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1 Introduction

Avatime, also known as Sideme or Siya, is a Volta-Congo language found in the Volta Region in Ghana, West Africa. The most closely related languages are Nyangbo and Tafi (Lewis, 2009). This study seeks to outline the noun class system used by Avatime speakers. In order to do so, an explanation is needed to give context to the Avatime language (1.1), to understand who Avatime speakers are and where they live (1.2), to define what noun classes are (1.3) and how noun class systems operate in other African languages (1.4), and to examine previous work done on Avatime noun classes (1.5).

1.1 Language Family

Jouni Maho (Maho 1999) did a typological survey of Bantu languages with the goal of identifying noun class variation across Bantu languages. He compares four linguists' Proto-Bantu lists of classes and looks at how various Bantu noun class systems can be derived from these lists.

Although Maho does not specifically talk about Avatime noun classes, he does say that Avatime is not a Bantu language. he creates a tree for the Niger-Congo language family in which Avatime is mentioned separately on the tree from Bantu. Bantu and Avatime are both Volta-Congo languages, but Volta-Congo further divides into four branches – North Volta-Congo, Benue-Congo, Kwa, and Kru. Bantu is under the Benue-Congo branch and Avatime is under the Kwa branch.

1.2 Avatime Speakers

Although the Ethnologue puts the number of Avatime speakers at twenty-four thousand as of 2003 (Lewis 2009), other estimates are considerably more conservative. Mununkum Divine, a linguist living in the Avatime-speaking village of Vane, estimates that approximately 8,500 people speak the language (Divine). A brochure for the Avatime traditional area says that Avatime is spoken by seven villages: Amedzofe, Gbadzeme, Fume, Dzokpe, Biakpa, Dzogbefeme, and Vane. Vane is the "traditional capital seat of Avatime" (Ackuaku, 2008).

Divine says that many speakers are bilingual, with Avatime as their first language and Ewe as their second. This is largely because Avatime villages are "almost surrounded by Ewe-speaking communities" (Divine). Many speakers also speak English. This is particularly true in the village of Vane, as that village is the capitol of the Avatime villages and the place of the most outside trading. As secondary education is conducted in English, younger speakers are more likely to know English than older speakers. Primary education is conducted dually in English and Ewe.

1.3 Noun Classes

R.M.W. Dixon, in his work "Noun Classes and Noun Classification in Typological Perspective" (1986), defines noun classes as separate from noun classifiers. Dixon gives three criteria for determining if a language has noun classes: size, realization, and scope.

Size refers to the number of noun classes, which generally fall between two and twenty, whereas noun classifiers can number in the hundreds. Realization means that, in a system of noun classes, each noun of a language must belong to a class. For instance, many Romance languages give a gender to each noun. In Spanish, every noun must be feminine or masculine.

If a noun is not a masculine noun, it can be assumed to be a feminine noun, since every noun must be one of the two. If a language uses a noun class system, every noun is a part of that system and will be a part of a class.

Finally, the noun class markers must be within the noun itself and somewhere else in the sentence. To use the example of Spanish once more, adjectives change endings to match the gender of the noun they are modifying. The scope of noun class markers appears not only in the noun itself, but will also appear in another word. Dixon gives the example of Swahili, in which a marker also applies to "all other words in the noun phrase… and is also coded… onto the verb" (Dixon 1986).

1.4   The Role of Semantics in Noun Classes

Denny and Creider attempt to identify semantic rational for Proto-Bantu noun classes. They claim that the bulk of noun classes are classified according to a shape or configuration held by the majority of nouns belonging to that particular class. In order to prove their claim, the two analyze a wide collection of Proto-Bantu vocabulary and compare their findings to three other Bantu languages that they had already analyzed.

The first distinction they make is between count and mass nouns. Mass nouns are divided into four classes: homogenous solid, differentiated solid, liquid, and dispersive. Count nouns are divided into configurations and kinds. Kinds include humans, animals, and artifacts. Configurations are divided into solid and outline figures. Solid include non-extended (further divided into unit and collection) and extended (also divided into unit and collection). Outline figures are divided into unit (non-extended and extended) and collection (not further divided).

Despite positing several semantic possibilities, Denny and Creider are left with two classes for which they say they have insufficient data to form semantic classifications. Additionally, each class has a list of "problematic" words which do not fit within the authors' classifications.

Although Avatime is not a Bantu language, as previously discussed, a look at Denny and Creider's semantic classifications is useful. Although the languages do not appear to be related (as discussed in 1.1), Denny and Creider show how to begin the work of categorizing nouns. No work has been done to categorize Avatime nouns according to semantics, so Denny and Creider can give a starting point for understanding how to go about researching semantic similarities within noun classes.

1.5   Previous Work in Avatime Noun Classes

Two linguists – K.C. Ford and Mununkum Divine – have categorized Avatime nouns into noun classes according to affixes (although not according to semantics). They differ from each other on the order and number of noun classes, as well as whether suffixes help determine classes. These three differences will be discussed after the presentation of their noun class systems.

K.C. Ford posits that Avatime has seven classes based on singular and plural prefixes. He also includes suffixes indicating definiteness for each class. His classes are summarized in the following table. Transcriptions here and throughout are given in the IPA, with the exception that Ford uses <y> to indicate the IPA sound /j/.

Table 1 Avatime Noun Classes According to Ford

Class	Sing. Prefix	Pl. Prefix	Sing. Suffix	Pl. Suffix
1/2	o-	be-	-ye	-ba
	ɔ-	ba-	-yɛ	-ba

3/4	o-	i-	-lo	-le
	ɔ-	i-	-lɔ	-lɛ
5/6	li-	e-	-le	-la
	li-	a-	-lɛ	-la
7/8	ki-	bi-	-ke	-be
	ki-	bi-	-kɛ	-bɛ
9/10	ku-	si-	-ko	-se
	ku-	si-	-kɔ	-sɛ
11/12	ku-	be-	-ko	-ba
	ku-	ba-	-kɔ	-ba
13/14	ke-	ku-	-ka	-ko
	ka-	ku-	-ka	-kɔ

Ford also says that while Avatime vowels do not have full cross-height harmony, there is a restricted harmony, including an alternation between the vowel pair /o/ and /ɔ/ and the vowel pair /e/ and /a/. This accounts for some of the variation within Avatime's prefixes and suffixes, such as in Class 1/2, in which there are two choices for the singular prefix (/o-/ or /ɔ-/), plural prefix (/be-/ or /ba-/), and singular suffix (/-ye/ or /-yɛ/). Ford says that the "vowels of roots, prefixes, and suffixes are divided into two harmonizing sets, though there is some overlap occasioned by the loss of certain vowels which is presumed to have taken place historically" (Ford 1988).

Divine says that Avatime has nine noun classes, divided by singular and plural prefixes. Divine's classes are described in the table below.

Table 2 Avatime Noun Classes According to Divine

Class	Sing. Prefix	Pl. Prefix
1	ka-/ke-	ku-
2	ki-	bi-
3	ku-	ba-
4	li-	a-
5	li-	e-
6	ɔ-	ba-
7	ɔ-	i-

8	o-	be-
9	o-	i-

As previously stated, Ford's classes and Divine's classes differ from each other in three ways: order, number, and suffixes. Divine's classes are alphabetized according to the singular prefix, but Ford's ordering is less clear. Order of classes will be discussed in-depth in regards to the current study.

Another difference between Divine's and Ford's work are the number of classes. Divine has a greater number of classes than Ford. Divine does not compare his system to Ford's. The result of this is that the reasoning behind the greater number of classes in Divine's system than Ford's is unclear. Three of Ford's classes are divided into two classes in Divine's system.

With Ford, class 1/2 has the singular prefixes /o-/ or /ɔ-/ and the plural prefixes /be-/ or /ba-/. Divine splits this class into two separate classes: class 6 has the singular prefix /ɔ-/ and the plural prefix /ba-/ and class 8 has the singular prefix /o-/ and the plural prefix /be-/.

Ford's class 3/4 has the singular prefixes /o-/ or /ɔ-/ and a single plural prefix /i-/. Divine has the singular prefix /ɔ-/ and the plural prefix /i-/ for class 7 and the singular prefix /o-/ and the plural prefix /i-/ for class 9.

Ford puts the singular prefix /li-/ and the plural prefixes /e-/ and /a-/ as class 5/6. Divine splits these into classes 4 and 5. Class 4 has the singular prefix /li-/ and the plural prefix /a-/. Class 5 has the same singular prefix and the plural prefix /e-/.

Besides three of Ford's classes being split into two in Divine's classes, Ford has a class that has no equivalent in Divine's categorizations. Class 9/10 has the singular prefix /ku-/ and the plural prefix /si-/. Although Divine does not put any nouns starting with /si-/ into their own

class, he does briefly discuss them in his work. He gives three examples of words beginning

with /si-/: [siwa] ('weed'), [siklami] ('sand'), and [sinjime] ('prowess'). Divine categorizes the

first two nouns ('weed' and 'sand') as "non-count" or "mass" nouns (2) and 'prowess' as an

"abstract" noun (2).

The final difference between Ford's classes and Divine's classes are the definite article

suffixes. Ford lists definite article suffixes for each class while Divine does not address them.

Divine's work was meant to be a preliminary outline of the noun class system and does not

include a discussion of definite articles.

2   Current Study

The current study is based on field work done in the village of Vane in the Volta Region

of Ghana in June and July of 2009. Words were collected by the author from three native

speakers. The three speakers did not show variations in their dialect, although occasionally the

two younger speakers would not know an Avatime word while the older speaker did.

Additional forms were provided by Mununkum Divine, a linguist currently living in Vane and

studying Avatime.

The current study posits seven noun classes, marked primarily by prefixes and

secondarily by definite article suffixes. Semantic categorizations are based on information

available from the data rather than from any previously available research, since no work has

been done to separate classes according to semantic categories.

Table 3 Avatime Noun Classes According to the Current Study

Class	Sing. Prefix	Pl. Prefix	Sing. Suffix	Pl. Suffix	Semantics
1	ɔ-/o-	ba-/be-	-e	-a	Animate objects
2	ɔ-/o-	i-	-lo/-no	-le/-ne	Long objects
3	li-	a-/e-	-le/-ne	-la/-na	Round objects
4	ka-/ke-	ku-	-a	-o	Curved or hollow objects

5	ki-	bi-	-e	-e	Protruding objects
6	ku-	ba-	-o	-a	Miscellaneous
7	si-		-se		Mass objects

In the following sections, each of these classes will be examined in detail to explain the semantic and morphological claims in Table 3. Before that, Dixon's definition of noun classes will be revisited to show how Avatime noun classes fit his qualifications of size, realization, and scope and, therefore, are noun classes rather than noun classifiers.

2.1   Noun Classes versus Noun Classifiers

Dixon says that noun classes can be distinguished from noun classifiers according to their size, realization, and scope. Avatime has seven noun classes. Languages will have between two and twenty noun classes while languages with noun classifiers can have hundreds of classifiers. Avatime also fits the realization requirement: each Avatime noun belongs to one and only one class.

The final requirement – that the scope of the noun class markers extend beyond the noun itself – is also met. Although the collected Avatime information does not adequately determine what the copulative verb is and how it works, examples were collected to show that the copulative verb has a prefix which changes according to the noun class of the subject.

The following table has one singular example and one plural example from classes 1-6. No sentences were collected with class 7. The second word in each transcription is the copulative verb. The first sounds of the copulative changes to match the prefix of the subject. These pairings are bolded in the table.

Table 4 Copulative Verbs

Class	Transcription	English Gloss
1	**o**-vi **o**-tine libula ba	'the mouse is on the stool'
1	**be**-va **be**-tine libula ba	'the mice are on the stool'

2	**o**-plo-no **o**-li kepame	'the table is in the house'
2	**i**-plo-ne **i**-li kepame	'the tables are in the house'
3	**li**-to-le **li**-kemi	'the hill is big'
3	**e**-to-la **e**-kemi	'the hills are big'
4	**ka**-topa **ka**-li owena	'the male-goat is outside'
4	**ku**-topa **ku**-li oweno	'the male-goats are outside'
5	**ki**-k-wi **ki**-tine oplõnua ba	'the yam is on the table'
5	**bi**-k-we **bi**-tine oplõnua ba	'the yams are on the table'
6	**ku**-dɔ **ku**-dʒe	'the road is long'
6	**ba**-da **ba**-dʒe	'the roads are long'

2.2 Methodology of Discussion

Each noun class is discussed in its own section. Each section will first address the semantics of the class. Any noun that does not follow the semantic classification of its class is italicized in the English gloss of the data tables. After semantics, the morphology of each class will be addressed, including both the class prefix markers and the definite article suffixes. For ease of comprehension, plural nouns follow their singular counterparts and are marked in gray in all noun class tables.

Many nouns were transcribed without definite articles. This does not necessarily mean that definite articles do not exist, but rather that the information has not been collected from speakers. Further research would most likely uncover definite articles. To indicate that a noun does not have a transcribed article, the article column in the table for that noun will read "N.C." ("not collected").

2.3 Class 1 ɔ-/o- : ba-/be-

Class 1 nouns are "person" words. They have the singular prefix /ɔ-/ or /o-/ and the plural prefix /ba-/ or /be-/. The definite article suffixes may be /-e/ for singular and /-a/ for

plural, but the data are insufficient to determine this with certainty. Morphological properties will be covered in detail after semantics.

2.3.1 Semantics

Class 1 is the class most easily definable by shared semantic features. This is the animate object class. Out of sixty-nine singular nouns, fifty-nine of them refer to people, and another six refer to animals. The other four ('fetish,' 'month,' 'year,' and 'scar') do not share this characteristic. A few person words and many animal words are found in other classes. In Tables 4 and 5, nouns which do not fit the semantic criteria of "animate objects" are italicized.

The words referring to people include profession words, such as 27. [ɔdʒisaː] 'singer,' 35. [ɔdobasi] 'teacher,' and 53. [odziga] 'trader'; relationship words, such as 9. [ɔŋɛɹɛ] 'uncle,' 47. [osobi] 'grandchild,' and 17. [ɔgulɔ] 'fiancé'; other identifying words, such as 19. [ɔbaba] 'bastard,' 67. [opipinete] 'poor person,' and 77. [ozeː] 'thief'; and the word 'person' – 83. [ɔnwe].

The six animals included in this noun class are 'goat', 'she-goat', 'lizard', 'housefly', 'mouse', and 'animal.' The presence of the word 'animal' in this class suggests that the semantic category should be expanded beyond only "persons" to include both "persons and animals." For the animals that are in other classes, perhaps they have another semantic connection that trumps the "animate object" connection. These will be addressed as they arise in each class.

One particularly interesting "person" noun is number 83, found in Table 4. This noun is [okpo] ('corpse'). The presence of the word 'corpse' in class 1 indicates that the body of a dead person is still considered an "animate object."

2.3.2   Morphology

Class 1 nouns have the singular prefix /ɔ-/ or /o-/ and the plural prefix /ba-/ or /be-/. The definite article suffixes may be /-e/ for singular and /-a/ for plural, but the data are insufficient to determine this with certainty.

2.3.2.1 Class Prefixes

In order to determine the prefixes for class 1, the two forms of both the singular and the plural prefix need to be understood. The singular prefixes are /ɔ-/ and /o-/ and the plural prefixes are /ba-/ and /be-/. Furthermore, the two forms do not correspond (that is, /ɔ-/ is not necessarily paired with /ba-/). A noun with the singular prefix /o-/ can have either plural prefix, although a greater number of them have /be-/ than /ba-/. However, in the data available for this study, every class 1 noun that starts with the singular prefix /ɔ-/ has the plural prefix /ba-/.

As discussed earlier, Avatime has a limited vowel harmony. The first vowel of the root partially determines whether /ɔ-/ or /o-/ will be used. When the first vowel of the root is [ɔ] or [ɛ], the singular prefix is /ɔ-/. For example, the word for 'father-in-law' is 13. [ɔnɛ] and the word for 'adult' is 7. [ɔnɔtʃitʃi]. When the first vowel of the root is [o], the singular prefix is /o-/. This is seen in 47. [osobi] 'grandchild.' The data contain four exceptions in which roots with the first vowel of [o] have the prefix of /ɔ-/. These four words are 29. [ɔnoβuβu] 'new person,' 31. [ɔnogiadoba] 'foreigner,' 33. [ɔdobadoba] 'foreigner,' and 35. [ɔdobasi] 'teacher.'   It is possible that these words were transcribed incorrectly.

When the first vowel of the root is any other vowel besides [ɔ] or [ɛ], which have the prefix [ɔ-] or [o], which has the prefix /o-/, then the singular prefix cannot be predicted in this

data set. For instance, 79. [ɔme] 'goat' and 57. [ove] 'mouse' both have [e] in the root, but

have a different prefix. Further research must be done to determine if more data will allow for

more predictability.

The distribution between the plural prefixes /ba-/ and /be-/, while not completely

apparent, can be partially predicted based on current data. When the first vowel of the root is

back and non-close, the prefix is /ba-/. These vowels are [a], [ɔ], and [o]. Examples are 2. [baka]

'fathers' and 8. [banɔtʃitʃi] 'adults.' When the first vowel after the plural prefix is front and

non-close, the prefix is [be-]. [e] is the only vowel in the data that predictably pairs with the

prefix /be-/, such as in 46. [beneda:] 'aunts.'

The prefix cannot be predicted when the next vowel is [i] or [u], which are close vowels.

26. [badzidzi] 'months' and 54. [bedziga] 'traders' are examples in which the vowel in the root is

the same but the plural prefix is different.

The alternation between [o] and [ɔ] in the singular prefix and [e] and [a] in the plural

prefix reflect the restricted harmony mentioned by Ford (Ford, 1988). The restricted vowel

harmony was discussed previously in the section detailing Ford's noun class categorizations

(1.5).

Table 5 contains all noun pairs for which no article suffixes were elicited. This table

shows the class 1 nouns which follow the pattern for prefixes (/ɔ-/ and /o-/ for singular and

/ba-/ and /be-/ for plural).

Table 5 Regular Class 1 Nouns without Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
1	ɔka	ɔ	ka	N.C.	'father', 'adult man'
2	baka	ba	ka	N.C.	'fathers', 'adult men'
3	ɔɲivo	ɔ	ɲivo	N.C.	'child'

4	baɲivo	ba	ɲivo	N.C.	'children'
5	ɔmwidʒe	ɔ	mwidʒe	N.C.	'she-goat'
6	bamwidʒe	ba	mwidʒe	N.C.	'she-goats'
7	ɔnɔtʃitʃi	ɔ	nɔtʃitʃi	N.C.	'adult'
8	banɔtʃitʃi	ba	nɔtʃitʃi	N.C.	'adults'
9	ɔŋɛɹɛ	ɔ	ŋɛɹɛ	N.C.	'uncle'
10	baŋɛɹɛ	ba	ŋɛɹɛ	N.C.	'uncles'
11	ɔkada:	ɔ	kada:	N.C.	'aunt (father's sister)'
12	bakada:	ba	kada:	N.C.	'aunts (father's sister)'
13	ɔnɛ:	ɔ	nɛ:	N.C.	'father-in-law'
14	bana:	ba	na:	N.C.	'fathers-in-law'
15	ɔnadzɛ	ɔ	nadzɛ	N.C.	'mother-in-law'
16	banadzɛ	ba	nadzɛ	N.C.	'mothers-in-law'
17	ɔgulɔ	ɔ	gulɔ	N.C.	'fiancé'
18	bagulɔ	ba	gulɔ	N.C.	'fiancés'
19	ɔbaba	ɔ	baba	N.C.	'bastard'
20	bababa	ba	baba	N.C.	'bastards'
21	ɔbu	ɔ	bu	N.C.	*'fetish'*
22	babu	ba	bu	N.C.	*'fetishes'*
23	ɔga	ɔ	ga	N.C.	'animal'
24	baga	ba	ga	N.C.	'animals'
25	ɔdzidzi	ɔ	dzidzi	N.C.	*'month'*
26	badzidzi	ba	dzidzi	N.C.	*'months'*
27	ɔdʒisa:	ɔ	dʒisa:	N.C.	'singer'
28	badʒisa:	ba	dʒisa:	N.C.	'singers'
29	ɔnoβuβu	ɔ	noβuβu	N.C.	'new person', 'stranger'
30	banoβuβu	ba	noβuβu	N.C.	'new people', 'strangers'
31	ɔnogiadoba	ɔ	nogiadoba	N.C.	'foreigner'
32	banogiadoba	ba	nogiadoba	N.C.	'foreigners'
33	ɔdobadoba	ɔ	dobadoba	N.C.	'foreigner'
34	badobadoba	ba	dobadoba	N.C.	'foreigners'
35	ɔdobasi	ɔ	dobasi	N.C.	'teacher'
36	badobasi	ba	dobasi	N.C.	'teachers'
37	odʒidʒi	o	dʒidʒi	N.C.	*'year'*
38	badʒidʒi	ba	dʒidʒi	N.C.	*'years'*
39	obidʒe	o	bidʒe	N.C.	'girl (to 18)'
40	bebidʒe	be	bidʒe	N.C.	'girls (to 18)'
41	obinjame	o	binjame	N.C.	'baby boy'
42	bebinjame	be	binjame	N.C.	'baby boys'

43	obi	o	bi	N.C.	'baby'
44	bebi	be	bi	N.C.	'babies'
45	oneda:	o	neda:	N.C.	'aunt (mother's sister)'
46	beneda:	be	neda:	N.C.	'aunts (mother's sisters)'
47	osobi	o	sobi	N.C.	'grandchild'
48	besobi	be	sobi	N.C.	'grandchildren'
49	oŋe	o	ŋe	N.C.	'husband'
50	beŋe	be	ŋe	N.C.	'husbands'
51	odze	o	dze	N.C.	'wife'
52	bedze	be	dze	N.C.	'wives'
53	odziga	o	dziga	N.C.	'trader'
54	bedziga	be	dziga	N.C.	'traders'
55	obikpo	o	bikpo	N.C.	*'scar'*
56	bebikpo	be	bikpo	N.C.	*'scars'*
57	ove	o	ve	N.C.	'mouse'
58	beve	be	ve	N.C.	'mice'
59	okusi	o	kusi	N.C.	'chief'
60	bekusi	be	kusi	N.C.	'chiefs'
61	okpo	o	kpo	N.C.	'corpse'
62	bekpo	be	kpo	N.C.	'corpses'
63	omeme	o	meme	N.C.	'palmwine tapper'
64	bememe	be	meme	N.C.	'palmwine tappers'
65	oʋeʋe	o	ʋeʋe	N.C.	'hunter'
66	beʋeʋe	be	ʋeʋe	N.C.	'hunters'
67	opipinete	o	pipinete	N.C.	'poor person'
68	bepipinete	be	pipinete	N.C.	'poor people'
69	onete	o	nete	N.C.	'owner'
70	beneta	be	neta	N.C.	'owners'

Although the prefix pattern says that plural prefixes should be either /ba-/ or /be-/, four exceptions are included in the data. These are listed in Table 6 along with their singular counterparts, although the singular prefixes are what is normally expected (/ɔ-/ or /o-/). In the class 1 data, there is one example of a noun with [bɑ-] as the plural prefix, one example of [bɛ-], and two examples of [bi-]. Nouns with the plural prefix [bi-] are usually class 5 nouns, but these two examples (76. [binjime] 'boys' and 78. [bizea] 'thieves') have the class 1 singular prefixes

(seen in 75. [onjime] 'boy' and 77. [oze:] 'thief'). Additionally, these two nouns match the semantic category of "animate" objects. Although each noun in Table 6 has an irregular plural prefix, they are still class 1 nouns.

Table 6 Class 1 Nouns with Irregular Plural Prefixes

	Word	Prefix	Root	Article	Gloss
71	ɔβie	ɔ	βiɑ	e	'friend'
72	bɑβiɑ:	bɑ	βiɑ	:	'friends'
73	onitʃi	o	nitʃi	N.C.	'grandmother', 'old woman'
74	bɛnitʃia	bɛ	nitʃi	a	'grandmothers', 'old women'
75	onjime	o	njime	N.C.	'boy'
76	binjime	bi	njime	N.C.	'boys'
77	oze:	o	ze	:	'thief'
78	bizea	bi	ze	a	'thieves'

2.3.2.2 Definite Article Suffixes

Definite article suffixes for class 1 are difficult to determine with certainty with the currently available data. Class 1 nouns that have articles in the data are listed in Tables 6 (above) and 7 (below).

There are nine singular article suffixes in the class 1 data: three are /-e/, three are /-we/, and the remaining three are /-i/, /-nɛ/, and a lengthened /e/ on a word that already ends with that vowel. There are thirteen plural article suffixes in the data. Six of them are /-a/ and four are /-wa/. The other three are /-nɛa/, /-ǎ/, and a lengthened vowel on a word ending in the vowel /ɑ/. The singular /-nɛ/ and plural /-nɛa/ occur on the same noun pair (see 93 and 94 in Table 7), but the lengthened vowels are on different nouns (see 72 and 77 in Table 6).

Seven of the nine singular suffixes include the vowel /e/, and twelve of the thirteen plural suffixes include the vowel /a/. Class 1 suffixes cannot be absolutely determined without more data, but a reasonable theory based on the collected nouns indicates that the singular definite article is /-e/ and the plural definite article is /-a/.

Table 7 Regular Class 1 Nouns with Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
79	ɔmwe	ɔ	me	we	'goat'
80	bamwa	ba	mo	wa	'goats'
81	ɔnuβe	ɔ	nuβo	e	'child'
82	banuβwa	ba	nuβa	wa	'children'
83	ɔnwe	ɔ	nɔ	we	'person'
84	banwa	ba	nɔ	wa	'people'
85	ɔgasie	ɔ	gasi	e	'lizard'
86	bagasia	ba	gasi	a	'lizards'
87	ɔdʒei	ɔ	dʒe	i	'woman' (not a mother)
88	badʒa	ba	dʒe	a	'women' (not mothers)
89	ɔzuwe	ɔ	zu	we	'housefly'
90	bazwa	ba	zu	wa	'houseflies'
91	okatʃi	o	katʃi	N.C.	'grandfather', 'old man'
92	bakatʃia	ba	katʃi	a	'grandfathers', 'old men'
93	obipɔɛ	o	bipɔ	nɛ	'midwife'
94	bebipɔnɛa	be	bipɔ	nɛa	'midwives'
95	obweti	o	bweti	N.C.	'wise person'
96	bebwetiă	be	bweti	ă	'wise people'
97	oni	o	ni	N.C.	'mother', 'adult woman'
98	bena	be	ni	a	'mothers', 'adult women'

2.4   Class 2 ɔ-/o- : i-

Class 2 nouns are "long objects." They have the singular prefix /ɔ-/ or /o-/ and the plural prefix /i-/. As with class 3, class 2 nouns have two options for definite article suffixes. These suffixes do not correspond to the distribution of the singular prefixes. The two options are /-lo/ for singular and /-le/ for plural or /-no/ for singular and /-lo/ for plural.

2.4.1 Semantics

Class 2 nouns share the property of being long. Examples include 135. [odese] 'backbone' and 161. [ɔsiguno] 'tree root.' Out of fifty-eight nouns, twenty-six nouns are long and thirty-three are not. The nouns which do not follow the semantic description of "long" are italicized in the English gloss in Tables 8, 9, and 10.

Some speculation is possible for the thirty-three nouns which do not seem to fit with the rest of the class. For instance, 145. [ɔgudolo] 'farm bag' could be long if the bag hangs over the shoulder. The word 163. [ɔmano], for 'community' is also a class 2 noun. Its inclusion in the "long object" class could reflect the symbolic idea that communities provide roots. The words for 'root,' 'tree root,' and 'tree' (187. [oguno], [161. ɔsiguno], and 169. [oselo], respectively) are also class 2 nouns. In the English language, the phrase 'family tree' describes the generations of family connections. Perhaps the Avatime word for 'community' has similar connotations.

As discussed previously for Class 1, some people and animals are scattered in classes other than the "animate object" class. Class 2 has two nouns for people and seven for animals. The "person" words are numbers 133. [otɾelo] 'bachelor' and 201. [obi] 'student.' The animals are 155. [ɔbesi] 'sheep,' 157. [ɔbesinime] 'he-sheep,' 159. [ɔbesidʒe] 'she-sheep,' 161. [ɔkɔkɔ] 'chicken,' 179. [ɔsiã] 'ringworm,' 187. [ɔsisiblisi] 'bear,' and 197. [oble] 'intestinal worm.'

179. [ɔsiã] 'ringworm' and 197. [oble] 'intestinal worm' are both immediately understandable as "long objects." They do not belong in the "animate object" class because, for these two nouns, that meaning is trumped by the "long object" categorization.

An argument can be made to explain the presence of the three words for 'sheep' in class 2. Although sheep themselves are not "long objects," their wool could be considered long. Sheep could be included in class 2 on the basis that they produce a long object.

2.4.2   Morphology

The morphology for class 2 needs to account for the two forms of the singular prefix (/ɔ-/ and /o-/) and to address the two sets of definite article suffixes (the first set being /-lo/ and /-le/ and the second set being /-no/ and /-ne/).

2.4.2.1 Class Prefixes

Class 2 has the same two forms for the singular prefix as class 1: /ɔ-/ and /o-/. The predictability for which prefix will be used is also the same as class 1, with one exception. If the first vowel of the root is a mid-vowel, such as [ɔ] or [ɛ], the singular prefix is [ɔ-], which is also a mid-vowel. If the first vowel after the prefix is a higher vowel, such as [o] or [ɪ], the singular prefix is [o-], which is a higher vowel. The pattern of [o-] before [ɪ] is the only difference between class 1 and class 2. [ɪ] does not occur in the data for class 1. Further noun elicitation may uncover an occurrence of the vowel [ɪ] in class 1, in which case the expected finding would be that the rules for both classes match.

If the first vowel of the root is any other vowel other than the four discussed above, the singular prefix cannot be predicted in this data set. Further research must be done to determine if more data will allow for more predictability. Table 8 lists the nouns which follow the prefix patterns. Each singular noun is followed by its plural counterpart, marked in gray.

Table 8 Regular Class 2 Nouns without Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
99	ɔbesi	ɔ	besi	N.C.	*'sheep' (singular)*

100	ibesi	i	besi	N.C.	*'sheep' (plural)*
101	ɔbesinime	ɔ	besinime	N.C.	*'he-sheep' (singular)*
102	ibesinime	i	besinime	N.C.	*'he-sheep' (plural)*
103	ɔbesidʒe	ɔ	besidʒe	N.C.	*'she-sheep' (singular)*
104	ibesidʒe	i	besidʒe	N.C.	*'she-sheep' (plural)*
105	ɔkɔkɔ	ɔ	kɔkɔ	N.C.	*'chicken'*
106	ikɔkɔ	i	kɔkɔ	N.C.	*'chickens'*
107	ɔgle	ɔ	gle	N.C.	*'month'*
108	igle	i	gle	N.C.	*'months'*
109	ɔgla	ɔ	gla	N.C.	'jaw'
110	igla	i	gla	N.C.	'jaws'
111	ɔtami	ɔ	tami	N.C.	'beard'
112	itami	i	tami	N.C.	'beards'
113	ɔjaɪ	ɔ	jaɪ	N.C.	'penis'
114	ijaɪ	i	jaɪ	N.C.	'penises'
115	ɔkili	ɔ	kili	N.C.	'leg'
116	ikili	i	kili	N.C.	'legs'
117	ɔna	ɔ	na	N.C.	*'heart'*
118	ina	i	na	N.C.	*'hearts'*
119	ɔwulasɛŋ	ɔ	wulasɛŋ	N.C.	'muscle'
120	iwulasɛŋ	i	wulasɛŋ	N.C.	'muscles'
121	ɔfɔfɔ~ɛ	ɔ	fɔfɔ̃	N.C.	*'breath'*
122	ifɔfɔ~ɛ	i	fɔfɔ̃	N.C.	*'breaths'*
123	ɔsi~a	ɔ	siã	N.C.	'ringworm'
124	isi~a	i	siã	N.C.	'ringworms'
125	ɔmɔe	ɔ	mɔe	N.C.	*'orange'*
126	imɔe	i	mɔe	N.C.	*'oranges'*
127	ɔlago	ɔ	lago	N.C.	*'evening'*
128	*ilago	*i	lago	N.C.	*'evenings'*
129	ɔkwɛnuako	ɔ	kwɛnuako	N.C.	*'working place'*
130	ikwɛnuako	i	kwɛnuako	N.C.	*'working places'*
131	ɔsisiblisi	ɔ	sisiblisi	N.C.	*'bear'*
132	isisiblisi	i	sisiblisi	N.C.	*'bears'*
133	onugu	o	nugu	N.C.	*'mouth'*
134	inugu	i	nugu	N.C.	*'mouths'*
135	odese	o	dese	N.C.	'backbone'
136	idese	i	dese	N.C.	'backbones'
137	oble	o	ble	N.C.	'intestinal worm'
138	ible	i	ble	N.C.	'intestinal worms'

139	onipo	o	nipo	N.C.	'river'
140	inipo	i	nipo	N.C.	'rivers'
141	obi	o	bi	N.C.	*'student'*
142	iba	i	ba	N.C.	*'students'*

2.4.2.2 Definite Article Suffixes

Class 2 has two distinct sets of definite article suffixes. One set has /-lo/ for singular and /-le/ for plural. The other set has /-no/ for singular and /-ne/ for plural. No noun has [l] in the singular form and [n] in the plural form or vice versa. The articles used cannot be determined by looking at the last vowel of the root or from any other phonological determination.

In this data set, the distribution of the [l] and [n] definite article suffixes appears to be random. Perhaps further noun elicitation could help determine which nouns have which articles. Alternatively, perhaps this class has been simplified in some way (so that the article division has some basis which has been lost over time). Table 9 shows the class 2 nouns that have regular definite article suffixes. After the table, irregular forms are discussed.

Table 9 Regular Class 2 Nouns with Regular Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
143	ɔjialo	ɔ	jia	lo	'chain', 'necklace', 'bracelet', 'belt'
144	ijale	i	ja	le	'chains', 'necklaces', 'bracelets', 'belts'
145	ɔgudolo	ɔ	gudo	lo	*'farm bag' (big, for tools)*
146	igudole	i	gudo	le	*'farm bags' (big, for tools)*
147	ɔsevugavugalo	ɔ	sevugavuga	lo	'cane', 'walking stick'
148	isevugavugale	i	sevugavuga	le	'canes', 'walking sticks'
149	ɔwilo	ɔ	wi	lo	*'car'*
150	iwile	i	wi	le	*'cars'*
151	ɔsubolo	ɔ	subo	lo	*'stove' (clay, gas)*
152	isubole	i	subo	le	*'stoves' (clay, gas)*
153	ɔwulalo	ɔ	wula	lo	'arm'
154	iwulale	i	wula	le	'arms'
155	ɔplɔno	ɔ	plɔ	no	'table'

156	iplɔne	i	plɔ	ne	'tables'
157	ɔnjono	ɔ	njo	no	*'church bell', 'watch', 'clock'*
158	injone	i	njo	ne	*'church bells', 'watches', 'clocks'*
159	ɔdzino	ɔ	dzi	no	*'song'*
160	idzine	i	dzi	ne	*'songs'*
161	ɔsiguno	ɔ	sigu	no	'tree root'
162	isigune	i	sigu	ne	'tree roots'
163	ɔmano	ɔ	ma	no	*'community'*
164	imane	i	ma	ne	*'communities'*
165	ole	o	le	lo	'neck,' 'throat'
166	ile	i	le	le	'necks,' 'throats'
167	opupolo	o	pupo	lo	*'door'*
168	ipupole	i	pupo	le	*'doors'*
169	oselo	o	se	lo	'tree'
170	isele	i	se	le	'trees'
171	olelo	o	le	lo	*'cocoa dye'*
172	ilele	i	le	le	*'cocoa dyes'*
173	obwelo	o	bwe	lo	*'garden egg (eggplant)'*
174	ibwele	i	bwe	le	*'garden eggs (eggplants)'*
175	otʃɪnelo	o	tʃɪne	lo	'okra'
176	itʃɪnele	i	tʃɪne	le	'okras'
177	otɾelo	o	tɾe	lo	*'bachelor'*
178	itɾele	i	tɾe	le	*'bachelors'*
179	onipelo	o	nipe	lo	*'ocean', 'sea'*
180	inipele	i	nipe	le	*'oceans', 'seas'*
181	omabidilo	o	mabidi	lo	*'big town', 'capitol'*
182	imabidile	i	mabidi	le	*'big towns', 'capitols'*
183	otagolo	o	tago	lo	*'pestle' (to pound fufu)*
184	itagole	i	tago	le	*'pestles' (to pound fufu)*
185	ogbeno	o	gbe	no	'rope'
186	igbene	i	gbe	ne	'ropes'
187	oguno	o	gu	no	'root'
188	igune	i	gu	ne	'roots'
189	omweno	o	mwe	no	*'orange'*
190	imwene	i	mwe	ne	*'oranges'*
191	opino	o	pi	no	'tail'
192	ipine	i	pi	ne	'tails'
193	oweno	o	we	no	*'outside' (singular)*
194	iwene	i	we	ne	*'outside' (plural)*

195	omano	o	ma	no	*'country'*
196	imane	i	ma	ne	*'countries'*
197	osano	o	sa	no	*'instruction', 'law', 'rule'*
198	isane	i	sa	ne	*'instructions', 'laws', 'rules'*
199	ɔsɔlo	ɔ	sɔ	lo	'sugarcane' (singular)
200	isɔle	i	sɔ	le	'sugarcane' (plural)
201	ɔgɔno	ɔ	gɔ	no	*'coconut'*
202	igɔne	i	gɔ	ne	*'coconuts'*
203	ɔnjɔ:no	ɔ	njɔ:	no	*'farm'*
204	injɔ:ne	i	njɔ:	ne	*'farms'*

Table 10 shows nouns that have irregular vowels in the definite article suffixes. 205, 207, 209, and 211 have irregular singular suffixes and 212 has an irregular plural suffix. These irregular vowels cannot be explained without further data.

Table 10 Class 2 Nouns with Irregular Vowels in Definite Articles

	Word	Prefix	Root	Article	Gloss
205	ɔninu	ɔ	ni	nu	*'soup'*
206	inine	i	ni	ne	*'soups'*
207	onuglɔ	o	nug	lɔ	*'chicken beak'*
208	inugle	i	nug	le	*'chicken beaks'*
209	owalale	o	wala	le	'thing with a handle'
210	iwalale	i	wala	le	'things with a handle'
211	opoβanɔ	o	poβa	nɔ	'side of body'
212	ipoβɑnɛ	i	poβɑ	nɛ	'sides of body'

2.5   Class 3 li- : a-/e-

Class 3 nouns are "round" or "blobby." They have the singular prefix /li-/ and the plural prefix /a-/ or /e-/. The definite article suffixes have two options: the singular suffix /-le/ and the plural suffix /-la/ or the singular suffix /-ne/ and the plural suffix /-na/. The rules governing which set of suffixes will be used are unclear, but they do not correspond to the use of the plural prefixes.

2.5.1 Semantics

Class 3 nouns are "round" or "blobby." Examples include several organs, such as 229. [linazibi] ('kidney'), 293. [litene] ('liver'), and 243. [lifuflute] ('lung'), and body parts, such as 213. [lijɔ] ('cheek'), 215. [limua] ('breast'), and 221. [likilipo] ('hip'). Out of fifty-four nouns, thirty-two fit this semantic characterization. An additional twenty-two – such as 255. [liwole] 'air' and 287. [libwele] 'word' – do not follow the categorization of being "round" or "blobby." Perhaps some of the nouns which do not appear to be a part of the semantic category make more sense in a cultural context. For example, 259. [lipowele] 'birthday' could mean that birthdays are seen in a circular way – the person has come in a full circle to his next birthday. The nouns that are not "round" are marked by italics in Tables 11-17.

2.5.2 Morphology

The morphology of class 3 needs to account for the two forms of the plural prefix (/a-/ and /e-/) which correspond to the singular prefix /li-/. This will be followed by a discussion of the definite article suffixes and then a look at irregular forms.

2.5.2.1 Class Prefixes

The singular prefix for class 3 is /li-/. The plural prefix for class 3 has two forms: /a-/ and /e-/. Although these prefixes cannot be entirely predicted, they have the same vowel harmony pattern found in class 1 singular prefixes /ka-/ and /ke-/. The prefix /a-/, which is a back, non-close vowel, can be followed in the next syllable by [a], [ɔ], and [o], which are also back, non-close vowels (for example, 214. [ajɔ] 'cheeks'). The prefix /e-/ can only be predicted when the next vowel is [e], as is the case in 242. [ene] 'teeth.' [e] is a front, non-close vowel. When the next vowel following the prefix is close (such as 216. [amua] 'breasts' and 244. [efuflute]

'lungs'), the prefix cannot be predicted. In the data, these two vowels are [i] and [u]. Table 11

contains all the regular class 3 nouns which were collected without definite articles.

Table 11 Regular Class 3 Nouns without Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
213	lijɔ	li	jɔ	N.C.	'cheek'
214	ajɔ	a	jɔ	N.C.	'cheeks'
215	limua	li	mua	N.C.	'breast'
216	amua	a	mua	N.C.	'breasts'
217	limlɔja	li	mlɔja	N.C.	'buttock'
218	amlɔja	a	mlɔja	N.C.	'buttocks'
219	lipɔsi	li	pɔsi	N.C.	'testicle'
220	apɔsi	a	pɔsi	N.C.	'testicles'
221	likilipo	li	kilipo	N.C.	'hip'
222	akilipo	a	kilipo	N.C.	'hips'
223	liklamasi	li	klamasi	N.C.	'knee'
224	aklamasi	a	klamasi	N.C.	'knees'
225	liklihu	li	klihu	N.C.	'ankle'
226	aklihu	a	klihu	N.C.	'ankles'
227	liɣoa	li	ɣoa	N.C.	*'bone'*
228	aɣoa	a	ɣoa	N.C.	*'bones'*
229	linazibi	li	nazibi	N.C.	'kidney'
230	anazibi	a	nazibi	N.C.	'kidneys'
231	likla	li	kla	N.C.	'stome'
232	akla	a	kla	N.C.	'stomes'
233	lili	li	li	N.C.	'palm fruit'
234	ali	a	li	N.C.	'palm fruits'
235	liwulap'a	li	wulap'a	N.C.	'leaf'
236	awulap'a	a	wulap'a	N.C.	'leaves'
237	liza	li	za	N.C.	*'past' (singular)*
238	aza	a	za	N.C.	*'past' (plural)*
239	litʃukpo	li	tʃukpo	N.C.	'head'
240	etʃukpo	e	tʃukpo	N.C.	'heads'
241	line	li	ne	N.C.	'tooth'

242	ene	e	ne	N.C.	'teeth'
243	lifuflute	li	fuflute	N.C.	'lung'
244	efuflute	e	fuflute	N.C.	'lungs'
245	lizokpo	li	zokpo	N.C.	'hole'
246	ezokpo	e	zokpo	N.C.	'holes'
247	lito	li	to	N.C.	'hill'
248	eto	e	to	N.C.	'hills'
249	ligu	li	gu	N.C.	'palm kernel'
250	egu	e	gu	N.C.	'palm kernels'

Table 12 contains the only noun in class 3 with an irregular singular prefix. Rather than having the prefix /li-/, 251. [lekatʃa] 'cottage' has the irregular prefix /le-/. This is especially strange since this word violates the vowel harmony in which the vowel [a] or [e] is the prefix is determined by the first vowel of the root. Since the first vowel in the root of [lekatʃa] is [a], the vowel [e] is not expected to show up in the prefix. Indeed, 252. [akatʃa] 'cottages' predictably uses /a-/ rather than /e-/ for the plural prefix due to the first vowel of the root.

Table 12 Class 3 Nouns with Irregular Prefixes

	Word	Prefix	Root	Article	Gloss
251	lekatʃa	le	katʃa	N.C.	'cottage'
252	akatʃa	a	katʃa	N.C.	'cottages'

2.5.2.2 Definite Article Suffixes

The definite article suffixes for class 3 have two options: either /-le/ for singular and /-la/ for plural or /-ne/ for singular and /-na/ for plural. Although the vowels in the definite articles are different than in the definite articles for class 2, the definite articles are similar in that no noun has [l] in the singular form and [n] in the plural form or vice versa. The vowels of the root cannot be used to determine which article pair will be used with a particular noun. More research must be done to determine what, if any, criteria are used to predict the use of

the [l] suffixes or the [n] suffixes. Table 13 shows the class 3 nouns that follow the pattern of

the definite article suffixes. All irregular definite article forms will be discussed after the table.

Table 13 Regular Class 3 Nouns with Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
253	ligale	li	ga	le	'car tire', 'towel to protect head while carrying things'
254	agale	a	ga	la	'car tires', 'towels to protect head while carrying things'
255	liwole	li	wo	le	*'air'*
256	awole	a	wo	le	*'airs'*
257	lizile	li	zi	le	'groundnut'
258	azila	a	zi	la	'groundnuts'
259	lipowele	li	powe	le	*'birthday'*
260	apowela	a	powe	la	*'birthdays'*
261	liplele	li	ple	le	'cloud'
262	aplela	a	ple	la	'clouds'
263	ligbale	li	gba	le	'building'
264	agbala	a	gba	la	'buildings'
265	ligp͡ale	li	gp͡a	le	*'fish'*
266	agp͡ala	a	gp͡a	la	*'fishes'*
267	libale	li	ba	le	*'hoe'*
268	abala	a	ba	la	*'hoes'*
269	ligpole	li	gpo	le	'clan/tribe', 'lump in banku and fufu'
270	agpola	a	gpo	la	'clans/tribes', 'lumps in banku and fufu'
271	lisiane	li	sia	ne	*'horn' (i.e. goat horn)*
272	asiana	a	sia	na	*'horns' (i.e. goat horn)*
273	ligbane	li	gba	ne	*'life'*
274	agbana	a	gba	na	*'lives'*
275	likodʒine	li	kodʒi	ne	'chicken egg'
276	akodʒina	a	kodʒi	na	'chicken eggs'
277	liwane	li	wa	ne	'charcoal' (singular)
278	awana	a	wa	na	'charcoal' (plural)
279	liwule	li	wu	le	*'uniform'*
280	ewula	e	wu	la	*'uniforms'*
281	liwile	li	wi	le	'hole' (in basket, not a tear)
282	ewila	e	wi	la	'holes' (in basket, not a tear)
283	liwele	li	we	le	*'day'*

284	ewela	e	we	la	*'days'*
285	libile	li	bi	le	'wound', 'seed'
286	ebila	e	bi	la	'wounds', 'seeds'
287	libwele	li	bwe	le	*'word'*
288	ebwela	e	bwe	la	*'words'*
289	likutole	li	kuto	le	'hat'
290	ekutola	e	kuto	la	'hats'
291	litupole	li	tupo	le	'head'
292	etupola	e	tupo	la	'heads'
293	litene	li	te	ne	'liver'
294	etena	e	te	na	'livers'
295	ligune	li	gu	ne	*'breastbone'*
296	eguna	e	gu	na	*'breastbones'*

In Table 14, the four plural forms are all regular, but the singular forms do not have the expected vowel. 297, 299, and 301 have /-li/ instead of /-le/ (this is also seen in 310. [liweli] 'moon,' which is listed in Table 16 with the other class 3 nouns that do not have plural forms). 303 has /-nɛ/ instead of /-na/. Further noun elicitation could illuminate why the vowels are changed in these forms.

Table 14 Class 3 Nouns with Irregular Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
297	liβeli	li	βe	li	*'morning'*
298	aβela	a	βe	la	*'mornings'*
299	liweli	li	we	li	*'day'*
300	ewela	e	we	la	*'days'*
301	liboli	li	bɔ	li	'stool'
302	egbɔla	eg	bɔ	la	'stools'
303	liŋɔnɛ	li	ŋɔ	nɛ	'nose'
304	aŋɔna	a	ŋɔ	na	'noses'

The two nouns given in singular and plural in Table 15 have [me] or [mɛ] at the end of the word after the usual definite article suffix. Although they could be a part of the definite article suffix, it is more likely that they serve as a second suffix indicating possession, as both

forms are used to mean "my". This explanation makes sense for 305. [ligbaleme] 'room in a house' – perhaps the speaker's natural response to a request for the Avatime word for 'room' is to say 'my room.' 307. [liwafudʒidʒenemɛ] 'forest' could be explained the same way. Although the speaker was asked for the Avatime word for 'forest,' the concept does not necessarily translate so readily. This noun could indicate 'my field' or 'my land,' in which case the possessive suffix would apply.

Table 15 Class 3 Nouns with Irregular Endings

	Word	Prefix	Root	Article	Gloss
305	ligbaleme	li	gba	leme	*'room in a house'*
306	agbaleme	a	gba	lame	*'rooms in a house'*
307	liwafudʒidʒenemɛ	li	wafudʒidʒe	nemɛ	*'forest'*
308	awafudʒidʒeneme	a	wafudʒidʒi	name	*'forests'*

Table 16 shows the four class 3 nouns which do not have plural forms. They are included as class 3 nouns because they match the class prefix pattern.

Table 16 Class 3 Nouns without Plural Forms

	Word	Prefix	Root	Article	Gloss
309	liwole	li	wo	le	*'wind'*
310	liweli	li	we	li	'moon'
311	liwoleme	li	woleme	N.C.	*'weather'*
312	libwe	li	bwe	N.C.	*'trouble'*

2.6   Class 4 ka-/ke- : ku-

Class 4 nouns have the singular prefix /ka-/ or /ke-/ and the plural prefix /ku-/. Despite the differing singular prefixes, they are grouped as one class for three reasons. First, they seem to share the semantic property of being "curved" or "hollow." Second, they have the same plural prefix /ku-/. Third, they have the same definite article suffixes: /-a/ for singular and /-o/ for plural.

2.6.1   Semantics

Class 4 nouns share the semantic property of being "curved" or "hollow."   Examples include 345. [kapamia] ('cutlass') and 341. [kepliʊi] ('calabash'). A cutlass is a curved knife used to cut grass. A calabash is a fruit that is dried and used as a bowl. Another interesting example is 375. [kelami] 'world.'   This noun is in the "curved" object class, meaning that the ancient Avatime people did not consider the world to be flat. This characterization of [kelami] could be either because Avatime speakers live largely in mountainous areas of Ghana or because they already knew the world was a sphere rather than a flat surface.

Out of thirty-three nouns in class 4, twenty-one of them are curved or hollow. The remaining twelve are not. Those that are not are marked by italics in Tables 17-22. 349. [keplepa] 'book' is an example of the twelve nouns in the data that do not appear to be "curved." However, if Avatime speakers used to write on curved bark or scrolls rather than printing books, this characterization as "curved" makes sense.

2.6.2   Morphology

The data contain thirty-three singular and plural noun pairs classified as class 4. Six pairs follow the prefix pattern (/ka-/ or /ke-/ singular prefix and /ku-/ plural prefix) and suffix pattern (/-a/ singular suffix and /-o/ plural suffix). An additional sixteen pairs following the prefix pattern but have no recorded articles. While the language likely has articles for these words, they were not elicited from the speakers and thus are not in the data for this study.

2.6.2.1 Class Prefixes

The distribution of singular prefixes [ka-] and [ke-] match those of class 1 plural prefixes and class 3 plural prefixes, which also have the vowels [a] and [e].

If the first vowel of the root is a back, non-close vowel, then the prefix will be [ka-].

Since [a] is also back and non-close, this makes sense. Back, non-close vowels in the data are

[a], [o], and [ɔ].

If the first vowel following the prefix is front and non-close, then the prefix will be [ke-].

[e] is the only vowel in the data to be front and not close.

The singular prefix cannot be predicted when the first vowel following the prefix is close.

These vowels are [i] and [u]. Further research needs to be done to determine what

environments differentiate the singular prefixes [ka-] and [ke-].

Table 17 shows sixteen nouns and their plural counterparts that follow the prefix

patterns for class 4 but do not have transcribed articles.

Table 17 Class 4 Nouns without Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
313	katopa	ka	topa	N.C.	*'he-goat'*
314	kutopa	ku	topa	N.C.	*'he-goats'*
315	kawulɔkpɔ	ka	wulɔkpɔ	N.C.	'wrist'
316	kuwulɔkpɔ	ku	wulɔkpɔ	N.C.	'wrists'
317	kawlɔame	ka	wlɔame	N.C.	'palm of hand'
318	kuwlɔame	ku	wlɔame	N.C.	'palms of hand'
319	kakilikpɔ	ka	kilikpɔ	N.C.	'foot'
320	kukilikpɔ	ku	kilikpɔ	N.C.	'feet'
321	kakilise	ka	kilise	N.C.	'sole of foot'
322	kukilise	ku	kilise	N.C.	'soles of feet'
323	kadzidzi	ka	dzidzi	N.C.	*'tale'*
324	kudzidzi	ku	dzidzi	N.C.	*'tales'*
325	kasɔʋi	ka	sɔʋi	N.C.	'basket'
326	kusɔʋi	ku	sɔʋi	N.C.	'baskets'

327	kasamia	ka	samia	N.C.	'tortoise'
328	kusamia	ku	samia	N.C.	'tortoises'
329	keplepa	ke	plepa	N.C.	'book'
330	kuplepa	ku	plepa	N.C.	'books'
331	kelezu	ke	lezu	N.C.	'nape of neck'
332	kulezu	ku	lezu	N.C.	'napes of necks'
333	kedʒe	ke	dʒe	N.C.	*'rat'*
334	kudʒe	ku	dʒe	N.C.	*'rats'*
335	kegu	ke	gu	N.C.	*'stump'*
336	kugu	ku	gu	N.C.	*'stumps'*
337	kefukpo	ke	fukpo	N.C.	'pot'
338	kufukpo	ku	fukpo	N.C.	'pots'
339	kese	ke	se	N.C.	*'plot of land'*
340	kuse	ku	se	N.C.	*'plots of land'*
341	keplivi	ke	plivi	N.C.	'calabash'
342	kuplivi	ku	plivi	N.C.	'calabashes'
343	kesegpa	ke	segpa	N.C.	'small pestle'
344	*kusegpa	ku	segpa	N.C.	'small pestles'

Number 344 is a form that was originally given by the consultant, and then rejected as a word. He said that the word could not be pluralized. However, his initial use of the word shows that nouns without plural forms still belong in a class and are bound by other rules of the class.

2.6.2.2 Definite Article Suffixes

The definite article suffixes for class 4 are /-a/ for singular and /-o/ for plural. Table 18 shows the six nouns and their plural counterparts these definite article suffixes.

Table 18 Class 4 Nouns with Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss

345	kapamia	ka	pami	a	'cutlass'
346	kupamio	ku	pami	o	'cutlasses'
347	kakukula	ka	kukul	a	'car horn', 'trumpet'
348	kukukulo	ku	kukul	o	'car horns', 'trumpets'
349	keplia	ke	pli	a	'ladle', 'wooden spoon', 'cup', 'thing to fetch water'
350	kuplio	ku	pli	o	'ladles', 'wooden spoons', 'cups', 'things to fetch water'
351	kezia	ke	zi	a	'bowl', 'plate'
352	kuzio	ku	zi	o	'bowls', 'plates'
353	ketʃua	ke	tʃu	a	'forehead'
354	kutʃuo	ku	tʃu	o	'foreheads'
355	kegia	ke	gi	a	*'price'*
356	kugio	ku	gi	o	*'prices'*

Table 19 has two singular and plural nouns. The singular nouns were collected with definite articles, but the plural nouns were not. This does not mean that the plural articles do not exist for these nouns; however, they are not a part of the data for this study.

Table 19 Class 4 Nouns without Plural Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
357	katɔsia	ka	tɔsi	a	'chin'
358	kutɔsi	ku	tɔsi	N.C.	'chins'
359	kepea	ke	pe	a	*'house'*
360	kupe	ku	pe	N.C.	*'houses'*

Table 20 has eight nouns with [j] as a part of the article. The appearance of [j] can be accounted for with a phonological rule.

[j] Insertion: Ø → [j]/{e, o, u, n}+_{o,a}

When the final sound of the root is [e], [o], [u], or [n], and the suffix begins with [o] or [a], then [j] is inserted between these two sounds. That means that the underlying form of 361 [katʃoja] 'bird' is /katʃoa/.

Table 20 Class 4 Nouns with [j] Insertion

	Word	Prefix	Root	Article	Gloss
361	katʃoja	ka	tʃo	ja	'bird'
362	kutʃojo	ku	tʃo	jo	'birds'
363	ketʃitʃali	ka	vro	ja	'headscarf'
364	kuvrojo	ku	vro	jo	'headscarves'
365	kawinja	ka	win	ja	*'broom'*
366	kuwinjo	ku	win	jo	*'brooms'*
367	kadɾeja	ka	dɾe	ja	*'dog'*
368	kudɾujo	ku	dɾu	jo	*'dogs'*

Table 21 shows the two noun pairs that are class 4 but have irregular forms. For number 369, the last vowel is lengthened. The regular form would be /kasaa/, so the form [kasa:] could be a different way of transcribing the noun rather than an irregular way of pronouncing the noun. This is the only case in the data in which the root ends with an [a] and a suffix is given. The reason for the form for 370. [kusɛo] 'waists' is unclear: although the suffix is as expected, the vowel in the root is [ɛ] rather than [a]. Although 371. [katɔkpua] 'bladder' is a regular noun, its plural counterpart, 372. [kutɔkpuɔ] 'bladders' has [-ɔ] as the definite article suffix rather than [-o].

Table 21 Irregular Class 4 Nouns

	Word	Prefix	Root	Article	Gloss
369	kasa:	ka	sa	:	'waist'
370	kusɛo	ku	sɛ	o	'waists'
371	katɔkpua	ka	tɔkpu	a	'bladder'
372	kutɔkpuɔ	ku	tɔkpu	ɔ	'bladders'

The three nouns in Table 22 do not have plural forms, but they have the singular prefix that would be expected of a class 4 noun.

Table 22 Class 4 Nouns without Plural Forms

	Word	Prefix	Root	Article	Gloss
373	kanamedɾa	ka	namedɾa	N.C.	'lightning'
374	ketʃitʃali	ke	tʃitʃali	a	*'floor, ground'*
375	kelami	ke	lami	N.C.	'world'

2.7   Class 5 ki- : bi-

Class 5 nouns have the singular prefix /ki-/ and the plural prefix /bi-/. The definite articles might be [-e] for both singular and plural. They will be discussed in more detail in the morphology section. The nouns in the class 5 have the common property of being protruding objects.

2.7.1   Semantics

Class 5 nouns share the semantic property of being "protruding" objects. Examples include 386. [kibwi] ('thorn'), which protrudes from plants, and 380. [kinemie] ('tongue'), which protrudes from the mouth. Out of seventeen words, ten are protruding objects. The remaining seven are not. Class 5 nouns that are not "protruding objects" are marked by italics in Tables 22 and 23.

2.7.2   Morphology

The class prefixes for class 5 are [ki-] for singular and [bi-] for plural. The definite article suffixes vary greatly, but their underlying forms might be [-e] for both singular and plural. All of the forms will be addressed.

2.7.2.1 Class Prefixes

Class 5 prefixes have a simpler construction than most of the other classes. Rather than having multiple forms for the prefixes, /ki-/ is the only option for the singular prefix and /bi-/ is

the only option for the plural prefix. 403. [kɪnmeza] ('afternoon'), by having [ɪ] in its prefix rather than [i], is the only noun which does not follow this prefix rule.

2.7.2.2 Definite Article Suffixes

In contrast to the relative simplicity of the prefixes, the definite article suffixes for class 5 cannot be determined by the current data. The eight singular definite article prefixes in the data include nasalization of the final vowel /i/, two instances of /-e/, one of /-ie/, three of /-wi/, and one of /-we/. The seven plural definite article prefixes are four cases of the suffix /-we/, two of /-e/, and one /-ew/.

Table 23 Regular Class 5 Nouns

	Word	Prefix	Root	Article	Gloss
376	kinib~i	ki	nibi	~	'eye'
377	binibwe	bi	nibi	we	'eyes'
378	kinemie	ki	nemi	e	'tongue'
379	binemie	bi	nemi	e	'tongues'
380	kikilie	ki	kili	e	'toe'
381	bikilie	bi	kili	e	'toes'
382	kikpafie	ki	kpafu	ie	'fist'
383	bikpafew	bi	kpafu	ew	'fists'
384	kibwi	ki	bu	wi	'thorn'
385	bibwe	bi	bu	we	'thorns'
386	kigwi	ki	gu	wi	*'war'*
387	bigwe	bi	gu	we	*'wars'*
388	kikwi	ki	ku	wi	'yam'
389	bikwe	bi	ku	we	'yams'
390	kiwulakubi	ki	wulakubi	N.C.	'elbow'
391	biwulakubi	bi	wulakubi	N.C.	'elbows'
392	kiwulayi	ki	wulayi	N.C.	'finger'
393	biwulayi	bi	wulayi	N.C.	'fingers'
394	kinwulafu	ki	nwulafu	N.C.	'fingernail'
395	binwulafu	bi	nwulafu	N.C.	'fingernails'
396	kidʒa	ki	dʒa	N.C.	*'meat'*
397	bidʒe	bi	dʒe	N.C.	*'meats'*
398	kide	ki	de	N.C.	*'mortar (for grinding)'*

399	bide	bi	de	N.C.	*'mortars (for grinding)'*
400	kinjane	ki	njane	N.C.	*'food'*
401	binjane	bi	njane	N.C.	*'foods'*

Class 5 has a limited number of nouns. Further data collection may unearth more nouns which fit the description for this class or the class may truly have a smaller number of nouns than other classes. The data for class 5 has a total of thirteen nouns with singular and plural forms. Another three nouns do not have plural forms, but do follow the singular prefix pattern. These are seen in Table 24.

Table 24 Class 5 Nouns without Plural Forms

	Word	Prefix	Root	Article	Gloss
402	kibwe	ki	bɔ	we	*'money'*
403	kɪnmeza	kɪ	nmeza	N.C.	*'afternoon'*
404	kisidʒa	ki	sidʒa	N.C.	*'skin'*

2.8   Class 6 ku- : ba-/be-

Class 6 nouns have the singular prefix /ku-/ and the plural prefix /ba-/ or /be-/. The plural prefixes may be determined by phonological rules, which will be discussed under the morphology section. The definite article suffixes are /-o/ for singular and /-a/ for plural.

2.8.1   Semantics

The nouns in class 6 are difficult to categorize semantically. This class has the least amount of data, with only twenty-two singular nouns. Perhaps more data in this class could give further insight. If there is no underlying shared semantic property, this class could be a catch-all for nouns which do not fit into other classes. For this study, class 6 will be discussed as a class for "miscellaneous" objects.

2.8.2   Morphology

The morphology for class 6 must account for the variation in the plural prefix (either /ba-/ or /be-/) and then examine /-o/, the singular definite article, and /-a/, the plural definite article.

2.8.2.1 Class Prefixes

Class 6 prefixes are /ku-/ for singular and /ba-/ or /be-/ for plural. As seen classes 1, 3, and 4, the distribution of [a] and [e] is governed by a limited vowel harmony. /ba-/ comes before back, non-close vowels in the root, such as in 406. [bapɔ] 'families.' These vowels are [a], [ɔ], and [o]. /be-/ comes before front, non-close vowels. In this data, the only example of a front, non-close vowel is [e], such as in 440. [bede] 'road.' In front of close vowels in the root, such as [i] and [u], the prefix cannot be predicted with the current data. Table 25 shows the singular and plural nouns which demonstrate the distribution of the plural prefixes.

Table 25 Regular Class 6 Nouns without Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
405	kupɔ	ku	pɔ	N.C.	'family'
406	bapɔ	ba	pɔ	N.C.	'families'
407	kutu	ku	tu	N.C.	'ear'
408	batu	ba	tu	N.C.	'ears'
409	kulila	ku	lila	N.C.	'dream'
410	balila	ba	lila	N.C.	'dreams'
411	kupɛ	ku	pɛ	N.C.	'valley'
412	bapɛ	ba	pɛ	N.C.	'valleys'
413	kumijo	ku	mijo	N.C.	'oil'
414	bamwa	ba	mwa	N.C.	'oils'
415	kubija	ku	bija	N.C.	'palm oil' (from palm fruit)
416	bamwa	ba	mwa	N.C.	'palm oils' (from palm fruit)
417	kunja	ku	nja	N.C.	'sickness', 'illness', 'disease'
418	banja	ba	nja	N.C.	'sicknesses', 'illnesses', 'diseases'
419	kunjo	ku	njo	N.C.	'smoke'
420	*banja	ba	nja	N.C.	'smokes'

Number 420 serves as evidence of the pluralization rules of class 6. When the speaker was asked to say the plural version of [kunjo], he first said [banja] before rejecting the notion that [kunjo] could be pluralized at all. In saying the wrong word, the speaker applied the typical plural prefix for class 6, demonstrating that words without plural forms are still a part of a noun class.

2.8.2.2 Definite Article Suffixes

Although relatively few of the nouns in this data set were transcribed with articles, the ones that were consistently show the articles to be /-o/ for singular and /-a/ for plural. Table 26 gives two noun pairs which follow this definite article pattern.

Table 26 Regular Class 6 Nouns with Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
421	kuklio	ku	kli	o	'leg (hip down)'
422	baklia	ba	kli	a	'legs (hip down)'
423	kulio	ku	li	o	'palm tree'
424	balia	ba	li	a	'palm trees'

Irregular singular and plural class 6 nouns are in Table 27-31.

The nasalization in 425 and 426 is perhaps tied to the root ending of [a], although it does not explain why the singular suffix is not some version of [o].

Table 27 Class 6 Nouns with Irregular Definite Article Suffixes

	Word	Prefix	Root	Article	Gloss
425	kudã	ku	da	~	'assorted drink'
426	badã	ba	da	~	'assorted drinks'

427 and 429 are partially explained with the [j] Insertion rule explained in class 4, but the plural suffix for both should be [ja], rather than [a] in 428 and the deletion of the [e] and addition of the [a] in 430.

Table 28 Class 6 Nouns with Irregular [j] Insertion

	Word	Prefix	Root	Article	Gloss
427	kuwaɪjo	ku	waɪ	jo	'game'
428	ba waɪa	ba	waɪ	a	'games'
429	ku tʃejo	ku	tʃe	jo	'death'
430	bi tʃa	bi	tʃe	a	'deaths'

Number 431 has no recorded singular suffix, and the plural word 432. [basa] is changed to [baswa] when the definite article is present.

Table 29 Class 6 Nouns with Irregular [w] Insertion

	Word	Prefix	Root	Article	Gloss
431	kusa	ku	sa	N.C.	'cloth'
432	baswa	ba	sa	wa	'clothes'

In 434, the final vowel of the root is replaced by the vowel of the suffix, and the singular suffix in 433 is [ɔ] instead of [o], also replacing the final vowel of the root.

Table 30 Class 6 Nouns with Irregular Definite Article Prefixes

	Word	Prefix	Root	Article	Gloss
433	kudɔ	ku	de	ɔ	'road', 'path'
434	beda	be	de	a	'roads', 'paths'

The reason for the vowel lengthening in 435 is not clear.

Table 31 Class 6 Nouns with Irregular Vowel Lengthening

	Word	Prefix	Root	Article	Gloss
435	kususu:o	ku	susu	:o	'brain'
436	besusua	be	susu	a	'brains'

Table 32 lists the six class 6 nouns that do not have plural counterparts.

Table 32 Class 6 without Plural Forms

	Word	Prefix	Root	Article	Gloss
437	kuwo	ku	wo	N.C.	'sun (opposite of shade)'
438	kujo	ku	jo	N.C.	'shade (opposite of sun)'
439	kumo	ku	mo	N.C.	'salt'
440	kuhuhjo	ku	huhjo	N.C.	'temperature'
441	kusujo	ku	sujo	N.C.	'piece', 'part'

| 442 | kukotʃa | ku | kotʃa | N.C. | 'forgiveness' |

2.9 Class 7 si-

Class 7 nouns are mass nouns. They have the prefix [si-] and the article suffix [-se]. They have the smallest number of examples in the data.

2.9.1 Semantics

Class 7 nouns are united in being mass nouns, such as 448. [siklami] 'sand.' These words are not very common, and when they did appear, all three speakers insisted that there was not a distinct singular or plural of these words. Some of the English glosses were given in a singular form, such as 445. [sisise] 'feather,' and some in plural, such as 444. [sipapase] 'wings.'   When asked to say 'feathers' or 'wing,' each speaker said that there was no other form (i.e. either singular or plural) of these words. 451. [sinjime] 'prowess' does not seem to fit the semantic category of being a mass noun, but it does match the class prefix and there is only one form of this word rather than both singular and plural forms.

2.9.2 Morphology

The morphology of class 7 is notably different from the other six classes. Rather than having a singular and plural form, class 7 has only one form, with one prefix and one definite article suffix.

2.9.2.1 Class Prefixes

The class prefix for class 7 is /si-/. No exceptions exist in the data.

2.9.2.2 Definite Article Suffixes

The definite article suffix for class 7 is /-se/. Four of the nine nouns in the data for class

7 have this definite article. Likely, the five nouns which were not recorded with articles follow

the same pattern.

Table 33 Class 7 Nouns

	Word	Prefix	Root	Article	Gloss
443	siase	si	a	se	'hair'
444	sipapase	si	papa	se	'wings'
445	sisise	si	sisi	se	'feather'
446	siwase	si	wa	se	'grass'
447	sikɔ	si	kɔ	N.C.	'feces'
448	siklami	si	klami	N.C.	'sand'
449	simi	si	mi	N.C.	'feces'
450	siwa	si	wa	N.C.	'weed'
451	sinjime	si	njime	N.C.	'prowess'

2.9.3   /si-/ According to Ford and Divine

Divine does not have a class for nouns beginning with /si-/. He mentions in his paper

that a few of them exist and that they are mass nouns, but because they are so few, he does

not give them their own class.

Ford has a class for /si-/ nouns; however, his class differs significantly from the current

study. According to Ford, this class of nouns has /ku-/ for the singular prefix, /si-/ for the plural

prefix, /-ko/ or /-kɔ/ for the singular article, and /-se/ or /-sɛ/ for the plural article.

This claim does not match what the speakers for the current study said. For each /si-/

noun in the data, all three speakers insisted that there was no other form of the word. They

used it to describe the same noun whether the noun could be considered singular or plural (for

example, "a piece of hair" was the same thing as "hair").

One possibility to explain this sharp distinction between Ford's work and the current study is that Avatime is gradually collapsing this noun class. Ford's research was published in 1988. Between that time and 2009, when this data was collected, it is possible that the singular /ku-/ has fallen out of use in Avatime. Since these words are so few to begin with, this class seems to be a good candidate for a simplification of its system.

3   Discussion

Differences exist between both the order and the morphology of the Avatime noun class system according to the current study and according to the previous work done by Ford (1988) and more recently by Divine (unpublished).

3.1   Class Order

The class order differs between all three propositions of the Avatime noun class system. Ford gives no account for the reasoning behind his order nor does he give semantic categories to the classes. Nevertheless, his class 1 is the "animate" object class, as is standard practice in noun class systems (Denny and Creider 1986). Beyond that, the classes seemed to be grouped according to similarities in the singular prefixes: the two o-/ɔ- classes are next to each other, as are the four classes which Ford says begin with /k/ singular prefixes. The /k/ classes are not in alphabetical order or any other order that can be discerned solely from Ford's chart.

Divine's class order is completely alphabetical, which nearly inverts Ford's order: the /k/ classes are first rather than last, followed by /li-/ in the middle, and ending with the o-/ɔ- classes rather than beginning with them.

The current study relies primarily on semantic categories and secondarily on similarities between different classes' singular prefixes. The first class is the "animate" object class, which

has the o-/ɔ- prefixes, followed by the other class beginning with o-/ɔ-. The last class, class 7,

has the mass nouns, and is also distinct from the other classes in that it has only one form of

the noun instead of having both a singular and plural form. Class 6 is also distinct in that it

seems to be a "miscellaneous" category – a catch-all for nouns that do not fit in other classes.

Aside from the first and the last two classes, the other four fall in between according to

similarities between the singular prefixes: the other classes beginning with /k/ come before the

"miscellaneous" class, the other o-/ɔ- class comes after the "animate" object class, and the /li-/

class comes between those two groups of classes.

Order of classes according to Ford, Divine, and the current study are summarized in

Table 34 Noun Class Order Compared According to Prefixes.

Table 34 Noun Class Order Compared According to Prefixes

	Ford		Divine		Watkins	
	Singular	Plural	Singular	Plural	Singular	Plural
1	o-/ɔ-	be-/ba-	ka-/ke-	ku-	ɔ-/o-	ba-/be-
2	o-/ɔ-	i-	ki-	bi-	ɔ-/o-	i-
3	li-	e-/a-	ku-	ba-	li-	a-/e-
4	ki-	bi-	li-	a-	ka-/ke-	ku-
5	ku-	si-	li-	e-	ki-	bi-
6	ku-	be-/ba-	ɔ-	ba-	ku-	ba-
7	ke-/ka-	ku-	ɔ-	i-	si-	
8			o-	be-		
9			o-	i-		

3.2   Morphology

In Table 35, Ford's suffixes are reordered to line up with the classes posited by the

current study, in order to compare the suffixes side-by-side. Divine's work with Avatime noun

classes does not extend to definite article suffixes.

Table 35 Comparison of Definite Article Suffixes

	Ford		Watkins	
	Singular	Plural	Singular	Plural
1	-ye/-yɛ	-ba	-e	-a
2	-lo/-lɔ	-le/-lɛ	-lo/-no	-le/-ne
3	-le/-lɛ	-la	-le/-ne	-la/-na
4	-ka	-ko/-kɔ	-a	-o
5	-ke/-kɛ	-be/-bɛ	-e	-e
6	-ko/-kɔ	-ba	-o	-a
7	-ko/-kɔ	-se/-sɛ	-se	

As is seen in Table 35, the suffixes from Ford and the current study differ greatly. For Ford,

classes 2 and 3 do not include an alternation between [n] and [l]. The current study cannot

explain the alternation, but the data show clearly that it exists. For class 7, the suffix in the

current study is also in Ford's work, but since the current study only has one form of nouns in

class 7, it also has only one form of the suffix. Ford's singular suffixes /-ko/ and /-kɔ/ would

have disappeared alongside the singular nouns beginning with /ku-/. For class 1 and classes 4-6,

the vowels of the suffixes match, but Ford has a consonant at the beginning of each of those

suffixes, whereas the current study has only vowels.

Assuming that Ford's data back up his proposed suffixes, the current study indicates a

significant simplification to the Avatime noun class system. The definite article suffixes are

being reduced.

4   Conclusion

According to the current study, Avatime has seven noun classes divided according to

alternating singular and plural prefixes, definite article suffixes, and semantic similarities.

Classes are ordered according to semantic similarities. The "animate" object class is first and

the two classes for "miscellaneous" and mass nouns are last.

Class 1 nouns are "animate" objects, such as people or animals, which begin with either /ɔ-/ or /o-/ in the singular and /ba-/ or /be-/ in the plural. When the noun is used with a definite article, these articles are often /-e/ in the singular and /-a/ in the plural.

Class 2 nouns are "long" objects which also begin with /ɔ-/ or /o-/ in the singular. In the plural, they begin with /i-/. When used with definite articles, these articles are /-lo/ for singular and /-le/ for plural or /-no/ for singular and /-ne/ for plural.

Class 3 nouns are "round" or "blobby" objects which begin with /li-/ in the singular and either /a-/ or /e-/ in the plural. When used with definite articles, these articles are /-le/ for singular and /-la/ for plural or /-ne/ for singular and /-na/ for plural.

Class 4 nouns are "curved" or "hollow" objects which begin with either /ka-/ or /ke-/ for singular and /ku-/ for plural. When used with definite articles, these articles are /-a/ for singular and /-o/ for plural.

Class 5 nouns are "protruding" objects which begin with /ki-/ for singular and /bi-/ for plural. The definite article suffix is /-e/ for both singular and plural.

Class 6 nouns do not have an obvious semantic correlation. Either they are a "miscellaneous" objects class or further research could be done to determine an underlying shared semantic property. They begin with /ku-/ in the singular and /ba-/ in the plural. When used with definite articles, these articles are /-o/ in the singular and /-a/ in the plural.

Class 7 nouns are mass nouns. They do not have both a singular and a plural form, but rather, they all begin with /si-/. When used with a definite article, that article is /-se/.

Although the current phonological rules cannot account for all of the variety in the suffixes and prefixes, some of the variation follows predictable patterns. Limited vowel

harmony exists between vowels /a/ and /e/ and vowels /o/ and /ɔ/. The [j] Insertion Rule explains the occasional presence of /j/ in definite article suffixes. For the forms which are not explained, further research could be done to determine what rules are guiding the formation of some suffix and prefix combinations.

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