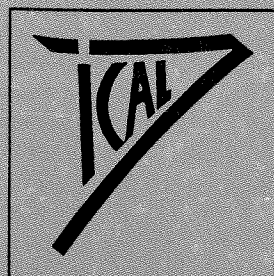


Proceedings of
the Seventh International Conference
on *Austronesian Linguistics*



Leiden
22-27 August 1994

Cecilia Odé & Wim Stokhof
Editors

THE PARAGOGIC VOWEL IN LAUJE (TOMINI-TOLITOL): PHONOLOGY OR MORPHOSYNTAX?

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1 Abstract and introduction

In Lauje, the vowel /e/ may be optionally added to consonant-final words. Unlike suffixes, this vowel does not cause a stress shift and thus seems to be very similar to so-called paragogic vowels in North and South Sulawesi languages. Paragogic vowels make up part of 'the drift towards final open syllables in Sulawesi languages' as recently argued by Sneddon (1993). However, as opposed to other Sulawesi languages, the paragogic vowel in Lauje is not lexicalized. Instead, it is a highly variable phenomenon for which very few straightforward rules exist.

This paper offers a preliminary investigation of the factors involved in the use of paragogic vowels in Lauje. The investigation is based on two samples, one consisting of words in isolation (elicited words), the other consisting of connected speech (narratives and elicited sentences). It is shown that, apart from phonological factors, there are other, non-phonological factors relevant for the use of a paragogic vowel in Lauje.

Of considerable interest is the fact that a fairly consistent interaction exists in Lauje between paragogic vowels and certain grammatical elements. This leads to the conclusion that a descriptively adequate statement of the distribution of the paragogic vowel in Lauje has to make reference to specific morphosyntactic information. Thus, both phonology and morphosyntax are relevant for stating the distribution of the paragogic vowel. The final section offers a tentative explanation of this phenomenon along the following lines: In present-day Lauje, a set of former grammatical relation markers is in the process of being phonologized. The paragogic vowel as attested in other Sulawesi languages represents the final stage of this process. In Lauje, however, the paragogic vowel has not yet been completely phonologized. This accounts for the fact that morphosyntactic factors play a role in its use as well as for the fact that, from a phonological point of view, there are merely tendencies discernible with respect to its distribution rather than straightforward rules.

There is a well-known drift towards open final syllables in Sulawesi languages, a phenomenon widespread in Oceanic languages but rare in

Western Malayo-Polynesian languages. Sneddon (1993:4) has identified the following four processes as playing a major role in this drift:

Table 1: Major processes leading to open final syllables in Sulawesi languages (Sneddon 1993:4).

1. FINAL CONSONANT LOSS (FCL)	$C \rightarrow \emptyset / _ \#$
2. FINAL CONSONANT REDUCTION (FCR)	$C \rightarrow \gamma / _ \#$
3. ADDITION OF A PARAGOGIC SYLLABLE (PA)	$\emptyset \rightarrow V(\gamma) / C _ \#$
4. NASAL VELARISATION (NV)	$N \rightarrow \eta / _ \#$

As Sneddon (1993) illustrates in detail, the various languages and language microgroups in Sulawesi differ with respect to which and to what extent any of these processes has been operative in their history (if any at all).

In some of the Tomini-Tolitoli languages of northern Central Sulawesi, the last two of these processes, i.e. PA and NV, seem to be presently in progress. This is shown by the fact that these languages exhibit a considerable degree of variability with respect to these processes. For example, note that for the Lauje words given in (1), forms ending in the 'original', non-velar nasal as well as forms ending in a velar nasal have been recorded (from the same speaker, on the same occasion, i.e. in recording a list of elicited words):

(1) <i>gasan/gasang</i>	'bamboo'
<i>polengan/polengang</i>	'lie supine'
<i>balaun/balaung</i>	'root (above ground)'
<i>inum/inung</i>	'drink'

Given this variability, the Tomini-Tolitoli languages provide for the rare opportunity of studying in detail some of the factors and mechanisms involved in the various processes leading to final open syllables in Sulawesi languages.

The present paper offers a preliminary exploration of one process, i.e. the addition of paragogic vowels, in one language, i.e. Lauje, as spoken on the eastern coast of the Tomini-Tolitoli area (between Tinombo and Palasa, cf. Himmelmann (1993; Chap. 2.1.10) for more details on the location). Its major goal is establishing some descriptive generalizations regarding the occurrence of paragogic vowels in this language.

The remainder of this section provides basic information on the paragogic vowel in Lauje. First note, however, that the data on which this paper is based have not been collected with the specific goal of investigating the paragogic vowel in mind. Rather, they were collected as part of an extensive survey on Tomini-Tolitoli languages, the goals and procedures of which are stated in Himmelmann (1993).

The paragogic vowel in Lauje is a mid front vowel (/e/). It often occurs on consonant-final words in isolation (in elicitation), as well as in syntagms

consisting of several words (in connected speech). As opposed to 'true' (i.e. etymological) vowels, the paragogic vowel exhibits the following two characteristics: First, it is not relevant in determining the stressed syllable. Stress in Lauje regularly falls on the penultima. Thus, words ending on a paragogic vowel are stressed on the antepenultima. Compare the following examples:¹

(2) <i>tútugE</i>	'charcoal'	vs.	<i>galígo</i>	'stir'
<i>moló'opE</i>	'sufficient'	vs.	<i>solópi</i>	'waist'

Second, the paragogic vowel never occurs when suffixes are added to a given base form. Thus, a paragogic vowel may be added to base forms such as *intug* 'look for' or *su'ul* 'measure' as long as no suffix (-an in the following examples) is added. On the other hand, an etymological vowel such as the final /i/ in *otoi* 'know' also occurs with suffixes, viz.:

(3) <i>mongintugE</i>	'look for' (ACTOR-oriented)
<i>meintu-intúgan</i>	'look for each other' (reciprocal)
<i>nosú'ulE</i>	'measure' (UG-oriented)
<i>ponyu'úlan</i>	'measuring instrument'
<i>nootoime</i>	'known' (STATIVE)
<i>me'ootoian</i>	'know each other' (reciprocal)

The occurrence of a paragogic vowel is optional. The word for 'charcoal' in (2), for example, might be pronounced *tutug* or as *tutugE* by the same speaker on the same occasion.² In my data, there is neither a group of word-final consonants nor a single lexical item to which a paragogic vowel is consistently added. That is, unlike in the other Sulawesi languages discussed by Sneddon (1993), in Lauje, the addition of a paragogic vowel is neither an automatic phonological process nor is it lexicalized. Hence, the question arises as to which factors contribute to the occurrence of this vowel.

The most reasonable starting point for investigating this question is a closer inspection of the phonological environments in which paragogic vowels occur since — with very few exceptions to be discussed below (cf. examples 15 & 16) — these vowels generally occur only after consonant-final words.

¹ Here and in all the other examples in this paper, the paragogic vowel is written with a capital <E> in order to distinguish it from other vowels of the same quality. Regular stress is only indicated in the present and following example. For a more detailed statement of Lauje phonology, cf. Himmelmann (1991).

² In recording the wordlist items elicited during my survey of the Tomini-Tolitoli area, I asked the speakers to repeat each Lauje word twice. All of the following patterns occurred in response to the Indonesian prompt I gave myself: *tutug - tutug*, *tutug - tutugE*, *tutugE - tutug*, *tutugE - tutugE*.

That is, the major condition for the use of a paragogic vowel is a phonological one. In section 2, other, more specific phonological factors contributing to this use are explored.

Looking at the distribution of paragogic vowels in connected speech, it turns out that morphosyntactic factors are involved in its use as well. In section 3, it is shown that two grammatical elements, i.e. the genitive marker *nu/u* and the subject marker *a* block the occurrence of a paragogic vowel. The final part of this section then offers some tentative remarks as to the reasons for the interaction of grammatical elements and paragogic vowels. The hypothesis is advanced that the paragogic vowel itself may be considered the final stage in the phonologization of a set of grammatical relation markers, all of which consist of a single vowel. In other words, paragogic vowels and related phenomena in present-day Lauje may be considered instances of *morphology turning into phonology*. The plausibility of this hypothesis crucially depends on evidence that the paragogic vowel in Lauje is not a phenomenon exclusively determined by phonological factors. For this reason, considerable attention is given (in section 2) to the task of showing this is, in fact, not the case. Further evidence supporting the hypothesis is presented in section 4. This includes the fact that a similar phenomenon is attested with respect to suffix-final vowels in Lauje, and, that not only the use but also the form of paragogic vowels in Lauje exhibits considerable variability.

The extreme variability of most phenomena considered in this paper makes it difficult to present the facts in a coherent and comfortably processible way. For almost every tentative generalization, at least one exception has to be noted. In order to keep the complexity of the exposition to a manageable size, I have sometimes opted to postpone the discussion of exceptions to a later point in the presentation. The general expository strategy is to present first general statements of the basic facts and then progressively modify these statements in order to account for exceptions. Therefore, one should not be surprised when a generalization is modified a few pages after it has been stated for the first time.

2 Phonological factors in the distribution of the paragogic vowel

This section presents some data on phonological factors in the distribution of the paragogic vowel in Lauje. As a first step, words in isolation are considered. The second step is an investigation of the occurrence of paragogic vowels in connected speech.

The following table displays the data for some 700 consonant-final words extracted from a Lauje wordlist with ca. 1700 entries (the full list may be found in Himmelmann 1993). In this table, the number of examples for each word-final consonant is given where a paragogic vowel was added during the recording (in the column headed by a plus-sign), as well as the number of

examples where a paragogic vowel was added (in the column headed by a minus-sign). Since various speakers cooperated in the recording of this list, the tokens produced by each speaker are listed in a separate row. A slash (/) indicates that no example for the cell in question is found in the database.

In interpreting the data displayed in table 2, it has to be kept in mind that the samples per speaker are fairly heterogeneous, both quantitatively and qualitatively. Quantitatively, the number of tokens per speaker varies between 26 (speaker D) and 275 (speaker E). Qualitatively, ca. 60% of the words

Table 2: Distribution of paragogic vowel in a sample of elicited words (Total: 702 words; numbers in () = row totals).

	b		d		g		p		t		ʔ	
SPEAKERS	+	-	+	-	+	-	+	-	+	-	+	-
A (19)	1	1	/	/	2	/	/	1	2	2	10	/
B (64)	2	/	2	/	7	2	3	/	15	2	29	2
C (12)	/	/	/	/	5	1	/	1	2	1	/	2
D (3)	/	/	/	/	/	1	1	1	/	/	/	/
E (108)	1	5	3	/	13	4	/	9	3	21	17	32
F (42)	/	5	/	2	/	2	/	4	/	11	3	15
G (13)	/	/	2	/	2	1	/	/	1	2	1	4
TOTALS (261)	4	11	7	2	29	11	4	16	23	39	60	55

	s		l		(r)		y		m		n		ŋ	
SPEAKERS	+	-	+	-	+	-	+	-	+	-	+	-	+	-
A (38)	2	2	4	2	/	1	1	/	/	/	1	7	3	15
B (98)	15	1	18	/	3	1	3	/	/	/	4	6	21	26
C (20)	/	1	/	5	/	/	1	/	/	/	1	5	/	7
D (23)	1	4	1	2	/	1	/	/	/	/	/	2	1	11
E (167)	16	2	/	32	/	2	4	/	/	4	/	14	1	92
F (55)	1	12	2	14	/	1	/	1	/	/	/	2	1	22
G (40)	1	3	1	6	/	1	1	1	/	1	/	8	3	14
TOTALS (441)	36	25	26	61	3	6	10	2	/	5	6	44	30	187

recorded with speaker B are adjectives (property concepts), of those recorded with speaker F, ca. 90% are verbs. The words recorded with the other speakers are mostly nouns.

Perhaps the major conclusion to be drawn from the data displayed in table 2 is that the use and non-use of a paragogic vowel with words in isolation is indeed a highly variable phenomenon. In particular, considerable variation exists on an individual level in the production of the eight speakers included in table 2. Note, for example, the conspicuous fact that speaker B adds a paragogic vowel to all of the 18 tokens of word-final /l/ recorded with him, while speaker E does not add a single one to any of the 32 tokens recorded with him. Furthermore, both these speakers strongly favor the use of a paragogic vowel after /s/, while no such tendency is observable for all the other speakers. The high frequency of paragogic vowels after word-final /s/ is particularly conspicuous in the case of speaker E since this speaker generally disfavors the use of a paragogic vowel in most of the other environments. Given this individual variability, it seems safe to conclude that the paragogic vowel in Lauje is not an exclusively phonological phenomenon.

Variability, however, is only one side of this phenomenon. The other side is the fact that there are also some regularities discernible in the use of paragogic vowels. With respect to words in isolation, two such tendencies are discernible:

— First, some word-final consonants favor the use of a paragogic vowel more strongly than others. In particular, the occurrence of a paragogic vowel is more common with non-nasal than with nasal consonants. Nasal consonants are the only consonants for which all the speakers produce more examples without a paragogic vowel than examples where such a vowel is added to a consonant-final word. All speakers, except speaker B, actually strongly disfavor the use of a paragogic vowel after a word-final nasal. But the production by speaker B is also in line with this general trend since, although the number of examples without a paragogic vowel after word-final nasals is only a little higher than the number of examples with a paragogic vowel, this is clearly an exception for this speaker when compared to all the examples with non-nasal consonants in word-final position. With non-nasal consonants, he strongly prefers the addition of a paragogic vowel.

Within the group of non-nasal consonants, it seems to be the case that voiced consonants favor the use of a paragogic vowel more strongly than voiceless ones and, similarly, velar consonants more strongly than labial ones. These tendencies, however, are much less discernible and do not hold for all the speakers.

— The second overall tendency is the fact that the speakers — despite their considerable individual differences — seem to belong to two groups, one of which (speakers A-D) favors the use of a paragogic vowel more strongly than the other (speakers E-G). The following table displays the relevant totals for these two groups:

Table 3: Group totals for use/non-use of paragogic vowels in sample of elicited words.

GROUP	TOKENS WITH PV	TOKENS WITHOUT PV	TOTALS
A-D	160	117	277
E-G	77	348	425
TOTALS	277	425	702

This difference is of interest since it may be correlated with two different sets of sociolinguistic background features for these speakers. Speakers A-D all come from one place (Palasa), are all farmers in their fifties with little education and not fully fluent speakers of Indonesian. Speakers E-G, on the other hand, are in their late thirties, have received a (local) university education, are government officials, are distantly related to each other, and are completely fluent in Indonesian (which they use most of the time in public as well as at home). Hence, it seems highly probable that the use of a paragogic vowel with words in isolation is a sociolinguistic variable in this speech community.

The next step in our investigation of the phonological factors determining the use of paragogic vowels in Lauje is to look at what occurs in connected speech. It must be investigated whether not only the preceding consonant but also the segment following a consonant-final word has any influence on the use of paragogic vowels.

A simple hypothesis in this regard is that paragogic vowels are used interconsonantly (i.e. when a consonant-final word is followed by a consonant-initial word) but not when a consonant-final word is followed by a vowel-initial word. This, however, is generally not the case, as is shown by the following examples. Examples (4a) and (4b), both produced by the same speaker (= speaker F in table 2) on the same occasion, illustrate the *interconsonantal context* (C_C). In (4a), as opposed to (4b), no paragogic vowel is used:

- (4a) C_C
saenong pinateango'ume
 sáinong in -pate -ang -O-'e -me
 pig REAL(UG) -kill -UG.LOC -O-1.SG.POSS -COMPL
 '(the) pig I already killed'

- (4b) C_E_C
saenong E pinateango'ume
 sáinong in -pate -ang -O-'e -me
 pig REAL(UG) -kill -UG.LOC -O-1.SG.POSS -COMPL
 '(the) pig I already killed'

Examples (4c) and (4d), again from the same speaker, show the same kind of variation for the context *consonant-final word before vowel-initial word* (C_V):

- (4c) C_V
 sobolum E liio nelampa la' kampung injoo'e,
 sobolum liio ne -lampa la'e kampung injoo'e
 before 3.SG INT.REAL -go from village DIST
 'Before she left that village,'

- (4d) C_E_V
 láupe nelampa la'e kampung E injoo'e,
 láupe ne -lampa la'e kampung injoo'e
 not.yet INT.REAL -go from village DIST
 'Before she left that village,'

A third context of interest here is the use of a consonant-final word at a unit boundary. I only consider major and easily identifiable unit boundaries, i.e. clause boundaries in elicited materials (marked by a comma or a full stop) and pauses in recorded narratives.³ Examples (4e) and (4f), both taken from the same narrative, show that at unit boundaries (C_{}), the same kind of variation — as in the two other contexts considered above — occurs:

- (4e) C_{}
 nátem bangkola' {0.7}
 nate -me bangkola'
 STAT.REAL.dead -COMPL monkey
 'and dead was the monkey,'

- (4f) C_E_{}
 nate bangkola' E {2.4}
 STAT.REAL.dead monkey
 'When the monkey was dead,'

These examples clearly show that, with respect to the phonological environment, there are no obligatory rules determining the distribution of paragogic vowels in connected speech.

In fact, the evidence provided by the examples given in (4) is not restricted to the influence of the phonological environment. Each pair of examples was provided by the same speaker in the same kind of circumstances

³ Pauses are marked by { }, the number within the brackets specifying the length of the pause in seconds.

(examples (4a-d) are elicited, examples (4e-f) come from the same narrative). The (linguistic) contexts are fairly similar or even identical in each pair of examples. Hence, it seems reasonable to conclude that, at least in examples such as the ones given in (4), the use of paragogic vowels may be regarded as an instance of so-called free variation. Several other examples could be adduced to support this conclusion. To add a final one, consider the following pair of examples, which again are taken from the same spontaneous narrative. For both examples, the micro- as well as the macrolevel contexts are virtually identical. In both instances, a child leaves his parents to go on a long journey. However, in the first instance, a paragogic vowel is used, in the second, this is not the case:

- (5) seeleo doeleo {0.7} (bisa_026f)
 so -eleo dou-eleo
 one -day two-day
 'One day, two days'

sombulang E dombulang E {0.3}
 so -N -bulang dou -N -bulang
 one -LG -moon two -LG -moon
 'one month, two months'

- (6) seeleo doeleo {0.4} (bisa_217f)
 so -eleo dou-eleo
 one -day two-day
 'one day, two days'

ahirnya sombulang dombulang {0.8}
 ahirnya so -N -bulang dou -N -bulang
 final one -LG -month two -LG -moon
 'finally, one month, two months'

However, the conclusion that some examples may be considered instances of free variation does not preclude the possibility that tendencies similar to those described above for words in isolation are operating in connected speech as well. Table 4 displays the relevant data drawn from a small corpus consisting of 4 narratives⁴ and 71 elicited clauses (= 731 discourse units altogether).

⁴ Each of the narratives was produced by a different speaker. All of the narrators come from the Lombok/Dusun area, which is located some 30 km south of Palasa. One of the narrators is a university student in his mid-twenties, one a primary school teacher in his fifties, and the other two — one in his fifties, the other in his early seventies — are members of the old Lauje aristocracy, nowadays prominent figures in village politics and culture. All of them are fluent speakers of Indonesian. None of them fits into any of the two sociolinguistic groups mentioned above.

This table is organized according to the three major contexts just discussed (before consonant-initial word (C), before vowel-initial word (V), before unit boundary). For each of these contexts, first the number of examples without a paragodic vowel is given, followed by the number of examples where such a vowel was used:

At first glance, tendencies in the predicted direction seem to exist. That is, paragodic vowels are more common before consonant-initial words than before vowel-initial words. Note, however, that for most cells, the number of examples is very small or even zero. Furthermore, in the two rows for which a reasonable number of examples is attested, i.e. glottal stop and velar nasal, the distribution of paragodic vowels is a chance distribution in both the interconsonantal as well as the unit boundary contexts (cf. columns 1, 2, 5, and 6). Thus, one might suspect that the data displayed in table 4 are, in some way, skewed.

Table 4: Distribution of paragodic vowels in connected speech (database: 4 narratives + 71 elicited clauses = a total of 731 clauses/pause units; empty cells = no examples found in database).

word-final consonant	<u> </u> C		<u> </u> V		unit boundary	
	C_C	C_E_C	C_V	C_E_V	C{}	C_E{}
b	2	2		1	2	
d			1	4		
g		5	5		1	
p		3	1	1		
t	2	4	6	2	1	3
ʔ	30	32	20	5	23	20
s	4	11	3		2	1
l		8	4	7	4	2
y		1			2	1
m	5	2			10	1
n	4	13	3	4	10	7
N	18	24	48	17	32	28
TOTALS	65	105	91	41	87	63

A closer inspection of the data in table 4 shows that several skewings, in fact, occur. The major skewing pertains to the distinction of lexical elements and grammatical elements, such as demonstratives, pronouns, genitive markers,

etc. The tendencies just noted with reference to table 4 only hold for grammatical elements (henceforth: *grams*), as shown by the following table in which separate totals for lexemes and grams are given:

Table 5: Distribution of paragodic vowels with respect to syntactic category of following word (same database as table 4).

	<u> </u> C		<u> </u> V	
	C_C	C_E_C	C_V	C_E_V
LEXEME	58	75	7	11
GRAM	7	30	84	30
TOTALS	65	105	91	41

As for lexemes, the figures reported in table 5 indicate that no significant distinction exists between consonant-initial and vowel-initial lexemes with respect to the occurrence of a paragodic vowel.

The difference between lexemes and grams with respect to the use of paragodic vowels is *not* due to distinctive segmental features of these two word-classes. That is, the initial vowels and consonants found in grams are also found in lexemes. Therefore, the different behavior of lexemes and grams with respect to paragodic vowels may not be attributed to (segmental) phonology. Instead, it is to be hypothesized that the different morphosyntactic features of these two word-classes are relevant here. This amounts to the claim that the use of paragodic vowels is not exclusively determined by phonological factors but that morphosyntactic factors are relevant as well. Further evidence for this claim will be presented in the next section.

To conclude the discussion of phonological factors in the distribution of paragodic vowels, let us briefly compare the data for words in isolation and those in connected speech (table 2 and tables 4-5, respectively). The higher overall frequency of paragodic vowels in connected speech is conspicuous, as well as the fact that no clear tendencies with respect to word-final consonants are discernible. Note, in particular, that nasal consonants do *not* disfavor the use of a paragodic vowel, unlike found in the case of words in isolation.⁵

Unfortunately, this comparison is hampered by the fact that the narratives have been produced by speakers other than the ones cooperating in the recording of the elicited words (i.e. those mentioned in table 2). As may be gleaned from the information given in footnote 4, the former do not match the latter with regard to features of their respective sociolinguistic background.

⁵ This holds for lexemes as well as for grams. The examples for word-final bilabial nasals are skewed in the following way: All but three of these examples involve the completive suffix *-me*, which is often shortened to *-m* (especially at unit boundaries).

Hence, no direct comparison is possible between the use of paragogic vowels in elicitation and in connected speech which excludes the possibility of sociolinguistic variation. There is one exception, however: speaker F, who cooperated in word elicitation as well as in sentence elicitation. For this speaker, the same observation as the one just made with respect to the comparison of tables 2 and 4 holds: He clearly used paragogic vowels more frequently in connected speech than with words in isolation. Also, in connected speech, no clear influence of the word-final consonant on the use of paragogic vowels is detectable.

Finally, note that, in the sample of connected speech, the data per speaker are too small to draw any reliable conclusions with respect to individual or group-level variations.

From the evidence presented in this section, it is to be concluded that:

1. word-final consonants have some influence on the use of paragogic vowels with words in isolation;
2. in connected speech, no clear influence of the phonological environment on the use of paragogic vowels is discernible;
3. in connected speech, morphosyntactic factors — in particular, the syntactic category of the word following a consonant-final word — are relevant for the use of paragogic vowels.

With respect to the second point, note that it pertains to phonological factors other than the basic phonological condition for paragogic vowels, i.e. that the preceding word is generally consonant-final. This should be kept in mind as we turn now to the discussion of morphosyntactic factors in the use of these vowels.

In the present section, we also found some indications for the possibility that sociolinguistic factors may also be relevant for the use of paragogic vowels. If this suggestion holds true, it constitutes strong evidence for the hypothesis to be developed in the next section (i.e. that the paragogic vowel in Lauje is an instance of language change in progress). However, the available data do not allow a rigorous investigation of this suggestion so it will not be further pursued in this paper.

3 Morphosyntactic factors in the distribution of the paragogic vowel

In this section, the data summarized in table 5 above are discussed in more detail. The focus will be on the interaction between paragogic vowels and

vowel-initial grams (columns 3 and 4 of table 5).⁶ Of particular interest is the highly regular interaction of paragogic vowels with two grams, i.e. the genitive marker *nu/u* and the 'subject' marker *a*, which — like the paragogic vowel — consist only of a single vowel.

The grams referred to in columns 3 and 4 of table 5 are the following: demonstratives (all of which are vowel-initial in Lauje), the genitive marker *u*, the 'subject' marker *a* and a few others, such as personal pronouns, the proper noun marker *i* (a variant of *si*), and the local adposition *i* (a variant of *li*). The latter are fairly infrequent in the sample and are lumped together here in a group called *other*. All of these grams are vowel-initial, some of them consist only of one vowel. They interact in different ways with the paragogic vowel, as shown by the data in the following table.

The data in table 6 clearly show that the various classes of vowel-initial grams do not behave in a uniform way with respect to paragogic vowels.

Table 6: Distribution of paragogic vowels with respect to category of following gram.

	C_V	C_E_V
'SUBJECT' MARKER	24	/
GENITIVE MARKER	36	/
DEMONSTRATIVES	15	27
OTHER	9	3
TOTALS	84	30

The 'subject' marker and the genitive marker do not co-occur with paragogic vowels, while for the other gram classes, such absolute restrictions do not exist. Demonstratives, in fact, slightly favor the use of a paragogic vowel (for examples, see 4c-d above). Thus, it is not the case that all vowel-initial grams

⁶ The consonant-initial grams referred to in table 5 (columns 1 and 2) are a fairly heterogeneous set of appositions, conjunctions and pronouns for which no generalizations are possible to date. For lexemes, a preliminary closer inspection of the other two contexts included in table 4 (interconsonantal (C_C), at unit boundary ({}_{})) suggests the possibility that further, different morphosyntactic factors are involved in the distribution of paragogic vowels. Thus, a paragogic vowel seems to be rarely used interconsonantly as long as the first (consonant-final) word belongs to a topical constituent and the second (consonant-initial) word belongs to the comment. Similarly, paragogic vowels are rare at unit boundaries which are also boundaries of larger units (for example, the final pause unit of an episode or a story), and more common at unit boundaries which are internal to a larger unit (for example, an episode-internal pause unit).

These possibilities are not discussed in detail here for two reasons: First, the units in question (topic, episode, etc.) are notoriously difficult to define. A thorough discussion and exemplification of such units would require a paper (if not a monograph) of its own. Second, the tendencies, which I believe discernible on an intuitive basis thus far, are far from straightforward.

disfavor the use of a paragogic vowel to the same degree. Instead, the overall tendency manifest in the sample — that vowel-initial grams strongly disfavor the use of a paragogic vowel — is largely due to the fact that two grams do not co-occur with paragogic vowels.

Let us now take a closer look at these two grams, i.e. the genitive marker *u/nu* (*i/ni* for proper names) and the 'subject' marker *a*.⁷ First note, however, that the use of both these elements is also subject to some variation not yet fully understood. This will be discussed in section 4.

The genitive marker has the following characteristics. It appears fairly regularly between head and dependent in genitive constructions (including actors of UNDERGOER-oriented predicates). After vowel-final words, it has the form *nu* (or *ni*), as in the following example:

- (7) *paa nu polando*
leg GEN mouse.deer
'the mouse deer's leg'

After consonant-final words, it regularly appears as *u*, as in:

- (8a) *li tòtoloang u labong*
LOC front GEN house
'in front of the house'

In this context, the use of a paragogic vowel is generally excluded:

- (8b) **li tòtoloang E u labong*

Sometimes, the genitive construction is not marked at all; cf. *labong to_sia'ang* in the following example:

- (9) *li tòtoloang u labong to_sia'ang*
LOC front GEN house elders
'in front of the house of the elders'

Let us now turn to the 'subject' marker *a*. It appears fairly regularly between predicate and 'subject', both after consonant-final (10) and vowel-final (11) words:

⁷ The label 'subject' marker has been chosen as a matter of convenience because the element *a* occurs most often with expressions that may be analyzed as subjects (in the sense of predication bases) vis-à-vis a preceding predicate expression (details are given below). The single quotes indicate that this terminological decision would require a thorough investigation and discussion of the intricate issue of subjecthood in order to be considered more than a convenient label.

- (10) *nonyimbat A jonga*
noN -simbat A jonga
ACT.REAL -answer SUB deer
'replied the deer.'
- (11) *kana mate A gugus E{0.7}*
kana mate A gugus
on.the.mark STAT.IRR.dead SUB short.grass
'the grass withered right away'

It never occurs in the order 'subject'-predicate, as in the following example:

- (12) *unga sia'a injéine nomeelume{0.3}*
unga sia'a injéine noN -peelu -me
child older.sibling PROX ACT.REAL -inform -COMPL
'the girl said:'

It also never occurs when the preceding word (i.e. the predicate expression) ends on a vowel-cluster (which is rarely the case), viz.:

- (13) *doluo siina nu bembe,*
two mother GEN goat
'the mothers of the goats were two'

Occasionally, the subject marker is not used at all (cf. examples 4e-f above). Like the genitive marker, it also never co-occurs with a paragogic vowel.

There are thus three similarities between the paragogic vowel and the two grams just discussed, apart from the fact that these elements never co-occur. First, they all consist of a single vowel. Second, phonological factors play a role in the use of each of these elements (the shape of the genitive marker is determined by the preceding segment; the 'subject' marker does not occur after vowel clusters). Third, none of these elements is truly obligatory, although the genitive and the 'subject' markers occur much more regularly than the paragogic vowel.

The kind of complementary distribution between the paragogic vowel and the two grams is particularly conspicuous given the considerable variability noted for all the other factors involved in the use of paragogic vowels. What, then, could be the reason for this kind of complementary distribution? Or, to ask this question in a different way, why should there be this specific interaction between a prima facie phonological phenomenon such as the paragogic vowel and two morphosyntactic relation markers?

One possibility is the segmental shape of the two grams, i.e. the fact that they consist of only one vowel. Although this possibility cannot be ruled out

with certainty, note that the paragogic vowel co-occurs with grams of similar shape. This is shown by the following example, where a paragogic vowel occurs next to the local adposition *i*:⁸

- (14) *lalong u tengkop E i angkop u polu{0.7}*
 inside GEN cave LOC under GEN stone
 'in a cave under a stone.'

Another possibility is considering the paragogic vowel a kind of (defective) member of a paradigm of grammatical relation markers, all of which are expressed by a single vowel, i.e. /a/, /u/ and /e/. Such an analysis faces several serious problems. First and foremost, the paragogic vowel is difficult to consider as a gram since it does not seem to have a meaning and function of its own. Furthermore, it would have to be explained why phonological factors influence its use. Recall, in particular, the primary phonological constraint on paragogic vowels, i.e. that they generally occur only after consonant-final words.

There are, however, a few examples in the database for which this primary phonological condition does not hold. With respect to words in isolation, one speaker (speaker E of table 3) produced the following two examples of vowel-final words followed by a paragogic vowel:

- (15) *ulesa E* 'nit (louse egg)'⁹
 monyau E 'go down, descend' (< *sau*, ACT-oriented)

With respect to spontaneous connected speech, another speaker produced the following example in which a paragogic vowel occurs twice after a vowel-final word:

- (16) *ma'o ogo E ma'o mongintug E sau*
 ma'o ogo ma'o moN -intug E sau
 go.out water go.out ACT.IRR -look.for THING
- noinang E{0.5} eh mo'otulu E{0.7}*
 no -inang eh mo -'otulu
 IRR(UG) -eat ehm STAT.IRR -sleep
 '(wherever they went, they went together) to the river, to look for food, to sleep'

⁸ The most frequent form of the local adposition in Lauje is *li*. So far, it remains unclear under what conditions the allomorph *i* is used.

⁹ The standard Lauje form for 'nit' is *luesa*. The form *ulesa* was accepted by several speakers as a possible variant for this standard form.

Since these are the only examples in the database where a paragogic vowel follows a vowel-final word, it seems useless to speculate over the motivation for its use in these particular cases. Nevertheless, it seems fairly clear that no phonological factors are involved in these examples (for both speakers, many examples are attested where no paragogic vowel is used in identical or very similar phonological environments). Thus, these examples may be interpreted in either of the following two ways: First, the /e/ in these examples is actually not a paragogic vowel at all but, instead, a gram with still unidentified meaning and function. Second, these examples are exceptional examples for paragogic vowels. If this is the case, it must be concluded that, for some speakers at least, the use of a paragogic vowel is not strictly bound to any phonological condition. Given the exceptional status of these examples in my data, the second possibility seems to be, at present, the more plausible one.

Even if the second interpretation of the examples (15) and (16) is accepted, this does not invalidate the observation that phonological factors play an important role in the use of the paragogic vowel. That is, any explanation of the distribution of this vowel has to account for the fact that both — phonological and morphosyntactic — factors influence its use and that it is a highly variable phenomenon. In order to accomplish this, the hypothesis that the paragogic vowel is in a kind of paradigmatic relation to relation marking grams is to be supplemented with an additional assumption. That is the assumption that the paradigm in question is unstable and, presently, in the process of falling apart. The paragogic vowel could then be analyzed as the phonologized 'remainder' of a former gram (or even several grams).

This analysis is obviously highly speculative. However, supporting evidence exists along several lines. As noted above, the use of all three elements in question (i.e. the paragogic vowel and the two grams) is variable. Furthermore, the vowels /a/ and /u/ also occur in contexts where they cannot be analyzed as genitive and 'subject' markers, respectively (examples are given in the next section). These two observations may be considered evidence for the assumption that the paradigm in question is unstable in present-day Lauje. Finally, there is a vowel-alternation in suffix-final vowels in Lauje which looks fairly similar to the hypothetical paradigm mentioned above. Details concerning this vowel-alternation as well as the variability of /a/ and /u/ are presented in the next section.

4 Other variable vowels in Lauje

In this section, two sets of data concerning vowel alternations in Lauje are presented, which may be considered evidence for the hypothesis that the paragogic vowel is the most strongly phonologized 'member' of a dissolving paradigm of grammatical relation markers. This hypothesis involves two separate claims:

On the one hand, it is claimed that the paradigm in question is unstable and presently in a process of phonologization, i.e. morphosyntactic relation markers become phonologically conditioned elements. In the preceding section, it was already pointed out that the use of the elements in question is variable and already influenced by phonological factors. This may be considered primary support for this claim. The first set of examples to be presented in this section may be considered further support for this claim. The examples illustrate the fact that the vowels *u* and *a* also show evidence of being phonologized, i.e. they occur in contexts where they do not serve any discernible morphosyntactic function. Note that these examples are 'exceptional' in the sense that they are extremely rare in the database.

On the other hand, it is claimed that the paragogic vowel is the result of the progressive phonologization of former grammatical relation markers. That is, the paragogic vowel is no longer a grammatical element but the phonologized continuation (or 'remainder') of such elements. The second set of examples provides some indirect support for this claim. It pertains to highly regular vowel-alternations which occur in suffix-final vowels and which show that the vowel /e/ is the unmarked final vowel in Lauje grams.

The first set of examples is this: Apart from contexts where they can clearly be analyzed as genitive and 'subject' markers, respectively, the vowels /u/ or /a/ also occur in contexts where this is not possible. In these contexts, rather, they are very similar to the paragogic vowel /e/, which is shown by the fact that they are interchangeable with this vowel. The first pair of examples involves the numeral 'one' which, in (17a), is followed by /u/ and, in (17b), by /e/ (the first example was elicited, the second comes from a spontaneous narrative):

- (17a) *lia'e maani mongoli soung U manu'*
 lia'e maani moN -oli soung manu'
 1.SG want ACT.IRR -buy one chicken
 'I'd like to buy a chicken'

- (17b) *jadi soung E watu jimo lâlampa{1.4}*
 then one time 3.PL RED2-walk
 'Then at one time when they were walking (together),'

In one possible interpretation, the /u/ in (17a) is an echo vowel, i.e. a paragogic vowel whose quality is determined by the last vowel of the preceding word. This kind of paragogic vowels is commonly found in South Sulawesi languages (cf. Sneddon 1993:22). Such an interpretation is corroborated by the following examples where a (non-etymological) /i/ occurs in the same context as a paragogic /e/ (both examples come from the same narrative):

- (18a) *iye bela jeiang I{0.2}*
 yes comrade friend
 'Alright my friend,'
- (18b) *li'ó bela jeiang E{0.8}*
 2.SG comrade friend
 'you my friend'

There are also examples where /a/ seems to be an echo vowel, as in the following elicited example (no parallel example with /e/ in the same context is attested):

- (19) *tunggal E sàsambat A tutumbalang E injoo'e*
 every morning RED-yard DIST
 'every morning that yard (is swept/cleaned)'

If these vowels are indeed echo vowels, then two variants for paragogic vowels in Lauje exist: The paragogic vowel may be either an /e/ or an echo vowel.

The picture is further complicated by the fact that /a/ also occurs in contexts where it is not an echo vowel:

- (20) *manu' A injéine nobeeme*
 manu' injéine no -bee -me
 chicken PROX IRR(UG) -give -COMPL
 'This chicken will be given away.'

In (20), /a/ may not be interpreted as a 'subject' marker either. Instead, it occurs in a position and context typical for paragogic vowels. If it is interpreted as a paragogic vowel, this implies that a third variant for paragogic vowels has to be assumed: Paragogic vowels in Lauje may be realized as /e/, or /a/, or an echo vowel. This assumption is supported by the fact that, in elicitation, some speakers accept both /e/ and /a/ in examples such as the following:¹⁰

- (21) *deu memeeas E/A dedee'i injoo'e*
 dog white small DIST
 'that small white dog over there'

The interpretation of the preceding examples remains somewhat speculative. The possibility cannot be ruled out that the vowels in these examples have grammatical meanings and functions that are still to be identified. If they are

¹⁰ All of them accept zero as well, i.e. no vowel at all between *memeeas* and *dedee'i*.

interpreted as alternative realizations of paragogic vowels, then the paragogic vowel in Lauje is a highly variable phenomenon, not only in terms of its distribution but also with respect to its formal realization. This makes sense if we are, in fact, dealing with a transitional phenomenon: the progressive phonologization of former grams.

Further support for this hypothesis is provided by the following phenomenon: Most suffixes in Lauje end on a vowel, which is generally /e/ (the other suffixes are consonant-final). The final vowel of these suffixes changes into /a/ in those contexts where the 'subject' marker *a* is to be expected. Thus, for example, the completive suffix is generally *-me* (cf. (12) above). However, when a following 'subject' marker is expected, this suffix changes to *-ma*, as in the following two examples (in (22), the following word is consonant-initial; in (23), it is vowel-initial):

- (22) *nomeeluma* *siamanye*
 noN -peelu -me #A siama -nye
 ACT.REAL -inform -COMPL #SUB father -3.SG.POSS
 'her father said'
- (23) *'udendenima* *ine{0.5}*
 'u -dendeng -i -me #A ine
 1.SG.ACT -hit -APPL.LOC -COMPL #SUB PROX
 'I will bang it.'

The sequence *-me A* is not attested in the database.

This phenomenon may not be interpreted as a purely superficial, phonetic fusion of the two vowels (i.e. as a sandhi phenomenon) since such a fusion regularly leads to long vowels in Lauje. It also does not happen with stem-final /e/ (cf. example (11) above).

Furthermore, the change /e/ → /a/ is not the only regular change with respect to vowel-final suffixes. Rather, the final vowel of these suffixes also regularly changes to /o/ in the event that another affix is added. Thus, word-final *-nye* (3.SG.POSS) changes to *-nyo* when followed by another suffix, for example, completive *-me*. Example (24) illustrates this:

- (24) *tinambunangonyome* *nu*
 in -tambung -ang -O-nye -me nu
 REAL(UG) -pile -UG.LOC -O-3.SG.POSS -COMPL GEN
- petu batanganonye{0.9}*
 petu batangan -O -nye
 soil body -O -3.SG.POSS
 'she had her body covered with soil'

Hence, suffix-final /e/ seems to be the unmarked member of a paradigm consisting of three vowels, i.e. /e/, /a/, and /o/.

Note in this connection that suffix-final /e/ in Lauje is probably the result of an innovative leveling of suffix-final vowels in this language. The final vowels of the cognate suffixes in closely related languages such as Dondo or Tajio are either /a/ or /o/, as summarized in table 7.

As hinted at above, the second claim involved in the hypothesis that the paragogic vowel is the phonologized continuation of former grammatical elements presumes an analogous scenario for the rise of the paragogic vowel: paragogic /e/ results from the leveling of former single-vowel grams. This is a change still in progress. That is, in some contexts, i.e. for 'subject' and for genitive marking, the grams still occur fairly regularly in their former shape.

Table 7: Vowel-final suffixes in 3 Tomini-Tolitoli languages.

	LAUJE	DONDO	TAJIO
COMPL	-me	-mo	-mo
3.SG.POSS ¹¹	-nye	-nyo	-nya
AND	-ma'e	-ma'o	ma'o

If this scenario is correct, one would expect paragogic /e/ to occur occasionally *instead of* the genitive marker *u* or the 'subject' marker *a*. There is, in fact, one single example in the database (from a narrative) where this is the case. In (25), we find paragogic /e/ instead of 'subject' marking *a*:

- (25) *sosobuan E 'ite injéine{1.0}*
 friend 1.PL.INCL PROX
 'we here are friends'

Here, however, as with many other examples presented in this paper, another interpretation is possible. As noted above, the 'subject' marker *a* is not obligatory. Thus, (25) could be analyzed as an example where the 'subject' marker *a* is missing and paragogic /e/ is used for some other reason (rather than being used instead of *a*).

To conclude the discussion on the proposed hypothesis, let me make one further assumption explicit. It is not assumed that the paragogic vowel is a result of a phonologization of the 'subject' marker *a* and/or the genitive marker *u*. Instead, it is assumed that there used to be other grammatical relation markers of a similar shape (or: other functions served by *a* and *u*). Recall in this connection that, in Paiwan, the marker *a* serves as a subject

¹¹ The same holds for other pronominal suffixes such as 1.SG -'e, 2.SG -Vme and 1.PL.INCL -te.

marker as well as a linking element within nominal expressions. And, it is with these other grams that the process of phonologization has started and led to their obsolescence.

5 Conclusion

The primary goal of this paper is to show that the paragogic vowel in Lauje is a highly variable phenomenon and that several factors — phonological as well as non-phonological ones — interact in determining its distribution. Most remarkable is the fact that a highly specific interaction exists between the paragogic vowel and two grammatical relation markers. Due to this interaction, it is not possible to consider the paragogic vowel in Lauje a basically phonological phenomenon. Instead, it is a transitional or borderline phenomenon for which both — phonology and morphosyntax — are relevant.

In order to explain the transitional character of the paragogic vowel in Lauje, the following hypothesis was tentatively suggested: the paragogic vowel is the phonologized continuation of a dissolving paradigm of grammatical relation markers, a process which is still in progress in present-day Lauje. This hypothesis could explain three major facts pertaining to the paragogic vowel: It would explain why the paragogic vowel does not co-occur with these grams. Furthermore, it would explain why its use is influenced by phonological factors. And finally, it would explain why it is a highly variable phenomenon. Given the fact that the data basis for this paper was fairly small and that different analyses are possible for many examples presented here, it is clear that I consider this hypothesis far from compelling. It is to be hoped that further data — including data from the neighboring languages — will provide for a more detailed analysis and a more well-founded explanation. It will then, perhaps, also be possible to come to some general conclusions about the widespread drift towards open final syllables found throughout Sulawesi and Eastern Austronesia.

Abbreviations

ACT	Actor	LOC	Locative
AND	Andative	PL	Plural
APPL	Applicative	POSS	Possessive
COMPL	Completive	PROX	Proximal
DIST	Distal	REAL	Realis
GEN	Genitive	RED	Reduplication
INCL	Inclusive	SG	Singular
INT	Intransitive	STAT	Stative
IRR	Irrealis	SUB	'Subject'
LG	Ligature	UG	Undergoer

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