

A Grammar of Savosavo

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A Grammar of Savosavo

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Abbreviations

1	first person	N	noun
2	second person	NMLZ	nominalizing morpheme
3	third person	NOM	nominative
ABL	ablative	NP	noun phrase
Adj	adjective	NSG	non-singular
ADV	adverb	NVC	nominalized verbal clause
AFF	affirmative	O	object
ANT	anticipatory	PA	particle
APPR	apprehensive	PL	plural
ATT	attributive marker	PersPr	personal pronoun
BG	background	Phr	phrase
C	consonant	POSS	possession
CERT	certainty marker	PossPr	possessive pronoun
COM	comitative marker	PRIV	privative
CONJ	conjunction	PROPR	propriative
DEM	demonstrative pronoun	PROX	proximal
DET	determiner	PRS	present
DETR	detransitivizing suffix	PST	past
DS	different subject	Quan	quantifier
DU	dual	RECIP	reciprocal
EMPH	emphasis	REDUP	reduplication
EP	epenthetic vowel	RelCl	relative clause
EX	exclusive	S	subject
F	feminine	SG	singular
FIN	finiteness marker	SIM	simultaneous
FUT	future	SS	same subject
GEN	genitive	SVC	serial verb construction
IMP	imperative	TR	transitivizing suffix
IN	inclusive	V	in phonology: vowel elsewhere: verb
IPFV	imperfective	VBLZ	verbalizing morpheme
IRR	irrealis	VC	verb complex
LOC	locational	W	word
M	masculine		
-	separates morphemes		
=	separates clitics		
/	separates alternative glosses		

~	marks reduplication
σ	syllable
'	primary stress
,	secondary stress
//	phonemic representation
[]	in example glosses: non-overt elements; in the phonology chapter: phonetic representation (IPA)
.	separates items in multi-item glosses
—	marks borrowings from Solomon Islands Pijin and English

Chapter 1

The language and its speakers

1.1. Location and linguistic affiliation

Savosavo is one of four Papuan (i.e., non-Austronesian) languages spoken in the Solomon Islands, part of a region called Island Melanesia in the Southwest Pacific (see Fig. 1). The Solomon Islands became the British Solomon Islands Protectorate in 1893 and gained independence in 1978, within the Commonwealth of Nations.

Savosavo is spoken on Savo Island, a small volcanic island with a diameter of about 6 km, about 35 km from the capital Honiara, at 9°08' South, 159°49' East. In 1999 Savo Island was home to 2,549 people (Solomon Islands Census Office 1999), most of whom had Savosavo as their first language. Today, the number of speakers can be estimated at about 2,500.

The people on Savo are swidden agriculturalists. They mainly live off fruit and the root crops and vegetables they grow inland, supplemented by fish and, occasionally, chicken and pigs. Rice, which is not grown but has to be bought, is nowadays also an important part of the diet. Their social organization is based on clan lineages. There are six clans on Savo, each of which has a traditional clan leader ('chief'). The leaders of all clans are organized in the Savo Ghizi Kato House of Chiefs. The chiefs and the House of Chiefs are still important authorities on the local level, alongside government and church institutions.

Island Melanesia is the link between Polynesia, an area where only languages of the Austronesian family are spoken, and Papua New Guinea. All those languages on Papua New Guinea and in Island Melanesia that are not Austronesian have been subsumed under the label 'Papuan'. In contrast to the Austronesian languages, which are all members of one family and can be shown to be related, the group of Papuan languages comprises very diverse languages. Some of them can be shown to be related, but for a large number the genetic affiliation is still unclear. While speakers of Austronesian languages arrived only about 3,000 years ago, the time depth for the ancestors of the Papuan languages is much deeper, possibly up to 35,000 years in Papua New Guinea, and 25,000 years for the Solomon Islands. This means that it is often quite challenging to prove genetic relationships between Papuan languages. Island Melanesia is thus a very interesting area for historical linguistics and research on language contact.

The Solomon Islands are the easternmost country where Papuan languages are spoken, and Savosavo is the easternmost Papuan language of the Solomon Islands. For a small number of languages in the Temotu Province (the east-most

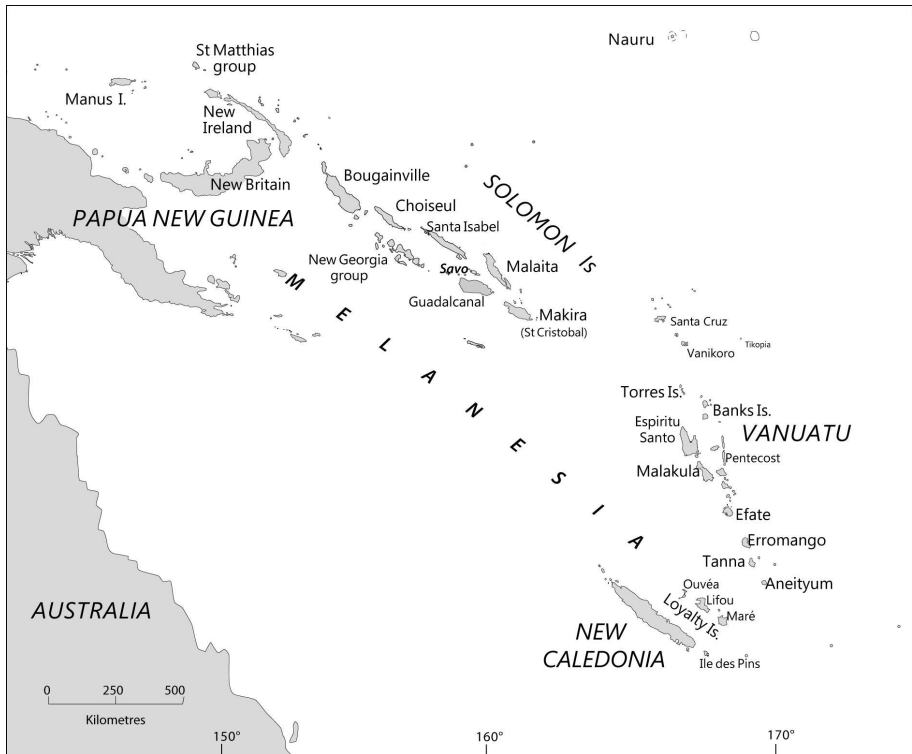


Figure 1. Map of the Solomon Islands and neighboring countries

province of the Solomon Islands, see Fig. 1), there was a long-standing discussion whether they should be classified as Austronesian or non-Austronesian languages (cf. Wurm 1978; Lincoln 1978; Ross 2001), but Ross and Næss have provided convincing evidence that they are indeed Austronesian (Ross and Næss 2007). Savosavo, spoken on Savo Island in the Central Province (Fig. 2), is one of the four languages in the central Solomon Islands that have been unequivocally classified as Papuan. The other three are Bilua (Obata 2003) and Touo in the Western Province, and Lavukaleve (Terrill 2003) in the Central Province (see Fig. 2). These four languages are not closely related and quite different from each other, both in structure and in the lexicon, but have been claimed to belong to one language family, the East Papuan family (Ross 2001; Dunn et al. 2002, 2005; Terrill 2002). A comparison of 324 lexical items across Austronesian and Papuan languages of the Solomon Islands conducted by Tryon and Hackman (1983) shows that while the Austronesian languages share a high percentage of their lexicon (sometimes up to 70 or 80%), the four Papuan languages of the Solomon Islands have few lexical items in common. For example, Savosavo and Lavukaleve show the highest percentage of shared vocabulary of all possible pairings between the Papuan languages, which is only about 13.7% (Tryon and

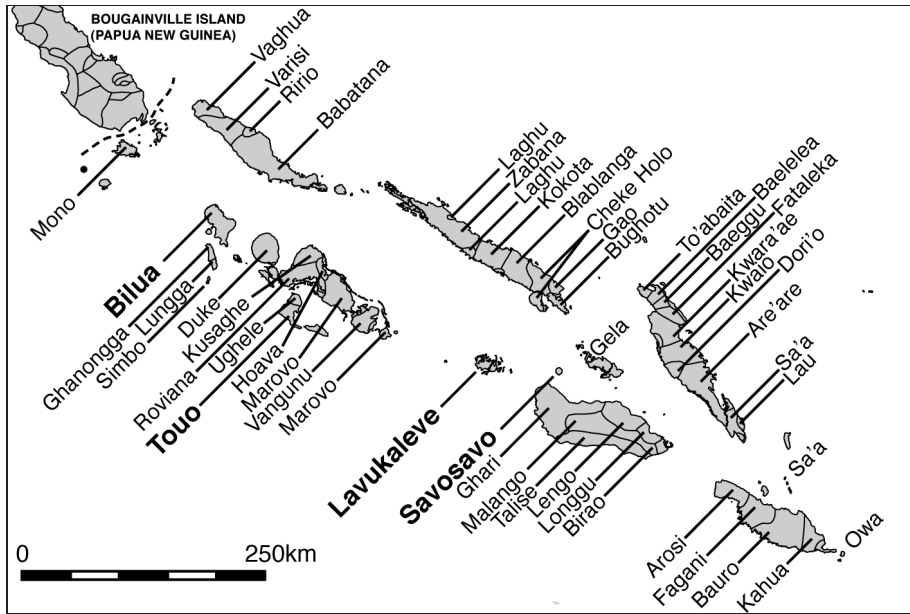


Figure 2. Language map of the Solomon Islands; the names of the Papuan languages are bold and in a larger font

Hackman 1983: 456, 460); in contrast, Savosavo has up to 20% shared vocabulary with neighboring Austronesian languages (Tryon and Hackman 1983: 464). But although there has been intensive contact between Savosavo and the neighboring Austronesian languages for a long time, as evidenced by borrowings and loans, it has retained very distinct grammatical features (e.g. SOV word order and a gender system) and kept its unique character. It is unintelligible for speakers of other languages, whether Austronesian or Papuan, and (like the other Papuan languages in the country) has a reputation of being difficult to learn.

Although the official language of the Solomon Islands is English, the most important contact language these days is Solomon Islands Pijin (SIP), the lingua franca of the whole country. It is the primary means of communication in Honiara, and almost everyone on Savo – and indeed in the Central Province and Guadalcanal, if not in all of the Solomon Islands – is fluent in SIP. SIP and English are also the languages used in school. Children usually acquire SIP only slightly later than Savosavo. Only one quarter of the Savosavo-speaking children under the age of 14 cannot speak SIP, and over the age of 14 it is only less than one percent (Solomon Islands Census Office 1999).

Other important contact languages are the neighboring Austronesian languages. Lavukaleve, the only neighboring Papuan language, is of lesser importance, as very few Savosavo speakers have knowledge of Lavukaleve and vice versa. The closest neighboring Austronesian languages are Ghari (north-

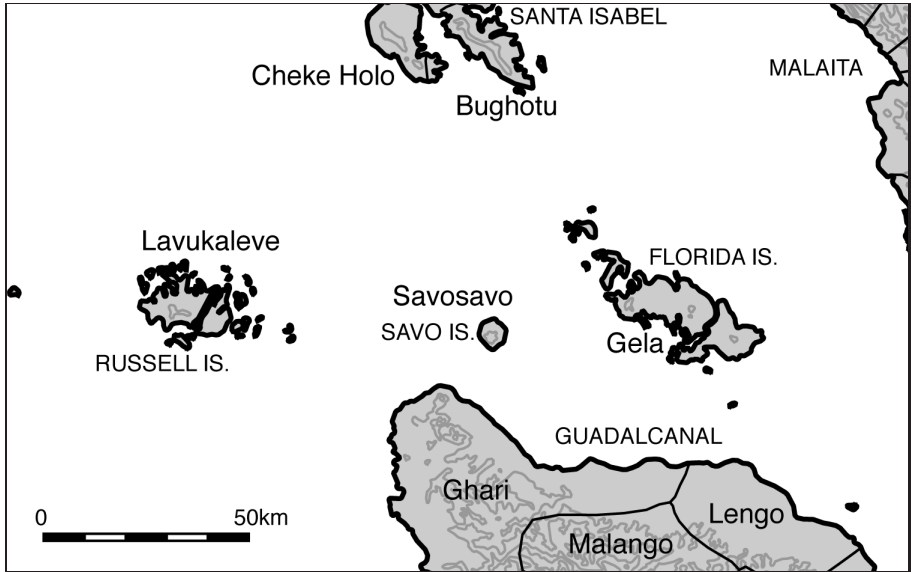


Figure 3. Map with the languages and islands around Savo Island

west Guadalcanal, comprising a number of dialects (Lewis 2009)), Lengo (north-east Guadalcanal), Gela (Florida Islands, Central Province, Crowley 2002a) and Bughotu (St. Ysabel). Figure 3 shows where these languages are located in relation to Savo Island. Of special importance to the Savosavo-speaking community is Gela, as there are some villages in the area of Pokilo in the northeast of Savo Island where Gela, and not Savosavo, is the primary language. In the south of Savo, Ghari is the most important contact language, but Savosavo still is the primary language in this area. Historically, the Savo people also had contacts and alliances with other, more distant, groups, e.g. with speakers of Marovo in the Western Province, marked in Fig. 2 (Edvard Hviding, pers. comm.).

For a long time, oral transmission was the only way of passing on knowledge of historical events, customs and beliefs from one generation to the other. Still, today, according to Cronin et al. (2004: 110), the “Central Province has the lowest literacy rate of the Solomon Islands (c. 52%, measured as those who have attended at least 4 years of school).” With the disruption in the educational services due to ethnic tension escalating between 1998 and 2001, illiteracy might be even higher in the current generation of children of school age, as many did not go back when the schools started again after two or more years. The number given above pertains to literacy in English, literacy in the local languages such as Savosavo is much lower, as people rarely learn to write their own language. Consequently, Savosavo is only occasionally used in writing, usually in short notes and notices to the public, or in private letters.

Within an ongoing Savosavo DoBeS (Documentation of Endangered Languages) project financed by the Volkswagen Foundation in Germany, an orthography was developed that combines the two main orthographies that have been in use for some time, introduced by the Catholic and the Anglican church respectively. These alternative spelling systems (cf. Sec. 1.5) added to the insecurity many speakers felt when they tried to write in their own language, so many people used to go and ask elders for help when they had to have something written. Until recently, the only printed material in Savosavo was a translation of about 20 pages from the prayer book used by the Anglican church. As part of the documentation project, materials like story books and dictionaries are currently developed and made available to the speech community, and are received with great enthusiasm.¹ Furthermore, two workshops on Savosavo literacy were organized in 2010, in collaboration between LASI (Literacy Association of Solomon Islands) and the DoBeS project. During the first one, a course book for Savosavo literacy courses was put together, based on a template from LASI. The DoBeS project then financed the printing of this course book, and during the second workshop, LASI personnel trained a number of interested Savosavo speakers in how to teach Savosavo literacy with these course books. It is hoped that the materials produced by the DoBeS project in combination with this newly starting literacy program will encourage Savosavo speakers to use their language more, and more confidently, in reading and writing, and ultimately support language maintenance.

1.2. Typological profile

Savosavo has a phoneme inventory of medium size, with seventeen consonants and five vowels. Four places (bilabial, alveolar, palatal and velar) and six manners (stop, nasal, fricative, trill, lateral and approximant) of articulation are distinguished. The stop series consists of three voiceless (p, t, k) and four voiced stops (b, d, ʃ, g). The voiced stops are almost always prenasalized. A series of four nasals parallels the series of voiced stops (m, n, ɲ, ŋ). Two fricative phonemes (s, z), one trill (r), one lateral (l) and two approximants (β, w) complete the set of consonants. The five-vowel set is unremarkable (a, e, i, o, u). Syllables are open and consist of a vowel or an onset consonant plus a vowel. Root stress is mostly on the penultimate syllable, but in some trisyllabic words it is on the initial syllable. Bound morphemes often modify the stress pattern of the root they attach to. Reduplication of the first one or two syllables is mostly used for derivative purposes, but also to mark distributive plural in noun phrases.

1. Some of these materials are already accessible in the Savosavo part of the DoBeS online archive at http://corpus1.mpi.nl/ds/imdi_browser/?openpath=MPI553799\%23

Savosavo is rather agglutinating. Bound morphemes are mostly suffixes and enclitics. The only prefixing morphemes are object prefixes used on some verbs. There is very little nominal morphology. Enclitics marking dual and plural number attach to the head noun of a noun phrase, or to the right-most constituent in headless noun phrases. Case marking enclitics are phrasal and attach to a noun phrase as a whole.

The main word classes are nouns and verbs. Other word classes include adjectives, quantifiers, pronouns, determiners, locationals, derivative markers and postpositions. In addition to a set of free personal pronouns, there is a set of enclitic nominative personal pronouns that can only be used for syntactic subjects.

Savosavo has a gender system with two classes, masculine and feminine. For higher animate beings, the class assignment is semantic. All inanimate referents are by default masculine, but can be treated as feminine to form diminutives or express high relevance in discourse. A gender system is rather unusual for the area. The neighboring, but not (closely) related language Lavukaleve also has a gender system, but with three classes and much less flexibility. The neighboring Oceanic languages do not have gender systems.

The structure in the noun phrase is rather rigid. Only the modifier *pono* ‘only’ can follow the head noun, all other modifiers, including relative clauses and determiners, precede the head noun. Noun phrases can be very long and complex. There are two types of relative clause, both externally headed by the head noun. All syntactic positions in the relative clause can be relativized.

Verbs consist of a root with two layers of morphology: the inner layer contains transitivity-relevant morphology, i.e. object agreement prefixes and suffixes as well as transitivity-changing suffixes. Subjects are not cross-referenced on the verb. The object affixes mark person, number and, in the third person singular, gender of the object. The morphemes of the inner layer are not restricted to finite, main-clause verbs, but can be present on subordinated, non-finite verb forms as well as on nominalized verbs. The outer layer contains morphemes for tense, aspect, mood and finiteness. Many of these outer layer morphemes cannot be combined and only occur with finite, main-clause verbs. Some are unspecified in terms of finiteness and can occur in some subordinated clauses, in non-finite clauses of clause chains, or in nominalized constructions. The main distinction in tense is between future and non-future. There are markers for future, simultaneous and anticipatory events. Aspectual distinctions that are marked are past imperfective, present imperfective and background imperfective. Mood markers are imperative suffixes, an apprehensive marker and an irrealis suffix. Serial verb constructions are common in Savosavo, as they are in many Papuan and Oceanic languages. In Savosavo, some serial verb constructions consist of fully lexical verbs, some contain aspectual verbs and some serve to increase the transitivity of the verb complex.

The basic constituent order in a verbal clause is Subject–Object–Verb when the arguments are expressed by full noun phrases. This is, however, rather rare and pragmatically not neutral. Very often the subjects are expressed by second-position enclitic pronouns, which can be preceded by an object noun phrase, an adjunct or an adverb. Nonetheless, Savosavo is a fairly typical SOV-language: suffixing, with postpositions, modifiers usually preceding the modified and the possessor preceding the possessed. In non-verbal clauses, the basic constituent order is Subject–Predicate, but predicates are frequently fronted.

Savosavo has a ‘marked nominative’ case system, i.e. syntactic subject noun phrases are marked as nominative, while object noun phrases are unmarked. Other cases marked by bound morphology are the genitive, which is the subject case in nominalized clauses and some subordinate and cosubordinate clauses, the locative, which is a multi-functional case also used for other semantic roles, e.g. instruments, and the ablative.

There are two emphatic morphemes, the particle *te* and the enclitic *=e*, that are used very frequently. They emphasize the preceding full constituent (i.e., not enclitics) to mark focus or a change or shift in topic. The particle *te* can be used to emphasize phrasal modifiers in noun phrases, arguments and adjuncts in verbal clauses, and constituents of non-verbal clauses. The enclitic *=e* is used exclusively on the clausal level, mostly in non-verbal clauses. It attaches to a clause-initial constituent, either subject or object in non-verbal clauses or arguments and adjuncts in verbal clauses. If *=e* ‘EMPH’ is attached to a subject NP, no nominative case marking can be used. Neither emphatic morpheme can be used to emphasize verbal predicates, conjunctions and most adverbs. The enclitic *=e*, however, is often attached to nominalized verbal clauses, which are used to place special emphasis on a predicate or on an event as a whole.

Savosavo has a number of subordinate clauses, including two types of relative clause, conditional clauses, temporal clauses, simultaneous clauses and purpose clauses. Clause chaining is a common phenomenon. The non-finite verbs of initial and medial clauses in clause chains take a same-subject suffix if the subject of the following clause is the same, but remain unmarked if the subject changes. Tail-head linkage, i.e. the repetition of the last verbal predicate of the preceding clause as the initial predicate of a new clause chain, is also found in Savosavo. Clause chaining, tail-head linkage and switch-subject marking are common phenomena in Papuan languages. What is unusual about the Savosavo system is that it is the different-subject condition that does not require overt marking; usually it is the same-subject condition that is unmarked.

Nominalizations are a central part of Savosavo grammar. The nominalization suffix *-ghu* can be used to derive nominalized structures for varying contexts, with varying features. The resulting structures range from derived nouns to nominalized clause chains, which can contain object noun phrases, adjuncts, adverbs, the emphatic particle *te* and a small number of TAM morphemes.

1.3. Previous work on Savosavo

The first published materials on Savosavo are Codrington (1974), providing a brief sketch and a 70-item vocabulary list, Todd (1977), a brief comparative work on Savosavo, Lavukaleve, Bilua and Touo, the four Papuan languages of the Solomon Islands (cf. Sec. 1.1 above), and Tryon and Hackman (1983), giving a comparative list of 324 vocabulary items from Solomon Islands languages. Todd (1977) is based on about 7 months of fieldwork on Savo Island undertaken by the author in 1972–73.

The earliest recordings of Savosavo are two recordings (made in 1958 and in the 1960s) in a collection of tapes recorded by Arthur Capell, stored in the PARADISEC repository. Both recordings, comprising 21 minutes of elicited and narrative material, have been transcribed, glossed and translated as far as possible by myself, and the annotation has been archived in the PARADISEC repository as well.²

1.4. The nature of the data used in this grammar

The data used in this grammar was collected during 13 months of fieldwork. Most of this fieldwork (12 months between 2002 and 2005) was funded by the Max Planck Institute for Psycholinguistics in Nijmegen as part of a PhD project and connected to the interdisciplinary research project “Pioneers of Island Melanesia”³, one more month of fieldwork in 2007 was financed by the Volkswagen Foundation as part of the project “Documentation of Savosavo” in the DoBeS (‘Documentation of Endangered Languages’) program⁴. All the data used in this grammar is stored in the archive of the Max Planck Institute for Psycholinguistics in Nijmegen. The access to the data itself is restricted, but the structure of the corpus and some basic metadata can be accessed under http://corpus1.mpi.nl/ds/imdi_browser?openpath=MPI50527%23. Some of this data was also included in the Savosavo part of the DoBeS archive (http://corpus1.mpi.nl/ds/imdi_browser?openpath=MPI553799%23).

During these 13 months I recorded about 42 hours of text, from 46 different speakers (30 male, 16 female), ranging in age from 14 to about 85. Basic meta-

2. The recordings as well as the annotations are stored as AC1-013-B and AC1-106-A and can be accessed online (with password) in the PARADISEC repository at <https://store.apac.edu.au/paradisec/repository/AC1/013> and <https://store.apac.edu.au/paradisec/repository/AC1/106>. For more information on the repository, and for the procedure of requesting access, see <http://www.paradisec.org.au/home.html>.

3. The Project was part of the European Science Foundation EUROCORES program “The Origin of Man, Language and Languages” (contract no. ERAS-CT-2003-980409); for more information see the homepage of the project: <http://www.eastpapuan.ling.su.se/index.html>.

4. For more information see <http://www.mpi.nl/dobes>.

Table 1. Summary of the data used in this grammar, sorted by text type

Text type	# Texts	Recording time	Records	# Speakers (m/f)
Narratives	54	13:51	9,264	31 (22/9)
Procedural	9	2:06	744	9 (7/2)
Stimulus-based Elicitation	25	8:10	3,863	16 (10/6)
TOTAL	88	24:07	13,873	46 ⁵ (30/16)

data in IMDI format exist for all recordings. The description presented in this grammar is based on about 24 hours of these recordings which are transcribed and glossed in Toolbox. The recorded material is supplemented by field notes of elicitation sessions. In total, the corpus contains about 13,000 records in Toolbox, with one record usually equivalent to one sentence. For some elicited material, a record contains a full turn of a speaker, e.g. a description of a picture. A lexical database in Toolbox format based on this corpus consists of about 2,000 entries at present.

The material used in this grammar comprises mostly narratives, procedural texts and material elicited by games and video stimuli developed by the Max Planck Institute for Psycholinguistics. For each of these categories, Table 1 provides the number of individual texts, the recording time and records, and the number of speakers.

Table 2 provides the list of stimulus materials used to elicit data on specific topics. In addition, there are about 1,000 example sentences from grammatical elicitation sessions, including responses elicited with the Tense/Aspect questionnaire (Dahl 1985), and daily observations. The two recordings made by Arthur Capell (cf. Sec. 1.3 above) were also used; they comprise about 21 minutes (247 Toolbox records) of elicited and narrative material.

Throughout this grammar, examples from coherent discourse such as narratives or procedural texts, but also elicited material such as dialogues about pictures or scenes between speakers, were given preference. Only if there was no suitable example of this kind, other elicited examples were used.

1.5. Orthography and conventions used in examples

As mentioned above in Sec. 1.1, there are a number of orthographies found on Savo Islands, all differing in the spelling of the same few sounds (see Tab. 3; grey cells mark differences between orthographies). The most widespread orthogra-

5. Some speakers provided data from more than one category, therefore the total number of speakers is not the sum of the number of speakers for each type of text.

Table 2. Stimulus sets used to elicit data on specific topics, together with the number of sessions, the recording time and records, and the number of participants that contributed the data

Stimulus set	Sessions	Recording time	# Records	# Particip. (m/f)
Man & Tree (Pederson et al. 1998)	3	2:06	1182	6 (3/3)
Staged Events (Staden et al. 2001)	1	1:00	954	2 (2/0)
Cut & Break (Bohnenmeyer et al. 2001)	4	2:16	462	4 (3/1)
Put & Take (Bowerman et al. 2004)	3	1:10	198	3 (2/1)
Reciprocals (Evans et al. 2004)	6	1:38	238	6 (3/3)
Topological Relations Picture Series (Bowerman and Pederson 1993)	6	0:00	658	4 (4/0)
MoVerb (Levinson 2001)	2	0:00	171	2 (2/0)

phies are those introduced by the Anglican and the Catholic churches, which make use of digraphs for some sounds, but other variants (e.g. in the translation of some pages of the prayer book used by the Anglican church) use diacritics or slanted letters instead. In the context of the ongoing DoBeS documentation project on Savosavo (see pages 5 and 8), an orthography combining the Anglican and Catholic orthographies by choosing the unambiguous graphemes *q* for [g] and *gh* for [u] has been discussed with members of the speech community and was approved by chiefs and elders. This 'unified orthography' is also used in this grammar.

In the examples throughout this grammar, the following conventions apply, many based on the Leipzig Glossing Rules (Comrie et al. 2004):

- Each example consists of at least three lines: the first provides the Savosavo text, separated into morphemes, the second the morpheme-by-morpheme glosses, and the last provides a translation into English, enclosed in quotes (''); sometimes both a free and a literal (lit.) translation are given. For long examples, there can be more than one pair of text and gloss lines.
- In the Savosavo text, punctuation reflects intonation. A period (.) marks a sentence-final drop in pitch followed by a distinctive pause, while a question mark (?) stands for a sentence-final rise in pitch, again followed by a distinctive pause. A small, sentence-internal rise in pitch that is not followed by pause is marked by a comma (,), while a sentence-internal drop in pitch

Table 3. Representation of phonemes in different orthographies

Phoneme	Anglican	Catholic	Other variants	Unified orthography
/a/	A a	A a		A a
/b/	B b	B b		B b
/d/	D d	D d		D d
/e/	E e	E e		E e
/g/	G g	Q q	G, g	Q q
/ŋ/	Gh gh	G g		Gh gh
/i/	I i	I i		I i
/j/	J j	J j		J j
/k/	K k	K k		K k
/l/	L l	L l		L l
/m/	M m	M m		M m
/n/	N n	N n		N n
/ɲ/	Gn gn	Gn gn	$\tilde{N} \tilde{n}$	Gn gn
/ŋ/	Ng ng	Ng ng	$\bar{N} \bar{n}, N$	Ng ng
/o/	O o	O o		O o
/p/	P p	P p		P p
/r/	R r	R r		R r
/s/	S s	S s		S s
/t/	T t	T t		T t
/u/	U u	U u		U u
/β/	V v	V v		V v
/z/	Z z	Z z		Z z

that is not followed by a pause is marked by a semicolon (;). A solidus is used to indicate pauses (/). If material is omitted because of morphophonological processes, it is provided in parentheses.

- In both the Savosavo text line and the line containing the glosses, suffixation is indicated by a hyphen (-), cliticization by an equals sign (=), and reduplication by a tilde (~). If a gloss consists of multiple words or abbreviations, they are separated by a period (.). Savosavo words consisting of two morphemes that cannot be easily separated, e.g. when the suffixation leads to a stem-internal sound change, are not separated in the Savosavo text. The glosses of the morphemes involved will be provided separated by a period. Square brackets ([]) indicate that a gloss does not correspond to any overt element in the Savosavo word. In a translation, however, square brackets mark additional information that is necessary for the understanding of the example.
- Solomon Islands Pijin and English words used in Savosavo examples are underlined, e.g. olomane ‘old man’.
- The translation is followed by a code consisting of letters and numbers that specifies the speaker, the text and the exact location of the example in the cor-

pus. Furthermore, it provides information about whether the example is part of a longer, coherent stretch of free speech or not: When the letters precede the numbers, e.g. ap_polupolu_002, the example is one of natural free speech, from a narrative or connected discourse. This includes data elicited with the Man & Tree pictures (Pederson et al. 1998) and the Staged Events video clips (Staden et al. 2001), because the speakers interacted freely during these tasks. When the numbers precede the letters, e.g. 06-rr_bp, the example was taken from elicited material or noted during participant observation. The code used for examples taken from the recordings made by Arthur Capell, e.g. AC1-013-B_009, consists of the file name (AC1-106-A or AC1-013-B) and a three-digit number.

There are audio files available online for each of the examples for which a figure with the intonation contour is provided, as well as for the texts in the appendix. They can be found on the publisher's website at <http://dx.doi.org/10.1515/9783110289657.fm>

Chapter 2

Phonology

The phonology of Savosavo does not differ substantially from its neighboring Austronesian languages (cf. Lynch et al. 2002). This chapter begins with an overview of phonemic variation (2.1) and the structure of syllables and roots (2.2). The following section on stress (2.3) describes the phonotactic rules for stress assignment, and the morphological properties governing stress shift. Other morpho-phonological processes are described in Section 2.4. The chapter closes with a brief instrumental description of sentential intonation and ‘vocal gestures’ (2.5).

2.1. Phoneme inventory

The phoneme inventory consists of twenty-two phonemes, seventeen consonants and five vowels.⁶ In addition to this there is also one marginal phoneme, a diphthong. The consonants will be presented first, followed by a discussion of the vowels.

2.1.1. Consonants

There are four places and six manners of articulation for consonants. Table 4 gives the IPA symbols for each phoneme.

If a word borrowed from Solomon Islands Pijin contains the labiodental fricative [f], it is often, but not always, changed into [p] or [β]. Whether [f] is used or not seems to depend whether the word is a recent loan or not, and on the level of proficiency of the speaker in English and/or Pijin. As [f] is currently restricted to more recent loanwords from Solomon Islands Pijin, and to the speech of speakers who are proficient in English and/or Pijin, it is not taken to be a phoneme of Savosavo.

6. According to Maddieson (1984:7) “the typical size of an inventory lies between 20 and 37 segments”; compared to this, the size of the inventory of Savosavo (22) is cross-linguistically typical. In particular, it is a typical inventory size for the geographic area (cf. Lynch et al. 2002). The vowel system consists of the five most common vowels (Maddieson 1984: 125). Comparing the number of vowels and consonants, one gets a ratio of 0.29 (no. of vowels / no. of consonants), which is slightly below the median value of 0.36 for Maddieson’s UPSID data (Maddieson 1984:9).

Table 4. Consonant phonemes

	bilabial	alveolar	palatal	velar
voiceless stop	p	t		k
voiced stop	^m b	ⁿ d	^ɲ ʃ	^ŋ g
nasal	m	n	ɲ	ŋ
voiceless fricative		s		
voiced fricative		z		
trill		r		
lateral		l		
approximant	β			ɥ

Correspondence of phonemes to graphemes

Savosavo examples are given in an orthography that combines the two most widely known orthographies (see discussion in Section 1.5). For most phonemes, the corresponding graphemes are identical to the respective IPA symbols, except for the following:

Phoneme	Grapheme
^ɲ ʃ	<i>j</i>
^ŋ g	<i>q</i>
ɲ	<i>gn</i>
ŋ	<i>ng</i>
β	<i>v</i>
ɥ	<i>gh</i>

The digraphs are never ambiguous, because there are no consonant clusters in Savosavo (cf. Sec. 2.2).

Stops

There are three voiceless stops (/p/, /t/, /k/) and four voiced stops (^mb/, ⁿd/, ^ɲʃ/, ^ŋg/). The voiceless stops are not or only slightly aspirated, aspiration is not phonemic. The voiced stops have prenasalized and non-prenasalized allophones. Both allophones can occur word-initially as well as word-medially. However, the prenasalized allophones are much more frequent, especially in non-initial position. Non-prenasalized allophones are mostly found in word-initial position and only rarely word-medially.

- /**p**/ voiceless bilabial stop Examples:
 → [p] *pade* ['paⁿde] ‘one’
 mapa ['mapa] ‘person’

- /**t**/ voiceless alveolar stop Examples:
 → [t] *tone* ['tone] ‘brother’
 ata ['ata] ‘here’

- /**k**/ voiceless velar stop Examples:
 → [k] *kurighidi* [kuriⁿʔiⁿdi] ‘fly’
 roko ['roko] ‘plank canoe’

- /^m**b**/ voiced bilabial stop Examples:
 → [ᵐb] (~ [b]) *batu* [ᵐbatu] ~ ['batu] ‘head’
 ghobu [ʔoᵐbu] ‘middle’

- /ⁿ**d**/ voiced alveolar stop Examples:
 → [ᵐd] (~ [d]) *dala* [ᵐdala] ~ ['dala] ‘kite’
 pada ['paⁿda] ‘thunder’

- /^ɲ**j**/ voiced palatal stop Examples:
 → [ɲ^ɰ] ~ [ɲ^ɰɰ] ~ [ɲ^ɰc^ɛ] *jai* [ɲ^ɰʔai] ~ [ɲ^ɰc^ɛai] ‘river’
 ~ [c^ɛ] ~ [ɲ^ɰc^ɛ] ~ [c^ɛ] *majali* [ma^ɲʔali] ‘ghost’

This phoneme has a considerable number of allophones, varying in a number of features:

- All allophones have a fricative release, but the ratio of the stop portion to the fricative portion varies: Sometimes the stop is almost inaudible, sometimes it is dominant. With respect to this feature the allophones seem to be in free variation.
- It can be voiced or voiceless. The voiced allophone is always, the voiceless one often prenasalized. The voiceless allophones are found more often word-initially than word-medially. This also holds for the prenasalization: as with voiced stops, the non-prenasalized allophones occur mainly word-initial. The voiced allophones are more common than the voiceless ones.
- The place of articulation can be alveo-palatal or palatal, the alveo-palatal variety being more common in both positions.

Due to this variation, it is difficult to decide which of the possible realizations should be taken as the underlying form. Todd (1977: 808) analyzed this sound as a palatal voiced prenasalized stop. But since the fricative release is always present this phoneme could alternatively be analyzed as a palatal or alveo-palatal affricate. As Clark and Yallop (1995: 123) say, “there is a close relationship between palatal articulation and affrication”, occasionally resulting in different analyses of the same sound as an affricate or a stop. Also, Benjamin (1985: 8) notes for Aslian languages in southeast Asia that “the palatal stop consonants *c* and *j*, when immediately preceding a vowel, produce a degree of friction as the tongue pulls away from the palate; the intensity of friction varies from speaker to speaker”. I therefore decided to follow Todd’s analysis and regard it as a palatal stop with a fricative release. Both analyses can account for the phonetic realizations, but treating it as an affricate would mean adding a further manner of articulation to the phoneme inventory and be less economical. The fact that the phoneme discussed here is commonly prenasalized like all other voiced stops and that there is a corresponding palatal nasal supports our analysis, as it leads to a balanced phoneme inventory which for all nasals has stops at the same place of articulation (see Maddieson (1984: 13) “[n]asal consonants do not occur unless stops (including affricates) occur at (broadly speaking) the same place of articulation”).

With regard to voicing, given the fact that both voiced and voiceless allophones exist, the question arises if the underlying phoneme is indeed a voiced stop. Because prenasalization is commonly found with this phoneme, which was also noted by Todd (1977), and because it often occurs with voiceless realizations as well the voiced stop seems to be the appropriate choice.

- | | | |
|---------------------------------------|-------------|--|
| – / ^h g/ voiced velar stop | Examples: | |
| → [ʔg] (~ [g]) | <i>qazu</i> | [^h gazu] ~ [gazu] ‘ripe coconut’ |
| | <i>aqe</i> | [^h aʔge] ‘branch’ |

Nasals

- | | | |
|-------------------------------|---------------|----------------------------------|
| – / m / bilabial nasal | Examples: | |
| → [m] | <i>muzi</i> | [^h muzi] ‘night’ |
| | <i>kakami</i> | [ka ^h kami] ‘to play’ |
| – / n / alveolar nasal | Examples: | |
| → [n] | <i>nale</i> | [^h nale] ‘tooth’ |
| | <i>zine</i> | [^h zine] ‘mat’ |

- /ɲ/ palatal nasal Examples:
 → [ɲ] *gnari* [ˈɲari] ‘small’
 vognu [ˈβoɲu] ‘turtle’
- /ŋ/ velar nasal Examples:
 → [ŋ] *ngitu* [ˈŋitu] ‘breadfruit seed’
 musanga [ˈmusɒŋa] ‘evening’

Fricatives

- /s/ voiceless alveolar fricative Examples:
 → [s] *suba* [ˈsu^mba] ‘garden’
 ghase [ˈuɰase] ‘to be happy’
- /z/ voiced alveolar fricative Examples:
 → [z] *ze* [ze] ‘they’
 muzi [ˈmuzi] ‘night’

Trill

- /r/ alveolar trill Examples:
 → [r] ~ [r̥] *reka* [ˈreka] ‘dust, ground’
 ara [ˈara] ‘five’

The alveolar trill is sometimes realized as a single tap, especially in fast speech. These two allophones are in free variation.

Lateral

- /l/ alveolar lateral Examples:
 → [l] *lapi* [ˈlapi] ‘tongue’
 kuvala [ˈkuβala] ‘afternoon’

Approximants

- /β̞/ voiced bilabial
 unrounded approximant Examples:
 → [β̞] ~ [v] *vila* [ˈβ̞ila] ‘lightning’
 kove [ˈkoβ̞e] ‘rainbow’

This phoneme is sometimes realized as a voiced labiodental approximant. Again, these allophones are in free variation. Todd (1977: 808) analyzed this phoneme as a voiced bilabial fricative (/β̞/).

– /ɥ/ voiced velar approximant	Examples:		
→ [ɥ]	<i>gharo</i>	[ˈɥaro]	‘gecko’
	<i>ivaghu</i>	[iˈβauɥu]	‘day’

This phoneme was analyzed by Todd (1977: 808) as a voiced velar fricative (/ɣ/).

2.1.2. Minimal contrast between consonants

The following minimal sets or near-minimal sets between phonetically close consonants are evidence for their phonemic status.

	Initial	Medial
p:b	<i>puzu</i> ‘waist’ <i>buzu</i> ‘breadfruit’	<i>kapu</i> ‘to be full’ <i>kabu</i> ‘to run away’
p:v	<i>pazu</i> ‘palm leaf’ <i>vazu</i> ‘to bud’	<i>sape</i> ‘to follow (2DU)’ <i>savea</i> ‘fin’
b:v	<i>boli</i> ‘intestines’ <i>voli-li</i> ‘to buy (3SG.M)’	<i>labu</i> ‘belly button’ <i>lavu</i> ‘place’
b:m	<i>barata</i> ‘hillside’ <i>marara</i> ‘to be bright’	<i>kaba</i> ‘shell’ <i>kama</i> ‘armpit’
t:d	<i>tada</i> ‘man’ <i>dada</i> ‘to be afraid’	<i>pata-li</i> ‘to separate rope (3SG.M)’ <i>pada-li</i> ‘to count (3SG.M)’
d:n	<i>data</i> ‘outside’ <i>nata</i> ‘flat area’	<i>vudu</i> ‘(boy)friend’ <i>vunu-li</i> ‘to smell (3SG.M)’
d:r	<i>doi</i> ‘earth’ <i>roi</i> ‘to sink’	<i>kudo</i> ‘hen’ <i>kuro</i> ‘pot’
d:l	<i>dole</i> ‘louse’ <i>lole</i> ‘enough’	<i>dada</i> ‘to be afraid’ <i>dala</i> ‘kite’
d:j	<i>dai</i> ‘good’ <i>jai</i> ‘river’	<i>kudia</i> ‘fin’ <i>kuji</i> ‘bamboo (for picking apples)’
j:gn	<i>gnari</i> ‘small’ <i>jari-li</i> ‘to learn sth.’	<i>pagne</i> ‘to make (1SG)’ <i>pajepaje</i> ‘bamboo wall’

	Initial	Medial
r:l	<i>raju</i> ‘level ground’ <i>l-aju</i> ‘to finish (3SG.M)’	<i>kuro</i> ‘pot’ <i>kulo</i> ‘seawards’
r:n	<i>rata</i> ‘to be slippery’ <i>nata</i> ‘flat area’	<i>ura</i> ‘crayfish’ <i>una</i> ‘earring’
l:n	<i>lo</i> ‘he’ <i>no</i> ‘you’	<i>male</i> ‘left’ <i>mane</i> ‘then’
s:z	<i>sala</i> ‘to follow (3SG.M)’ <i>zala-li</i> ‘to look for (3SG.M)’	<i>posovata</i> ‘yellow’ <i>pozogho</i> ‘bottom’
k:g:gh	<i>karu</i> ‘edge’ <i>qaruqaru</i> ‘to be hard’ <i>gharu</i> ‘to move’	<i>ake</i> ‘what’ <i>aqe</i> ‘branch’ <i>aghe</i> ‘we (excl.)’
g:ng	<i>qasi-li</i> ‘to close (3SG.M)’ <i>ngasi</i> ‘to be hard’	<i>koqa-li</i> ‘to erect posts (3SG.M)’ <i>konga-li</i> ‘to worship (3SG.M)’

2.1.3. Vowels

Savosavo has a vowel system consisting of five vowels. In addition to these vowels there is the vowel combination /ai/, which has the status of a diphthong in some contexts (see Sec. 2.1.6).

Table 5. Vowel phonemes

	front	central	back
high	i		u
mid	e		o
low		a	

There is free variation between allophones of /i/, /e/, /o/ and /u/.

- /i/ high front unrounded vowel → [i] ~ [ɪ] ~ [i̥]
- /e/ mid front unrounded vowel → [e] ~ [ɛ] ~ [ɐ]
- /a/ low central unrounded vowel → [a]
- /o/ mid back rounded vowel → [o] ~ [ɔ]
- /u/ high back rounded vowel → [u] ~ [ʊ]

Non-phonemic nasalization of vowels is found when they are preceded or followed by nasals. There is no contrast between long and short vowels. However,

in monosyllabic words the vowel is usually lengthened, e.g. *mi* [mi:] ‘fish’ and *tu* [tu:] ‘midrib of a palm leaf’, at least when uttered in isolation.

2.1.4. Minimal contrast between vowels

These minimal sets show the phonemic status of the five vowels.

	Initial	Final
a:e:i	<i>aghe</i> ‘we (dual incl.)’ <i>eghe</i> ‘Ngali nut tree’ <i>ighe</i> ‘recently’	<i>kata</i> ‘bushwards (dist.)’ <i>k-ate</i> ‘to hold (3SG.F)’ <i>kati</i> ‘bushwards (prox.)’
o:u	<i>ora</i> ‘to burn’ <i>ura</i> ‘crayfish’	<i>kao</i> ‘bushwards’ <i>k-au</i> ‘to take (3SG.F)’

2.1.5. Vowel combinations

Sequences of identical vowels are not allowed in Savosavo. When a suffix that starts with a vowel is attached to a stem ending in the same vowel, these two vowels are fused into a vowel of normal length. One consequence is that, for example, the attachment of the suffixes *-tu* ‘PRS.IPFV’ and *-atu* ‘BG.IPFV’ to a stem like *vuz* ‘to come into being’ leads to the same form /vuzatu/ (see Sec. 2.4.1.1)

Apart from identical vowel sequences all possible vowel combinations are attested, but /ie/ only occurs when the enclitic =*e* ‘EMPH’ is added to a word ending in /i/ (e.g. *mi* ‘fish’ + =*e* ‘EMPH’ → *mie*), and /uo/ is only attested in one word that is a frozen reduplicated form (*ovuovu* ‘gas, steam’). Table 6 lists all vowel combinations together with an example.

2.1.6. Diphthong

Arguments for distinguishing vowel sequences from diphthongs come from stress patterns of words uttered in isolation or in a very short sentence, in particular the influence of affixes and clitics on the stress pattern of a root. These patterns are discussed in detail below in Section 2.3. At the time of writing only one vowel sequence has been identified as having the status of a diphthong in some contexts, namely /ai/.

The example that suggests that /ai/ sometimes has the status of a diphthong is the noun *vaitula* ‘servant’, which has primary stress on the first syllable: *vai-tula*. If /ai/ is analyzed as a diphthong, *vaitula* ‘servant’ is a trisyllabic root, if it is analyzed as a vowel sequence, it would be a root with four syllables.

Table 6. Vowel combinations

	a	e	i	o	u
a	*	<i>ae</i> 'to be married'	<i>jai</i> 'river'	<i>kao</i> 'bushwards'	<i>kakau</i> 'arm/hand'
e	<i>onea</i> 'to listen'	*	<i>kolei</i> 'megapode egg'	<i>eo</i> 'yes'	<i>seu</i> 'container'
i	<i>liaza</i> 'to return'	<i>mi=e</i> 'fish=EMPH'	*	<i>pio</i> 'man (addr.)'	<i>siu</i> 'to be edible'
o	<i>moaba</i> 'day bef. yesterday'	<i>dodoe</i> '± 4 gen. relative'	<i>ghoi</i> 'also'	*	<i>bou</i> 'heel'
u	<i>buara</i> 'root'	<i>due</i> 'bamboo segment'	<i>kui</i> 'eight'	<i>ovuovu</i> 'steam, gas'	*

All four-syllable roots in Savosavo show the same stress pattern, with primary stress on the penultimate syllable, which is inconsistent with the stress pattern observed with *vaitula* 'servant'. Primary stress in trisyllabic roots is either on the penultimate or the antepenultimate, i.e. the first, syllable, and so the stress pattern observed with *vaitula* 'servant' identifies the root as trisyllabic. Furthermore, when a suffix or enclitic is added, the primary stress shifts to the penultimate syllable, thus showing the same behavior as any other trisyllabic root with stress on the first syllable (cf. Sec. 2.3.2):

'vaitula 'servant' + =*gha* 'PL' → ,*vaitu*'*lagha*

This is the only example that clearly suggests that the vowel combination /ai/ is at least sometimes a diphthong; on the other hand there is also only one example that points in the other direction:

vu'*rai* 'spring water' + =*gha* 'PL' → *vu*'*raigha*

If /ai/ is analyzed as a diphthong in this case, it would mean that this is a disyllabic root. There are, however, no disyllabic roots that have stress on the last syllable in Savosavo. If, on the other hand, /ai/ is viewed as a vowel sequence, this root is a trisyllabic root. And indeed, it does behave like a normal trisyllabic

root: primary stress is on the second syllable, and this does not change when a bound morpheme is added.

All other roots containing /ai/ would conform to the stress patterns described below, whether /ai/ is analyzed as a diphthong, belonging to one syllable, or a sequence of two vowels, consequently belonging to two syllables. For example, *ghai'oko* could either be analyzed as a trisyllabic root containing a diphthong in the first syllable, or as a four syllable root if the two vowels are counted separately. Both analyses are compatible with the stress pattern here, namely that primary stress is on the penultimate syllable, and the fact that the stress does not change if a bound morpheme is added.

The conclusion that follows is that in some cases this vowel combination is indeed a diphthong, but in others it is not.⁷ Cases that force one or the other analysis are rare. In cases that allow for both analyses I decided to treat /ai/ as a vowel combination, not as a diphthong, i.e. a root like *ghai'oko* 'dugout canoe' is analyzed as a four-syllable root in what follows.

2.2. Syllable and root structure

A syllable can either consist of only a vowel nucleus or a vowel nucleus and a consonant onset, i.e. the basic syllable structure is (C)V.

$$\sigma \rightarrow (C)V$$

Roots consist of one or more syllables.

$$W \rightarrow \sigma^*$$

Most roots consist of two (50 % of 1777 roots) or three syllables (28 %). Examples are *'uvi* 'house', *'elu* 'Ngali nut', *'ka'dora* 'possum' and *'avasa* 'when'. There are very few monosyllabic roots (about 2 %), and these invariably have the form CV, for example: *ba* 'come', *me* '2PL', *pi* 'green coconut', and *zu* 'and'. The vowel of a monosyllabic root is slightly lengthened.

Roots consisting of four syllables are more common, they make up about 18 % of the dictionary. Many of these roots are frozen forms, containing reduplicated material that might have been analyzable in an earlier stage. Some examples of roots with four syllables would be: *'molu'molu* 'island', *'lili'kia* 'small ant', *'abu'zaghi* 'to blink', *'buli'kaku* 'elbow', and *'vara'talu* 'cutnut tree'.

About 2 % are roots with more than four syllables; again most of these roots contain reduplicated material that might have been analyzable in an earlier stage. For example, the verbs *'sabesa'bera* 'to hang (naturally, e.g. a fruit on the tree)'

7. A similar situation is found in Samoan, where vowel combinations functioning as diphthongs in penultimate syllables have to be considered as constituting two syllables when occurring in word final position (Mosel and Hovdhaugen 1992: 29).

and *ˌkulaˌkulaˈpapa* ‘to put your arms around your neighbors’ are at present apparently only used in these reduplicated forms. However, reduplication on verbs is used to change the aktionsart of a verb to give it a durative or iterative reading (cf. Sec. 6.4), and the meaning of these verbs does have a durative or iterative component: a fruit hanging at a tree, and putting one’s arms around both neighbors or each other. It therefore seems reasonable to assume that non-reduplicated forms existed once, but fell out of use.

The few other roots with more than four syllables, some of which also look like reduplicated forms, are to my knowledge unanalyzable in present day Savosavo, but can to a large extent still be identified as complex forms that were analyzable earlier on, e.g. *ˌkoroˈdikolo* ‘small lizard’ can be traced back to *ˌkoropi-* ‘to claw at something or someone’ and *diko-* ‘to pinch’, describing the way the lizard moves, and *ˌmuziˈkavili* ‘darkness’ is composed of *ˈmuzi* ‘night’ and **kavili*, which is to my knowledge not a root in present-day Savosavo. It is striking that many of these words are names of plants and animals (e.g. *ˌdakidaˈkili* ‘big black ant’, *ˌkurakuˈrape* ‘frog’, *ˌkaupeˈbeta* ‘kind of pandanus’, *ˌkapisiˈvatu* ‘kind of shell’, and *ˌbilikoˈkio* ‘kind of bird’). At least the last example is onomatopoeic, imitating the bird’s cry.

Although there is no monosyllabic root that consists of one vowel only, some disyllabic roots consist only of vowels (e.g. *ai* ‘who’, *au* ‘move down’, and *-ou* ‘eat’). Very few roots have a sequence of three vowels (e.g. *ˌghaiˈoko* ‘dugout canoe’), and no root has sequences of more than three vowels. Words with more than three vowels in a sequence are rare, and are the result of reduplication and/or affixation, as for example in the case of *ˌeoˈeo* ‘hanger’, derived from *eo-* ‘to hang something’.

2.3. Stress

A stressed syllable is marked by longer, clearer pronunciation, higher intensity and sometimes higher pitch.⁸ Roots with three or more syllables can have more than one stressed syllable. Stress assignment proceeds from the end of the root. Therefore, if there is more than one stressed syllable in a root, the rightmost stressed syllable is analyzed as carrying primary stress. Stress on other syllables is analyzed as secondary, although there is usually no or only little difference in realization.

The next section describes the stress patterns found with roots in Savosavo (2.3.1); after this the influence of affixation on stress patterns is discussed (2.3.2). The influence of reduplication on root stress is discussed in the section on reduplication, Section 2.4.2 on page 33.

8. The description in this chapter is based on auditory impression, supplemented by qualitative analysis of pitch and intensity with the Praat software.

2.3.1. Root stress

The general rule for stress in roots in a one- or two-word sentence where the bare root is used is that the penultimate syllable of a root carries primary stress (marked by ' in the examples). Furthermore, whenever primary stress is on a non-initial syllable, the initial syllable receives secondary stress (indicated by , in the examples), i.e. it is (almost) as prominent as the primarily stressed syllable.

Disyllabic roots are without exception stressed on the first syllable, e.g. *'tuvi* 'house'. Trisyllabic roots are either stressed on the first or the second syllable, and therefore partly deviate from the general pattern described above. It is not predictable which trisyllabic roots are stressed on the first syllable and which on the second. From a sample of 292, about 75 % are stressed on the penultimate syllable (and also have secondary stress on the first). The remaining 25 % are stressed on the first syllable. There is no obvious feature distinguishing these 25 % from the other trisyllabic roots. Some examples are:

Primary stress on second syllable	Primary stress on first syllable
<i>,a'qutu</i> 'work'	<i>'adaki</i> 'woman'
<i>,ka'simu</i> 'kind of vine'	<i>'kasanga</i> 'to be angry'
<i>,si'noqo</i> 'cork'	<i>'sivugha</i> 'hair'
<i>,to'moko</i> 'canoe with two prows'	<i>'totolo</i> 'kind of vine'

Four-syllable roots are stressed on the penultimate syllable, the first syllable carries secondary stress (e.g. *,kena'ghuli* 'fishing hook'). Roots with more than four syllables are usually complex and historically analyzable and therefore show patterns that are combined of two, three and four syllable roots, depending on their internal structure. Both V and CV syllables can take primary or secondary stress. Examples for five syllable words are: *,agha'vazeza* 'forty', *,bolota'ngana* 'gun', from English/Solomon Islands Pijin *ball/bolo* and Gela *tangana* 'shout', and *,koro'dikolo* 'small lizard', from Savosavo *koropi-* 'to claw at something' and *diko-* 'to pinch'.

The stress patterns of roots with two to four syllables can be schematized as in Table 7. As the examples show, syllable structure does not have an influence on stress assignment.

2.3.2. Influence of affixes and clitics on stress

Savosavo is predominantly suffixing, but prefixes are found as object markers on one type of transitive verb (cf. Sec. 4.1.1.2) and on postpositions (cf. Sec. 4.9). Clitics are always placed after their host.

Table 7. Stress patterns of roots with two to four syllables

'σσ	' <i>tada</i> 'man' ' <i>aqe</i> 'branch' ' <i>tau</i> 'to fall'
,σ'σσ	, <i>a</i> ' <i>qutu</i> 'work' , <i>ma</i> ' <i>ghani</i> 'decoration' , <i>ku</i> ' <i>ava</i> 'nine'
'σσσ	' <i>adaki</i> 'woman' ' <i>sivugha</i> 'hair, fur, feather' ' <i>kaunga</i> 'elder'
,σσ'σσ	, <i>kuri</i> ' <i>ghidi</i> 'fly' , <i>aq</i> ' <i>soru-</i> 'to consume all of something' , <i>bebe</i> ' <i>ula</i> 'butterfly'

Prefixes consist of one consonant only and are exclusively attached to roots that start with a vowel. Consequently, prefixes do not change the number of syllables of a root, they only change the structure of the first syllable from V to CV. As shown above, syllable structure does not have any influence on stress, and indeed the roots that take prefixes are inconspicuous with regard to stress.

Suffixes on the other hand consist of one to three syllables (V, CV, CV.CV, CV.V or CV.CV.CV) and can even be combined. Therefore they increase the number of syllables of a word, and hence influence its stress pattern. These stress changes are in some cases predictable, but not in others. The attachment of suffixes to disyllabic roots, for instance, may result in different stress patterns without any phonological conditioning being apparent. It has to be learned along with the root whether the stress pattern changes when a suffix is added. In addition to this, suffixes differ in how they influence the stress pattern of the root or stem they attach to.

The syllable structure of enclitics is V, CV or CV.CV and thus also increases the number of syllables of a word. Although all clitics form a phonological word with their host, some have a stronger influence on its stress pattern than others. Further investigation is required to provide a full account of stress pattern changes triggered by different suffixes and enclitics combined. The remainder of this section will focus on two common bound morphemes, the suffix *-ghu* 'NMLZ' and the enclitic *=gha* 'PL'. Especially *-ghu* 'NMLZ' is often found in short utterances (see examples (1) and (2) below), so its influence on stress patterns can be observed in everyday speech very easily. This discussion is then followed by some remarks about the object marking suffixes that are added to verb stems.

When adding monosyllabic morphemes such as *-ghu* ‘NMLZ’ (on verbs) or *=gha* ‘PL’ (on nouns) to **disyllabic roots**, the stress stays on the first syllable for 68 % of the 592 roots tested, but moves to the second syllable for the remaining 32 %.

Primary stress stays on first syllable:

'sota ‘to be calm’ + *-ghu* ‘NMLZ’ → *'sotaghu*
'kake ‘taro’ + *=gha* ‘PL’ → *'kakegha*

Primary stress moves to second syllable:

'epi ‘to sit’ + *-ghu* ‘NMLZ’ → *,e'pighu*
'ghuba ‘front of canoe’ + *=gha* ‘PL’ → *,ghu'bagha*

There is no obvious pattern determining how the stems behave; there is no systematic difference in the combinations of vowels or consonants between the two groups:

Stress does not change

'oru ‘to roll’
'bani ‘fence’
'ida ‘pana’
'kuma ‘rain’
'ravu ‘tribe’
'sara ‘to reach’

Stress changes

'lomu ‘to fill a container’
'basi ‘to vanish’
'iva ‘to become day’
'kula ‘to be short’
'samu ‘food’
'kabu ‘to move away’

Examples (1) and (2) show one verb of each kind in a commonly used nominalized verbal clause in which the stress is clearly detectable, aided by the pitch peak of the clausal intonation falling on the stressed syllable of the verb (see Sec. 7.2.1.3, p. 226):

- (1) *Ze ka ka'bu-ghu=e lo=na.*
 3PL already move.away-NMLZ=EMPH 3SG.M=NOM
 ‘They already ran away.’, lit. ‘It (is) their running away already.’
 (ej_cs_botoli_017)
- (2) *Ok, lo-va 'sara-ghu=e lo=na.*
 ok 3SG.M-GEN.M reach-NMLZ=EMPH 3SG.M=NOM
 ‘Ok, it (is) its end.’, lit. ‘Ok, it (is) its reaching.’
 (pk_mk_mt_356)

When the above-mentioned morphemes are added to **trisyllabic roots** having their primary stress on the second syllable the stress stays there; in contrast, if they are added to those having stress on the first syllable, the primary stress