The Phonology of Sanᶜānī Arabic*

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Abstract. Sanᶜāni Arabic (SA) /ṭ/ is replaced by the phoneme /d/ and /t/ has the allophone [d] if /t/ and /t/ occur intervocalically or in word-initial position. /g/ is the reflex of literary Arabic /q/. The glottal stop /'/ and the glottal fricative /h/ occur in all positions. In addition to the three short and the corresponding three long vowels, SA has /e/, /ē/ and /ō/. Final /-ā'/ changes into /-ē'/, a feature known as *'imāla*. /a/ has three allophones and /u/ has a midback [o] allophone, which may occur interchangeably with a high back [u] in certain environments. SA has two diphthongs /ay/ and /aw/. Word initial two- or three-consonant clusters do not normally occur, but certain final three-consonant clusters may occur. Regressive assimilation is more frequent than progressive assimilation. The two most significant features of stress in SA are: (1) in a disyllabic word that is made up of two long syllables stress falls on the first syllable, and (2) the antepenultima is stressed if the penultima is short in three or more syllable words.

1. Introduction

1.1 Geographical and Ethnic Backgrounds

Sanᶜa is the captial and seat of the government of North Yemen, officially known as the Yemen Arab Republic (YAR). It is situated on the high plateau of central Yemen, 7500 feet above sea level. It has a population of about 180,000[1] people. It is built at the foot of a 900 foot mountain at the southern end of a cultivated valley. The surrounding mountains are barren, except for cultivated terrace areas. Its climate is generally clear and mild. Night temperatures rarely drop below 32°F in winter, and midday temperatures range in the 70s and 80s. Due to extreme dryness, dust is heavy at certain times during the year. The old section of Sanᶜa, known as *ṣanᶜa l-gadīma* or simply the *madīna*, is surrounded by a partially dismantled ancient

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(1) According to an estimate in *Post Report*, 1975, by the Department of State. U.S.A., p.1.

city wall, and life within the city wall has changed little in the thousands of years since it was first settled.

The YAR has a population of seven million people[2], more than ninety percent of whom are of Arab origin. A number of Arab and non-Arab immigrants are there to help in developing the country by working on many projects which the YAR has started in such fields as education, construction, health care, agricultural development, and recently the oil industry.

There are two major varieties of Arabic in use in Ṣanᶜa today: the literary language, *al-fuṣḥā,* and the spoken language, i.e., SA. *Al-fuṣḥā* is the official language of the country, and it is used in mass media, official ceremonies, and public speeches. It is also the medium of instruction in Yemeni schools. SA, on the other hand, is the native spoken language of the majority of Ṣanānis, and it is the only means of communication for most of them. It is also a lingua franca used by minorities of various groups. Linguistic changes are taking place now due to the extensive contacts between Ṣanānis and outsiders, especially other Arabs, and due to the spread of education.

1.2 Material and Informants

The native speakers ("informants") whose speech served as the basis for the data selected for inclusion in this article are unsophisticated bona fide speakers of *ṣanāni* Arabic. They are male and their ages range between twenty and forty. A frequency list of approximately 2,000 vocabulary items was compiled from tape recordings which I made of spontaneous unprepared conversations of those native speakers in different situations, such as greetings, telephone conversations, comments, interviews, etc. On most occasions the informants talked to each other either in their homes during *gāt* sessions or in such places as office buildings, coffeehouses, etc. There was a search for tales, fables, anecdotes and stories from story tellers, poets and informants. In informant interviews the question, "How do you say ...?" was avoided as much as possible for the sake of authenticity. Indeed, some of them had the tendency to emulate my dialect or other Arabic dialects, especially Egyptian and Palestinian. I have run across contrast of styles in the same speakers on different

(2) Ibid., p.7.

(3) It should be pointed out that most of my informants have come in direct contact with a number of Arab immigrants working in Ṣanᶜa, especially Egyptians and Palestinians. I was on the lookout for "speech emulation", e.g., one informant said, *"bakēt Ɣagāyir,"* 'a package of cigarettes' on one occasion and *"gafaṣ Ɣiqāyir"* on another occasion. The latter is the SA form. In instances such as this one, I would check with the informant again, or another informant would contribute saying, "we do not use this in our dialect." See: Frederic Cadora, "Some Linguistic Concomitants of Contactual Factors of Urbanization," *Anthropological Linguistics,* 12, No.1 (1970), 110–19 for a detailed linguistic study of this phenomenon.

occasions.[3] Because of limitations of time and for circumstances beyond my control no children or female informants were interviewed.[4]

A limited but careful use was made of the following secondary data, including texts, word lists, grammars,[5] etc: Rossi,[6] Nami,[7] Al-Akwa'[8] and Renaud.[9]

1.3 Data Treatment and Limitations of the Study

This study is a descriptive analysis of the phonology of the dialect of Ṣanᶜa; it is essentially synchronic.[10] No attempt has been made to refer to any diachronic facts. However, some reference is made to other colloquial Arabic dialects to highlight certain features of the phonology of SA. Features that are not mentioned in this article may be assumed to be either similar to those in other Arabic dialects or needing further investigation, which lies beyond the scope of this study, which is a sketch of the chief or salient features of the phonology of SA. Features that need to be researched or further investigated are vowel allophones, certain sound changes such as pausal glottalization and assimilation of pronominal suffixes, initial two-conson-ant clusters, stress shift, emphasis spread, etc.

2. Phonology

2.1 Consonants (see Table 1).

2.1.1 The voiceless dental stop /t/ is replaced by the phoneme /d/ in an intervocalic environment or in word-initial position followed by a vowel. Examples:

/yitfil/	'he spits'	but	/dafal/	'he spat'
/matkeh/	'cushion, pillow'	but	/madāki/	'cushions, pillows'
/binteh/	'his daughter'	but	/banādi/	'my daughters'
/'iftataḥ/	'he inaugurated'	but	/fadaḥ/	'he opened'

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In word-initial position followed by a vowel the phoneme /t/ is also heard, especially in the speech of educated Ṣanānis; I have heard both *tafal* and *dafal* 'he spat', *tirmi* and *dirmi* 'she throws', etc.

2.1.2 Similarly, but invariably, the pharyngealized[11] dental stop /ṭ/ has an allophone

Table 1. Consonants.

		Bilabial	Labiodental	Interdental	Dental	Alveolar	Alvepalatal	Velar	Pharyngeal	Glottal
Stops	vl.				t ṭ			k		'
	vd.	b			d			g		
Fricatives	vl.		f	t̲		s ṣ	š	x	ḥ	h
	vd.			d̲ ḏ		z		ġ	c	
Affricate	vl.									
	vd.						j			
Nasals	vd.	m			n					
Lateral	vd.				l					
Flap	vd.					r				
Semi-vowel	vd.	w					y			

Table 2. Vowels.

		Front	Central	Back
High	close	ī		ū
	open	i		u
Mid		ē		ō
		e		
Low			ā	
			a	

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(11) The feature of pharyngealization is sometimes referred to as "emphasis" or "velarization." "Pharyngealization" is probably a more satisfactory term since it does not suggest forceful articulation or features of the velars *x-ġ* or the pharyngeals *ḥ-c*. It is known as "*'iṭbāq*" in Arabic grammar.

[ḍ] in an intervocalic environment (including geminates) or in word-initial position followed by a vowel. Examples:

/ᶜaṭ˛/	'thirst'	but	[ᶜɑ̄ḍo˛]	'thirsty'
/'usta/	'craftsman'	but	['ɑsɑḍi]	'craftsmen'
/maṭbax/	'kitchen'	but	[mɑḍɑ̄bix]	'kitchens'

Other examples:

[moḍɑhhɑr]	'masculine name'	[mɑḍɑr]	'rain
[sɑlɑḍɑ]	'salad'	[˛ɑḍɑlə]	'fork'
[mɑḍar] f̄ain´ [ḍɑ̄geh] ẃindow´			
[muᶜɑḍḍɑl]	'out of order'	[bɑḍḍɑ̄niyə]	'blanket'
[ḍɑmɑ̄dīs]	'tomatoes'	[ḍɑli]	'lamb'
[bɑḍḍix]	'cantaloupes (coll.)'	[ᶜɑḍḍār]	'perfumer; chemist'

elsewhere, the allophone [ṭ] occurs:

/baṭn/	'belly'	/raṭl/	'unit of weight'
/sulṭān/	'Sultan'	/maṭᶜam/	'restaurant'

It should be pointed out that this allophone [ḍ] is semipharyngealized, i.e., the pharyngealization is not as pronounced as it is in colloquial Levantine or colloquial Egyptian Arabic /ḍ/.

2.1.3. The voiced velar stop /g/ is the reflex of original (early Arabic) /q/ in all environments, including proper names.
Examples:

/'al-gāhira/	'Cairo'	/'al-gur'ān/	'the Quran'
/gatar/	'Qatar'	/ḥadīgeh/	'garden'
/gāt/	'qat'	gafaṣ/	'package'
/gallag/	'he shut, closed'	/dagīgeh/	'minute'
/ḥaggi/	'mine'	/baggāl/	'greengrocer'

2.1.4 The glottal stop /'/ occurs in all positions in SA:

Initially:	'ayn	'where?'	'ay˛	'What?'
	'al-gāhira	'Cairo'	'amwās	'razors'
Medially:	girā'a	'reading'	fa's	'adz'
	ma'dubeh	'banquet'	rā'iheh	'smell(n.)'
	ra's	'head'	fa'r	'rat, mouse'
Finally:	gara'	'he read'	mā'	'water'
	warā'	'behind'	jubā'	'ceiling; roof'
	ḥɑmrā'	'red(f.)'	zargā'	'blue(f.)'
	ᶜawrā'	'one-eyed(f.)'	latgā'	'stammerer(f.)'

In word-final position the occurrence of the glottal stop is very rare in other Arabic dialects, e.g., in colloquial Gulf, Levantine, or Egyptian the final glottal stop in the words above is dropped.

Sometimes, especially in rapid speech, word-initial /'/ and preceding long /ā/ in final position in one-syllable words are dropped.

yā 'ibni	---- y-ibni	'oh, my son'
yā 'ummi	---- y-ummi	'oh, my mother'
mā 'adri	---- m-adri	'I do not know'
('i)la 'ayn	---- l-ayn	'where to'

2.1.5 The glottal fricative /h/ in word-final position is distinctly heard in SA; it corresponds to the feminine marker *ta' marbūṭa* of literary Arabic[12] or to the third-person masculine singular pronominal suffix. Examples:

matkeh	'cushion, pillow'	ḥadīgeh	'garden'
ṭāgeh	'window	gimeh	'value; price'
binteh	'his daughter'	ḥilbeh	'fenugreek'

The feminine marker /-eh/ changes into /-at/ if the noun in which it occurs is the first term of an *'idāfa* construct:

| matkat ad-dīwān | 'the living room cushion' |
| ṭāgat ad-dayma | 'the (old Yemeni) kitchen window' |

2.1.6 The alveopalatal affricate /j/ is similar to English j̲ in judge. Examples:

jāwiᶜ	'hungry'	jambiyyeh	'dagger'
'al-jumᶜah	'Friday'	'aᶜjam	'dumb, mute'
ᶜajmē'	'dumb, mute(f.)'	dajāj	'chickens (coll.)'

2.1.7 For the assimilation of /n/ and /m/ see 4.2 *Assimilation* below.

2.1.8 The dental lateral /l/ has a pharyngealized allophone [ḷ] in the following environments:

   (1) In a cluster with a pharyngealized consonant. Examples:

[xɑlt̩]	'mixing(v.n.)'	[zɑl̩teh]	'a swallowing (instance n.)'
[fɑs̩l]	'season'	[rɑt̩layn]	'two pounds (weight)'
[fɑd̩l]	'grace, favor'	['ɑs̩lɑk]	'your origin'

(2) after a long vowel other than /ī/ which is in turn preceded by a pharyngealized consonant. Examples:

| [dūl] | 'length' | s̩ɑlōn | 'living room' |
| [d̩ɑl] | 'it lingered long' | [d̩ɑl̩l] | 'straying; lost' |

In other environments the /l/ is a plain non-pharyngealized phoneme, e.g., /zalat̩/ 'money', /salīt̩/ 'motor oil', /galīd̩/ 'fat', d̩alam/'he oppressed', /t̩alab/ 'application', /galas̩/ 'drinking glass'.

A pharyngealized [l̩] appears in certain forms of the word for "God", e.g. ['ɑl̩l̩āh] 'God', [wal̩l̩āh] 'by God'. No minimal or near minimal pairs could be found in SA to establish the presence of a pharyngealized /l̩/ phoneme.

2.1.9 The alveolar flap /r/ has a pharyngealized allophone [r̩] only in the following environment: v-ç, -çv, çv-, and -vç, where v is any vowel and ç is a pharyngealized consonant. In the following examples /r/ is pharyngealized:

[fɑr̩d]	'(religious) duty'	[gɑd̩ɑr]	'Qatar'
[gor̩t̩]	'earring'	['ɑgr̩ɑt̩]	'earrings'
[gɑtr̩ə]	'eyedrops'	[mɑḥdɑr]	'official report'
['ɑxdɑr̩]	'green'	[tɑmɑyrad̩]	'he pretended to be ill'

In other environments it is a plain /r/. In all of the following examples it is a plain /r/ in SA. (It is a pharyngealized allophone of /r/ in this environment in most Arabic dialects, especially Levantine, Egyptian and Gulf Arabic):

ra's	'head'	ra'īs	'director'
sāra	'Sarah'	fa'r	'rat'
'idāra	'administration'	gara'	'he read'
maḡraf	'ladle, scoop'	ḥārr	'hot'

2.1.10 The semivowels /w/ and /y/ may replace the glottal stop /'/ in a few isolated words, e.g., wanīs instead of 'anīs 'companion,' mawājil instead of ma'ājil 'basins,' mistaysir instead of mista'sir 'having taken s.o. captive,' muwattin instead of mu'attin 'muezzin,' and muwaddab instead of mu'addab 'well-behaved.' However, the forms with the glottal stop are more frequent. No other examples could be found and the environment in which /'/ ——> /w/ or /y/ could not be determined.

2.2 Vowels

2.2.1 Like literary Arabic and most other dialects of Arabic, SA has in its vowel system three short vowels and the corresponding three long vowels: *a–ā*, *i–ī* and *u–ū*. Examples:

/gatl/	'killing'	/māǧi/	'no'
/kawa/	'he cauterized'	/kāwiyeh/	'an iron'
/bi'r/	'a well'	/bībar/	'bell peppers'
/gusgusi/	'puppy'	/gūzi/	'roasted lamb'
/yurt/	'yoghurt'	/hūt/	'fish'

In addition SA has the short vowel /e/ and the corresponding long vowel /ē/. /e/ occurs only in a word-final position in nouns and verbs. Long /ō/ occurs only in loan words.

/ḥilbeh/	'fenugreek'	/ṭāgeh/	'window'
/bayteh/	'his house'	/ḍarabeh/	'he hit him'
/gālōn/	'gallon'	/ṣālōn/	'living room'

Similarly, /ē/ occurs only in the word-final sequence /ē'/. This will be not only in singular feminine adjectives of color or defect but also any words that ended originally in /ā'/. [13]

/ḥamrē'/	'red(f.)'	/baydē'/	'white(f.)'
/ᶜamyē'/	'blind(f.)'	/zargē'/	'blue(f.)'
/latgē'/	'stammerer(f.)'	/jē'/	'he came'
/mē'/	'water'	/warē'/	'behind'

It should be pointed out that final /-ā'/ in such words remains /ā'/ if they are not followed by pause, e.g., *mā' al-maṭar'* 'rain water', *jā' al-wagt* '*the time has come*',sawdā' al-ᶜuyūn 'black-eyed(f.)', etc.

2.2.2 The phoneme /a/ has three allophones: (1) a low back unrounded [α] in the environment of pharyngealized consonants:

/baṭn/	------> [bαṭn]	'belly'
/faḍl/	------> [fαḍl]	'favor'
/gaṣr/	------> [gαṣr]	'palace'

(13 This feature, traditionally known as *'imāla* (deflection), is characteristic of the speech of Ṣanᶜānis. It is also present in personal proper names that end in /a/, e.g. /mūse/ 'Musa', /yahye/ 'Yahia,' /layle/ 'Laila,' etc. For a definition and discussion of *'imāla* see: W.H.T Gairdner, "The Arab Phoneticians on the Consonants and Vowels," *Moslem World* 25 (1935), 242-57.

(2) a mid central [ə] in an unstressed word-final position and as the vowel of the definite article /'al-/ when preceded by another word:

/waladha/	——> [wɑlɑdhə]	'her son'
/gaṣraha/	——> [gɑṣrɑhə]	'her place'
/mā' al-bi'r/	——>[mɑ' əl-bi'r]	'the well water'
/bān ad-dār/	——>[bāᵇ'əd-dɑr]	'the house door'

(3) elsewhere it is the low front [æ], as shown in the examples above.

2.2.3 The phoneme /u/ has a mid-back [o] allophone in the environment of pharyngealized consonants, the velars x–ġ and the pharyngeals ḥ–ᶜ; elsewhere it occurs interchangeably with a high (open) [u]. Examples:

/xuti/	——> [xodi]	'he walked.'
/ᶜuduġ/	——> [ᶜodoġ]	'He was thirsty.'
/ᶜuṣyeh/	——> [ᶜoṣyəh]	'stick; cane'
/ḥuzwiyeh/	——> [ḥozwiyəh]	'anecdote, tale'
/ᶜurs/	——> [ᶜors]	'wedding'
/xuzgi/	——> [xozgi]	'hole'
/baytukum/	——>[bæytukum] or [bæytokom]	'your house' (m.p.)
/ḥaggukum/	——> [ḥɑggukum] or [ḥɑggokom]	'yours (m.p.)'

2.3 Sound Combinations
2.3.1 Dipthongs

A dipthong is usually defined as a vowel and a glide in the same syllable. There are two diphthongs in SA:

Diphthong *ay*

The diphthong /ay/ is very frequent in SA; it occurs in (1) the dual suffix of nouns, (2) primary nouns, including some proper names, (3) the first person masculine singular and plural forms of weak and doubled perfect tense verbs, and in (4) the second and third person feminine plural verb suffixes:

(1)	bābayn	'two doors'	tintayn	'two(f.)'
	'alfayn	'two thousand'	kalbatayn	'pair of pliers'
	'itnayn	'two(m.)'	bugġatayn	'two bugġas. [14]
(2)	bayt	'house'	xayma	'tent'

(14) A *bugġa* is approximately 1/40 of a Yemeni riyal.

	layl	'night'	ᶜayn	'eye'
	bayᶜ	'selling'	šay'	'thing; something'
	xayš	'canvas'	jayš	'army'
	bayrūt	'Beirut'	'al-hudayda'	'Hudaida'
(3)	galayt	'I fried'	galayna	'we fried'
	bagayt	'I stayed'	ḥamayna	'we defended'
	gaṭṭayt	'I irritated s.o.'	ḥaṭṭayna	'we put'
(4)	darastayn	'you(f.p.) studied'	darasayn	'they(f.) studied'

In the examples above the diphthong /ay/ is in free variation with the long vowel /ē/ or the diphthong /ey/. Forms with /ay/, however, are more frequent. /ay/ does not have any variant in the sequence -ayy-, where syllable division is between the two y's. Examples:

'ayy(a)	'which (one)?'	'ayyin	'which one?'
turayya	'candelabra'	tayyeh	'this(f.)'
ḏayya	'this(m.)'	mayyit	'dead'
mikayyis	'masseur'	mixayyiṭ	'tailor'
taḥiyya	'greeting'		

Diphthong aw

Similarly, but less frequently, the diphthong /aw/ is in free variation with the long vowel /ō/ or diphthong /ow/ in the following environment:
-awC(v)(C) (where C is any consonant and v is any short vowel)

lawn	'color'	daw'	'light'
mawt	'death'	xawf	'fear'
ḥawl	'around'	bawl	'urine'
ḏawla	'these'	'ad-dawḥa	'Doha'
ᶜar-rawḍa	'Rawda'	dawleh	'state; government'
mawtar	'car; motor'	jaww	'weather'

Diphthong /aw/ is used in free variation with the long vowel /ū/ or the diphthong /uw/ in the second and third person masculine plural forms of weak and doubled verbs:

raḍaw	'they(m.p.) were content, satisfied'
yirḍaw	'they(m.p.) are content, satisfied'
tirḍaw	'you(m.p.) are content, satisfied'
šallaw	'they(m.p.) carried, lift s.th.'
tišillaw	'you(m.p.) carry, lift s.th.'
yišillaw	'they(m.p.) carry, lift s.th.'

2.3.2 Consonant Clusters
2.3.2.1 Two-Consonant Clusters

Word-initial two-consonant clusters do not normally occur in SA, e.g., verb forms V and VI may be heard with an initial two-consonant cluster, but usually they are heard with -a- between the first and the second consonants:

taᶜallam	'he learned'	tasallaf	'he borrowed'
taᶜajjab	'he was amazed'	taġallag	'it was shut'

Similarly verb Forms VII-X are usually heard with 'i-:

'ingalaᶜ	'he went away'	'inwalad	'he was born'
'intasa	'it was forgotten'	'inkasar	'it was broken'
'iltabaj	'he hit himself'	iltaff	'he went around'
'iṣfarr	'it turned yellow'	'iḥmarr	'it turned red'
istagāl	'he resigned'	'istawfa	'he was paid in full'

Participles of derived verbs are heard with initial *mu-*; only a few are heard with initial *mi-*:

muġallag	'shut, closed'	muᶜallim	'teacher'
musāfir	'traveller'	mutaᶜallim	'educated'
mutadāhir	'demonstrator'	multabij	'having hit himself'
mustagil	'having resigned'	mixayyiṭ	'tailor'
minaxwil	'sieve-maker'	minaḥḥis	'copper smith'

Medially and finally two-consonant clusters are very common, e.g., *barᶜa* 'dance tune', *dayma* 'kitchen', *gambar* 'he sat down', *faṣl* 'season', *skamkam* 'he sews up a sleeve', etc.

2.3.2.2 Three-Consonant Clusters

Three-consonant clusters do not occur either initially or medially. Finally they are encountered only in the negative form of the first or second person masculine singular perfect verb:

mā xazzantš.	'I (or you) did not chew qat.'
mā 'iṣtabahtš.	'I (or you) did not have breakfast.'
mā 'abṣartš.	'I (or you) did not see.'

Between word-boundaries three-or four-consonant clusters (usually with the helping vowel *i*) are common. (see 4.1 below)

2.4 Major Sound Changes
2.4.1 Epenthesis

Between word boundaries a three-consonant cluster is usually encountered in two cases:

A. When a word ends with a single consonant and is followed by a word beginning with a two-consonant cluster. In such a case the helping vowel /i/ is inserted between word boundaries. Examples:

ʿas-sabbāk-i-stagāl.   'The pipe fitter resigned.'
al-bayyāᶜ-i-stawfa t-taman.   'The seller was paid in full.'

B. When a word ends with a two-consonant cluster and is followed by a word beginning with a single consonant. In such a case no helping vowel is used. Examples:

bank damm   'blood bank'   layl ṭawīl   'long night'
gurṭ dahab   'gold earring'   farg kabīr   'big difference'

If the article prefix 'al- is used with the second noun, the glottal stop of the article prefix is dropped, and thus no helping vowel is needed:

bank al-damm   'the blood bank'
giǰr al-gahwa   'the skin of coffee beans'
gurṭ al-ḥarēwa   'the bride's earring'

A four-consonant cluster is encountered in two cases:
A. When a word with a final two-consonant cluster is followed by a word with an initial two consonant cluster. In such a case the helping vowel /i/ is inserted between the two words.

gurṭ-i-nkasar.   'An earring was broken.'
ḥilm-i-ntasa.   'A dream was forgotten.'

B. When a word with a three-consonant cluster is followed by another word. In such a case no helping vowel is used:

mā 'iṣtabaḥtǰ bayḍ.   'I did not have eggs for breakfast.'
mā 'abṣartǰ ǰay'.   'I did not see anything.'

2.4.2 Assimilation
2.4.2.1 Regressive Assimilation

Regressive assimilation in SA is frequent. The first consonant of a two-conson-ant cluster of stops or fricatives, excepting the pharyngeals /ḥ/ and /ᶜ/, the glottal fricative /h/ and the dental stop /t/, assimilates to the second consonant in voicing. Examples:

b	+ k	as in	/yabki/	——>	[yæpki]	'he weeps'
f	+ g	as in	/ʾafgar/	——>	['ævgəl]	'poorer'
t̲	+ g	as in	/yaθgal/	——>	[yædgəl]	'it becomes heavy'
d̲	+ k	as in	/yadkur/	——>	[yætkur]	'he mentions'
k̄	+ b	as in	/ʾakbar/	——>	['ægb̄ɔr]	'older; bigger'
d	+ ḥ	as in	/ʾaḏḥak/	——>	['ɑḏḥɑk]	'I laugh'
ṭ̲	+ l	as in	/raṭl/	——>	[rɑdl̩]	'pound(weight)'
t	+ f	as in	/yatfil/	——>	[yædfil]	'he spits'
s	+ j	as in	/masjūn	——>	[mæzjūn]	'imprisoned'
z	+ f	as in	/razfeh/	——>	[ræsfeh]	'merry-making'
ġ	+ s	as in	/yiġsil/	——>	[yixsil]	'he washes'
g	+ ɣ	as in	/bugɣeh/	——>	[bukɣeh]	'one bugɣa'

Regressive assimilation also appears across word boundaries. Examples:

/ʾab + kabīr/	——>	['æpkæbīr]	'old father'
/bas + ġudweh/	——>	[bæzgudweh]	'only tomorrow'
/ragad + sālim/	——>	[rægɑtsælim]	'Salim fell asleep'

Total regressive assimilation occurs within words or across word boundaries in the following cases:

n	+ z	as in	/ᶜanzawwij/	——>	[ᶜazzɑwwij]	'We will marry off s.o.'
d	+ b	as in	/mā gad + bisɣ/	——>	[mægɑbbiɣ]	'There isn't any more.'
d	+ t	as in	/ragad + t/	——>	[rægætt]	'I fell asleep.'
			/ʾinwalad + t/	——>	['inwælætt]	'I was born.'

2.4.2.2 Progressive Assimilation

Progressive assimilation is rare in SA. The following are the only examples of progressive assimilation that were found:

h	+ d	as in	/waḥdi/	——>	[wæḥti]	'alone; by myself'
h	+ b	as in	/ʾahbal/	——>	['æhpæl]	'weak-minded'
j	+ l	as in	/yijlis/	——>	[yijjis]	'He sit down'

m + b as in /gambar/   ——>   [gambar]   'He sat down'
             /gambaᶜ/   ——>   [gambaᶜ]   'He walked arrogantly.

2.5 Stress

Stress is generally predictable in SA. Note the following on syllable structure in SA:

1. Every syllable contains a vowel, short or long; it begins with a consonant and may end with a vowel.

2. An intervocalic consonant belongs in the syllable with the following vowel, as in *da-hab* 'gold'.

3. If a word has an intervocalic two-consonant cluster, syllable division is between the two consonants, as in *mat.keh* 'pillow'.

4. A long vowel may be followed by one consonant only (in the same syllable, as in *ḏāl-lin* 'straying, lost(p)'). The last syllable in a word may end with a two-or a three-consonant structure, as in /'iṣtabaḥt/ 'I had breakfast' and /mā 'iṣtabaḥtš/ 'I did not have breakfast'.

1. In disyllabic words the ultima is stressed if it is long and if the penultima is short; otherwise the penultima is stressed. Examples:

wúgaf	'he stood up'	ṭábūr	'battalion'
zálat	'money'	dúlāb	'wardrobe; cupboard'
rajjál	'man'	físaᶜ	'fast(adv.)'
mása	'table'	máši	'no'

2. In three or more syllable words the penultima is stressed if it is long. Examples:

dakákīn	'stores'	garāgíšak	'your scarves'
ᶜammárīn	'masons'	hwāníti	'my shops'
šigára	'cigarette'	gārúra	'bottle'
dūlábayn	'two wardrobes'	absarnáhum	'we saw them'

3. Otherwise, the antepenultima is stressed. Examples:

ᶜállamayn	'they(f.) taught'	tazawwájaha	'he married her'
yáwmiya	'daily; always'	yaxtálifu	'they differ'
zāratHín	'sometimes'	buyútukum	'your homes'

| ḥalāluhum | 'their possessions' | ᶜallámatayn | 'they(d.f) taught' |
| madrásathum | 'their school' | 'absártuhum | 'I saw them' |

It should be pointed out that the above-mentioned stress rules are observed by Sanᶜāni speakers under normal conditions. Thus, in two-syllable words, I have heard both /wúgaf/ and /wugáf/ 'he stood up; /bígi/ and /bigí/ 'he remained', etc. In words of three syllables or more the rules mentioned aove were generally observed.

النظام الصوتي في اللهجة الصنعانية

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ملخص البحث . في اللهجة الصنعانية تنطق الدال تاء والطاء ضادا (أي /ت/ ← /د/ و/ط/ ← [ض])
على التوالي إذا وقعتا في أول الكلمة أو بين صائتين، والفونيم /ق/ ينطق جافًا (/چ/) حيثما وقع، وقد
حافظت اللهجة الصنعانية على إبقاء الهمزة في أول الكلمة ووسطها وآخرها. أما بالنسبة للصوائت
فبالإضافة إلى الصوائت القصيرة التي تمثلها الفتحة والضمة والكسرة ونظائرها الطويلة تحوي اللهجة
الصنعانية الصائت القصير /e/ ونظيره الطويل /ē/ والصائت الطويل /ة/، والإمالة صفة تتميز بها
هذه اللهجة. للصائت القصير /a/ والذي تمثله الفتحة ثلاثة ألوفونات في مواضع معينة من الكلمة وهناك
صوتان مركبان هما /اي/ و/او/ والعناقيد الصوتية لاتقع عادة في أول الكلمة كما هو الحال في الفصحى.
المماثلة الرجعية أكثر حدوثًا من المماثلة التقدمية. أما بالنسبة للنبر فهناك صفتان تميزانه وهما: (١) يقع النبر
على المقطع الأول في الكلمات التي تتألف من مقطعين طويلين و(٢) يقع النبر على المقطع الثالث من آخر
الكلمة إذا كان المقطع ما قبل الأخير قصيرًا في الكلمات التي تتألف من ثلاثة مقاطع أو أكثر.