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Palatalization in Seenku

The Seenku language, also known as Sambla, is spoken by around 16,000 people west of the Bobo-Dioulasso city in southwestern Burkina Faso. It is a Mande language with two dialects: Northern and Southern. Part of the Samogo language group, Seenku belongs to the Niger-Congo family and is primarily used in domestic, everyday life. The French colonized Sambla in July of 1898, which has resulted in the education of the Sambla people in French. Due to the presence of many language groups in the geographic area, different ethnicities have been using Jula and French for spoken and written communication, respectively, which threatens this language with endangerment. The source I will be referencing, *A Grammar of Seenku,* is written by Dr. Laura McPherson and was published in 2020. Primarily obtained through elicitation and texts, McPherson's work and research is an incredibly thorough study, documenting the grammar, typology, discourse, usage, and customs of the Seenku language and people. Her work is supported by the National Science Foundation Documenting Endangered Languages program. In this paper, I will be giving a brief overview of Seenku's consonant and vowel inventories and discussing its phonological process of palatalization, along with a short description of affrication, as they are somewhat intertwined with each other.

Seenku's consonant inventory contains 20 core phonemes plus two marginal phonemes, /p/ and /j/, and the five places of articulation are as follows: Bilabial, alveolar, palatal, velar, and labiovelar. Stops, orals, and nasals each exhibit contrast in their places of articulation (See Table 1), and its possession of the phonemic alveolar affricates /ts/ and /dz/ are unique, as these sounds are rare in Mande languages. I will be writing further on the phoneme /s/ later, which has two allophones: [ʃ] appears before [+high, +ATR] vowels and variably before /ʊ/, and [s] elsewhere. Additionally, note that both /k/ and /c/ neutralize to [t͡ʃ] when preceded by /i/, but otherwise show contrast in other environments.

Table 1
Seenku Consonant Inventory

Seenku consonant inventory

	Labial	Alveolar	Palatal	Velar	Labiovelar
Plosive	(p) b	t d	c ɟ <ȷ>	k g	kp gb
Nasal	m	n	ɲ	ŋ	ŋm
Affricate		ts dz			
Fricative	f	s			
Approximant		l	(j <y>)		w

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

Seenku also has a rich vowel inventory, consisting of 8-9 phonemic oral vowels and five nasal vowels. Seven of these, /i e ɛ a ɔ o u/, are found in the usage of all speakers, which is notable because having seven vowels is characteristic of Mande languages (See Table 2).

Table 2
Seenku Vowel Features

Seenku vowel features

	ɪ	e	ɛ	a	ɔ	o	ʊ	u
[front]	+	+	+	-	-	-	-	-
[back]	-	-	-	-	+	+	+	+
[high]	+	-	-	-	-	-	+	+
[low]	-	-	-	+	-	-	-	-
[ATR]	+	+	-	-	-	+	-	+

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

High vowels in Seenku, notably those with [+ATR], often act as a catalyst, revealing the allophonic variations of its preceding consonant. Two main processes are found, and they are palatalization and affrication. McPherson observes that some speakers switch the allophones revealed by these processes, possibly indicating an ongoing language change. Palatalization is triggered by Seenku's high vowels /i/ and /u/ and affects the phonemes /s/, /k/, and /g/. Also termed the "post-alveolarization" of the preceding consonant, it often coincides with affrication in its process of turning palatal stops into post-alveolar affricates. It is important to note that "the palatal allophones of /k, g/ derived in this section are an abstract intermediate stop on their way to [t͡ʃ] and [d͡ʒ]" (McPherson 64).

Least ambiguous in /s/, the palatalization of this phoneme is triggered by the vowels /i/ and /u/. [s] is generally not observed before Seenku's [+high, +ATR] vowels, and in its place is found the post-alveolar fricative [ʃ] (See Table 3). There are, however, exceptions to generalization: The birth order name *Sì* 'first son', the adverb *súu* 'directly', and the auxiliary verb *sɻ̌* 'be' are variably realized as [*sì*], [*súu*], and [*sɻ̌*]. Regardless, the phoneme /s/ is only found in onsets, so McPherson uses realis infixation, which contains a high vowel, to derive an environment that demonstrates how [s] and [ʃ] are allophones of the same phoneme (See Table 3). This example shows that [s] and [ʃ] exist in complementary distribution, surfacing as [ʃ] before the high vowel /i/, and [s] elsewhere (ignore the accent marks indicating tone).

Table 3
Allophones of /s/

	Irrealis		Realis		
a.	*sɛ̋*	[sɛ̋]	*sʲɛ́*	[ʃʲɛ́]	'shave'
b.	*sɔ́*	[sɔ́]	*sʲɔ́*	[ʃʲɔ́]	'bury'

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

Now that we have determined the allophonic nature of [s] and [ʃ], it is possible to continue with the analysis. Palatalization is demonstrated in Tables 3 (above) and 4 (see below), which shows that /s/ surfaces as [ʃ] when followed by /i/ and /u/.

Table 4
Palatalization of /s/

a.	*sʲ́*	[ʃʲ́]	'water jar'
b.	*sʲúu*	[ʃʲúu]	'antelope'
c.	*sʲ́a*	[ʃʲ́a]	'Bobo-Dioulasso'

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

The rule for /s/ palatalization in Seenku is stated below. It is important to note that palatalization is also observed inconsistently and lightly with the [+high, -ATR] vowel /ʊ/: *sʊ̂* 'song' is slightly palatalized, the extent to which is not as great as that found with /u/.

/s/ Palatalization Rule:
/s/ [ʃ] / __[+high, +ATR]
/s/ [s] / elsewhere

Palatalization is also somewhat observed in Seenku's velar stops /k/ and /g/, but these phonemes only palatalize before the vowel /i/ (therefore remaining velar in its place of articulation when followed by /u/, as seen with *kû* [kû] 'thing', and *à gù* [à gù] 'his neck'). Before /i/, velars and palatals merge and surface as postalveolar affricates [t͡ʃ] and [d͡ʒ], which is analyzed as a two-part change: Velar stops first palatalize (into palatal stops), after which they affricate in Seenku's affrication process discussed below. McPherson writes that "Unlike [s] and [ʃ], velar palatalization represents a neutralization process, where a phonemic contrast that is clear in certain environments is lost before /i/. As such, it is not possible in the case of static generalization to determine the underlying form as unambiguously /k/ or /c/, /g/ or /j/. […] It should be noted than an underlying sequence like /ki/ would be pronounced in the same way" (McPherson 65-66). She adds that she will be transcribing all underived stems with the palatal phonemes in the future examples regarding affrication, since it is closer to the surface form. Additionally, because realis formation inserts /u/ instead of /i/ after velars (which don't trigger palatalization), no active alternations between velars and palatals are found. Palatalization is also unable to occur in environments derived by vowel hiatus resolution, one of Seenku's post-lexical phonological processes (See Table 5 where [k] doesn't palatalize after the removal of [ɛ] to resolve vowel hiatus)

Table 5

Palatalization (or the lack thereof)

kɛ́ í wó tɛ̃̀ → [kí wó tɛ̃̀]
COP 2PL EMPH GEN
'It is yours (pl.).'

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

To demonstrate the process of palatalization in /k/ and /g/, I will be briefly discussing the relevant portions of Seenku's affrication process, since they ultimately surface as [t͡ʃ] and [d͡ʒ]. In this process, coronal (alveolar and palatal) stops affricate before the vowels /i/ and /u/. In the case of /k/ and /g/, they first palatalize into /c/ and /ɟ/, respectively (rule below).

Palatalization Rule:
[-son, +back, αvoice] [-son, -back, αvoice] / __ [high, +ATR]

This, as mentioned before, is not visible because McPherson decided to transcribe these underived stems as the palatal phonemes instead of the velar ones when followed by /i/. Regardless, the coronal stops are next subjected to the coronal affrication rule (stated below), stating that coronal stops affricate before [+high, +ATR] vowels.

Affrication Rule:
[+COR, -del. rel.] [+del. Rel] / __ [+high, +ATR]

This alternation is exemplified in Table 6, where /c/ and /j / (or [ɟ]), the result of the palatalization process, affricate and surface as [t͡ʃ] and [d͡ʒ] when preceded by /i/ and /u/.

Table 6
Coronal affrication

a.	*cî*	[tʃĩ]	'house'
b.	*jĩ́*	[dʒĩ́]	'laugh'
c.	*cɔ̀ɛ*	[tʃɔ̀ɛ]	'vomit'
d.	*jɔ̀*	[dʒɔ̀]	'year'

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

An active alternation is shown in Table 7 (see below). As she did before, McPherson derived a high vowel environment with realis infixation, showing how /c/ affricates into [t͡ʃ] and /j/ into [d͡ʒ] when followed by /i/. Note that in realis formation, [u] is never inserted after a palatal in Seenku, so we only have examples involving [i].

Table 7
Palatal stop/affricate alternation

	Irrealis		Realis		
a.	cɔ́	[cɔ́]	cɪ̋ɔ̋	[tʃɪ̋ɔ̋]	'scoop'
b.	cɛ̄̀	[cɛ̄̀]	cɪ̄̀ɛ̄	[tʃɪ̀ɛ̄]	'take off (hat)'
c.	jɔ̋	[ɟɔ̋]	jɪ̋ɔ	[dʒɪ̋ɔ]	'draw (water)'
d.	jɔ̄̀	[ɟɔ̄̀]	jɪ̄̀ɔ̄	[dʒɪ̀ɔ̄]	'grill'

Source: McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.

Works Cited:

McPherson, Laura. *A Grammar of Seenku*. De Gruyter Mouton, 2020.