New Vanduul phrases from *Around the Verse*

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ABSTRACT: This paper examines the new interview with Britton Watkins, creator of the fictional Vanduul language. The interview introduces new insight into this Vanduul phonology and grammar. This study discusses the modes of communication used by the Vanduul, their writing system and what we can learn from the ortography, resulting in a revised sketch of phonology. Two new Vanduul inscriptions and six new phrases transcribed from the video are presented. The paper also covers some new ideas about grammatical issues such as language typology. Published: 2017-01-24 Version: 2017-03-15.321

RECENTLY, NEW INFORMATION about the alien languages from Star Citizen video game was published. Star Citizen Youtube segment *Around the Verse* featured an interview with the creator of the Vanduul language, Britton Watkins (*Star Citizen Special Edition: Around the Verse - Alien Languages* 2017). In the remainder of this paper we refer to this new video. During the interview, we hear a discussion about Vanduul and Xi'an languages, and what design decisions influenced the creation process. This paper will focus on Vanduul, which has been already studied by the author (Sipola 2016).

MODES OF COMMUNICATION

The video highlights two other Vanduul modes of communication in addition to their spoken language. Bioluminescense adds an extra layer of tone or mode into the language. Body and hand gestures seem to be another way of communicating basic messages silently. Watkins calls it a "tapestry where the different elements overlap", which leads me to think that there is redundancy between the three systems. We also learn that there are mood particles, often accompanied with movements, that come to the end of phrases or sentences.

WRITING

History of the writing system

In the video an internal history of the writing system is given. Vanduul writing is based on the shapes that the three fingers of a Vanduul individual can produce. The alphabet evolved from conquest markings into a calligraphic looking typeface and then into the modern computer screen typeface. Others have published the writing system from the video (*Vanduul alphabet* 2017). As a whole, the Vanduul seem to be remarkably phonetically aware since their writing system groups similar sounds with similar shapes. I will not focus on the writing itself but the ortographical and phonetic information that can be learned.

Constructing phonology from ortography

By looking at the Latin transcription of the Vanduul alphabet we can probably learn more about the intended phonology. Below I construct a phonology based on the newly discovered ortography. It is compared to the phonology constructed from the earlier available material (Sipola 2016).

Consonants

The following consonants and consonant groups are given above the actual Vanduul letters: vw, vr, w, h, x (-xh), q, qq, qy, d, dy, p, b, y, l, r, th, thy, t, ' (-?), sh, shq, s, ss, z, zz, m, n, ng. The double consonants most probably represent geminate sounds. We already have attested $\langle qq \rangle$ in the name of the character *Óqquray*. It seems that $\langle xh \rangle$ and $\langle ' \rangle$ appear only at the end of a word.

	labial	alveoral	palatal	velar	uvular	glottal
stops	рb	t d			q	?
fricatives	?f ?v	θ			Х	
sibilants		S Z	ſ			
nasals	m	n		ŋ		
trill		r				
lateral appr.		1				
approximants	W		j			h

Table 1: Consonant phonemes with IPA symbols.

Table 1 shows the presumed system. There is a glottal stop [?] (perhaps only at the end of a word) and a glottal approximant [h]. We also learn that there are labial stops [p] and [b], as well as an unvoiced alveoral stop [t].

However, there is no velar stop [k] as I interpreted earlier (possibly a mispronunciation of [q]). There seem to be three labial fricatives $\langle vw \rangle$, $\langle vr \rangle$ and $\langle w \rangle$ but it is hard to determine their exact qualities except that there indeed is a voiced labio-velar approximant [w]. There is also a theory that $\langle vw \rangle$ is the voiced bilabial fricative [β] (SavvyBlonk 2017). Voiced sibilant [z] appears and [ʒ] becomes dubious, so I have removed it.

The quality of $\langle shq \rangle$ is uncertain for the moment, perhaps it is a pahryngealized variant. It is safe to assume that $\langle x \rangle$ is the uvular fricative but how the word-final $\langle xh \rangle$ differs from it is uncertain. I have introduced a velar nasal [ŋ] but being the only velar sound it does not fit in, so perhaps it should be a uvular sound. It is not clear whether $\langle qy \rangle$, $\langle dy \rangle$ and $\langle thy \rangle$ are palatalized or some other variations.

VOWELS

The following vowels are given: a, aa, u, uu, e, ey, o, ow, i, ii, aw, aaw, ew $(/\infty)$, eew $(/\infty)$, ay, aay.

Table 2: Vowel phonemes with IPA symbols.	•
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	front	back	
close	i i:	u u:	
close mid	e	0	
open mid	œœ:		
open	a a:		

Table 2 shows the vowels. This list also confirms the missing $\langle ii \rangle$ from the earlier research. In addition there seems to be several diphthongs: [ei], [ou], [au], [ai], [ai] and [a:i]. However, it is not certain that the ortography really represents diphthongs, since the letter pair $\langle ew \rangle$ is an independent vowel [∞], so the vowels letters combined with $\langle w \rangle$ might actually be some variations of those vowels. It is quite certain that $\langle ay \rangle$ is pronounced [ai] because we hear it in the real examples.

TONES

What is interesting is that at the bottom of the chart there are symbols for five tones. Apparently tonality is phonemic in Vanduul, although maybe more like a tone accent than full contour tonality. The tones are for short and long vowels: a, aa (mid, unmarked), á, áá (high), à, àà (low), ă, ăă (rising) and à, àà (creaky low). As I wondered in the earlier research, the rising and creaky vowel qualities at the end of sentences actually are phonemic in nature.

NEW VANDUUL PHRASES

The video contains some old and some new material. In the beginning we hear the same Vanduul sentences as in the earlier video (*Squadron 42: Behind the Scenes - Andy Serkis* 2016; Sipola 2016). New material is found later in the video between interview sections. There are two inscriptions in the Vanduul script, one line by Britton Watkins and five lines by Patrice Naiambana.

Inscriptions

Title card Others have noticed that the title card can now be transcribed with the expected translation "around the universe" (Reis Leven | Koop 2017). We hear these words spoken by both of the men, see below.

<tiinngo ma yeewl>

[tiːnŋo ma jœːl]

Ortography chart We can also read the title of the chart, which gives us the native words for 'ortography' and 'Vanduul'. The pronunciation is just a guess since we don't yet know the values for $\langle thy \rangle$ (perhaps palatalized), $\langle shq \rangle$ (perhaps pharyngealized) or $\langle vw \rangle$.

<thyŏwshqang vwanduul>

[θ^jǒuʃ`aŋ vanduːl]

Britton Watkins

Britton Watkings demonstrates (at 12:33–12:37) the unusual (to English speakers) open mid front rounded vowel [∞] and the glottal stop [?] at the end of the sentence. This confirms that the glottal stop indeed is a phoneme contrary to what I believed earlier (Sipola 2016).

12:33–12:37 Britton Watkins demonstrating open mid front rounded vowel [@] and glottal stop [?].

[t^hiŋːoma'jœ́l tul'he?]

No meaning is given although the title card features the first part and apparently Patrice Naiambana says it again later. I am not sure if the aspiration in $[t^h]$ is supposed to be there. If so, then all the unvoiced stops might be aspirated.

Patrice Naiambana

Patrice Naiambana reads many new lines that we have not heard before, although many of them resemble what was heard in the earlier video (Sipola 2016). These are probably Óqquray's lines. We cannot be sure about the accuracy of pronunciation here.

13:33-13:37

[oq:u'rai ∫alju'?uveχ]

After this another person says off-camera: "Be cautious, my Óqquray", which might be the meaning of this phrase. This is quite similar to ['kurae ∫al'juve:] that is heard in the earlier video.

13:40-13:44

[∫a'lim fi'sadu 'lusa 'kujaχ mlaχ'nŭ]

There's similarities to a phrase in the earlier video: ['kai 'fisad 'jusa 'ku-jam,lax ↗ nu::].

13:46-13:48

[diŋgumei'jul tul'he?]

This is probably the same phrase that Britton Watkins says earlier.

13:50-13:53

[∫auna'kʰunà̪ːː]

Again, after this, someone says off-camera: "See, your blood must cost us",¹ which might be the meaning of this phrase. Here the creaky voice is clearly heard at the end.

13:56-14:01

['iwe:xax 'xuʃdavuh bud'nadù::]

In the earlier video we heard a half-remembered humorous version of this sentence.

The difference between the assumed phonology and what is actually heard is still quite substantial. It would be possible to create an approximation again from the spoken lines but it is certain that the ground truth is in the ortography and the phonology behind it.

¹Another interpretation (DT_smash 2017) of the off camera voice is "see what your blood lust costs us", although perhaps "see, your blood lust cost us" is the most accurate guess.

LANGUAGE TYPOLOGY

We also learn that Vanduul is a synthetic language with long words. In synthetic languages there are many morphemes in one word, in contrast to analytic languages that have few morphemes in a word. Hungarian and Russian are examples of synthetic languages (Aikhenvald 2007). We do not know yet whether Vanduul is more agglutinating or fusional, but my guess is that it is more in the former category. Another grammatical hint is that there are mood particles at the end of sentences, but unfortunately there are no clear examples about this phenomenon.

CONCLUSION

This paper presented a new framework for Vanduul phonology based on the information from the new video. Several new instances of Vanduul use were also identified. A big question is how much the actors' pronunciation differs from the intended. We probably should construct another dialect or low register phonology for actual spoken Vanduul, and interpret written Vanduul through the more formal (and probably older) phonology. We still do not have enough material in actual story context to start guessing word (and morpheme) meanings, and also to start inspecting the grammatical structure of the language. As new new findings become available, it will be possible to slowly build a coherent grammar for the Vanduul language.

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