *wakáanai* 'is a habitual walker' (P), *káši* 'night' (T)].

Although all satellite tagmemes may occur in imperative

clauses only two or three occur in any one clause: *sánči takastá* 'work hard!' [*sánči* 'hard' (Ma), *takastá* 'work' (P)]; *kašín wainiámi* 'let's see each other tomorrow!' [*kašín* 'tomorrow' (T), *wainiámi* 'let's see each other' (P)].

Nominative clauses have only subject and manner satellite tagmemes: *kúši makíčik kúntin ikámiayai* 'the anteater is an animal of the jungle' [*kúši* 'anteater' (S₂), *makíčik* 'one', *kúntin* 'animal' (S₁), *ikámiayai* 'it is from the jungle' (P)]; *íkamyawá máčikiš tágkučui* 'a tiger isn't a little bit tame' [*íkamyawá* 'tiger' (S), *máčikiš* 'little bit' (Ma), *tágkučui* 'he is not tame' (P)].

All satellite tagmemes occur in transitive clauses. Intransitive clauses never have a direct-object tagmeme but may have a referent-object tagmeme and any other satellite tagmemes. Contrast the following maximum expansions of a transitive clause and of an intransitive clause.

TDACI: *kašín wi yašúghai wámak akíkmaktathai diwímaun dukuhún ní hāan atašuf* 'tomorrow I with my brother will quickly pay the debt to my mother with a chicken at her house' [*kašín* 'tomorrow' (T), *wi* 'I' (S), *yašúghai* 'with my brother' (Acc), *wámak* 'quickly' (Ma), *akíkmaktathai* 'I will pay it to her' (P), *diwímaun* 'debt' (DO), *dukuhún* 'to my mother' (RO), *ní* 'her', *hāan* 'at her house' (L), *atašuf* 'by means of a chicken' (Ag)].

ItDACI: *yáu yúu yačihái šfig mína nampagtíma tampúghai mína hagahuf* 'yesterday Yuu with his brother danced well for me with a drum at my house' [*yáu* 'yesterday' (T), *yúu* 'Yuu' (S), *yačihái* 'with his brother' (Acc), *šfig* 'well' (Ma), *mína* 'for me' (RO), *nampagtíma* 'he danced in reference to me' (P), *tampúghai* 'with drum' (Ag), *mína* 'my', *hagahuf* 'at my house' (L)].

The following additional illustrations of emic independent clause classes show the occurrence of optional satellite tagmemes.

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ImpCl: namák maámi 'let's kill fish!' [namák 'fish' (DO), maámi 'let's kill' (P)]; titú ubáim kuitámkata 'quietly take care of your brother!' [titú 'quietly' (Ma), ubáim 'your brother' (DO), kuitámkata 'you take care of' (P)].

StCl: apág ģumúnum puháu 'my father stayed down river' [apág 'my father' (S), ģumúnum 'down river' (L), puháu 'stayed' (P)]; kašín tíkič minítin 'tomorrow another will come' [kašín 'tomorrow' (T), tíkič 'another' (S), minítin 'will come' (P)].

DACl: wampukái učín áugmitkaġui 'Tadpole is not causing the child to read' [wampukái 'Tadpole' (S), učín 'child' (DO), áugmitkaġui 'he is not causing him to read' (P)]; yáŭ wámahi ģumúnum 'yesterday we went downriver' [yáŭ 'yesterday' (T), wámahi 'we went' (P), ģumúnum 'downriver' (L)].

InPACl: yamáí ģuwáaġmak amáš 'do you not have a fever now?' [yamái 'now' (T), ģuwáaġmak 'do you not have a fever' (P), amáš 'you' (S)]; amáš šihigkáš takámak 'are you working rubber?' [amáš 'you' (S), šihigkáš 'rubber' (DO), takámak 'are you working' (P)].

InIACl: ya dapín maáma 'who killed the snake?' [ya 'who' (In-S), dapín 'snake' (DO), maáma 'he killed' (P)]; tuŭ puhámġ amáš 'where do you live?' [tuŭ 'where' (In-L), puhámġ 'you live' (P), amáš 'you' (S)].

SjACl: wíša yamáiš takastáhastai 'I'll probably work now' [wíša 'I' (S), yamáiš 'now' (T), takastáhastai 'I'll probably work' (P)]; amáš kašíníš suhúktapáš 'tomorrow might you sell?' [amáš 'you' (S), kašíníš 'tomorrow' (T), suhúktapáš 'you might sell' (P)].

DECL: ukukufk nanámnai atúšat yakí 'the eagle is one who flies far and high' [ukukufk 'eagle' (S), nanámnai 'is one who flies' (P), atúšat 'far' (Ma), yakí 'high' (L)]; káau tikfma wáinčatayi 'the owl is that which is not seen very

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much' [káau 'owl' (S), tikíma 'very much' (Ma), wáinčatayi 'he is that not seen' (P)].

InPECl: učfē wainnúkai 'are children those who see it?' [učfē 'children' (S), wainnúkai 'is he one who customarily sees it' (P)]; pumpúkuš págkagčikai 'is an owl a little bit good?' [pumpúkuš 'owl' (S), págkagčikai 'is he a little bit good' (P)].

InIECl: wahf číškita 'what bird is it?' [wahf 'what' (In-S), číškita 'is bird' (P)]; wahfínma káninaita 'in what does it sleep?' [wahfínma 'in what' (In-L), káninaita 'he is one who customarily sleeps' (P)].

An additional contrastive feature of the emic clause classes is their distribution in sentence tagmemes. Independent clauses manifest the sentence-base tagmeme. A complete description of clause distribution is not included in this presentation; however, note the following contrastive distribution of the four major clause classes. In the illustrations the sentence-level tagmemes are indicated first, followed by the words with translation. The following sentence-level tagmemes occur in these illustrations: sentence-base (SB), sentence-qualifier (SQ), quote (Qt), vocative (Voc), and response (Res). Manifesting classes are indicated only when they consist of an independent clause class. For tagmemes occurring in independent clauses only, clause-level tagmemes are indicated in parentheses following the translation of each word or phrase.

Imperative clauses manifest the sentence-base tagmeme in imperative sentences in conversational style and the quote tagmeme in conversational and narrative style: yaḡuhŭ suhustá wakáhau asámtai 'my brother, give it to me because I want it' Voc [yaḡuhŭ 'my brother'], SB:ImpCl [suhustá 'give it to me' (P:ImpV)], SQ [wakáhau 'wanted' asámtai 'because it is']; ačiktá tfu 'grab him, he said' Qt:ImpCl [ačiktá 'grab him' (P:ImpV)], SB:StCl [tfu 'he said' (P:StV)].

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Stative clauses manifest the sentence-base tagmeme in response sentences in conversational style. They also occur as the most frequent manifesting class of the sentence-base tagmeme in narrative style: wátatmak 'will you go?' aǰá wáčatin 'no, will not go' SB:InPACl [wátatmak 'will you go' (P:In₁AV)], Res [aǰá 'no'], SB:StCl [wáčatin 'will not go' (P:StV)]; núnikmatai ámič kampátumčik maá hinkfu 'when he did this the fox killing three came out' SQ [núnikmatai 'when he did this'], SB:StCl [ámič 'fox' (S), kam-pátumčik 'three' (DO), maá 'killing' (Ma), hinkfu 'he came out' (P:StV)].

Active clauses manifest the sentence-base tagmeme in statement, query, and response sentences in conversational style and in personal experience narrative style. kaihú kašín miníttamak 'my sister, will you come tomorrow?' Voc [kaihú 'my sister'], SB:InPACl [kašín 'tomorrow' (T), miníttamak 'will you come' (P:In₁AV)]; Δ^2A miníttahai 'yes, I'll come' Res [Δ^2A 'yes'], SB:DACl [miníttahai 'I'll come' (P:DAV)].

Equative clauses manifest the sentence-base tagmeme in descriptive and query of description sentences. dúwi wakáhutayai tagkumátasa 'therefore it is that which is wanted in order to domesticate it' SQ [dúwi 'because of this'], SB:DECL [wakáhutayai 'it is that which is wanted' (P:DEV)], SQ [tagkumátasa 'in order to domesticate']; apawá tátašam wahínum puhúwaita 'Father, in what does a woodpecker live?' Voc [apawá 'father'], SB:InIECl [tátašam 'woodpecker' (S), wahínum 'in what' (In-L), puhúwaita 'it is one who stays' (P:In₂EV)].

The following text gives additional illustrations of clause distribution within the sentence tagmemes. Sentences are numbered consecutively with the corresponding free translation given at the end of the text. Sentences with a

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number plus a letter are sentences manifesting the sentence-quote tagmeme within the sentence having the same number.

1. SB:StCl [čúwi 'oriole' (S), sukuyán 'night hawk' (DO), iwakfu 'took him up' (P:StV), yakí 'high' (Ma), pasúgkan 'into his nest' (L)]. 2. SB:StCl [agkaáu 'put him in' (P:StV), SQ [kanághatatus 'in order that he sleep'].
3. SB:StCl [agkamáu 'put-in-one' (S), pásugnum 'in nest' (L), kanúmain 'able-to-sleep-one' (DO), dakápaachu 'he did not feel' (P:StV)], SQ [pásug 'nest', bučítai 'when moving'], SQ [dása 'wind', umpúam 'because blowing'].
4. SQ [išámak 'fearing'], SB:StCl [táu 'he said' (P:StV)]; 4a. Voc [saihu 'brother-in-law'], SB:DACl [iyágtathai 'I will fall' (P:DAV)]......5. SQ [tútai 'when he said'], SB:StCl [čúwi 'oriole' (S), tfu 'said' (P:StV)]; 5a. Res [ačá 'no'], SB:DACl [iyágčattama 'you will not fall' (P:DAV)]......6. SB:StCl [čawáhu 'dawned' (P:StV)], SQ [kanúguk 'without sleeping', sapíhin 'from fear'].....
7. SB:StCl [tíkič 'another', čawantái 'when day' (T), tahfu 'came for' (P:StV), agkuántai 'when afternoon' (T), sukuyá 'night hawk' (S), čuwín 'oriole' (DO)]. 8. Voc [kumpahú 'friend'], SB:DACl [miníthama 'I come for you' (P:DAV)], SQ [hukíthamsan 'in order to take you'], SQ [kanágmi 'that we sleep', mína 'my', hačahufš 'in my house also'].
9. SB:StCl [čuwíšakam 'oriole also' (S), šfig 'well', anaás 'feeling' (Ma), tfu 'said' (P:StV)], Res [ayú 'Ok'].....10. SB:StCl [káši 'night' (T), tfu 'said' (P:StV)]; 10a. SB:ImpCl [ayámsami 'let's rest' (P:ImpV)].....10b. SB:ImpCl [mína 'my', kanútai 'in my bed', huí 'here' (L), kanágmi 'let's sleep' (P:ImpV)], SQ [čáčáakai 'from cold', waftčaim 'lest you suffer'].
11. SB:StCl [patasú 'put' (P:StV), minagkuftnum 'on old log' (L), agá 'outside' (L)]......12. SB:DECL [aší 'all' (Ma), háhai 'I'm sick' (P:DEV), SQ [čáčáahan 'I being cold'].
13. SB:StCl [sukuyá 'night hawk' (S), tfu 'said' (P:StV)]; 13a.

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SB:DECL [ʃaʃakak 'coldness' (S), máčiki 'is little' (P:DEV)];
 13b. SB:DACL [wi 'I' (S), áma 'your', haámín 'in your house' (L), imá 'more' (Ma), waitʃábiahai 'I suffered' (P:DAV)], SQ [yakí 'high', kánuču 'don't customarily sleep', ásan 'because I being']; 13c. SB:ImpCl [aták 'again' (T), hútikdayačmi 'let's not do it to each other' (P:ImpV)]; 13d. SB:ImpCl [amáš 'you also' (S), adaágtá 'you remember' (P:ImpV), wáitʃamu 'that suffered' (DO)]; 13e. SB:DACL [wíša 'I also' (S), mídaun 'mine' (DO), adaágtahai 'I will remember' (P:DAV)]; 13f. SB:DECL [kumpahúihai 'with your friends' (Acc), wáká 'stomach' (S), basámahai 'it is broken' (P:DEV)], SQ [ʃanuniáuk 'deceiving one another'].

Free translation: 1. The oriole took the night hawk up high into his nest. 2. He put him in, in order that he sleep. 3. The one who was put in the nest didn't feel like sleeping because the wind blew and moved the nest. 4. Being fearful he said, 4a. "Brother-in-law, I will fall!"5. When he said it the oriole said, 5a. "No, you will not fall."6. Because of his fear he dawned without having slept.

7. Another day the night hawk came in the afternoon for the oriole. 8. "Friend, I come for you in order that we sleep in my house also." 9. The oriole also happily replied, "Ok." 10. At night he (night hawk) said, 10a. "Let's rest! 10b. Let's sleep here in my bed lest you suffer from cold." 11. He put him on an old log outside12. "I'm completely sick from the cold." 13. The night hawk said, 13a. "The cold is little. 13b. I suffered more in your house because I had never slept up high. 13c. Let's not do this to one another again. 13d. You remember your suffering. 13e. I'll remember mine. 13f. Among friends it is sad to deceive one another."