TOMINI-TOLITOLI SOUND STRUCTURES[1]

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The Tomini-Tolitoli languages are spoken in the northern parts of Central Sulawesi. The present contribution gives an overview of the phonologies of these languages. Suprasegmentals and segment inventories are described for two languages in some detail, followed by a brief review of phonological differences found within the group. Finally, implications of these differences for subgrouping are discussed.

1   Introduction

The purpose of this contribution is to give a rough sketch of the phonologies of the Tomini-Tolitoli languages. The approach taken is not based on any particular framework but aims at a descriptively adequate statement of the facts. It focuses on the common features and problems of the sound structure of these languages. More detailed statements pertaining to the individual languages studied and the theoretical problems they pose will be left to future publications.

The Tomini-Tolitoli languages are spoken in the northern parts of Central Sulawesi, located roughly between the equator and 1° of north latitude, and around 120° of east longitude, the eastern parts reaching 121°. On the West Coast, the area borders on the Makassar Straits, on the East Coast on the Tomini Bay. Neighbouring languages are, in the north-east, Buol and Gorontalo, in the south, Kaili (Tawaili and Parigi dialects).

The group consists of the following languages/main dialects[2] (alternative names given in parentheses): Taje (Petapa), Tajio (Kasimbar), Lauje, Tialo (Tomini), Boano (Bolano), Pendau (Ndau), Dampelas, Dampal, Dondo, and Totoli (Tolitoli).

Their locations are indicated on the accompanying map. Most languages are spoken directly on the coast. Three things are important to keep in mind with respect to this map. First, we must remember that a chain of mountains separates the east from the west coast, and therefore the contact between the two coasts is much less intensive than the contact along one coastline. Only the Pendau live off (but still close to) the coast. Some of the Lauje actually dwell in the mountains. Second, the west coast is densely populated with Kaili and Buginese speakers. Especially in the area north of Bou live predominantly Bugis. Here there are less than 100 Dampal (the language being virtually extinct) and around 200 Pendau, as opposed to several thousand Bugis. Third, in the Totoli area, i.e., between Tolitoli and Binontoan, there are small settlements of Dondo speakers in the hinterland of Totoli villages which are not indicated on the map.

I will present detailed statements on Lauje and Totoli as representatives of the two major types of sound systems occurring in this group, taking Lauje as a starting point. All examples not specifically labeled are from Lauje. At the end (sections 4 and 5) a short note is added, highlighting the peculiarities of the group as a whole.[3]

The statements are based on elicited word lists with at least 1200 entries per language. The master word list was compiled from different sources such as the SIL Sulawesi-Umbrella list (which itself was compiled from several other lists including the Swadesh 200 word list) and the Holle list (see Stokhof 1980). There are two lists for Lauje, one from the East (Palasa/Tinombo, see map) and one from the West Coast (Bou), which display different phonological preferences and several lexical differences.
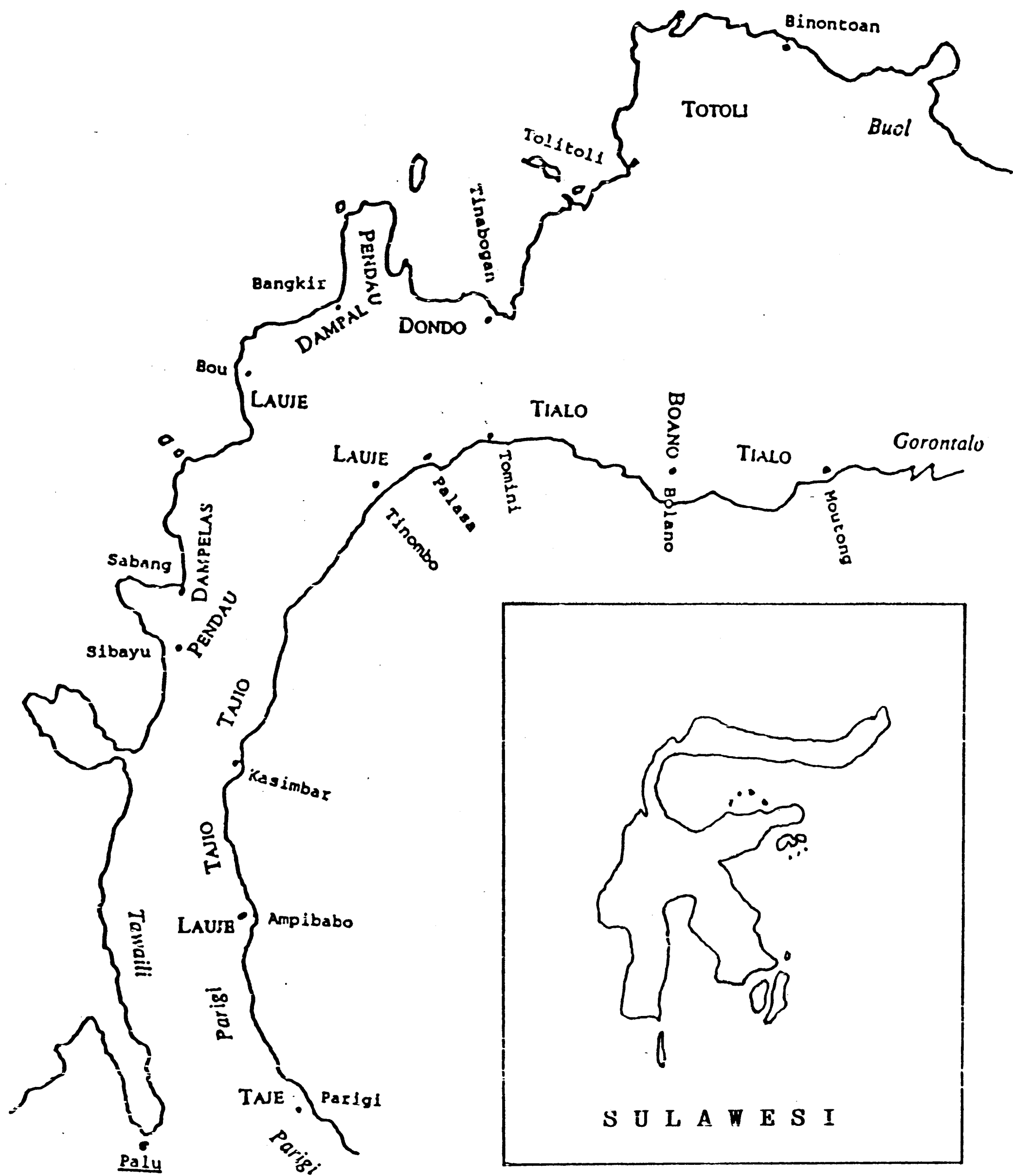
Map of Tomini-Tolitoli Languages

Since I have not yet undertaken a systematic analysis of the morpho-syntax, 1 will not deal with grammatical glosses.[4] The categories involved are broadly suggested by the translations.

When talking of 'loans' in the subsequent sections, I mean either words of a definitely non-Austronesian origin (Arabic, European), or ad-mittedly Malay words which were offered for lack of a native word. I have not yet identified intra-Sulawesi loans, i.e., loans from South Sulawesi languages such as Buginese, from northern languages such as Minahasan, and the direct neighbours Buol, Gorontalo, and Kaili. Most speakers of Tomini-Tolitoli languages are fluent in Kaili, the former lingua franca of the area, and many are proficient in Buginese. I suspect that some of the problematic phonemes mentioned below will turn out to be limited to non-native vocabulary.

2 Suprasegmentals

2.1 Stress

Stress placement is very regular in Tomini-Tolitoli languages and thus empirically defines the domain of (word) phonology. It falls on the penul-timate syllable of a (phonological) word and 'remains' penultimate when suffixes or clitics are added. Examples:[5]

1a)	bá'i	'head'
b)	ba'inye	'his/her head'

Exceptions to this rule are very few in number and are dealt with in the following sections.

2.2 Paragogic vowel[6]

In Lauje, the single most pervasive exception to the stress rule de-scribed above is the possible addition of a mid front vowel (/e/) to all consonant final words. Stress does not move to the penultimate syllable, it remains rather on the antepenultima:

2)	lábong/lábonge	'house'

This epenthetic or paragogic vowel is further characterized by the fact that – in contrast to 'true' final vowels (cf. (4)) – it does not appear when vowel-initial suffixes are added:

3a)	mongúgasE[7]	'to do the dishes'
b)	ugási	'do the dishes!'
4a)	mongámbe	'to beckon with the hand'
b)	ambéi	'beckon with the hand!'[8]

With consonant-initial suffixes the paragogic vowel also does not appear.[9] In this case, /o/ is inserted between the stem and the suffix:

5)	labongónye	'his/her house' (cf. 1b)

These facts show that the paragogic vowel cannot be considered an in-tegral part of the base-form of a word in Lauje. It must be seen as being added by an (optional) phonological rule.

As for its optionality, the factors governing its variation are not yet clear. In the highly marked context of eliciting isolated words, Lauje speakers from the West Coast used it quite consistently (but not in each and every case!), while on the East Coast it was much less common. Its oc-currence at the phrase and utterance level remains to be investigated. From the material transcribed so far, the following, not very suprising,

generalization can be made: the paragogic vowel usually does not occur when the following word begins with a vowel. In particular, it is not added when a phrase level marker such as the linking particle <u>u</u> (after vowels: <u>nu</u>) is used in possessive constructions:

> 6)   labong u langkai   'men's house'

There is no paragogic vowel in Totoli.

2.3   Long segments

There are phonetically long vowel segments in all Tomini-Tolitoli languages. Phonologically, they are best considered as sequences of two short vowels of the same quality for the following reasons:

a) Although the sequence of two vowels of the same quality is usually realized as a long vowel, in careful pronunciation two vowels often can be heard, one of which carries the stress and is thus slightly more prominent:

7a)	mengguungE	[meŋgúːŋe]/[meŋgúuŋe]	'noise, sound'
b)	meliingE	[melíːŋe]/[melíiŋe]	'to bathe'
c)	ngeesE	[ŋéːse]/[ŋéese]	'brook'
d)	moodoyE < mo+odoy	[móːdoye]/[moódoye]	'be silent'
e)	maanjulE < ma+anjul	[máːɲjule]/maáɲjule]	'to flow'

b) In the majority of cases, long vowels arise via contraction of two short vowels at a morpheme boundary and are thus derivationally transparent. For prefixation, see examples (7d/e). An example for suffixation is:

> 8)   oungaangE   < o+unga   'child'+ang   'womb'

c) Stem-internally, long vowels often arise due to the omission of an intervocalic lateral. Again, this remains transparent because of the synchronic variations which occur:

DON 9)   gaanapE/galanapE:ginaánapE   'feel, touch'

d) Stress falls on a long vowel occurring word-finally. This is regular when it is considered to consist phonologically of two short vowels:

10a)	metatáa	'to laugh'
b)	alipapáa	'grasshopper'

A long vowel in the penultimate of course, also receives stress. When pronounced as a single, long segment, stress placement is obviously ambiguous as to penultimate or antepenultimate. If pronounced as a sequence of two short vowels, stress placement is regular on the penultimate (see the examples (7d/e)). In fact, one could maintain that stress placement is a major cause for using the latter pronunciation.

2.4   Irregular stress on ultima

In Lauje, predominantly in the East Coast variety, the final vowel of suffixes/clitics is often omitted. Stress remains on the formerly penultimate, now ultimate syllable:

11a)	bonuọ	'nest'
	bonuónye/bonuóny	'its nest'
b)	tasa'	'cook'
	natasa'óme/natasa'óm	'done, cooked'

Stress in the second variant is distinctly stronger than in regular penultimate stress. Irregular position and the strength of stress lend a

radically different shape to these words. Therefore, they are quite prominent in intonational contours. It remains to be investigated whether this occurs for extra-phonological purposes.

Note, incidentally, that this process is the opposite of the effect that results from appending paragogic vowels. While the latter creates open syllables word-finally, here closed syllables emerge.

2.5   Irregular stress on ante-penultima

In a very small number of cases (less than ten in a sample of ca. 1200 entries), antepenultimate stress occurs, always involving a sequence of a non-high vowel (/a/, /e/ or /o/) followed by a high vowel (/i/ or /u/):

12a)	táipangE/taípangE	'mango'
b)	báuntalE	'widow (by divorce)'
c)	metéule/meteúle	'to return home'
d)	jéiangE/jeíang	'companion'

As indicated, sometimes there is variation between regular and irregular stress (12a/c/d). Not all vowel sequences of this type, however, exhibit this variation, but have a regular stress pattern:

13a)	taíngan	'fireplace'
b)	nombaúna'E < baung	'awaken someone'
c)	moúpu	'grandchild'

Since an example like (12d) is phonetically [jéyaŋe], one could argue that in the examples given in (12), the second (high) vowel is not realized as a vowel but is (optionally) realized as a glide (/y/ or /w/), and thus establish a regular stress pattern. Two arguments can be made against such an approach. First, sequences of three vowels, as in (12d), are extremely rare and do not allow for establishing a well-defined allophonic relation between high vowels and glides (cf. 3.1.1.). Second, such an approach would imply a complementary distribution between high vowels and glides. The examples in (13) show that this is not the case. Furthermore, the sequence of a non-high vowel followed by a high vowel and the sequence of a non-high vowel followed by a glide both occur word-finally, the difference being marked unambiguously by different stress placement and (optional) paragogic vowel after glides. Note that variation is not permitted:[10]

14a)	molúntoyE	'weak'
b)	mapálayE	'dry (clothes)'
15a)	mo'otói	'to know'
b)	langkái	'man'

Thus, there is no straightforward allophonic distribution between glides and high vowels. On the contrary, examples (13/14/15) are an argument for establishing /y/ as a phoneme of its own, since the occurrence of a vowel or glide is not predictable in this environment.

If glides are phonemes, the high vowels in (12) could then actually be phonemic glides. But there is no independent evidence for a labio-velar glide /w/ and no independent evidence for a cluster glide-consonant. (For the distribution of /y/, see below 3.1.2.) Furthermore, the variation which occurs is evidence against an interpretation as a phonemic glide. Given this situation, the examples in (12) are necessarily irregular in some way: either with respect to stress or to the distribution of glides or as an unpredictable variation between high vowels and glides.

In Totoli, the situation is different: the 'irregular' stress placement may be captured in a 'rule'[11]: if a high vowel occurs in the penultimate syllable directly preceded by a non-high vowel, stress is placed[12] on the antepenultimate (i.e. on the non-high vowel). Some examples:

TOL 16) báunta·   'widow (by divorce)'
          gáuan   'garden'
          dóua   'two'
          táipang   'mango'
          táiso·   'old man/woman'
          géiga   'no, not'

There is only one instance of variation (laisna [laísna/láisna] 'isthmus').
For the sequence /c/ + front high vowel there are some examples that show
regular penultimate stress:

TOL 17a) moítom   <   itom   'black'
     b)   moloítom   'rambutan'

But (17a), at least, and probably (17b) involve a morpheme boundary (as
with all other available examples) which might be a factor contributing to
the regularity (there are no examples with /ei/ or /ai/ and an intervening
morpheme boundary).
    For the examples in (16), one could postulate a high vowel/glide
allophony, but then one would expect this to happen in all clusters of this
kind, which is not the case. The same sequences occurring word-finally re-
ceive regular penultimate stress:

TOL 18a) kakái   'grandfather'
     b)   kanáu   'aren tree'

Therefore I prefer to treat them as an irregularity in stress placement.

2.6   Syllable Structure

2.6.1   Preferred syllable structure and resegmentation

    The most common type of syllables are V and CV-syllables:

19a) bi.bi   'lip'
   b) tu.le   'heel'
   c) so.li.pi   'waist'
   d) o.do   'monkey'
   e) u.le   'caterpillar'

CVC and VC-syllables only occur word-finally (for an exception in Totoli,
see below):

20a) mo.lo.lo.tong   'be choking'
   b) ta.pe.os   'great-great-grandchild'
   c) a.ni.ong   'cooked rice, food'

The examples in (20) actually occurred without a paragogic vowel. Since in
West Coast Lauje this vowel is usually appended, examples with (C)VC-sylla-
ble structures are extremely rare. In Totoli, on the other hand, they are
quite common:

TOL 21a) mo.lu.lak   'wash (long objects)'
     b)   ma.la.mos   'do the dishes'
     c)   ma.na.ip   'peel (mango)'
     d)   mo.ni.uk   'sniff'

    Both languages, however, show a clear tendency towards CV-syllable
structure, as shown by the resegmentation that takes place in affixation.
The final consonant of a prefix (here moN-) combines with a stem-initial
vowel to form a syllable (22a/b, 23a/b) and, analogously, a stem-final con-
sonant combines with a suffix-initial vowel (22c/d and 23c/d). In Lauje,
the paragogic vowel also combines with a stem-final consonant to form a

syllable (22b/e/f):

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LAU  22a)  no.ngu.pi        <  upi           'dream'
     b)  mo.ngo.nyo.pE     <  onyop         'swallow'
     c)  i.pi.si           <  ipis          'carry under the arm!'
     d)  u.na.po.nye       <  unap          'fish scales'
     e)  do.do.bE                            'breast'
     f)  nga.le.tE                           'molar'

TOL  23a)  no.ngu.pi        <  upi           'dream'
     b)  mo.gu.pit         <  upit 13        'carry under the arm'
     c)  ko.lo.gi          <  kolog         'break it!'
     d)  be.ne.ti          <  benet         'tear it!'
```

The synchronic force and diachronic potential of this resegmentation for Lauje is shown by the following facts. When asked to give the base-forms of prefixed words, respondents quite often volunteered a form including the consonant of the prefix as part of the base. Thus, for mongondo'E 'to stop' the base-form was claimed to be ngondo'. The same speakers did not hesitate to form an UNDERGOER-oriented inondo'a'E on the same occasion. A similar, but even more telling example is the triplet nyuung, monyuungE, nosuungonye 'to carry on the head', since 'reanalysis' here takes place where there is nasal substitution. In these instances, however, reanalysis of the base-form has not yet been carried through, as shown by the UNDERGOER-oriented forms. But there are examples for completed reanalysis where the consonant has actually become part of the base. Compare the following forms encountered for 'to fart' in Tialo and Lauje with those from Dondo, Totoli, and Boano:

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24)  TIA      ngontutE nongontutE
     LAU      ngontut mongontutE

     DON      ontutE mongontutE
     TOL      ontut
     BOA      ontut
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This seems to have happened most often in words that were used with the prefix mVg-. In Totoli and Boano this prefix still is productive; in the other languages it is not, /g/ being considered part of the stem. Compare the words for 'to hunt (for game)' in Lauje and Totoli:

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25)  LAU      gubas mogubasE ginubas
     TOL      ubas mogubas niubasan
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The action word 'sing' has an initial /g/ in its base-form, cf.

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26)  LAU      gumbuy mogumbuyE
     TIA      gumbuy mogumbuyE
     DON      mogumbi'E pinogumbia'anyo
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In the word for 'song', the old base-form is still preserved in Tialo ombuyonE and Dondo umbi'on. Lauje has gumbuyE here as well. Other suspected reanalysed base-forms are Lauje/Tialo gombo' and bambul, both meaning 'to speak, to utter'.[14]

For Totoli (and Boano), the tendency towards CV-syllables is much less strongly developed. The phenomena just described for Lauje are not encountered. On the contrary, there are at least 3 features opposed to the tendency towards a general CV-structure. First, Totoli allows for gemination of consonants word-initially and -medially. These usually arise by 'abbreviating' reduplicated CV-syllables. Since the syllable boundary runs between the two geminated consonants, (C)VC-syllables arise word-medially:

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TOL  27a)  mad.dek/madedek                  'small'
     b)  met.tek/metetek                    'always'
     c)  tuk.ka                             'older sibling'
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Second, there is no /o/-insertion rule as in Lauje (cf. example (5)). Consonant-initial suffixes/clitics are directly attached to the stem, again giving rise to word-medial (C)VC-syllables:

TOL 28a) le.ck.na   <   leok+na   'bay'
     b) noo.pus.mo   <   no+opus+mo   'finished'

-na signals 3.person singular, -mo is a TAM-morpheme. Whether these morphemes should be analyzed as clitics or suffixes is still unclear to me. There is no doubt, however, that they are part of the phonological word since they cause stress to move (viz. léok -> leókna, nóopus -> noopúsmo).

     Finally, the difference is also seen in a different adaptation of loans, Lauje necessarily simplifying clusters, eg. LAU watu < MAL waktu 'season', Totoli tolerating them (TOL waktu).

2.6.2   Nasal-oral consonant sequences

     As in most Sulawesi languages nasal-oral consonant sequences (NC-sequences) pose a special problem, since they are the only consonant sequences permitted (exceptions for Totoli and Boano have just been noted). They are further characterized by the following facts:

a) there is always a sequence of homorganic nasal plus obstruent, i.e., in Lauje /mb/ /mp/ /nd/ /nt/ /ngg/ /ngk/ /ns/ /nj/. (Cf. also examples 4/6/ 24/26):

     29a)   lompo   'fat'
       b)   moonda'E   'hot'
       c)   moboyonggo   'dumb'
       d)   pensa'E   'banana'
       e)   ngunju   'mouth'

b) they generally occur word-medially, never word-finally, rarely in word-initial position:

     30a)   ntaedo   'pumpkin'
       b)   ndaangE   'branch'
       c)   mbayang   'ear (of corn), bunch'

These are the only 3 examples encountered so far in Lauje. Others involve (potential) morpheme boundaries (the baseform of mendolingE 'to steal' is claimed to be ndolingE[15]) or variation (for 'dandruff' ndiapE as well as undiapE have been given (with preference to the former)).

c) various idiosyncracies of the segment inventory and morphonology are connected with these sequences. Most conspicuous is the appearance of /ngk/ in the ACTOR-orientation of some words, where neither /ngk/ nor /k/ is part of the base-form nor any other non-ACTOR form (cf. below the comment on /k/ in Lauje 3.1.3.):

     31a)   olong mongkolongE inolong   'carry on the back'
       b)   ala'ais mongkala'aisE inala'aisE   'scrap, scratch'

     The main problem in analysing these sequences consists in deciding whether to treat them as units (i.e., prenasalized obstruents) or as clusters. According to Herbert (1986:10) prenasalized consonants are defined in the following way:

     'A prenasalized consonant is formally defined as a necessarily homor-
     ganic sequence of nasal and non-nasal consonantal segments which to-
     gether exhibit the approximate surface duration of 'simple' consonants
     in those language systems within which they function.'

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To apply this to the available data in an objective way would mean to carry out an instrumental measurement which I have not yet done. On a basically impressionistic basis I can assert that in most cases the NC-sequences seem to have the surface-duration of clusters, i.e., they sound very much like similar segments in Malay. There may be, however, quite a significant degree of variation in pronouncing these sequences. In songs and stories recorded, the word onjo 'if', for example, is sometimes realized as [onjo], sometimes clearly as [o^{n}jo].

Other facts that may be relevant in deciding the issue empirically are those obtained in elicited syllabifications (note, however, that Herbert (1986:67ff) rejects their relevance). But here variation and indeterminacy is encountered again: native speakers offered on.jo as well as o.njo. Similarly, in prefixed forms the syllable boundary was sometimes said to coincide with the morpheme boundary (mem.buas < meN+buas 'to open'), sometimes the nasal was given as part of the base (me.mbuas (same word, no contrast), cf. example (22) for resegmentation not involving NC-sequences). In initial NC-sequences the nasal is usually alloted a syllabic status, i.e., n.ta.e.do, n.daa.ngE, m.ba.yang (cf. 30).

Thus, the empirical evidence as to deciding between a cluster or a unit analysis for NC-sequences is inconclusive so far. Phonologically the issue is often resolved on the basis of syllable structure considerations: analysing NC-sequences as units allows for simplifying the statement of syllable structure, i.e., 'all syllables are open'. This is done at the 'cost' of increasing the segment inventory (the additional series of pre-nasalized obstruents). But this 'argument' (Herbert (1986:73ff) doubts its validity) cannot be applied in the present case, since at least word-finally closed syllables are admitted in Tomini-Tolitoli languages. As I see it, there is more involved than choosing between the simplicity of the syllable structure statement and the size of the segment inventory. One important aspect is the behaviour of NC-sequences in morphonological processes (cf. example (31) above), another the overall phonotactic pattern. Both have not yet been thoroughly analysed, and thus I am not yet prepared to present a phonologically well-motivated decision. For the time being, I will treat them as clusters. I suspect that the variation encountered in elicited syllabification is part of the general tendency towards CV-syllable structure (more precisely: $^{(N)}$CV), but this is still a mere tendency and has not yet been completely generalized.

2.6.3   Summary: Syllable Structure

In summing up we may state that syllables in Tomini-Tolitoli languages are generally of the (C)V(N) type, with a strong preference for CV-syllables. (C)VC-syllables occur only word-finally, with exceptions in Totoli and Boano, where word-medial (C)VC-syllables might arise through gemination and suffixation. A minor syllable type are NCV(N)-syllables which occur only word-initially and are extremely rare.

3   Segment inventories

The preceding discussion of syllable structure has shown that there are 3 structural positions relevant to an analysis of the distribution of the phones in Tomini-Tolitoli languages, i.e., (word) initial, medial, and final. If a phone occurs in all of these positions without any restrictions, it is accorded phonemic status and not dealt with further in the following. Only defective distributions are singled out for closer inspection. A fourth position (homorganic nasal N) is relevant only to obstruents.

3.1 Lauje

3.1.1 Vowels

Lauje has the following 5 vowel phonemes:

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        i                          u
            e              o
                a
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Sequences of two vowels are quite common, and all vowels can cooccur with each other. Vowel length is not phonemic, but results from the cooccurrence of two vowels of the same quality (see above section 2.3.). Sequences of three vowels are extremely rare, the only examples not involving a morpheme boundary are:

32a)	tuai		'younger sibling'
b)	puai momuai		'to dry in sun'

3.1.2 Glides

An argument for treating the palatal glide as a (consonantal) phoneme in Lauje has already been provided in section 2.5. The distribution of this phoneme, however, is defective. It never occurs initially; it occurs in the medial and final position only after back vowels (cf. (14)):

33a)	mongoyabi		'to fan'
b)	ayu		'wood'
c)	buyo		'foam'
34)	mombubuyE		'to sow'

Phonetically, there is often a palatal glide after a front high vowel (/i/). But this does not seem to be distinctive and is thus a purely phonetically-motivated epenthetic glide:

35a)	ie	[iye]	'yes'
b)	lio	[liyo]	'he/she'
c)	monggiulE	[moŋgíule/moŋgíyule]	'pull'
d)	si ama	[[siama/siyama]	'father'

In examples (35c/d), there is no doubt about the epenthetic character of the glide because of the variation. The words in (35a/b), however, are hardly ever heard without a glide.

There is no evidence for a labio-velar glide as part of the native inventory. It occurs in a very few loans like tawar 'to bargain', watu 'season', or mewarisi 'to inherit', and as a variant onset in vowel-initial words:

36a)	oyo/woyo		'tongue'
b)	enge/wenge		'nose'
c)	ate/wate		'liver'
d)	isi/wisi		'flesh'
e)	uatE/wuatE		'tendon'

3.1.3 Consonants

The following consonantal phonemes occur. Parentheses indicate a special phonemic status. Phonemes which exclusively occur in loans are surrounded by pointed parentheses:

	bi-labial	dental-alveolar	palatal	velar	glottal
Stop	p	t	\<c\>	(k)	'
	b	d	j	g	
Fricative		s			\<h\>
Nasal	m	n	(ɲ)	ŋ	
Lateral		l			
Trill/Flap		(r)			
Glide	\<w\>		y		

Comments:

/k/ is problematic, since it shows a defective distribution, unlike all the other stops. It does not occur word-finally except in the obvious loan porokE 'fork'. In two instances there is variation between a glottal stop and final /k/:

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37a)   mobu:kE/mobu:'E                'rotten (fruit'
   b)   maja:'E/maja:kE                'bad, evil'
```

The number of examples with /k/ in initial or medial position is significantly lower than with the other two voiceless stops, and many of them are loans like pikir 'think', naraka 'hell', or kamis 'Thursday'. Only after a nasal does it not deviate from the other voiceless stops, except for the morphonological peculiarity illustrated in (31). All of these facts show that, diachronically speaking, /k/ changed to a glottal stop. This is confirmed by a large number of cognate sets, where a glottal stop in Lauje corresponds to /k/ in Totoli (cf. ex. (1) and TOL baki 'head'):

```
LAU  38a)   bu'u              'bone'
TOL    b)   buku              'bone'
LAU    c)   uto'E             'brain'
TOL    d)   utok              'brain'
LAU    e)   momene'E          'to climb (tree)'
TOL    f)   memenek           'to climb (tree)'
```

To determine the present phonological status of /k/ is difficult. Except for loans, it occurs after a homorganic nasal and initially and medially in some apparently native words. The latter probably permit a rigid characterization in terms of phonological make-up and/or semantics. Here, I will simply present the major pattern. They often exhibit a $kV_i kV_i$ structure such as kikib and kokob (both: 'to bite'), kekedE 'framboesia', or, with two vowels intervening, kaingkaing/kaingkai 'and, with'. Base-forms such as kejo and kepa (both: 'to limp') do not exhibit this make-up, but in normal usage they occur reduplicated as kekejo, kekepa and there we encounter $kV_i kV_i$ again. /k/ is thus a native sound of Lauje, but one with a highly specific distribution which sets it radically apart from related sounds such as its voiced counterpart /g/ or the other voiceless stops. It is obvious that the analysis and representation of such a distribution are not easily achievable within current phonological theory. But this is not the place to indulge in phonological theorizing. The problem of /k/ will be briefly touched upon again in section 4.

/'/ is also problematic because its phonetic realisation varies between a simple vowel onset and a clear glottal stop. Word-initially, it is acoustically undiscernible. No difference can be heard in the onsets of the following words:

```
39a)   olong inolong no'olongE         'carry/carried on the back'
   b)   oli inoli nooli                 'buy, be bought'
   c)   alenda maalenda                 'long'
   d)   apal ma'apalE                   'thick'
```

But the differences exhibited in affixation show that in (a) and (d) there

is an underlying glottal stop and in (b) and (c) there is not. Note that the idiosyncratic form mongkolongE mentioned in (31) results (synchronically speaking) from moN- + inital /'/. (Compare regular oli mongoli.)

Analogous phenomena occur word-finally. A paragogic vowel, of course, is never added to a final vowel, but is very common after a glottal stop. Thus, even if the glottal is not realised as a stop and a word such as luba'E 'hair' sounds like [lúbae], the paragogic vowel marks the presence of a final glottal. To my knowledge there are no word pairs where a glottal stop is the single distinctive segment. It is only in the phonological processes mentioned that it becomes functionally relevant.

/b/, voiced bilabial stop, has a voiced bilabial fricative allophone [β] before /u/, unless it is preceded by a nasal (in a NC-sequence). Compare:

40a)	buasime	[βuasíme]	'open!'
b)	membuasE	[membúase]	'to open'

Although this allophony is for the most part regular, there still occur some cases of (free?) variation, e.g.:

41a)	nanabu	[nanaβu/nanabu]	'to fall'
b)	monobulE	[monóβule/monóbule]	'to bark'
c)	bunutE	[βúnute/búnute]	'coconut fiber'

/j/, voiced palatal stop, does not occur word-finally. Its voiceless counterpart /c/ occurs in a few loans such as caya 'light' or cambangE 'sideburns'.

/ɲ/, voiced palatal nasal, has a highly-limited distribution. It occurs in the following 6 lexemes

42		
	ponyu	'turtle'
	onyop	'to swallow'
	utanya	'to ask'
	anyang	'to weave a mat'
	runyu	'to collapse (of a house)'
	nya:	'soul, spirit'

the last four of which might well be loans. It is most commonly encountered in 3 grammatical morphemes: -nye 3.sg possessive, mVny- allopmorph of the ACTOR-orienting prefix moN- (substituting for initial /s/), and nyaa/inyaa 'don't (negative imperative)'. In word-final position it appears only in the exceptional context described above in section 2.4. (ex.(11)).

/l/, a voiced lateral, has two allophones with respect to place: dento-alveolar after /e/, slightly retroflexed elsewhere.

/r/ is pronounced as an alveolar trill or an alveolar flap. Occasionally its articulation as uvular trill is also encountered. Although it occurs in all diagnostic positions (initially, medially, and finally), the phonemic status of this sound has not yet been firmly established, since many words in which it appears are suspiciously reminiscent of loans. Some examples: ajaranE 'horse', guru 'teacher', pikir 'to think', suara 'voice', kareba' 'to tell', turu' 'to imitate', turung 'to help', ranu 'to wish', robungE 'bamboo shoot', gamberE 'Uncaria gambir', kunduri 'gourd', lombori 'pandanus (anasa)', taringE 'bamboo (bambu air)'.

<h> There is no phonemic /h/ in native Lauje words. The phone [h] occurs in two loans (rahasia 'secret' and aha 'Sunday') and as a variant onset for word-initial vowels. This is very common and prominent in East Coast Lauje:

43)			
	ulag	[ulag/hulag]	'snake'
	imbat	[imbat/himbat]	'answer'
	obol	[obol/hobol]	'smoke'

```
eleo              [eleo/heleo]         'day'
apa               [apa/hapa]           'rice hull'
```

3.2 Totoli

3.2.1 Vowels

The vowel phonemes of Totoli are the same as in Lauje, and we may
therefore refer back to the comments made in 3.1.1 above. puai (cf. (32b))
is again one example of a 3-vowel sequence not involving a morpheme
boundary, dóua 'two' was mentioned in (16). A third example, also with
irregular stress, is laláui 'earring'.

3.2.2 Glides

Totoli differs here from Lauje, since there are no final glides.
Thus, the argument presented in 2.5 for the phonemic status of the pala-
tal glide in Lauje cannot be applied. Perhaps the most important fact
about glides in Totoli is that they are extremely rare. The labiovelar
does not occur at all apart from a few loans such as waktu 'season' and
waris 'inherit'. There are no epenthetic glides as in Lauje. The follow-
ing is a complete list of all the examples for a palatal glide taken from
the word list for Totoli:

```
TOL  44)   gagayun            'oar, paddle'
           kayu               'wood'
           pangaya            'sieve'
           mayat              'corpse'
           dayang-dayang      'servant'
           tanggayopan        'vegetation'
           pangayo            'to go head-hunting'
           bayog              'lazy'
           bungayon           'sand'
           kalimbayo          'shadow, shade'
           bueya              'crocodile'

           yaya/iya           'this'  (DEM pronoun)
           yaku/aku           'I'
```

With the exception of the two pronominal forms, the glide always occurs
intervocally and could thus be considered an allophone of /i/. But, on the
other hand, there is only 1 unambiguous, regularly stressed 3-vowel
sequence found in Totoli so far (see above 3.2.1), and it does not seem
reasonable to assume that all the words listed in (44) have an underlying
3-vowel sequence with a medial /i/ turned into a glide on the surface. I
would opt instead for a marginal phoneme /y/ in Totoli.

3.2.3 Consonants

The following consonantal phonemes occur:

	bi-labial	dental-alveolar	palatal	velar	glottal
Stop	p	t		k	
	b	d	j	g	\<h\>
Fricative		s			
Nasal	m	n	\<ɲ\>	ŋ	
Lateral		l			
Trill		(r)			
Glide	\<w\>		(y)		

Comments:

Geminates: The most conspicuous feature of Totoli consonants is that all of
them, with the exception of the trill and the palatals, may occur
geminated. Almost all cases of these geminates may be (synchronically) re-
lated to a reduplicated syllable. Geminates thus arise from deleting the
first vowel in the pattern CiVjCiVj. It therefore comes as no suprise that
geminates only occur word-initially and -medially (after prefixes). Exam-
ples:

TOL	45a)	bagi nibbagan	<	nibabagan	'hit, being hit'
	b)	buku ppi	<	pipi	'cheekbone'
	c)	maddek/madedek			'small'
	d)	tau ttoli			'Totoli people'
	e)	elat meggelat			'shout, be shouting'
	f)	bungo kku	<	kuku	'toe'
	g)	puai pommuaian			'place for drying'
	h)	suun ponnuun			'manner of carrying on the head'
	i)	ngaung mangngaung			'be meaowing'
	j)	sasaakan/ssaakan			'all'
	k)	lili molli			'yellow'

NC-sequences: as distinct from Lauje (cf. 2.6.2), not all obstruents occur
after a homorganic nasal. First, the voiceless fricative never occurs af-
ter a homorganic nasal. In cognates, Lauje /ns/ corresponds to Totoli
/nj/; cf. LAU ansangonye TOL anjang 'fish gills'. Second, the voiceless
velar stop appears after a homorganic nasal at morpheme boundaries only
(inángku < inang + -ku 'my mother', mengke < mengeke < meN- + keke 'to
dig'). Otherwise, Lauje /ngk/ corresponds to Totoli /ngg/, e.g., LAU
ingking TOL kingging 'to carry sth. hanging from the hand'.

/l/ has three allophones:[16] a voiced alveolar lateral [l] after front
vowels and a retroflexed lateral flap [L] after back vowels. In loans,
only the alveolar lateral occurs (cf. salaasa 'Tuesday', salendang
'shawl'). Initially both of these allophones are recorded, but the alveo-
lar lateral is the more common one. In gemination only the alveolar later-
al is permitted ([moLogo] 'wash hands' but [pollogoan] 'place to wash
hands').
    The third allophone pertains to final position, where /l/ is realized
as a tonal/length feature ['] of the preceding vowel, i.e., the vowel is
intonated at a higher pitch and is distinctly overlong. Stress remains on
the penultimate; the lengthening involved is thus of a different kind than
the one constituting long segments. When suffixes are added, the lateral
'reappears':

TOL	46a)	[kíki'] [nikkílan]	'bite, be bitten'
	b)	[bémbe'] [membembélan]	'to tremble'
	c)	[moŋgíu'] [moŋgiúLan]	'to call'
	d)	[kónto'] [mokkontóLan]	'to choke'
	e)	[lémba'] [lelembáLan]	'to carry on the shoulder with a stick'

/r/ is an alveolar trill. As in Lauje, an uvular articulation can occa-
sionally be found, but unlike Lauje no flapped articulation has been
recorded. /r/ does not occur geminated or word-finally (an exception being
the obvious loan dokter). Further doubt concerning the full phonemic
status of this sound is aroused by the possibility that a substantial num-
ber of yet unidentified loans occurs in the sample for this sound. Some
examples: turung 'help', sarobok 'fall in water', sarepet 'fall on humid
ground', poroi 'anus', ratana 'plain', soribu 'thousand', garung 'sawah',
tarima 'to accept', burukuis 'tailbone', burusungi 'moustache'.

/j/, voiced palatal stop, does not occur finally or geminated. Its voice-
less counterpart /c/ does not even occur in loans, but is regularly

replaced by /s/, e.g., rasung 'poison' (< MAL racun).

['] glottal stop is regularly added after a final short vowel by some speakers, but is not phonemic.

<h> occurs in a few loans such as harapan 'hope', ahad 'Sunday'.

<ɲ> occurs in nyawa 'soul' and in the phrasal expression tau nya koinang 'person who has no mother = orphan'. Opposed to Lauje, there is no mVny-allomorph of the ACTOR-orienting prefix moN-. Stem-initial /s/ is regularly replaced by /n/, e.g., suu monuu 'to send, to order' or sambak manambak 'to hit (with a small object)'. The 3.person possessive suffix is -na. The usual negators are ingga/géiga 'no' and kena 'don't'. This is to show that the palatal nasal phone does not occur in grammatical morphemes. Its occurrence is limited to the two cases mentioned at the beginning of this paragraph and is therefore not accorded phonemic status.

4 Summary review of sound systems

All Tomini-Tolitoli languages investigated so far share the basic phonological characteristics dealt with in the preceding sections: they show regular penultimate stress (2.1): they have phonetically long vowel segments arising from the fusion of two short vowels (2.3); they display a strong tendency towards CV-syllable structure (2.6.1); they have nasal-obstruent sequences which are ambiguous as to syllabification (2.6.2). The segmental inventories are largely identical. They include five vowel phonemes, a series of four voiced and three voiceless stops[17], a series of three nasals, an alveolar fricative, a lateral, and, finally, a trill, the phonemic status of which is still unclear. The major differences pertain to the following phenomena: the paragogic vowel (2.2); /o/-insertion between consonant-final stem and a consonant-initial suffix/clitic (2.2 and 2.6.1); geminates (2.6.1 and 3.2.3); final glides (2.5, 3.1.2, and 3.2.2); limited distribution of /k/ (3.1.3); phonemic status of the glottal stop (3.1.3 and 3.2.3); bilabial fricative as allophone of /b/ (3.1.2); lateral flap as allophone of /l/ (3.1.3). The following table summarizes the[18] distribution of these phenomena for the languages investigated so far:

	Lauje	Tialo	Dondo	Dampelas	Boano	Totoli
paragogic vowel	+	+	+	(+)	–	–
/o/-insertion	+	+	+	(+)	–	–
geminates	–	–	–	–	+	+
final glide	+	+	+	–	–	–
defective /k/	+	+	+	(+)	–	–
phonemic glottal	+	+	+	+	(+)	–
/b/-allophony	+	+	(+)	–	(+)	–
lateral flap	–	–	(+)	–	(–)	+

Before looking at the table as a whole, let us briefly comment on the parentheses. With respect to /l/-allophony, the situation is quite complex. Boano has no lateral flap and patterns with Lauje with regard to initial and medial positions. Word-finally, however, it patterns with Totoli (/l#/ = tonal feature on preceding vowel), but again, as opposed to Totoli, this does not happen after a front high vowel (/i/), viz.:

47a) BOA   gontu'   'thunder'
   b) TOL   gontu'   'thunder'
   c) BOA   bukil   'mountain'
   d) TOL   buki'   'mountain'

Dondo exhibits alveolar lateral/retroflex lateral flap-variation in all positions. Final /l/, however, is preserved. It is still unclear to me

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whether the data from Dondo are amenable to a (complex) statement of al-
lophony or must be attributed instead to the status of 'free', probably
speaker dependent, variation.

The distribution of /b/-allophony is also somewhat complex. In Dondo
the bilabial fricative occurs, but is noticeably rarer than in Lauje.
Boano also patterns with Lauje, but exhibits a peculiarity in that the
bilabial fricative allophone [ß] is presently changing to a glottal frica-
tive [h]. Thus, the older generation consistently pronounces (47c) above
as [ßukil], the younger generation as [hukil].[19]
The glottal stop in Boano differs from that of the other languages in
that it is in general clearly and strongly articulated. It even occurs in
consonant clusters arising at morpheme boundaries, viz. BOA dila'na 'his/
her tongue' (cf. (28) above). Furthermore, it occurs in different lexical
items. This does not come as a suprise if one recalls that /'/ in the
other languages regularly corresponds to /k/ in Boano and Totoli (cf. 3.1.1
above). Boano /'/ most often corresponds to zero in all the other lan-
guages. Compare:

48a)	BOA	ta'ip	'to peel mango'
	TOL	taip	'to peel mango'
	LAU	taip	'to peel mango'
b)	BOA	to'eng	'to hang up'
	TOL	toeng	'to hang up'
	LAU	(n)toeng	'to hang up'
c)	BOA	po'o	'to squeeze'
	TOL	poog	'to squeeze'
	LAU	poo	'to squeeze'
d)	BOA	pa'ag	'crow'
	TOL	paak	'crow'
	LAU	paa'E	'crow'

The difference in articulation thus seems to reflect a difference in his-
torical origin.

The parentheses in the column for Dampelas indicate the following idi-
osyncracies: The paragogic vowel has not one specific quality as in the
other languages (where it is /e/), but rather echoes the last vowel of the
stem, e.g.:[20]

DAM	49a)	hapatA	'four'
	b)	memene'E	'to climb'
	c)	tasi'I	'sea'
	d)	moloto'O	'calm (of sea)'
	e)	pudu'U	'short'

The same holds for the vowel inserted between a consonant-final stem and a
consonant-initial suffix, e.g.::

DAM	50a)	sinanganya	<	sinang	'his/her mother'+
	b)	ipusengenya	<	(m)puseng	'be cheated by him/her'
	c)	sisi'inya	<	sisi'	'fish scales'
	d)	simpopo'onya	<	simpopo'	'ichtyosis'
	e)	ncuutunya	<	ncuut	'sprout'

As for the paragogic vowel, note that it was rarely encountered with
speakers of Dampelas in isolated words (which was also the case for speak-
ers of East Coast Lauje, as opposed to speakers of West Coast Lauje,
Dondo, and Tialo).
With regard to the phonemic status of /k/, the facts for Dampelas are
essentially the same as for Lauje: /k/ hardly ever occurs word-finally, is
much less common in initial and medial positions than other voiceless
stops, and is very common after a homorganic nasal. The type- and token-
frequency of Dampelas /k/, however, seems to be somewhat higher than that
of Lauje. /k/ occurs in a few high frequency items such as méidek 'small'
and deidelek 'a little, a few' (the only two instances of word-final /k/
encountered so far), and ika and uka (used in addressing boys and girls,

respectively, cf. Lauje <u>uti</u> and <u>udo</u>). Furthermore, it is also found in the prefix-like <u>kali</u>- which occurs throughout Sulawesi in the names of small animals. Its Lauje equivalent is <u>ali</u>-, e.g.:

```
    51a)  DAM   kalipapaa          'grasshopper'
          LAU   alipapaa           'grasshopper'
      b)  DAM   kalibambang        'butterfly'
          LAU   alibambang         'butterfly'
```

cf. also DAM <u>kalipopo</u> 'firefly' (LAU <u>ilo-ilo</u>, TOL <u>kikilo</u>) and for another instance where Dampelas 'retains' a /k/:[21]

```
    52a)  DAM   kangkaúla          'spider'
          LAU   angkalua           'spider'
```

Further evidence for a (minor) difference of the phonemic status of /k/ in Lauje and Dampelas would involve elaborate consonant statistics, which I am not yet able to provide. Although within the current mainstream of phonological theory there is no room for a concept such as 'different degrees of phonemicity', in cases such as the present it seems useful to allow for the investigation and expression of such seemingly minor differences. Otherwise, it will not be possible to grasp the subtle differences between superficially identical systems and thus to understand the dynamics, both past and present, of the systems involved.

Speaking of marginal phonemes let us note that in Dampelas there is - as opposed to all other Tomini-Tolitoli languages - a marginally phonemic /h/. This sound does not deserve full phonemic status for the following two reasons: first, it only appears initially and medially (rare):

```
DAM   53)   haa               'blood'
            habia             'sago'
            hia'u             'I'
            honong            'six'
            huambengi         'the day after tomorrow'
            wahip             'spleen'
```

Second, in some words it is in 'free' variation with /r/, which in turn[22] varies between uvular- and alveolar- trilled articulation in Dampelas:

```
DAM   54)   hano/rano         'lake'
            arorong/ahohong   'rope'
            rui/hui           'thorn'
            duhian/durian     'Durio zibethinus'
            doro'/doho'       'betel'
            pohimung/porimung 'to gather'
```

As these examples show, the occurrence of /h/ is not restricted to a few obvious loans in Dampelas and must thus be considered a native phoneme, if only a marginal one. Despite its marginality, however, this phoneme constitutes one of the major phonological differences between Dampelas and the group as a whole.

Finally, note that the features presented in the table are not complete in the sense of comprising all the differences between the sound systems of Tomini-Tolitoli languages. There are further, potentially important differences to remain aware of, which still require research:

a) the phonemic status of the palatal nasal, dependent upon its occurrence in grammatical morphemes, cf. LAU -<u>nye</u> vs. Totoli -<u>na</u>, both 3. sg. possessive (see 3.1.1 and 3.2.3).

b) differences in the number of permitted NC-sequences: in Lauje, for example, 8 (see 2.6.2), in Totoli 6 (see 3.2.3).

c) in addition to the lateral flap, further phenomena related to liquids: for example, the phonemic status of the trill or the tendency to drop

laterals intervocalically (cf. example (9)). Boano (usually spelled Bolano) is especially prone to the latter process, e.g. lopak moopak (< molopak) 'to hit (with a stick)' or laya moumaya (< molumaya) 'to fly'.

5 Phonology and subgrouping

Turning now to the question of subgrouping and thus to the interpretation of the table at the beginning of Section 4 above, note first that it consists of a heterogeneous set of features: the first three pertain to suprasegmentals/morphonology and basically reflect one main fact, i.e. the strength of the tendency towards open syllable structure (cf. 2.6.1 above). The next three pertain to the segmental inventory. From the preceding discussion of the marginally phonemic /h/ in Dampelas, a fourth row could be added with minuses for all languages except Dampelas. Finally, the last two rows pertain to allophonic rules.

The table shows that Lauje and Tialo are identical with respect to phonology, and that Dondo differs from both only with regard to allophonic rules. The differences between Boano and Totoli also pertain to the level of allophony and a minor feature of the segmental inventory. (Recall that the Boano glottal stop is not the 'same' as in Lauje, etc.) Dampelas shares major features with Lauje, Tialo, and Dondo, and two minor features with Totoli, but also exhibits several idiosyncracies that set it off from all other languages.

The discrepancies observed in the allophonic rules seem to be closely linked with areal facts and may thus be accounted for in terms of geographical spread/diffusion. Dondo is the western neighbour of Totoli (both located on the West Coast). The eastern neighbour of Totoli is Buol, where a similar /l/-allophony occurs (cf. fn 16). Boano is spoken on the East Coast in only one village, which is completely surrounded by Tialo-speaking villages.

Although phonological features alone do not of course suffice for establishing a firm subgrouping, it seems plausible to assume that the major split manifested in the table - between Lauje, Dondo and Tialo, on the one hand, and Totoli and Boano on the other - will also be the major split in the subgrouping of these languages. Dampelas is probably more closely related to the first group, but its exact position remains to be determined. This preliminary subgrouping agrees with the subgrouping proposed by Barr et al. (1979:27) on the basis of purely lexicostatistical evidence. They also group Totoli and Boano together and distinguish them from the remaining Tomini-Tolitoli languages. Furthermore, they attribute the difference between Lauje and Tialo to the dialect level, which again agrees with the evidence found in the phonologies. Dampelas is more closely grouped with Lauje and Tialo than with Totoli and Boano, which also seems basically correct.[23] The only major difference pertains to the position of Dondo, which on the basis of lexicostatistical evidence appears to be very closely related to Totoli. This problem has already been discussed by Barr et al. (1979:28f), who opt for grouping Dondo more closely with Lauje and Tialo, despite the evidence found in the lexicostatistic percentages. The phonological evidence presented here supports this view and, in addition, provides evidence for the claim not made by Barr et al., that Lauje, Tialo, and Dondo are more closely related to each other than any of them is to Dampelas.

The said major split probably constitutes an important break within the geographical distribution of sound systems throughout Sulawesi. Adriani & Kruyt (1914:171) note that the central phonological feature distinguishing the Tomini-Tolitoli languages from the southern Kaili-Pamona group is the fact that the Tomini-Tolitoli languages allow for word-final consonants. Kaili-Pamona languages are, in their terminology, vocalic languages, permitting only open syllables, Tomini-Tolitoli languages are consonantal languages, permitting closed syllables at least word-finally. They even make a more specific claim, i.e., the closer a Tomini-Tolitoli language is to the area of the Kaili languages, the smaller is the set of consonants permitted in word-final position. Their discussion of final

consonants in Tomini-Tolitoli languages (1914:171-175), however, is not very convincing and seems to be based on inadequate data.[24] With the exception of Taje[25], all Tomini-Tolitoli languages permit essentially the same (number of) consonants to appear word-finally.[26] But apart from final consonant-statistics, the major intuition of Adriani & Kruyt seems to be well-founded. If the northern, Philippine-type languages are, according to their terminology, consonantal languages, and Kaili-Pamona languages are vocalic languages, Tomini-Tolitoli languages are, phonologically speaking, a transitional type striving towards an open syllable structure (cf. 2.6.1). The two languages farthest away from the Kaili area, Totoli and Boano, are distinctly more conservative in this process than the other Tomini-Tolitoli languages, since they lack an epenthetic /o/ in suffixation and the paragogic vowel and do have geminates.

Notes

1 The data on which this article is based were collected during a seven-month field trip to Central Sulawesi. The research was done under the auspices of LIPI, sponsored by the Kepala Pusat Pembinaan dan Pengembangan Bahasa, Prof. Dr. A.M. Moeliono, and funded by the German National Research Foundation (DFG). I would like to thank Professor Moeliono and the institutions named for their generous help and assistance. I would also like to acknowledge the local sponsorship and much practical assistance provided by the Kepala Kantor Wilayah DepDikBud Sulawesi Tengah, Drs. Amiruddin Maula, and the various sub-branches of his Kantor. Prof. Blust, Prof. Nothofer, Dr. Sneddon, and Phil Quick and Don Barr (both SIL Palu Branch) helped very much in planning and carrying through this project. Thanks very much to all of them. Last but not least, special thanks to Chris Searls for checking and improving my English.

2 At the present moment I am not yet able to make clear distinctions between languages and dialects. I adhere to the distinctions and names used by the speakers themselves, thus using Boano rather than Bolano, Totoli rather than Tolitoli, Tialo rather than Tomini. As for the name of the group as a whole, there is no native term in use. 'Tomini-Tolitoli' was introduced by Masyhuddin et al. (1975/81) in order to indicate a certain subgrouping and also as an alternative to the East Coast-centered term 'Tomini'. More detailed information on the languages, the geography, and the sociolinguistic setting may be found in the author's planned source-book on Tomini-Tolitoli languages.

3 I have not yet collected data on Tajio and Taje, thus all general statements include the reservation that the picture could change, if these two languages were incorporated. Phil and Becky Quick (SIL) started to work on Pendau in 1988, so I collected only a minimum of data for this language and only mention it in passing. Special thanks are due to Phil Quick for sending me his 'Pendau Phonology (Version Two - November 1989)', which was a big help in developing my analysis and checking my data, though the responsibility for the interpretation and validity of the Pendau data is, of course, my own.

4 Note that instead of the term 'focus' common in Philippine studies I prefer the term 'orientation', with ACTOR and UNDERGOER as cover-terms for the two main subgroups.

5 I use standard Indonesian orthography in transcribing the examples. Thus, ' is a glottal stop, ng a velar nasal, and ny a palatal nasal.

6 This term is used by Maryott and Sneddon for a similar phenomenon in the Sangiric languages (cf. Sneddon 1986:54).

7 Henceforth, instead of marking 'irregular' stress in words ending in a paragogic vowel, I will mark the paragogic vowel by using capital E.

8 (a)-examples are ACTOR-oriented declaratives, (b)-examples UNDERGOER-oriented imperatives.

9 This situation, of course, allows for different analyses. Besides an analysis as vowel-insertion, it could be claimed that /o/ is part of the underlying suffix, with a deletion rule for vowel-final stems:

10 There are no examples involving a labio-velar glide, since this glide hardly ever occurs (see below 3.1.2).

11 Given that to date there are a dozen examples it seems exaggerated to me to speak of 'rules'!

12 At least two of these are etymologically transparent, i.e., gáuan derives from gau 'to work', and táiso· from tau 'person' and iso· 'old'.

13 Note that with respect to the prefix (mVg-), Totoli differs markedly from Philippine languages such as Tagalog, where such a resegmentation does not take place, i.e., mag+abot is mag.a.bot 'reach for'.

14 Note that there are several cognate sets for initial /g/, covering all Tomini-Tolitoli languages, e.g.:
LAU, TIA, DON, TOL, BOA gutu 'to do, make'
LAU, TIA, DON, TAL, BOA geges 'to rub (massage)'

15 UNDERGOER-oriented pinendolingonyE 'stolen by him/her' also shows /nd/.

16 Note that a similar allophony occurs in Buol, the eastern neighbour of Totoli. According to Usup (1986:60f), there is a 3-way allophony in Buol, i.e., a voiced alveo-dental lateral after a high vowel, a voiced retroflex lateral flap before a high vowel, and a retroflex 'near' approximant before back vowels. Cf. also Sneddon and Usup 1986:425(fn13).

17 Boano is the only language investigated so far which clearly possesses a fully phonemic /k/ as well as a phonemic glottal stop and thus has four voiceless stops.

18 '+' indicates occurrence of the phenomenon, '-' its absence. Parentheses signal that the phenomenon occurs, but that there are further idiosyncrasies not encountered in Totoli or Lauje.

19 Note, incidentally, that in Gorontalo, a language spoken to the northeast of Boano, Proto-Gorontalic /b/ changed to /h/ when followed by /u/ (Sneddon and Usup 1986:412).

20 The same phenomenon has been described for Selayarese, a South Sulawesi language, by Mithun and Basri (1986:236ff). Blust (1990:241) mentions western Melanesia as another area where this phenomenon occurs.

21 The difficulty of capturing the history of /k/ within Tomini-Tolitoli languages in terms of regular sound change is shown by the following: unlike the examples given in (51), there is no initial /k/ in DAM alisabang 'lizard' (the same form in Lauje, Dondo, and Tialo). alisoso'E 'house-lizard (cecak)', and alipapaa'E 'grasshopper', we also find a kali- in kalibamba 'butterfly'. It seems therefore difficult to even generalize about such a minute phenomenon as the history of /k/ in kali-.

22 Dampelas /h/ regularly corresponds to /r/ in Pendau, the language with which it seems to be most closely related. Compare the examples in (53) and (54) with PEN raa 'blood', rabia 'sago', ronong 'six', roombengi 'the day after tomorrow', rano 'lake', arorong 'rope', doro' 'betel'. This /h/-/r/ sets in Dampelas and Pendau usually correspond to a lateral in Lauje: LAU laa 'blood', alipE 'spleen', labia 'sago', dolo'E 'betel', alolongE 'rope', luinye 'thorn', dulianE 'Durio z.', lia'e 'I'. But note that LAU dano 'lake' also exists.

23 Note, however, that a first crude comparison of lexical items has yielded several cognate sets shared exclusively by Totoli and Dampelas. The subgrouping might therefore turn out to be much more complicated than has been presented here.

24 Adriani & Kruyt claim that there is no word-final /n/ in Lauje (1914: 172) and that there is no final /d/ in Totoli (1914:174). Both claims are simply wrong, viz. Lauje ngunguman 'to tell a story', o'ogan 'fever' and Totoli motonggod 'industrious', kintid, tinggod both: 'heel'.

25 For Taje (Petapa), the language which is closest to the Kaili area on the East Coast and probably heavily influenced by the Parigi dialect of Kaili, I have no data of my own (cf. fn3). Adriani & Kruyt (1914:171) claim that it permits the following six consonants to occur word-finally: /ng/, /s/, /t/, /l/, /r/, /g/. According to Kaseng et al. (1979:74), there are no consonants at all permitted word-finally - inadequate data or change?

26 The differences which do occur pertain to final /k/, /r/, and /y/. That /y/ does not occur word-finally in Boano and Totoli is correct, but these two languages are the ones farthest away from the Kaili area. That /k/ does not appear word-finally in Lauje, Dondo, and Tialo is connected with the fact that this sound generally changed to a glottal stop in these languages (cf. 3.1.3 above, also already noted by Adriani & Kruyt (1914: 172f)). Since the glottal stop occurs word-finally in these languages and does not occur word-finally in Totoli, the number of final consonants is still the same for all languages. The phonemic status of /r/ is dubious in all Tomini-Tolitoli languages (with the possible exception of Pendau and Dampelas) and thus does not provide for conclusive evidence in comparing final positions.

Abbreviations and special symbols used

BOA	Boano
DAM	Dampelas
DON	Dondo
MAL	Malay
LAU	Lauje
PEN	Pendau
TIA	Tialo
TOL	Totoli

[]	phonetic transcription
//	phonemes
E	paragogic vowel (cf. 2.2)
L	retroflex lateral flap (cf. 3.2.3)
˙	high tone, overlong vowel (cf. 3.2.3)
'	glottal stop

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