Pat-

Here is something of a preliminary description. As you can see it is not exactly complete (even for this stage in the game). However, it is fairly complete and a very honest statement of how far short of the mark my data actually falls. Please note that I have not bothered to say ANYTHING about syntax. We both know from the data that Han is strongly head-final. In fact I can't think of a single counter example.

Mike asked me to give him a copy of this report. I told him it would not be done before he leaves. Not that I expect you to share this with him, but I would prefer to take some time over the break to polish it before turning it over to him.

I wrote the above note before meeting with you today. As you will see I did not get to the vowel discussion. I apologize. I will take a look at it on Sunday,* as I would like to have something completed on that myself. I will be happy to give you a copy on Monday if you like. It is now 20 to 4 and I still plan to attend the talk this afternoon, so obviously I will not complete this today.

Hope I haven't left you hanging.

Thanks!

Patrick

I also did not type up (ran out of time) ~~the~~ a discussion of classificatory verbs — such as they are. This will have to wait until sometime in the future of the study.

Pm.

* Assuming I can get my box back from you sometime today?! ☺

A Brief Outline of Han Phonology & (to some very small extent) Morphology as reflected in my fieldnotes (warts and all)

by
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December 12, 1997

1.0 Consonants

Han has a system of 42(?) consonants. These are distinguished by 8 places and 10 manners of articulation. Among the places of articulation I have included glottal, velar, palatal, retroflex, alveolar, dental, labial, and lateral. I recognize that both retroflex and lateral are generally regarded as manners of articulation rather than places, however, within South Asian languages and linguistics, retroflex pronunciation has long been recognized as a separate place of articulation and given this status on phonology charts. While I can not make the same claim for lateral, as the chart below shows, treating laterals as a series equivalent to dental or velar provides for a much more elegant phonological chart. The manners of articulation include aspiration and glottalization for the stops, voicing and glottalization for the affricates and voicing for the fricatives. Notice, I have treated sibilants as fricatives in the table below.

I will now provide a brief description of each series. I will attempt to 1) describe the system as I understand it from my notes and 2) note the outstanding questions which arise from my description.

	Labial	Dental	Alveolar	Lateral	Retroflex	Palatal	Velar	Glottal
Stops								
-asp.	b		d	dl	dr		g	?
+asp.			t	tl	tr		k	h
+glot.			t'	tl'	tr'		k'	
Affricates								
+voice		ddh	dz			j	kɣ	
-voice		tth	ts			c	kx	
+glot.		tth'	ts'			c'		
Fricatives								
+voice		dh	z	l	zr	z	gh	
-voice		th	s	ł	sr	s	kh	
Nasals	m	n					ŋ	
Semi-vowels	w			r		y		

1.1 Word Final Stops

While most Han consonants may appear syllable initially, only [t], [k], [?], [h],[n], [ŋ], [l], and [r] may occur word or syllable finally. This results in an extremely limited number of consonant clusters. Note, the status of both [t] and [k] in word final position is uncertain. It is unclear from my data whether these are +aspirated or -aspirated. I have NOT regularly distinguished these in the data and they must be checked.

1.2 Velar

Han has a full system of three velar stops, two velar fricatives and one nasal. While my data is inadequate for a complete description of this series, I can provide a brief description (based in part on conjecture).

All velar stops and fricatives may occur syllable initially. However, as the discussion above suggests, only [k] may occur word or syllable finally. [Please note that the distinction between aspirated and unaspirated in word final position is not clearly distinquished in my data.]

The distinction between the velar stop and affricate series is a false one. Mr. Juneby has a tendency to fricativize velar aspirates and I have at times written the same word with /kx/, /kˣ/, and /kˣʰ/ in my data (e.g., **kˣʰoh** vs. **kˣoh** 'not'). This conclusion is supported by the fact that [k] is found almost exclusively in word final position in my data while /kx/, /kˣ/, and /kˣʰ/ are found in syllable initial position. The situation is confirmed by the presence of /kɣ/ and the total lack of [g]. Given the tendency to fricativize velars it is likely that / kɣ/ may in fact be the missing [g]. This is confirmed by the correspondence between Han **kɣaeh** 'rabbit' and Gwich'in **geh** 'rabbit'

The velar nasal /ŋ/ has a limited distribution and is probably only an allophone of [n]. It is found in only two examples in my data: šɪɬɪŋ 'my dog' and nəŋkˣą̇i 'two'. Notice, that /ŋ/ is found only word finally and before /kˣ/. Further, in the case of šɪɬɪŋ 'my dog' compare Gwich'in šɪlɪk 'my dog'. As long as šɪɬɪŋ 'my dog' remains the only independent example of /ŋ/, it is unlikely that it has an independent phonological existence.
There are minimal pairs!!

1.3 Palatal

Han has a full series of palatal affricates and sibilants. Each of the affricates occurs freely in syllable initial position. The voiced affricate [j] may occur in the consonant clusters /nj/, /hj/, and /tj/. Following /h/, there is a tendency for to strengthen the onset of [j], even over word boundary, e.g., k'ah jæ' 'yesterday' tends to be pronounced as k'ah djæ'.

The Han palatal fricatives consist of the sibilants [ž] and [š]. Both occur freely syllable initially. However, /ž/ and /š/ alternate morpho-phonemically following [h]. In short, [ž] becomes /š/ when preceded by [h]: íhšì 'I breathe' vs. í·žì 'you breathe'. *I think there's something goin on w/ S initial as well*

There are two cases (and perhaps more) in my data in which the distinction between the voiceless affricate /c/ and the voiceless fricative /š/ is unclear: šɪdɪk vs. cɪdɪk 'they are walking'. All cases of this sort appear to involve verb forms and may therefore be due to a single alternating morpheme.

discuss y — *all 3 instances of it? Don't have my notes in front of me, but it was auspiciously infrequent & distributionally limited — altho' I do believe it exists*

1.4 Retroflex

Han has a complete series of retroflex stops and fricatives. All retroflex stops occur syllable initially. There is no evidence of morpho-phonemic alternation between them. However, I am not certain that I have consistently recorded the glottal vs. non-glottal distinction in my data.

The retroflex fricatives are relatively rare in my data. As a result I have [sr] word initally only, while [zr] occurs syllable initially (i.e., both word initial and word internal). The relative rarity of these phonemes is reinforced by Isaacs own treatment of zrąi 'black'. For most of the semester he provided the simple forms zrąi 'black' and ji zrąi 'it is black', he recently "corrected himself" — *it's still syllable initial (?)* and provided the form lɪzrąi 'black', showing the common French definite article found in most French loanwords (cf. lɪzræ̨ 'money').

Note: It has been suggested that velar consonants may also be retroflex. This distinction is not noted in my data and so can not be commented on here. *I didn't hear any + they wld, definitionally, be a physical impossibility; or perhaps classified as a co-articulation*

1.5 Alveolar

Han has a complete series of alveolar stops, affricates, and fricatives. While my data suggests that the alveolar stops appear freely in syllable initial position, I can not be certain of this. First, I fear that I have not maintained a regular distinction between the aspirated and unaspirated stops. As a result, the -aspirate [d] is found in only two examples in my data: da·cǫ 'count' and deih 'grouse'. Second, I am certain that I have not maintained a clear distinction between the glottalized and aspirated stops. As a result, I had (until yesterday) [t] written exclusively word finally and [t'] written virtually everywhere else (assuming there is no additional overlap with [d]). Meeting with Isaac yesterday, however, I was able to determine that [t] does indeed occur syllable initially. (Note: as with the velar series, the status of word final /t/ remains uncertain.)

The alveolar affricates all occur freely in syllable initial position. However, the voiced affricate [dz] is never found word initially in my data. My data further suggests that the onset may be voiceless, compare cɛi·tzɨ 'I usually dance' and c'əho·dzɨ 'I dance'

The voiceless affricate [ts] may also occur in clusters following /h/ or /n/.

The alveolar fricatives are exceedingly rare in my data. The voiceless fricative [s] is found only in the loan word məsį' 'thankyou'. The voiced fricative [z] only occurs in forms containing the root -zǫ· 'good'.

1.6 Dental

Han (according to my data) has a full series of dental fricatives and a partial series of dental affricates. The voiced dental fricative [dh] is found regularly syllable initially. It may occur in a cluster with [n]. The voiceless fricative [th] is found in only one of my examples: nithan 'I want'. However, this example is also written elsewhere in my notes as nihtthən 'I want'. The second form probably reflects a pause in careful pronunciation. The lack of other examples may suggest that I have not maintained a clear distinction between /tth/ and /th/.

Turning to the affricates, we find a partial series. There are no examples of [ddh] in my data. Given that the phoneme [ddh] is rare in neighboring Gwich'in might suggest that its lack in Han is a true gap in the system. This conclusion is supported by the fact that the word 'mountain' is /ddhah/ in Gwich'in but /dhao/ in my Han data. This form must be double checked to be sure I have not simply misinterpreted /ddh/ as /dh/. *I don't have any either*

The voiceless affricate [tth] is found regularly in my data in syllable initial position. However, [tth'] is limited to two examples only: shɪtth'ən 'my knee' and shɪtth'ən 'my bone'. Again this may reflect my own confusion between the glottalized and unglottalized forms. *I assume these 2 are same lexeme, dif. glosses*

-asp? or are you shifting parameters?

1.8 Lateral

Han has a complete system of lateral affricates and fricatives. While the voiced affricate [dl] is common in my data, both the voiceless [tl] and glottalized [tl'] are far less common. There is no evidence, however, of an alternation between these or that my data is "confused" in the way so many other series seem to be.

The lateral fricatives include both [l] and [ł]. Both occur syllable initially. In addition, the voiced fricative [l] may occur word finally and in clusters with [n]. The voiceless fricative [ł] may also occur in clusters with [n] or following [h]. [l] never follows [h]. This suggests that an alternation similar to that found for the palatal fricatives is possible.

Finally, notice that the voiced fricative is often heavily spirantized but this spirantization appears to be in free variation. Consider, for example šɪnłiæ' 'my hand' and nɪnliæ' 'your hand'.

discuss r

1.9 Glottal

The glottal series consists of ['] and [h]. Both occur freely, both syllable initially and finally.

1.10 Labial

The labial series is the most defective of all the Han series. It consists of one stop [b], one fricative [w][1] and one nasal [m]. While all three seem fairly in the data, I suspect that they additional research will show that they are not all that rare.

2.0 Vowels

Han has a system of 9 vowels and _____ dipthongs. Length and nasalization is distinctive for many (but not all) of these in my data.

Vowels

	Front				Back
High	i	I			u
Mid	e	ö	ə		o
Low	ä				a

3.0 Tone

In Han the following tonal patterns are distinctive: low, unmarked (=mid or high depending on position in the sentence or word), high-low, and low-high.

low   **unmarked**   **high-low**   **low-high**

3.1 Behavior of unmarked tone in the sentence

As unmarked tone may surface as either high or mid in the sentence, some discussion of this point is necessary.

In the Han sentence, the actual pitch of an unmarked syllable seems to be determined by its proximity to a low-marked syllable. In a sentence, with out a contrast (i.e., all syllables are unmarked) the tonal contour of the sentence appears more or less flat.

However, if an unmarked syllable directly precedes a low marked syllable, the unmarked syllable sounds distinctly high in pitch, thus contrasting with the low.

In sentences or phrases in which several unmarked syllables precede a low marked syllable, the syllable directly preceding the low is distinctly high. However, the unmarked syllables preceding this high may appear slightly lower than the high. This results in a distinct mid-high-low contour. In general, the longer the sentence the stronger the contour. Compare the following sentences:

The fact that an unmarked syllable may surface as either a mid or high tone in the utterance may be responsible for some surprising "false lows". In general, the possessive prefix surfaces with a clearly unmarked tone, as evidenced by the contrasts below:

_____

[1] [w] is treated here as a fricative for the sake of symmetry.

However, in isolation, some instances of the possessive prefix appear to have a low tone mark. This might be taken as an indication that some stem syllables are in fact high-marked and therefore require the unmarked syllable which precedes to surface as low.

However, this is a counter intuitive explanation. In a system in which both high and low tone were lexically marked, we would expect lexically high-marked syllables to be maintained as distinct from unmarked syllables in all positions. This would predict that the low-high contour evidenced in the example above, should be maintained within longer utterances. This is not the case.

Patrick, put a final copy in campus mail so we can compare examples on one of my returns

We can explain the "odd" behavior of the example above if we accept that an unmarked syllable may surface as either a mid or high tone, depending on its position in the longer utterance. *Explain w/ Examples?*

3.2 Spreading and Simplification

There are a couple rules that must be considered when dealing with Han tone:

1. **Low-Spread:** A low tone spreads to the right.

   zhùrh kγæh nó'į   'The wolf sees the rabbit'

2. **Back-Spread:** A high-low contour tone back-spreads to the preceding syllable, thus maintaining the high-low contour.

   kγæh theĩ nó'į   'The rabbit sees the dog-salmon'

At first glance, it would appear that a simplification rule (i.e., high-low contour becomes low) would work just as well as a back-spreading rule. In short, as an unmarked tone is expected to surface as high, the same sentence contour would arise if we assumed that a high-low contour tone was simplified to a low. However, simplification would not explain why the contour tone is maintained utterance initially. *unless S-initial is special*

theĩ zhùrh nò'į   'The dog-salmon sees the wolf'
theĩ kγæh nó'į   'The dog-salmon sees the rabbit'

When a high-low contour tone precedes a low marked tone, the resulting contour is low low. This may be interpreted in one of two ways. Either the low-spreading rule takes precedence, or the low tone is opaque to the back-spreading rule.

Clearly, more data is necessary. No where in my data do I have an example of what happens when a high-low contour is found between two lows (easily corrected by asking the question 'Does the dog-salmon see the wolf' using the question particle ya). Nor does my data contain unambiguous examples of low-high contour tone.

we simply need more comparable frames (+ more pragmatically likely!) sentences

II. Morphology (as pathetic as it is)

Unfortunately, I haven't the data to say much about morphology. However, I will discuss two points. First, I will address some of the noun possession. Second, I will discuss some of the basics of the verb.

1.0 Noun possession

Han nouns may be alienable or inalienable. The category inalienable largely consists of body parts and kin terms. The alienable category is virtually everything else.

The possessive prefixes consist of the following:

shə-	my
nə-	your
wə-	his/hers/its
nii-	our
xwə-	you guys'
hoo- ʔuƛ̓i	their
ch'ə-	indefinite

Their are several morphophonemic alternations that have to be dealt with.

1.1 Vowel Initial Stems

First, in all forms containing a schwa, the schwa is deleted when attached to a vowel initial stem. For those prefixes containing a full vowel, however, an epenthetic consonant is inserted between the prefix and the stem. The epenthetic consonant is either [h] or [w]. While there is insufficient data to determine the exact rules for consonant insertion, it is likely that [w] is inserted following [oo] while [h] is inserted elsewhere.

shə- + aj^{y}e	shaj^{y}e	'my older sister'
nə- + aj^{y}e	naj^{y}e	'your older sister'
wə- + aj^{y}e	waj^{y}e	'his/her older sister'
nii- + aj^{y}e	niihaj^{y}e	'our older sister'
xwə- + aj^{y}e	xwaj^{y}e	'you guys' older sister'
hoo- + aj^{y}e	hoowaj^{y}e	'their older sister' — I have this as /hʊ-/ (?)
	uʔ	
ch'ə- + aj^{y}e	ch'aj^{y}e	'somebody's older sister'

1.2 Consonant Initial Stems

For consonant initial stems, the following rules govern the outcome of schwa in possessive prefixes.

1. Following a palatal consonant, the schwa surfaces as /ɪ/. (Thus the first person ~~good~~ possessive prefix is always shɪ- before a consonant.):

   shɪnnǽʰ   'my mother'

2. Between nasals, the schwa surfaces as ~~≢~~ /ə/.

   nə́nnǽʰ   'your mother'

   however, I have [nɪ̃(n)nɛ́]ʰ 'our mo'
   —This rule is odd + needs to be more powerfully motivated (ie, more data, as value)

3. Following a nasal, but before a non-nasal consonant, schwa is deleted and the nasal becomes syllabic.

   n̩ʲǽ·   'your friend'

   how about 'our fa' — I have [nɪ̃čɛ́]ʲ

4. Following [w] schwa surfaces as either /ö/ or /ɪ/. It is /ö/ if the next vowel is /æ/. It is /ɪ/ elsewhere.

   wɪchō·   'his clothes'
   wöchǽ'   'his father'

1.3 Stem alternations

While there is not enough data to postulate rules, there are two stems which change shape when preceded by a possessive prefix. Notice that ts'át 'blanket' also changes tone marking. *and . . . ?*

   ts'et 'cap'   shɪts'æ 'my cap'
   ts'át 'blanket'   shɪts'àa 'my blanket'

2.0 Verbs

Clearly the data available is insufficient for even a cursory discussion of the Han verb. However, as some discussion is required, I will attempt to shed some light on the Han verb by discussing a few key paradigms.

All Athabaskan languages maintain 4 separate basic verb conjugation patterns. These patterns are historically the result of the interaction between the person prefix with one of four seperate classifier prefixes.

2.1 Ø-Classifier

The Ø-Classifier is well exemplified in our data. The prefix patterns are exemplified in the conjugations for 'chop' and 'sleep' given below. Notice that in 'chop' the dh-perfective prefix is

added to the beginning of the perfective paradigm while the dh-imperfective prefix is added at the beginning of the 'sleep' imperfective paradigm. (Note: Holes in the paradigms represent forms I was unable to obtain reliably.)

Notice that the stem for 'sleep' varies not only from mode to mode but also for person within the various modes. This reflects that historically Han probably maintained a dual distinction for some verbs similar to that still found in Gwich'in. In short, several core Gwich'in verbs (such as 'sleep') indicate singular-dual-plural distinctions. In this handful of verbs dual and plural share the same plural person-classifier perfixes and the distinction is maintained such that the dual uses the same stem as the singular while the plural uses a special stem.

Chop

	Imperfective	Perfective	Future
1sg.	íht'əh	dhíit'əh	chít'əh
2sg.	ínt'əh	dhínt'əh	chínt'əh
3sg.	ít'əh	dhít'əh	t'áht'əh
1pl.	tr'ít'əh	tr'íht'əh	tr'áht'əh
2pl.	aht'əh		t'áht'əh
3pl.	höt'əh		hít'át'əh

Sleep

	Imperfective	Perfective	Future
1sg.	dhíhchį	íchè'	chíhchêo
2sg.	in chį	ínchè'	chínchêo
3sg.	í chį		t'áhchêo
1pl.	tr'óht'ər	tr'áht'ər	tr'it'áhchêo
2pl.	dháht'ər		t'áht'ər
3pl.	dhoht'ər	háht'ər	höt'aht'ər

2.2 ł-Classifier

The ł-Classifier conjugation pattern is exemplified in our data by the verb 'make'. Again note that the perfective contains the dh-perfective prefix.

Make

	Imperfective	Perfective	Future
1sg.	őtsèi	dhítsài	tőtsèi
2sg.	áhtsèi	dháhtsài	táhtsèi
3sg.	óhtsèi	dhóhtsài	táhtséi
1pl.	tr'ótsèi	tr'óhtsài	tr'ítáhtsèi
2pl.	áhtsèi	dháhtsài	táhtsèi
3pl.	hóhtsèi	hóhtsài	hőtáhtsèi

when did you get The future? (!)

2.4 l-Classifier

A complete l-Classifier paradigm does not appear in our data. However, a mixed paradigm for the verb 'cough' was obtained. This mixed paradigm appears to partially follow the Ø-Classifier paradigm and partially the l-Classifier. Forms which follow the expected l-Classifier pattern are in bold.

Cough

	Imperfective	Perfective	Future
1sg.	íhkòh **eíkòh**	**eíkò'**	
2sg.	ínkòh	ánkò'	
3sg.	íkòh	**hókò'**	
1pl.	tr'íkòh **tr'ókòh**	tr'ókò'	
2pl.	áhkòh	**áakò'**	
3pl.	híkòh **hókòh**	**hóokò'**	

2.5 D-Classifier

The D-classifier is as badly documented as the l-classifier. The following paradigm for 'know' is perhaps the best example. The h-prefix is the areal prefix commonly used to refer to thoughts, ideas, and places. In this case it stands for the thing known. The w-prefix is most probably another object prefix, probably referring to a person (i.e., 'I know him/her'), and the y-prefix is probably the non-animate non-areal prefix. This prefix is identical in form to the y-prefix found commonly in Gwich'in 3ʳᵈ person transitive verbs. In Gwich'in the y-prefix is required for 3ʳᵈ person transitive verbs whenever there is no overt direct object in the sentence. It never occurs in the 1ˢᵗ or 2ⁿᵈ person.

Know

	Imperfective	Perfective	Future
1sg.	híshdèii		wéchíshdèii
2sg.	híndèii		wéchíndèii/héchíndèii
3sg.	héedèii		yít'ádèii
1pl.	hétr'ídèii		hétr'ít'ádèii
2pl.	háhdèii		hét'áhdèii
3pl.	héhídèii		hét'ádèii

Patrick, a rush job for sure! Thanks for the effort. I wish we'd had more time to compare notes. Your field book(s) is excellent. There's no reason you should not begin entering into a database - providing it's a forgiving one for later emendation.

I wish I'd insisted on phonetics — it is amusing comparing notes & I worry that "contradictory" data may be regularized into Athabascan received knowledge. Han appears borderline in several ways; and there's also & always the question of "last speaker" circumstances