

# PHONOLOGY OF DA'A, CENTRAL SULAWESI

Donald F. Barr and Sharon G. Barr

## 1. INTRODUCTION

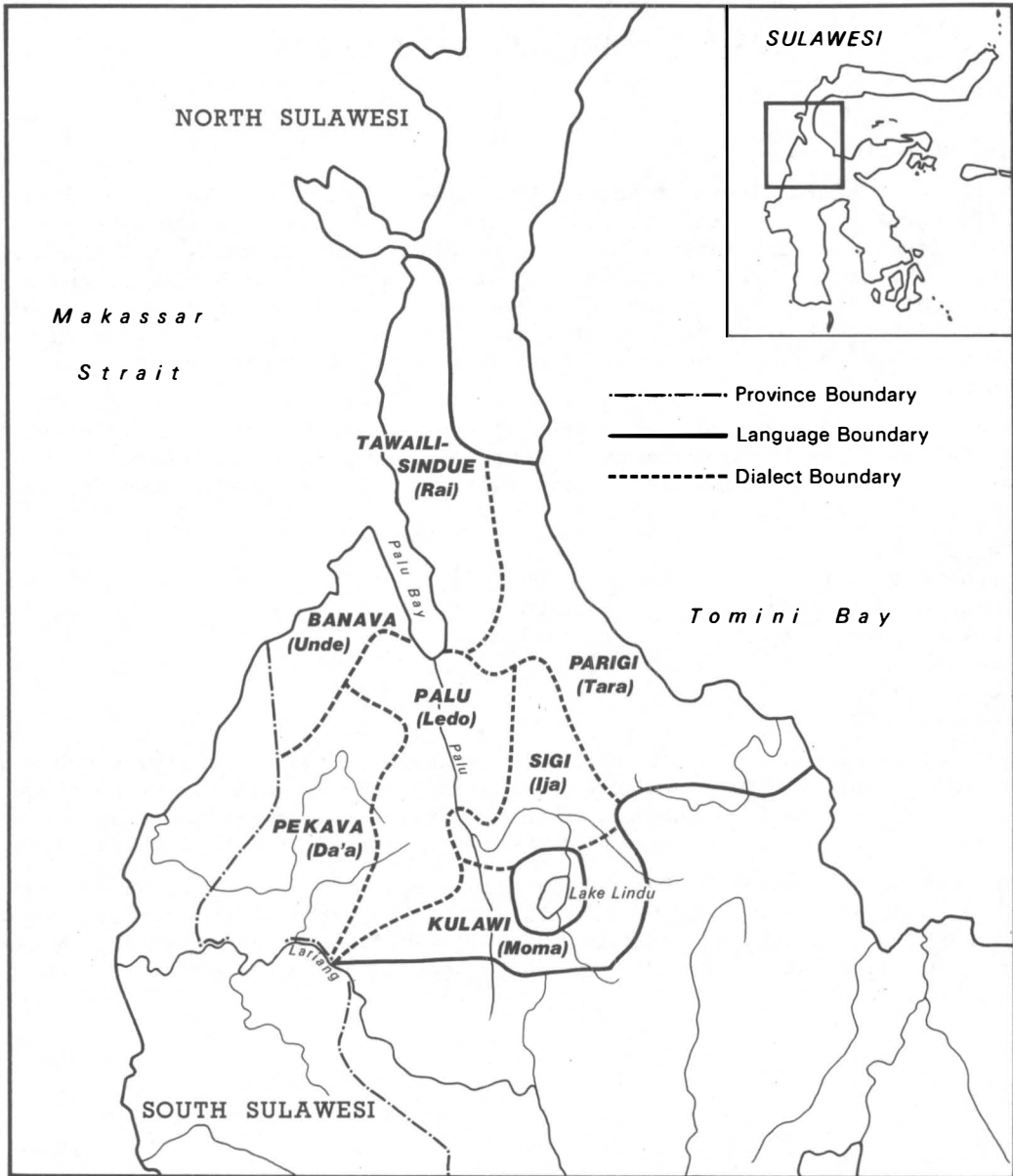
Da'a is one of the dialects of the Kaili language which is spoken by a total of  $\pm 290,000$  speakers in Central Sulawesi. Kaili speakers live in the main Palu River valley of western Central Sulawesi province, the mountains to the south, east and west of this valley, as well as along the coast north of Palu and along the coast of Tomini Bay, east of Palu (see map). Kaili has long been the major language of Central Sulawesi, in particular the Palu (Ledo) dialect, which can be heard spoken in many government offices in Palu, the capital of Central Sulawesi.

There are at least seven major dialects of Kaili, with numerous subdialects. These are listed by the Department of Education and Culture of Central Sulawesi (Wumbu 1973, Team Prasarvai Kebudayaan 1976) as follows: (population figures from Barr, Barr with Salombe 1979).

|                         |               |
|-------------------------|---------------|
| Palu (Ledo)             | $\pm 128,000$ |
| Banava (Unde)           | $\pm 20,000$  |
| Pekava (Da'a/Inde/Tado) | $\pm 32,000$  |
| Tawaili-Sindue (Rai)    | $\pm 55,000$  |
| Parigi (Tara)           | $\pm 43,000$  |
| Sigi (Ija)              | $\pm 7,500$   |
| Kulawi (Moma)           | $\pm 5,500$   |

Kaili is classified as a member of the Austronesian Language Family, South-west Indonesian Group, West Toradja Subgroup (Salzner 1960). More recent publications refer to the Toradja Subgroup (West and East) as Kaili-Pamona, a term more acceptable to the local population (Wumbu 1973, Barr, Barr with Salombe 1979).

The present study covers the Pekava (Da'a) dialect of Kaili and is based on a corpus of approximately 2,000 words. This data was gathered from September 1979 to May 1980, in the village of Dombu, Marawola Subdistrict (Kecamatan). While various people assisted, Mr Gidion Likenono contributed a large share of the data for the present paper.<sup>1</sup>



Map: Dialects of Kaili

2. SEGMENTALS

2.1 Phoneme chart

| CONSONANTS            |        |          |      |         |
|-----------------------|--------|----------|------|---------|
|                       | Labial | Linguals |      | Glottal |
|                       |        | Front    | Back |         |
| Stops                 |        |          |      |         |
| vd.                   | b      | d        | g    |         |
| vl.                   | p      | t        | k    | ʔ       |
| Prenasalised Stops    |        |          |      |         |
| vd.                   | mb     | nd       | ŋg   |         |
| vl.                   | mp     | nt       |      |         |
| Spirants              |        |          |      |         |
| vd.                   | v      | j        |      |         |
| vl.                   |        | s        |      |         |
| Prenasalised Spirants |        |          |      |         |
| vd.                   |        | nj       |      |         |
| Nasals                | m      | n        | ŋ    |         |
| Liquids               |        | l        | r    |         |
| Semivowels            |        |          | y    |         |
| VOWELS                |        |          |      |         |
|                       | Front  | Central  | Back |         |
| High                  | i      |          | u    |         |
| Mid                   | e      |          | o    |         |
| Low                   |        | a        |      |         |

2.2 Interpretation

2.2.1 Consonant vs. vowel

The semivowel y is interpreted to function as a consonant, not a vowel. There are virtually no unambiguous three-vowel sequences. From a corpus of over 2,000 words, only one example is found, and this is across a morpheme boundary: na+ue+mo mata+na *his eyes watered*. Thus in sequences of [V<sup>i</sup>V], [i] is interpreted as functioning as a consonant, y. [ma'nja'o] is thus interpreted as [ma'njayo] *will walk around*, and similarly ['da'o] is interpreted as ['dayo] *grave*.

2.2.2 Sequence vs. unit

No unambiguous CC patterns exist in Da'a. Therefore all CC sequences (mb, mp, nd, nt, nj, and ng) are interpreted as single phoneme units.

## 2.3 Description of consonant phonemes

## 2.3.1 Realisation of consonant phonemes

|     |   |          |                    |
|-----|---|----------|--------------------|
| /b/ | [b] voiced bilabial stop                |          |                    |
|     | ['babe]                                 | /babe/   | <i>machete</i>     |
|     | [ta'boyo]                               | /taboyo/ | <i>squash</i>      |
| /p/ | [p] voiceless unaspirated bilabial stop |          |                    |
|     | ['pone]                                 | /pone/   | <i>climb up</i>    |
|     | ['apu]                                  | /apu/    | <i>fire</i>        |
| /d/ | [d] voiced alveolar stop                |          |                    |
|     | ['dayo]                                 | /dayo/   | <i>grave</i>       |
|     | ['ladi]                                 | /ladi/   | <i>knife</i>       |
| /t/ | [t] voiceless unaspirated alveolar stop |          |                    |
|     | ['tana]                                 | /tana/   | <i>land, earth</i> |
|     | ['mata]                                 | /mata/   | <i>eye</i>         |
| /g/ | [g] voiced velar stop                   |          |                    |
|     | ['gaga]                                 | /gaga/   | <i>invite</i>      |
|     | ['aga]                                  | /aga/    | <i>only</i>        |
| /k/ | [k] voiceless unaspirated velar stop    |          |                    |
|     | ['kana]                                 | /kana/   | <i>must</i>        |
|     | ['aka]                                  | /aka/    | <i>Sunday</i>      |
| /ʔ/ | [ʔ] voiceless glottal stop              |          |                    |
|     | ['daʔa]                                 | /daʔa/   | <i>no, not</i>     |

NOTE: There is free variation between word initial [ʔ] and [∅], as in

|      |   |            |                     |
|------|---|------------|---------------------|
|      | ['inu] ~ ['ʔinu]                            | /inu/      | <i>drink</i>        |
| /mb/ | [mb] voiced prenasalised bilabial stop      |            |                     |
|      | ['mboto]                                    | /mboto/    | <i>self</i>         |
|      | ['sumba]                                    | /sumba/    | <i>mouth</i>        |
| /mp/ | [mp] voiceless prenasalised bilabial stop   |            |                     |
|      | ['mpuʔu]                                    | /mpuʔu/    | <i>very</i>         |
|      | [sa'mpulu]                                  | /sampungu/ | <i>ten</i>          |
| /nd/ | [nd] voiced prenasalised alveolar stop      |            |                     |
|      | ['ndoro]                                    | /ndoro/    | <i>worm</i>         |
|      | ['indo]                                     | /indo/     | <i>mother</i>       |
| /nt/ | [nt] voiceless prenasalised alveolar stop   |            |                     |
|      | ['ntoto]                                    | /ntoto/    | <i>very</i>         |
|      | [sa'ntipa]                                  | /santipa/  | <i>one week</i>     |
| /ŋg/ | [ŋg] voiced prenasalised velar stop         |            |                     |
|      | ['ŋga]                                      | /ŋga/      | <i>from</i>         |
|      | [pe'maŋgi]                                  | /pemaŋgi/  | <i>hoe</i>          |
| /nj/ | [nj] voiced prenasalised alveolar affricate |            |                     |
|      | ['njani]                                    | /njani/    | <i>know</i>         |
|      | [sa'njobu]                                  | /sanjobu/  | <i>one thousand</i> |
| /v/  | [v] voiced labio-dental fricative           |            |                     |
|      | ['vuku]                                     | /vuku/     | <i>bone</i>         |
|      | ['tava]                                     | /tava/     | <i>leaf</i>         |

|     |                                  |         |                      |
|-----|----------------------------------|---------|----------------------|
| /s/ | [s] voiceless alveolar fricative |         |                      |
|     | ['sani]                          | /sani/  | <i>mosquito</i>      |
|     | ['ose]                           | /ose/   | <i>rice (husked)</i> |
| /j/ | [j] voiced alveolar affricate    |         |                      |
|     | ['jono]                          | /jono/  | <i>grass</i>         |
|     | ['kaja]                          | /kaja/  | <i>difficult</i>     |
| /m/ | [m] voiced bilabial nasal        |         |                      |
|     | ['mata]                          | /mata/  | <i>eye</i>           |
|     | ['kami]                          | /kami/  | <i>we(excl)</i>      |
| /n/ | [n] voiced alveolar nasal        |         |                      |
|     | [na'ria]                         | /naria/ | <i>there is</i>      |
|     | ['pone]                          | /pone/  | <i>climb up</i>      |
| /ŋ/ | [ŋ] voiced velar nasal           |         |                      |
|     | ['ŋana]                          | /ŋana/  | <i>child</i>         |
|     | ['oŋe]                           | /oŋe/   | <i>nose</i>          |
| /l/ | [l] voiced alveolar lateral      |         |                      |
|     | ['lomu]                          | /lomu/  | <i>fat (n.)</i>      |
|     | ['uli]                           | /uli/   | <i>say</i>           |
| /r/ | [ʀ] voiced apico-alveolar trill  |         |                      |
|     | [ʀ] voiced apico-alveolar flap   |         |                      |
|     | [g] voiced velar fricative       |         |                      |
|     | ['ʀaʀa] ~ ['ʃaʃa] ~ ['gaga]      | /rara/  | <i>inside</i>        |
|     | ['baʀa] ~ ['baʃa] ~ ['baga]      | /bara/  | <i>perhaps</i>       |
| /y/ | [i] voiced palatal semivowel     |         |                      |
|     | ['i'ovi]                         | /yovi/  | <i>yesterday</i>     |
|     | ['na'ia]                         | /naya/  | <i>shy</i>           |

MARGINAL PHONEMES. The phonemes /č/ and /nč/, present in other Kaili dialects, do not occur in Da'a. A few loans from Indonesian retain these sounds, as in /bončis/ (Indonesian) → /bonči/ (Da'a). But the common pattern is for /č/ to become /s/, as in /čamat/ (Indonesian) → /sama/ (Da'a) *subdistrict officer*, or /čolo/ (Ledo) → /solo/ (Da'a) *matches*.

## 2.4 Consonant phonemes - contrasts

/b/ voiced labial stop

|              |                              |                                     |
|--------------|------------------------------|-------------------------------------|
| /b/ vs. /p/  | /bone/ <i>sand</i>           | /taba/ <i>kind of tree</i>          |
|              | /pone/ <i>climb</i>          | /tapa/ <i>dry</i>                   |
| /b/ vs. /mb/ | /ba/ <i>perhaps</i>          | /taba/ <i>kind of tree</i>          |
|              | /mba/ <i>where</i>           | /tamba/ <i>chop in small pieces</i> |
| /b/ vs. /mp/ | /buʔu/ <i>new banana bud</i> | /sabu/ <i>soap</i>                  |
|              | /mpuʔu/ <i>very</i>          | /sampu/ <i>sharpen</i>              |
| /b/ vs. /v/  | /bulu/ <i>mountain</i>       | /taba/ <i>kind of tree</i>          |
|              | /vulu/ <i>hair, fur</i>      | /tava/ <i>leaf</i>                  |
| /b/ vs. /m/  | /bata/ <i>stem of plant</i>  | /saba/ <i>problem</i>               |
|              | /mata/ <i>eye</i>            | /sama/ <i>bridle</i>                |

*/p/* voiceless labial stop

|                            |   |  |
|----------------------------|---|--|
| <i>/p/</i> vs. <i>/b/</i>  | see under <i>/b/</i> above                                  |  |
| <i>/p/</i> vs. <i>/mb/</i> | <i>/poto/</i> wood frame for hearth<br><i>/mboto/</i> self  | <i>/tapa/</i> dry<br><i>/tamba/</i> chop in small pieces         |
| <i>/p/</i> vs. <i>/mp/</i> | <i>/pae/</i> rice (in field)<br><i>/mpae/</i> year          | <i>/sopu/</i> blowgun<br><i>/sompu/</i> wrapped in grave clothes |
| <i>/p/</i> vs. <i>/v/</i>  | <i>/pua/</i> day before yesterday<br><i>/vua/</i> betel nut | <i>/apu/</i> fire<br><i>/avu/</i> ashes                          |
| <i>/p/</i> vs. <i>/m/</i>  | <i>/pone/</i> climb<br><i>/mone/</i> hoarse                 | <i>/lopu/</i> fall (of rotten fruit)<br><i>/lomu/</i> fat (n.)   |

*/d/* voiced front lingual stop

|                            |  |   |
|----------------------------|--|---|
| <i>/d/</i> vs. <i>/t/</i>  | <i>/dumpa/</i> carved ornament on gable<br><i>/tumpa/</i> frog | <i>/kada/</i> foot<br><i>/kata/</i> scratch                       |
| <i>/d/</i> vs. <i>/nd/</i> | <i>/dea/</i> many<br><i>/ndea/</i> young girl                  | <i>/pada/</i> kind of grass<br><i>/panda/</i> reed (pandanus)     |
| <i>/d/</i> vs. <i>/nt/</i> | <i>/dani/</i> a name<br><i>/ntani/</i> other                   | <i>/tudu/</i> measure river depth<br><i>/tuntu/</i> history story |
| <i>/d/</i> vs. <i>/nj/</i> | <i>/dani/</i> a name<br><i>/njani/</i> know                    | <i>/bada/</i> face powder<br><i>/banja/</i> coconut bud           |
| <i>/d/</i> vs. <i>/s/</i>  | <i>/doi/</i> money<br><i>/soi/</i> name of a river             | <i>/narodo/</i> stiff in fear<br><i>/naroso/</i> strong           |
| <i>/d/</i> vs. <i>/j/</i>  | <i>/doi/</i> money<br><i>/joi/</i> honest                      | <i>/kada/</i> foot<br><i>/kaja/</i> difficult                     |
| <i>/d/</i> vs. <i>/n/</i>  | <i>/daya/</i> kind of grass<br><i>/naya/</i> shy               | <i>/kada/</i> foot<br><i>/kana/</i> must                          |
| <i>/d/</i> vs. <i>/l/</i>  | <i>/dana/</i> a name<br><i>/lana/</i> kerosene                 | <i>/sada/</i> small piece left<br><i>/sala/</i> wrong             |
| <i>/d/</i> vs. <i>/r/</i>  | <i>/dano/</i> kind of banana<br><i>/rano/</i> lake             | <i>/nadamba/</i> happy<br><i>/naramba/</i> beautiful              |
| <i>/d/</i> vs. <i>/y/</i>  | <i>/dana/</i> a name<br><i>/yana/</i> a name                   | <i>/nada/</i> a name<br><i>/naya/</i> shy                         |

*/t/* voiceless front lingual stop

|                            |   |  |
|----------------------------|---|--|
| <i>/t/</i> vs. <i>/d/</i>  | see under <i>/d/</i> above                      |  |
| <i>/t/</i> vs. <i>/nd/</i> | <i>/toro/</i> turn<br><i>/ndoro/</i> worm       | <i>/ito/</i> pupil of eye<br><i>/indo/</i> mother                    |
| <i>/t/</i> vs. <i>/nt/</i> | <i>/tipa/</i> time<br><i>/ntipa/</i> week       | <i>/titi/</i> duck<br><i>/tinti/</i> hour                            |
| <i>/t/</i> vs. <i>/nj/</i> | <i>/tani/</i> stay alone<br><i>/njani/</i> know | <i>/bata/</i> stem<br><i>/banja/</i> coconut bud                     |
| <i>/t/</i> vs. <i>/s/</i>  | <i>/tero/</i> diarrhoea<br><i>/sero/</i> shovel | <i>/naboto/</i> crushed with teeth<br><i>/naboso/</i> full (stomach) |
| <i>/t/</i> vs. <i>/j/</i>  | <i>/tapi/</i> but, winnow<br><i>/japi/</i> cow  | <i>/kata/</i> scratch<br><i>/kaja/</i> difficult                     |
| <i>/t/</i> vs. <i>/n/</i>  | <i>/tana/</i> land<br><i>/nana/</i> pus         | <i>/ata/</i> roof<br><i>/ana/</i> child                              |

|             |   |   |
|-------------|---|---|
| /t/ vs. /l/ | /tana/ <i>land</i><br>/lana/ <i>kerosene</i>  | /uti/ <i>penis</i><br>/uli/ <i>say</i>                            |
| /t/ vs. /r/ | /tara/ <i>look at</i><br>/rara/ <i>inside</i> | /ata/ <i>roof</i><br>/ara/ <i>in</i>                              |
| /t/ vs. /y/ | /tana/ <i>land</i><br>/yana/ <i>a name</i>    | /doqato/ <i>kind of edible plant</i><br>/qayo/ <i>in front of</i> |
| /t/ vs. /ʔ/ | /koto/ <i>broken</i><br>/koʔo/ <i>hard</i>    |   |

## /g/ voiced back lingual stop

|              |   |   |
|--------------|---|---|
| /g/ vs. /k/  | /gata/ <i>rubber band</i><br>/kata/ <i>scratch</i>  | /aga/ <i>only</i><br>/aka/ <i>Sunday</i>              |
| /g/ vs. /ŋg/ | /gana/ <i>enough</i><br>/ŋgana/ <i>right (side)</i> | /baga/ <i>fight</i><br>/baŋga/ <i>village name</i>    |
| /g/ vs. /ŋ/  | /gana/ <i>enough</i><br>/ŋana/ <i>child</i>         | /nagana/ <i>be enough</i><br>/naŋana/ <i>be small</i> |
| /g/ vs. /ʔ/  | /gaga/ <i>invite</i><br>/gaʔa/ <i>divorce</i>       |   |

## /k/ voiceless back lingual stop

|              |   |   |
|--------------|---|---|
| /k/ vs. /g/  | see under /g/ above                         |   |
| /k/ vs. /ŋg/ | /ka/ <i>to, for</i><br>/ŋga/ <i>from</i>    | /nakuni/ <i>yellow</i><br>/naŋuni/ <i>very yellow</i> |
| /k/ vs. /ŋ/  | /kana/ <i>must</i><br>/ŋana/ <i>child</i>   | /nalaka/ <i>gap</i><br>/nalaŋa/ <i>tall</i>           |
| /k/ vs. /ʔ/  | /paka/ <i>cause</i><br>/paʔa/ <i>chisel</i> |   |

## /ʔ/ voiceless glottal stop

|              |   |  |
|--------------|---|--|
| /ʔ/ vs. /k/  | see under /k/ above                                     |  |
| /ʔ/ vs. /g/  | see under /g/ above                                     |  |
| /ʔ/ vs. /ŋg/ | /baʔa/ <i>above</i><br>/baŋga/ <i>village name</i>      |  |
| /ʔ/ vs. /ŋ/  | /baʔa/ <i>above</i><br>/baŋa/ <i>coconut shell bowl</i> |  |

## /mb/ voiced prenasalised labial stop

|               |   |  |
|---------------|---|--|
| /mb/ vs. /b/  | see under /b/ above                               |  |
| /mb/ vs. /p/  | see under /p/ above                               |  |
| /mb/ vs. /mp/ | /mboto/ <i>self</i><br>/mpotove/ <i>love</i>      | /sambula/ <i>a month</i><br>/sampulu/ <i>ten</i>             |
| /mb/ vs. /v/  | /mbuku/ <i>short</i><br>/vuku/ <i>bone</i>        | /nambuku/ <i>be short</i><br>/navuku/ <i>have many bones</i> |
| /mb/ vs. /m/  | /mboto/ <i>self</i><br>/motoro/ <i>motorcycle</i> | /sambaʔa/ <i>one person</i><br>/sama/ <i>bridle</i>          |

*/mp/* voiceless prenasalised labial stop

|                             |                             |                                   |  |
|-----------------------------|-----------------------------|-----------------------------------|--|
| <i>/mp/</i> vs. <i>/b/</i>  | see under <i>/b/</i> above  |                                   |  |
| <i>/mp/</i> vs. <i>/p/</i>  | see under <i>/p/</i> above  |                                   |  |
| <i>/mp/</i> vs. <i>/mb/</i> | see under <i>/mb/</i> above |                                   |  |
| <i>/mp/</i> vs. <i>/v/</i>  | <i>/mpuʔu/</i> <i>very</i>  | <i>/tumpulaka/</i> <i>hit</i>     |  |
|                             | <i>/voʔu/</i> <i>again</i>  | <i>/tuvuna/</i> <i>his life</i>   |  |
| <i>/mp/</i> vs. <i>/m/</i>  | <i>/mpuʔu/</i> <i>very</i>  | <i>/sampalai/</i> <i>a moment</i> |  |
|                             | <i>/muʔu/</i> <i>shrew</i>  | <i>/sama/</i> <i>bridle</i>       |  |

*/nd/* voiced prenasalised front lingual stop

|                             |                                     |   |  |
|-----------------------------|-------------------------------------|---|--|
| <i>/nd/</i> vs. <i>/d/</i>  | see under <i>/d/</i> above          |   |  |
| <i>/nd/</i> vs. <i>/t/</i>  | see under <i>/t/</i> above          |   |  |
| <i>/nd/</i> vs. <i>/nt/</i> | <i>/ndoro/</i> <i>worm</i>          | <i>/mandate/</i> <i>long (irrealis)</i> |  |
|                             | <i>/ntoto/</i> <i>very</i>          | <i>/mantate/</i> <i>cut brush</i>       |  |
| <i>/nd/</i> vs. <i>/nj/</i> | <i>/ndate/</i> <i>long</i>          | <i>/tandoko/</i> <i>a trap</i>          |  |
|                             | <i>/njani/</i> <i>know</i>          | <i>/nanjoko/</i> <i>hold</i>            |  |
| <i>/nd/</i> vs. <i>/s/</i>  | <i>/ndoro/</i> <i>worm</i>          | <i>/tanda/</i> <i>birth mark</i>        |  |
|                             | <i>/soro/</i> <i>slide, move</i>    | <i>/tasa/</i> <i>ripe</i>               |  |
| <i>/nd/</i> vs. <i>/j/</i>  | <i>/ndoe/</i> <i>long</i>           | <i>/tanda/</i> <i>birth mark</i>        |  |
|                             | <i>/joe/</i> <i>end</i>             | <i>/taja/</i> <i>sharp, to pull</i>     |  |
| <i>/nd/</i> vs. <i>/n/</i>  | <i>/ndoro/</i> <i>worm</i>          | <i>/tanda/</i> <i>birth mark</i>        |  |
|                             | <i>/nororo/</i> <i>straight</i>     | <i>/tana/</i> <i>land</i>               |  |
| <i>/nd/</i> vs. <i>/l/</i>  | <i>/ndoro/</i> <i>worm</i>          | <i>/indo/</i> <i>mother</i>             |  |
|                             | <i>/lomumu/</i> <i>fat (n.)</i>     | <i>/ilo/</i> <i>loop in rope</i>        |  |
| <i>/nd/</i> vs. <i>/r/</i>  | <i>/ndoro/</i> <i>worm</i>          | <i>/tanda/</i> <i>birth mark</i>        |  |
|                             | <i>/rororo/</i> <i>broil, roast</i> | <i>/tara/</i> <i>look at</i>            |  |
| <i>/nd/</i> vs. <i>/y/</i>  | <i>/ndoe/</i> <i>long</i>           | <i>/indo/</i> <i>mother</i>             |  |
|                             | <i>/yua/</i> <i>name</i>            | <i>/iyoy/</i> <i>yes</i>                |  |

*/nt/* voiceless prenasalised front lingual stop

|                             |                                    |                                     |  |
|-----------------------------|------------------------------------|-------------------------------------|--|
| <i>/nt/</i> vs. <i>/d/</i>  | see under <i>/d/</i> above         |                                     |  |
| <i>/nt/</i> vs. <i>/t/</i>  | see under <i>/t/</i> above         |                                     |  |
| <i>/nt/</i> vs. <i>/nd/</i> | see under <i>/nd/</i> above        |                                     |  |
| <i>/nt/</i> vs. <i>/nj/</i> | <i>/ntani/</i> <i>other</i>        | <i>/tuntu/</i> <i>history story</i> |  |
|                             | <i>/njani/</i> <i>know</i>         | <i>/tunju/</i> <i>burn</i>          |  |
| <i>/nt/</i> vs. <i>/s/</i>  | <i>/ntani/</i> <i>other</i>        | <i>/vuntu/</i> <i>end</i>           |  |
|                             | <i>/sani/</i> <i>mosquito</i>      | <i>/vusu/</i> <i>dam</i>            |  |
| <i>/nt/</i> vs. <i>/j/</i>  | <i>/ntapi/</i> <i>ancestors</i>    | <i>/tuntu/</i> <i>history story</i> |  |
|                             | <i>/japi/</i> <i>cow</i>           | <i>/tuja/</i> <i>plant</i>          |  |
| <i>/nt/</i> vs. <i>/n/</i>  | <i>/ntoto/</i> <i>very</i>         | <i>/tuntu/</i> <i>history story</i> |  |
|                             | <i>/noto/</i> <i>knowledgeable</i> | <i>/tunu/</i> <i>charcoal broil</i> |  |
| <i>/nt/</i> vs. <i>/l/</i>  | <i>/ntapi/</i> <i>ancestors</i>    | <i>/tinti/</i> <i>hour</i>          |  |
|                             | <i>/lapi/</i> <i>layer</i>         | <i>/tili/</i> <i>kinky hair</i>     |  |



|              |                             |                              |
|--------------|-----------------------------|------------------------------|
| /nt/ vs. /r/ | /ntapi/ <i>ancestors</i>    | /tuntu/ <i>history story</i> |
|              | /rapi/ <i>twins</i>         | /turu/ <i>sleep</i>          |
| /nt/ vs. /y/ | /ntu'a/ <i>grandparents</i> | /nantalu/ <i>make garden</i> |
|              | /yua/ <i>a name</i>         | /naya/ <i>shy</i>            |

## /ŋg/ voiced prenasalised back lingual stop

|              |                     |                                  |
|--------------|---------------------|----------------------------------|
| /ŋg/ vs. /g/ | see under /g/ above |                                  |
| /ŋg/ vs. /k/ | see under /k/ above |                                  |
| /ŋg/ vs. /ŋ/ | /ŋga/ <i>from</i>   | /baŋga/ <i>village name</i>      |
|              | /ŋana/ <i>child</i> | /baŋa/ <i>coconut shell bowl</i> |
| /ŋg/ vs. /ʔ/ | see under /ʔ/ above |                                  |

## /nj/ voiced prenasalised front lingual spirant

|               |                               |   |
|---------------|-------------------------------|---|
| /nj/ vs. /d/  | see under /d/ above           |   |
| /nj/ vs. /t/  | see under /t/ above           |   |
| /nj/ vs. /nd/ | see under /nd/ above          |   |
| /nj/ vs. /nt/ | see under /nt/ above          |   |
| /nj/ vs. /j/  | /njani/ <i>know</i>           | /banja/ <i>coconut bud</i>              |
|               | /jani/ <i>overly punish</i>   | /baja/ <i>knife edge</i>                |
| /nj/ vs. /s/  | /njani/ <i>know</i>           | /banja/ <i>coconut bud</i>              |
|               | /sani/ <i>mosquito</i>        | /basa/ <i>language</i>                  |
| /nj/ vs. /n/  | /njani/ <i>know</i>           | /banja/ <i>coconut bud</i>              |
|               | /nana/ <i>pus</i>             | /bana/ <i>thread</i>                    |
| /nj/ vs. /l/  | /njayo/ <i>walk around</i>    | /banja/ <i>coconut bud</i>              |
|               | /layo/ <i>black and white</i> | /bala/ <i>white spot on pig's belly</i> |
| /nj/ vs. /r/  | /njani/ <i>know</i>           | /banja/ <i>coconut bud</i>              |
|               | /rani/ <i>tender</i>          | /bara/ <i>perhaps</i>                   |
| /nj/ vs. /y/  | /njani/ <i>know</i>           | /nenanja/ <i>don't want to eat</i>      |
|               | /yani/ <i>a name</i>          | /naya/ <i>shy</i>                       |

## /v/ voiced labial spirant

|              |                           |                    |
|--------------|---------------------------|--------------------|
| /v/ vs. /b/  | see under /b/ above       |                    |
| /v/ vs. /p/  | see under /p/ above       |                    |
| /v/ vs. /mb/ | see under /mb/ above      |                    |
| /v/ vs. /mp/ | see under /mp/ above      |                    |
| /v/ vs. /m/  | /volo/ <i>bamboo</i>      | /tava/ <i>leaf</i> |
|              | /molo/ <i>caterpillar</i> | /tama/ <i>end</i>  |
| /v/ vs. /s/  | /volo/ <i>bamboo</i>      | /tava/ <i>leaf</i> |
|              | /solo/ <i>matches</i>     | /tasa/ <i>ripe</i> |

## /s/ voiceless front lingual spirant

|             |                     |  |
|-------------|---------------------|--|
| /s/ vs. /d/ | see under /d/ above |  |
| /s/ vs. /t/ | see under /t/ above |  |

|              |                      |                 |
|--------------|----------------------|-----------------|
| /s/ vs. /nd/ | see under /nd/ above |                 |
| /s/ vs. /nt/ | see under /nt/ above |                 |
| /s/ vs. /nj/ | see under /nj/ above |                 |
| /s/ vs. /j/  | /sua/ enter          | /tasa/ ripe     |
|              | /jua/ a name         | /taja/ pull     |
| /s/ vs. /n/  | /sama/ bridle        | /tasa/ ripe     |
|              | /nama/ a name        | /tana/ land     |
| /s/ vs. /l/  | /sero/ shovel        | /mesua/ enter   |
|              | /leru/ wall          | /melua/ vomit   |
| /s/ vs. /r/  | /sara/ a name        | /basa/ language |
|              | /rara/ inside        | /bara/ perhaps  |
| /s/ vs. /y/  | /sua/ enter          | /nasa/ a name   |
|              | /yua/ a name         | /naya/ shy      |
| /s/ vs. /v/  | see under /v/ above  |                 |

## /j/ voiced front lingual spirant

|              |                      |                |
|--------------|----------------------|----------------|
| /j/ vs. /d/  | see under /d/ above  |                |
| /j/ vs. /t/  | see under /t/ above  |                |
| /j/ vs. /nd/ | see under /nd/ above |                |
| /j/ vs. /nt/ | see under /nt/ above |                |
| /j/ vs. /nj/ | see under /nj/ above |                |
| /j/ vs. /s/  | see under /s/ above  |                |
| /j/ vs. /n/  | /japi/ cow           | /taja/ pull    |
|              | /napi/ a name        | /tana/ land    |
| /j/ vs. /l/  | /japi/ cow           | /nataja/ sharp |
|              | /lapi/ layer         | /natala/ sank  |
| /j/ vs. /r/  | /jara/ horse         | /taja/ pull    |
|              | /rara/ inside        | /tara/ look at |
| /j/ vs. /y/  | /japi/ cow           | /naja/ a name  |
|              | /yapi/ a name        | /naya/ shy     |

## /m/ voiced labial nasal

|              |                      |                  |
|--------------|----------------------|------------------|
| /m/ vs. /b/  | see under /b/ above  |                  |
| /m/ vs. /p/  | see under /p/ above  |                  |
| /m/ vs. /mb/ | see under /mb/ above |                  |
| /m/ vs. /mp/ | see under /mp/ above |                  |
| /m/ vs. /v/  | see under /v/ above  |                  |
| /m/ vs. /n/  | /maria/ will have    | /sama/ bridle    |
|              | /naria/ has, had     | /sana/ happy     |
| /m/ vs. /ŋ/  | /mana/ no more       | /sama/ bridle    |
|              | /ŋana/ child         | /saŋa/ name (n.) |

*/n/* voiced front lingual nasal

- /n/* vs. */d/*    see under */d/* above  
*/n/* vs. */t/*    see under */t/* above  
*/n/* vs. */nd/*    see under */nd/* above  
*/n/* vs. */nt/*    see under */nt/* above  
*/n/* vs. */nj/*    see under */nj/* above  
*/n/* vs. */j/*    see under */j/* above  
*/n/* vs. */s/*    see under */s/* above  
*/n/* vs. */l/*    */nale/* a name    */sana/* happy  
                   */lale/* a fly      */sala/* wrong  
*/n/* vs. */r/*    */noa/* straight    */bana/* thread  
                   */roa/* friend      */bara/* perhaps  
*/n/* vs. */y/*    */nana/* pus        */nana/* pus  
                   */yana/* a name    */naya/* shy  
*/n/* vs. */m/*    see under */m/* above  
*/n/* vs. */ŋ/*    */nana/* pus        */sana/* happy  
                   */ŋana/* child     */saŋa/* name (n.)

*/ŋ/* voiced back lingual nasal

- /ŋ/* vs. */g/*    see under */g/* above  
*/ŋ/* vs. */k/*    see under */k/* above  
*/ŋ/* vs. */ŋg/*    see under */ŋg/* above  
*/ŋ/* vs. */m/*    see under */m/* above  
*/ŋ/* vs. */n/*    see under */n/* above  
*/ŋ/* vs. */ʔ/*    see under */ʔ/* above

*/l/* voiced front lingual liquid

- /l/* vs. */d/*    see under */d/* above  
*/l/* vs. */t/*    see under */t/* above  
*/l/* vs. */nd/*    see under */nd/* above  
*/l/* vs. */nt/*    see under */nt/* above  
*/l/* vs. */nj/*    see under */nj/* above  
*/l/* vs. */s/*    see under */s/* above  
*/l/* vs. */j/*    see under */j/* above  
*/l/* vs. */n/*    see under */n/* above  
*/l/* vs. */r/*    */lapi/* layer      */bola/* ball  
                   */rapi/* twins      */bora/* a name  
*/l/* vs. */y/*    */lua/* vomit      */nalana/* tall  
                   */yua/* a name      */naya/* shy

*/r/* voiced back lingual liquid

|                            |  |
|----------------------------|--|
| <i>/r/</i> vs. <i>/d/</i>  | see under <i>/d/</i> above   |
| <i>/r/</i> vs. <i>/t/</i>  | see under <i>/t/</i> above   |
| <i>/r/</i> vs. <i>/nd/</i> | see under <i>/nd/</i> above  |
| <i>/r/</i> vs. <i>/nt/</i> | see under <i>/nt/</i> above  |
| <i>/r/</i> vs. <i>/nj/</i> | see under <i>/nj/</i> above  |
| <i>/r/</i> vs. <i>/s/</i>  | see under <i>/s/</i> above   |
| <i>/r/</i> vs. <i>/j/</i>  | see under <i>/j/</i> above   |
| <i>/r/</i> vs. <i>/n/</i>  | see under <i>/n/</i> above   |
| <i>/r/</i> vs. <i>/l/</i>  | see under <i>/l/</i> above   |
| <i>/r/</i> vs. <i>/y/</i>  | <i>/rapi/ twins</i> <i>/narau/ angry</i><br><i>/yapi/ a name</i> <i>/naya/ shy</i> |

*/y/* voiced back lingual semivowel

|                            |  |
|----------------------------|--|
| <i>/y/</i> vs. <i>/d/</i>  | see under <i>/d/</i> above                     |
| <i>/y/</i> vs. <i>/t/</i>  | see under <i>/t/</i> above                     |
| <i>/y/</i> vs. <i>/nd/</i> | see under <i>/nd/</i> above                    |
| <i>/y/</i> vs. <i>/nt/</i> | see under <i>/nt/</i> above                    |
| <i>/y/</i> vs. <i>/nj/</i> | see under <i>/nj/</i> above                    |
| <i>/y/</i> vs. <i>/s/</i>  | see under <i>/s/</i> above                     |
| <i>/y/</i> vs. <i>/j/</i>  | see under <i>/j/</i> above                     |
| <i>/y/</i> vs. <i>/l/</i>  | see under <i>/l/</i> above                     |
| <i>/y/</i> vs. <i>/r/</i>  | see under <i>/r/</i> above                     |
| <i>/y/</i> vs. <i>/i/</i>  | <i>/yamo/ a name</i><br><i>/iamo/ it's he!</i> |

## 2.5 Consonant phonemes - distribution

Any consonant may precede any vowel, with the exception of */y/*. */y/* may not precede front vowels */i/* or */e/*, except in a few rare loanwords, such as */yisu/* ~ */yesu/ Jesus*.

There are no consonant clusters in Da'a.

## 2.6 Description of vowel phonemes (see chart p.133)

## 2.6.1 Realisation of vowel phonemes

|             |                                       |
|-------------|---------------------------------------|
| <i>/i/</i>  | [i] voiced high front unrounded vowel |
| [ 'ini ]    | <i>/ini/</i> <i>sweat</i>             |
| [ ma'ndiu ] | <i>/mandiu/</i> <i>will bathe</i>     |
| [ 'ia ]     | <i>/ia/</i> <i>he, she</i>            |

|     |  |
|-----|--|
| /e/ | [e] voiced mid front unrounded vowel   |
|     | ['epe] /epe/ hear                      |
|     | ['keni] /keni/ carry                   |
|     | ['peo] /peo/ down below                |
| /a/ | [a] voiced low central unrounded vowel |
|     | ['apa] /apa/ because                   |
|     | ['babe] /babe/ machete                 |
|     | [na'noa] /nanao/ straight              |
| /o/ | [o] voiced mid back rounded vowel      |
|     | ['ose] /ose/ rice (husked)             |
|     | ['bone] /bone/ sand                    |
|     | ['sou] /sou/ house                     |
| /u/ | [u] voiced high back rounded vowel     |
|     | ['uma] /uma/ father                    |
|     | [ka'puna] /kapuna/ crocodile           |
|     | [me'sua] /mesua/ will enter            |

## 2.7 Vowel phonemes - contrasts

### /i/ voiced high front unrounded vowel

|             |                             |                  |
|-------------|-----------------------------|------------------|
| /i/ vs. /e/ | /ira/ they                  | /suli/ expensive |
|             | /era/ brother/sister-in-law | /sule/ heart     |
| /i/ vs. /a/ | /inu/ drink                 | /ŋina/ later     |
|             | /anu/ whatchacallit         | /ŋana/ child     |
| /i/ vs. /o/ | /ito/ pupil of eye          | /tomi/ suck      |
|             | /oto/ car                   | /tomo/ heavy     |
| /i/ vs. /u/ | /ita/ a name                | /taʔi/ faces     |
|             | /uta/ vegetables            | /taʔu/ clever    |

### /e/ voiced mid front unrounded vowel

|             |                             |                            |
|-------------|-----------------------------|----------------------------|
| /e/ vs. /i/ | see under /i/ above         |                            |
| /e/ vs. /a/ | /era/ brother/sister-in-law | /pue/ Lord                 |
|             | /ara/ in                    | /pua/ day before yesterday |
| /e/ vs. /o/ | /eka/ fear                  | /keni/ carry               |
|             | /oka/ a name                | /koni/ eat                 |
| /e/ vs. /u/ | /epe/ hear                  | /ane/ if                   |
|             | /upe/ mite                  | /anu/ whatchacallit        |

### /a/ voiced low central unrounded vowel

|             |                     |                           |
|-------------|---------------------|---------------------------|
| /a/ vs. /i/ | see under /i/ above |                           |
| /a/ vs. /e/ | see under /e/ above |                           |
| /a/ vs. /o/ | /aka/ Sunday        | /daya/ kind of grass      |
|             | /oka/ a name        | /dayo/ grave              |
| /a/ vs. /u/ | /ata/ roof          | /baŋa/ coconut shell bowl |
|             | /uta/ vegetable     | /buŋa/ flower             |

/o/ voiced mid back rounded vowel

/o/ vs. /i/ see under /i/ above

/o/ vs. /e/ see under /e/ above

/o/ vs. /a/ see under /a/ above

/o/ vs. /u/ /oli/ *buy* /naŋao/ *cat meows*  
/uli/ *say* /naŋau/ *dry*

/u/ voiced high back rounded vowel

/u/ vs. /i/ see under /i/ above

/u/ vs. /e/ see under /e/ above

/u/ vs. /a/ see under /a/ above

/u/ vs. /o/ see under /o/ above

## 2.8 Vowel phonemes - distribution

As mentioned in 2.5 any vowel phoneme may co-occur with any consonant with the exception of /y/, which is not followed by /i/ or /e/.

All vowels may occur in all possible positions with the following exceptions involving a sequence of two vowels:

/i/ and /a/ do not occur in medial VV positions, and  
/o/ and /u/ occur in only one of the two positions in VV sequences.

### 2.8.1 Sequences of vowels

All vowels may occur with all other vowels in sequences of two vowels as illustrated in the examples below:

|      |           |                             |
|------|-----------|-----------------------------|
| /ii/ | /napii/   | <i>narrow</i>               |
| /ie/ | /tie/     | <i>a name</i>               |
| /ia/ | /nepia/   | <i>when</i>                 |
| /io/ | /pakio/   | <i>call</i>                 |
| /iu/ | /mandiu/  | <i>will bathe</i>           |
| /ei/ | /ndei/    | <i>young girl</i>           |
| /ee/ | /kuleŋee/ | <i>chicken hawk</i>         |
| /ea/ | /nadea/   | <i>many</i>                 |
| /eo/ | /eo/      | <i>day</i>                  |
| /eu/ | /kureu/   | <i>kind of bird</i>         |
| /ai/ | /vai/     | <i>give</i>                 |
| /ae/ | /mpae/    | <i>year</i>                 |
| /aa/ | /taraa/   | <i>pineapple</i>            |
| /ao/ | /dao/     | <i>cat</i>                  |
| /au/ | /bau/     | <i>fish</i>                 |
| /oi/ | /doi/     | <i>money</i>                |
| /oe/ | /ndoe/    | <i>long</i>                 |
| /oa/ | /soa/     | <i>smell</i>                |
| /oo/ | /randoo/  | <i>young unmarried girl</i> |
| /ou/ | /sou/     | <i>house</i>                |
| /ui/ | /lui/     | <i>rope</i>                 |

|      |         |                                  |
|------|---------|----------------------------------|
| /ue/ | /ue/    | <i>water</i>                     |
| /ua/ | /pua/   | <i>day before yesterday</i>      |
| /uo/ | /tuobo/ | <i>turn upside down</i>          |
| /uu/ | /kuu/   | <i>small black biting insect</i> |

### 2.8.2 Intervocalic glottal stops vs. sequence of vowels

There are a few contrasts involving glottal stop between two vowels of the same quality and a sequence of those two vowels. This is not extensive in Da'a, and a number of the words contrasting are borrowed words.

|                |   |
|----------------|---|
| /iʔi/ vs. /ii/ | /jiʔi/ <i>try</i><br>/jii/ <i>demon</i>                                 |
| /eʔe/ vs. /ee/ | /neʔe/ <i>don't</i><br>/tee/ <i>tea</i>                                 |
| /aʔa/ vs. /aa/ | /jaʔa/ <i>evil</i><br>/jaa/ <i>hour</i>                                 |
| /oʔo/ vs. /oo/ | /koʔo/ <i>hard</i><br>/koo/ <i>sound made to call dog</i>               |
| /uʔu/ vs. /uu/ | /kuʔu/ <i>stiff with dirt</i><br>/kuu/ <i>small black biting insect</i> |

## 3. SUPRASEGMENTALS

### 3.1 Stress

Stress is NOT phonemic. It occurs on the penultimate syllable of a word, except when the following suffixes are added:

|     |                             |
|-----|-----------------------------|
| -ku | <i>I, me</i>                |
| -mu | <i>you</i>                  |
| -na | <i>he, she, or definite</i> |
| -ta | <i>we (incl)</i>            |
| -mo | <i>already</i>              |
| -pa | <i>still</i>                |

In such cases the stress remains on the penultimate syllable of the word root. For example:

|          |                              |
|----------|------------------------------|
| 'sapo    | <i>house</i>                 |
| 'sapoku  | <i>my house</i>              |
| 'ana     | <i>child</i>                 |
| 'anamu   | <i>your child</i>            |
| 'uma     | <i>father</i>                |
| 'umata   | <i>our (incl) father</i>     |
| 'vavu    | <i>pig</i>                   |
| 'vavuna  | <i>his, her pig</i>          |
| 'peo     | <i>below</i>                 |
| 'peona   | <i>down below (definite)</i> |
| na'ria   | <i>have</i>                  |
| na'riamo | <i>already have</i>          |

## 3.2 Length

Length is NOT phonemic. What some have seen as vowel length in Kaili (Ledo dialect, Wumbu 1975) corresponds to the situation in the Da'a dialect of Kaili. There is not contrast of vowel length, but sequence of two vowels of the same quality. The contrast is between V in unstressed syllable and a vowel in stressed syllable followed by a vowel of the same quality in an unstressed syllable. For example:

|         |  |          |                     |
|---------|--|----------|---------------------|
| 'nasi   | <i>a name</i>                            | na'sii   | <i>wet</i>          |
| ku'lɛŋe | <i>tired (used of pig after a chase)</i> | kule'ŋee | <i>chicken hawk</i> |
| 'tara   | <i>look at</i>                           | ta'raa   | <i>pineapple</i>    |
| 'napi   | <i>a name</i>                            | na'pii   | <i>narrow</i>       |

A further note of some interest is that a sequence of two vowels of the same quality is often a mark of a loanword in which a final consonant has been dropped. Thus the Indonesian word *seng zinc roofing* → /see/ in Da'a; *teh tea* → /tee/; *jumaat Friday* → /jumaa/; and *jin demon* → /jii/.

## 4. SYLLABLE PATTERNS

Two basic syllable patterns exist in Da'a:

|    |       |              |
|----|-------|--------------|
| v  | 'a.ku | <i>I, me</i> |
| cv | 'bo   | <i>and</i>   |

These two patterns combine to allow words of the following syllable patterns, ranging in length from one to a maximum observed word of seven syllables. Examples are as follows:

## NUMBER OF SYLLABLES

|   |                |                   |                               |
|---|----------------|-------------------|-------------------------------|
| 1 | CV             | /bo/              | <i>and</i>                    |
| 2 | v.v            | /e.o/             | <i>day</i>                    |
|   | v.CV           | /a.ku/            | <i>I, me</i>                  |
|   | CV.CV          | /ma.ta/           | <i>eye</i>                    |
|   | CV.v           | /pu.e/            | <i>lord</i>                   |
| 3 | v.v.CV         | /a.o.no/          | <i>six</i>                    |
|   | v.CV.CV        | /a.na.na/         | <i>his child</i>              |
|   | CV.CV.CV       | /na.ra.ta/        | <i>arrived</i>                |
|   | CV.CV.v        | /mo.tu.a/         | <i>descend</i>                |
|   | CV.v.CV        | /pu.e.na/         | <i>owner</i>                  |
| 4 | v.CV.CV.CV     | /u.su.ŋge.di/     | <i>last rib</i>               |
|   | CV.CV.CV.CV    | /mo.mba.di.ka/    | <i>put</i>                    |
|   | CV.CV.CV.v     | /ka.tu.vu.a/      | <i>life</i>                   |
|   | CV.CV.v.CV     | /ka.sa.e.na/      | <i>long time</i>              |
|   | CV.v.CV.CV     | /ni.o.me.na/      | <i>was swallowed (by him)</i> |
|   | CV.CV.v.v      | /po.mpa.e.o/      | <i>morning star</i>           |
|   | CV.v.v.CV      | /na.u.e.mo/       | <i>cried (tears)</i>          |
| 5 | v.CV.CV.CV.CV  | /u.ja.ŋga.la.ʔa/  | <i>drizzle</i>                |
|   | v.v.CV.CV.CV   | /u.e.ŋga.lu.ku/   | <i>coconut water</i>          |
|   | v.CV.CV.CV.v   | /u.ja.ŋga.le.i/   | <i>sun shower</i>             |
|   | CV.CV.CV.CV.CV | /ku.li.mu.ŋga.pu/ | <i>fog, mist</i>              |
|   | CV.CV.CV.CV.v  | /sa.mpi.no.ra.a/  | <i>rainbow</i>                |



|   |                      |                          |                                      |
|---|----------------------|--------------------------|--------------------------------------|
|   | CV.CV.CV.V.CV        | /sa.mpa.la.i.pa/         | <i>in a moment</i>                   |
|   | CV.CV.V.CV.CV        | /ko.re.o.va.la/          | <i>canary</i>                        |
|   | CV.V.CV.CV.CV        | /pu.a.ŋga.ve.ŋi/         | <i>night before last</i>             |
| 6 | CV.CV.CV.CV.CV.CV    | /mo.mba.na.vu.sa.ka/     | <i>to drop</i>                       |
|   | CV.CV.CV.CV.CV.V     | /ma.si.na.mpo.ja.u/      | <i>sewing machine</i>                |
|   | CV.CV.CV.CV.V.CV     | /ma.nta.bu.ni.a.ka/      | <i>hide (something)</i>              |
|   | CV.CV.CV.V.CV.CV     | /mo.mba.bo.a.ra.ka/      | <i>open eyes (slowly)</i>            |
|   | CV.CV.V.CV.CV.CV     | /na.nta.i.lu.sa.ka/      | <i>spit out</i>                      |
|   | CV.CV.CV.V.CV.V      | /sa.ŋga.sa.e.sa.e/       | <i>forever</i>                       |
|   | CV.CV.V.CV.V.CV      | /ka.sa.e.sa.e.na/        | <i>forever</i>                       |
| 7 | CV.CV.CV.CV.CV.CV.CV | /mo.mba.vu.ne.ŋge.sa.ka/ | <i>shake out</i>                     |
|   | CV.CV.CV.CV.CV.V.CV  | /ra.po.si.go.li.a.ka/    | <i>will each roll up (something)</i> |
|   | CV.CV.CV.CV.V.CV.CV  | /ra.po.si.su.a.ra.ka/    | <i>will each insert</i>              |
|   | CV.CV.CV.V.CV.V.CV   | /sa.ŋga.sa.e.sa.e.na/    | <i>forever</i>                       |

Any syllable type may occur with any other type. Phonological words of more than two syllables having the V.V pattern are rare. /a.o.no/ *six* is an example but few others exist. /u.e.nga.lu.ku/ *coconut water* is a further rare example of V.V pattern in words of more than two syllables.

A few basic constraints exist governing the syllable patterns possible in Da'a. In general verb roots tend to be two syllable, most commonly CV.CV, with a few examples of CV.V. Words larger than five syllables are all verbs taking prefixes and suffixes. Very few words in the total lexicon begin with a vowel.

### 5. TENTATIVE ORTHOGRAPHY FOR DA'A

Based on the above analysis, the following tentative orthography is suggested for Da'a. The orthography suggested for Kaili (Ledo dialect, which differs slightly from Da'a) by the PDK (Wumbu 1975) is also shown, followed by a brief discussion of the minor differences between the two suggested orthographies.

| PHONEMES | TENTATIVE ORTHOGRAPHY | PDK ORTHOGRAPHY |
|----------|-----------------------|-----------------|
| /b/      | b                     | b               |
| /p/      | p                     | p               |
| /d/      | d                     | d               |
| /t/      | t                     | t               |
| /g/      | g                     | g               |
| /k/      | k                     | k               |
| /ʔ/      |                       | ʔ               |
| /mb/     | mb                    | mb              |
| /mp/     | mp                    | mp              |
| /nd/     | nd                    | nd              |
| /nt/     | nt                    | nt              |
| /nj/     | nj                    | nj              |
| /ŋg/     | ngg                   | ngg             |
| /v/      | w                     | v               |
| /s/      | s                     | s               |
| /j/      | j                     | j               |
| /m/      | m                     | m               |
| /n/      | n                     | n               |

|     |    |    |
|-----|----|----|
| /ŋ/ | ng | ng |
| /l/ | l  | l  |
| /r/ | r  | r  |
| /y/ | y  | y  |
| /i/ | i  | i  |
| /e/ | e  | e  |
| /a/ | a  | a  |
| /o/ | o  | o  |
| /u/ | u  | u  |

In addition to the above phonemes of Da'a, the Ledo dialect has several other phonemes. These are listed below with comments.

/č/ In Da'a this occurs in only a few loanwords from Indonesian. Most borrowings with /č/ are changed to /s/ when borrowed into Da'a. Thus /čamat/ → /sama/ *subdistrict government officer*. Ledo /č/ → Da'a /s/ as in Ledo /čolo/ → /solo/ *matches*. We propose the use of c in instances where loanwords are borrowed retaining the /č/.

/h/ Ledo has an /h/ phoneme. Da'a alters loans with /h/ to /ʔ/, as in Indonesian /pahat/ → /paʔa/ *chisel*.

/ŋk/ Present in Ledo, not in Da'a. Ledo loans with /ŋk/ become Da'a /ng/, as in /čaŋkore/ → /sanggore/ *peanuts*. Other Kaili dialects have /ŋk/ where Da'a has /ng/, for example Moma /maŋkoni/ and Da'a /maŋgoni/ *eat*.

/nč/ In Da'a only a few rare Indonesian loans have retained /nč/ as in /bončis/ → /bonči/ *red beans*. We suggest writing this as nc, as is suggested by PDK (Wumbu 1975).

/ny/ This is not found in Da'a.

DISCUSSION. As mentioned in section 3.2, the present analysis differs slightly in the treatment of long vowels. The PDK orthography lists phonemes of long vowels. In terms of the actual writing the analysis of long vowel vs. sequence of two similar vowels makes no difference. In either case these may be written as two vowels, as in kulengee *chicken hawk*.

The present work suggests the use of w for the phoneme /v/ in Da'a, while PDK suggests v for Kaili. The authors feel for the following practical reasons that /v/ is best symbolised by w: 1) There is no contrast between /v/ and /w/ in Da'a. 2) Literate Da'a speakers already know the symbol w and when writing Da'a they spontaneously use w for the phoneme /v/. 3) v is NOT used in the Indonesian orthography. Hence to symbolise /v/ with v puts an unnecessary added load on the Da'a reader, who must transfer his reading knowledge of Da'a to Indonesian or vice versa. From a pure linguistic view, v is perfectly acceptable. From a sociolinguistic viewpoint, we feel w is more suitable.

One phoneme is not represented in the proposed orthography of Da'a, /ʔ/, while PDK includes this for Kaili, using the symbol '. /ʔ/ does not have a high functional load in Da'a. Tests were made with people literate in Bahasa Indonesia to determine whether /ʔ/ needed to be symbolised in Da'a or not. Texts using ' for /ʔ/ and others without any symbolisation of /ʔ/ were tested with a number of Da'a literates. Both texts were equally readable. From a practical point of view, therefore, we suggest not symbolising /ʔ/ in the Da'a orthography. Tests show it is not needed. While ' is used in a few Indonesian words borrowed from Arabic, such as juma'at *Friday*, this symbol is often omitted, as in jumaat

*Friday.* By not symbolising /ʔ/ in Da'a orthography, new readers have one less symbol to learn.

## 6. SAMPLE TEXT IN DA'A

The following text is given in phonetic and phonemic transcription as well as in the proposed orthography. A free English translation follows.

['asu 'bo 'vavu 'ŋga 'kayu]  
/asu bo vavu ŋga kayu/  
Asu bo wawu ngga kayu

[na'ŋuli 'vavu 'ŋga 'kayu, 'daʔa ma'mala ʔa'ʔaga nu 'asu] [na'ŋuli 'asu  
/naŋuli vavu ŋga kayu, daʔa mamala raraga nu asu/ /naŋuli asu  
Nanguli wawu ngga kayu, daa mamala raraga nu asu. Nanguli asu  
ma'mala] [ni'ulina 'daʔa ma'mala ka ʔa'ʔaga] [na'ŋuli 'asu ma'mala] ['daʔa  
mamala/ /niulina daʔa mamala ka raraga/ /naŋuli asu mamala/ /daʔa  
mamala. Niulina daa mamala ka raraga. Nanguli asu mamala. Daa  
ma'mala 'aku mu'ʔaga] [ma'mala ku'ʔaga] ['ane 'daʔa 'iko ku'ʔaga ʔa'gese  
mamala aku muraga/ /mamala kuraga/ /ane daʔa iko kuraga ragese  
mamala aku muraga. Mamala kuraga. Ane daa iko kuraga ragese  
'mompe 'veʔi] ['asu ni'dikana ʔi oŋe na'mompe] ['vavu ni'dikana ʔi 'lelona]  
mompe veʔi/ /asu nidikana ri oŋe namompe/ /vavu nidikana ri lelona/  
mompe wei. Asu nidikana ri onge namompe. Wawu nidikana ri lelona.  
[nosi'elo nosi'elo nosi'elo nosi'njapu] ['vavu na'ŋelo 'asu 'daʔa ni'ratana]  
/nosielo nosielo nosielo nosinjapu/ /vavu naŋelo asu daʔa niratana/  
Nosielo nosielo nosielo nosinjapu. Wawu nangelo asu daa niratana.  
['daʔa ni'eŋana 'soana] ['asu na'ŋelo 'vavu ni'ratana] [ni'ratana 'vavu  
/daʔa nieŋana soana/ /asu naŋelo vavu niratana/ /niratana vavu  
Daa niengana soana. Asu nangelo wawu niratana. Niratana wawu  
ni'ʔaga 'ʔaga 'ʔaga ni'ʔaga 'sampe na'mala] ['etumo 'veʔi 'daʔa ma'mala 'iko  
niraga raga raga niraga sampe namala/ /etumo veʔi daʔa mamala iko  
niraga raga raga niraga sampe namala. Etumo wei daa mamala iko  
ku'ʔaga] ['venu na'malamo] [na'mala ka 'asupa ni'baga nu 'asumo 'ia]  
kuraga/ /venu namalamo/ /namala ka asupa nibaga nu asumo ia/  
kuraga. Wenu namalamo? Namala ka asupa nibaga nu asumo ia.  
[ni'soko nu 'asumo, ni'dagi nu 'asumo 'vavu] ['etu 'vavu ŋga 'kayu 'sampe  
/nisoko nu asumo, nidagi nu asumo vavu/ /etu vavu ŋga kayu sampe  
Nisoko nu asumo, nidagi nu asumo wawu. Etu wawu ngga kayu sampe  
na'mala ka 'asu]  
namala ka asu/  
namala ka asu.

### *The Dog and the Wild Boar*

*The wild boar said he couldn't be chased by the dog. The dog said he could chase the pig. He (the pig) said he couldn't be chased, and the dog said he could (chase the pig). "You can't chase me" (said the pig). "I can too" (said the dog). "If (you claim) I can't catch you (let's) rub this medicine like this." The dog put the medicine on the pig's nose. The pig put some on the*

*dog's tail. They looked and looked and looked for each other. The pig looked for the dog but couldn't find him. He couldn't smell the dog's odour. The dog looked for the pig and found him. He found the pig and chased and chased after him until he caught him. "You said I couldn't chase you. How come I got you?" The dog was able to fight the pig. He grabbed the pig and defeated him. And that's how the wild boar was caught by the dog.*

#### NOTE

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#### ABBREVIATION

PKD Kantor Wilayah Departemen Pendidikan dan Kebudayaan, Propinsi Sulawesi Tengah, Bidang Seseanian.

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