Cu

(3582 words)

1 Context

Cu is a language isolate, and the sole language spoken by a group of about 5200 Cu nomads. They are a completely isolated population, wandering a vast stretch of enclosed grassy plains. An unsurpassable circular mountain range surrounds the plains. They are a particularly pious people, with their religion holding pacifism and unity as some of its core and primary principles, as well as a respect for the established hierarchy and contentment in one's hierarchical position.

Their creation myth (see §6) details the story of a huge, benevolent serpent (named Ca̧) that breathed life into the first Cu person and, after falling in love with them, and realising their fragility and mortality, stretched its huge body around them, forming a wall that would protect them from outside dangers. Gradually, the serpent became petrified, forming the mountains that encase the plains. Cu is the language used by the serpent to communicate with the first person and, as the mountain range around the Cu people has become more weathered, the language has become more human.

The protective circle of the serpent's body that forms the mountains is a significant and embedded symbol in the faith and the language. Holism and unity is seen as the highest virtue, and speakers hold the idea that isolated words are lonely, so preserve heavy agglutination from the ultimately impractical protolanguage that Ca̧ had given them. Interestingly, expletives are the only words to be uttered in isolation to emphasise the disparity between the speaker and the listener; this is incredibly blasphemous behaviour, though, and would probably result in the speaker's excommunication.

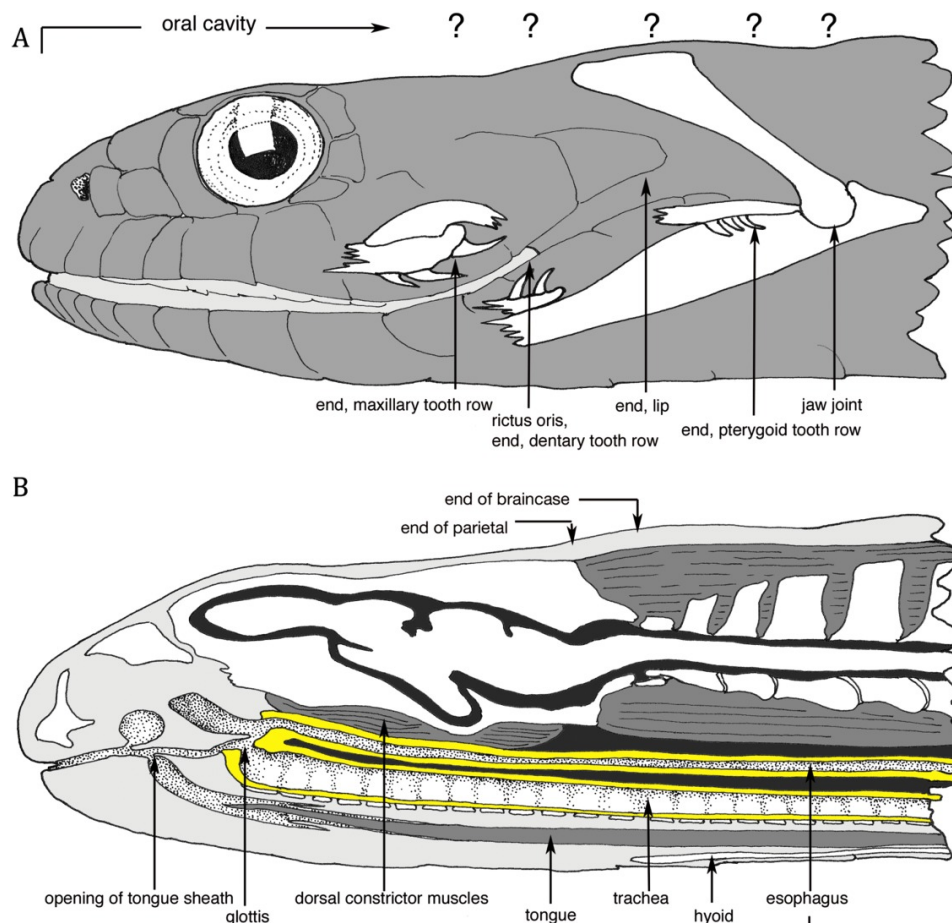## 1.1 Cu as an anthropo-serpentine means of communication

Figure 1. Snake diagram from Cundall et al. (2014) shows the anatomy of a snake's pulmonary and esophageal systems for speculation on the human phonemes that could be produced by a snake. The lower diagram (B) shows that air from the trachea does not pass over many easily manipulable vocal apparatus, and no larynx for voicing, potentially limiting a snake to voiceless fricatives, and maybe devoiced approximants and vowels with open/close distinctions. Question marks refer to an unrelated anatomical debate about the point at which a snake's head ends.

1.1 Phonetics of a human language through a snake's mouth

Snakes would never use any sort of vocal means of conspecific communication, given their hearing range is very low, rarely exceeding a top band of 500 Hz (Young 2003), which means that human speech (additional to even most of the sounds that a snake can produce) sounds incredibly muffled to a snake. Ca̧ was a god, however, and had far superior sensory capabilities to typical snakes and humans, but still had the mechanical restrictions that a snake would have (Cundall et al. 2014). Their restricted tongue and jaw dexterity, as well as their lack of lip movement and incapability to vary voicing, restricts the sounds they can produce to pretty much just a few fricatives that they can't

even really hear. Cḁ would probably only produce fricatives, semivowels and vowels, all of which are devoiced. The vowel space would be very narrow, probably only 2 mid vowels at most, representing just a close-open distinction: when the snake's mouth is more/less open. The lack of tongue dexterity would lead to laminal placement for all phones. Syllables may consist of lots of adjacent fricatives and syllabic fricatives. Their glottis is only flexible in the sense that it can move out to the side of the mouth while they consume large prey, so I don't think that any laryngeal consonants would be possible, because these require obstruction of airflow at the glottis. A snake does not have the means to practically and comfortably achieve such glottal obstruction.

1.2 Polysynthesis

Agglutination and incorporation are rare among young languages, given that affixes usually come from the encliticisation of auxiliary words (Haspelmath 2010). However, contemporary Cu speakers see heavy agglutination and incorporation as a virtue of the deity's mind to only see unity, so social attitudes force the preservation of this feature. Incorporation usually involves an object incorporating onto a verb (i.e. in Chukchi, Dunn 1999), but Cu goes to the extent of incorporating all verbal participants and modifiers onto the verb and all noun modifiers onto their respective nouns. There are also no prepositions, opting instead for locative case marking, and entire clauses may be affixed onto conjunctions.

1.3 Rapid adaptation for human convenience

The protolanguage's shortage of phones made for an incredibly phonologically impoverished language which required long words made of extensive fricative clusters in order to distinguish lexemes; being impractical for humans to use, it changed rapidly (see §2.4).

If Cu was a truly "new", sporadically created language, tracing back even to the very beginnings of humans evolving the cognitive capacity to produce language, Jackendoff and Wittenberg (2017) might say that it may even lack such basic elements as syntax and morphology. However, Cḁ must have known about some of these (potentially) later-developed grammatical concepts and embedded them into the initial language.

2 Phonology

I propose the protolanguage inventory:

Table (1). Proposed consonant inventory of the Cu proto-language.					
	Bilabial	Dental	Alveolar	Palatal	Glottal
Fricative	ɸ	θ	s	ç	h
Approximant				j̊ ʎ̥	

Table (2). Proposed vowel inventory of the Cu proto-language.	
Close	i [ɨ̥]
Open	a [ɐ̥]

And after some unknown period of time:

Table (3). Cu consonant inventory.							
	Bilabial	Dental	Alveolar	Postalv.	Palatal	Velar	Laryngeal
Plosive		t [t, t̠] <t>				k <k>	
Fricative	ɸ <f>	θ <θ>	s <s>	ʃ <ʃ>	ç <c>	x <x>	h <h>
Sonorant	m <m>				j <j> l [l~ʎ] <l>	ŋ <n>	ʀ <r>

Table (4). Cu vowel inventory.		
	Front	Back
Close	i <i>	u <u>
Open	a [a~æ] <à>	ɑ <a>

Both phases of the language are inspired by the heavy consonant clustering on display in Shilha/Tashelhit (Applegate 1955).

2.1.1 Romanisation: Cu has its own orthography and writing system, and in this grammar I'll use a romanised version which uses the graphemes presented next to the phonemes in the table. I use <à> for the low front vowel and <a> for the low back vowel so that a diacritic dot (as on <i>) consistently indicates frontness/a dominant vowel (see ☆NB2).

2.1.2 Vowel harmony: Cu has a vowel harmony system where front vowels are dominant and back vowels are recessive, such that presence of a dominant (front) vowel in the verb will make all vowels in the word elements dependent on the verb also front. This is similar to, but less complicated than the dominant/recessive vowel harmony system in Chukchi (Dunn 1999). All lexemes except verbs are recessive by default, and examples given in this sketch grammar that may be subject to vowel harmony are always given in the recessive form. Herein, phonemic analyses of non-verbs will phonemically transcribe low vowels as /L/ and high vowels as /H/.

2.1.3 The 'sonorant' category: I've grouped nasals and approximants into a 'sonorant' category, because Cu has a functional [+/-sonorant] distinction, but the language treats nasals and approximants the same, allowing both as the initial segment of a verb and being equal in the sonority hierarchy.

2.2 Phonological change

The overly complicated, hard-to-pronounce syllables that the snake deity gave the Cu people created a bias towards reducing the complexity of their language, by (a) shortening lexemes, (b) reducing/breaking up extensive fricative clusters and (c) introducing more phonemes to diversify short syllables. I present a few phonological changes in Table (5). Large clusters of consonants (i.e. 3+) are rare typologically, and where they do occur, they tend to have differing manners of articulation (with rising sonority in an onset and falling sonority in a coda) (Gordon 2016), so these long fricative clusters would surely have been dispreferred as they are typologically. It's also been shown that isolation can promote rapid lexical evolution from word loss and replacement in Austronesian languages, which is a further justification for the vast differences between the proto- and contemporary languages (Padilla-Iglesias et al. 2020).

For (b), phonemic /h/, when not in an onset position, is realised as a devoiced mid vowel [ə̥] for mechanical practicality, and may acquire partial assimilatory voicing if adjacent to a [+voice] consonant; this useful phoneme has also been inserted into lots of protolanguage fricative clusters to break them up, meaning this phonemic consonant

effectively acts phonetically like a vowel. Another way to break up vowels, simply, is to voice vowels and to have more of them. This relates to (c), because a front/back vowel distinction is also in its nascence in the contemporary language, a measure to diversify syllables more. Vowels were never a big part of the protolanguage, and up to the contemporary language are generally (latently) understood by speakers to really just be [+high] (H) or [-high] (L) slots for vowel insertion (from the protolanguage only having a high/low distinction). For example, the word *cucu* 'small' is phonologically just /çHçH/, and *hahka*, 'heavy' is /hLhkL/. Vowel frontness is determined by the verb, an obligatory element for every Cu clause. Verbs have developed codified vowels that mutate vowel 'slots' in agglutinating word elements. In essence, vowel harmony has come out of a need for vowels in making Cu more suitable to the human vocal apparatus, alongside an absence of codified vowel frontness properties (only vowel slots that are [±high]) in the phonologies of non-verbs.

Also regarding (c), more consonant phonemes emerged. Languages with impoverished syllable variation (such as Proto-Cu) tend to expand their phonemic inventories. For example, populations where 'glue ear' is a common and prevalent auditory issue have been speculated to have difficulty distinguishing frication and voicing. To compensate and expand their syllable diversity, the languages in these communities tend to have unusually high numbers of place distinctions (Butcher 2018). Consequently, sooner or later, more consonants emerged in the Cu phonemic inventory. Firstly, plosives, because they are universal (Maddieson 1984), so it was only a matter of time before Cu utilised this manner of articulation. The Cu people also took advantage of their dexterous tongues and nasal cavities (which Cḁ did not have), so they added more place distinctions (velar, postalveolar) and nasal consonants (see Table 5), which further enabled syllable diversification. Additionally, Proto-Cu /h/ expanded into several more guttural phonemes: a velar fricative /x/, a uvular trill /ʀ/, as well as contemporary /h/ (see Table 5, rows (a) and (d)). The consequences of (b) and (c) (reduction of clusters and diversification of syllables) are (a) (that words are made shorter).

Table (5). Examples of phonological change from Proto-Cu to Cu.		
Proto-Cu	**Contemporary Cu**	**Notes**
(a) /hçhɨ̯/	*ru* 'some'	/ʀ/ comes from oscillating fricative clusters that start and end on the velar fricative /h/, later /x/. The vowel maintains its height and becomes weak because this is not a verb.
(b) /hçh̥sθsθɨ̯/	*rultsu* 'towards'	/H/ has appeared here to separate two approximants. The /ts/ sequence comes from the needlessly long [sθsθ] sequence.
(c) /ʁ̊ɸʁ̥ʁ̥sʁ̥/	*mhsá* 'see'	/m/ comes from a [ʁ̊ɸʁ̥] sequence, that later became [ɐɸŋ̥]. Verbs started with VCV sequences in Proto-Cu, which would become the consistent initial sonorants on contemporary verbs. The final devoiced vowel in the [ɐɸŋ̥] sequence either disappeared entirely or remained as phonemic /h/ (phonetic [ə̥]). The features of [ɸŋ] crunched together, resulting in the new phoneme /m/. By now the sequence is [amə̥sa]. For a brief period, verbs all started with a low vowel, but the introduction of phonotactic rule #1 (see §2.5) meant that this was consistently swallowed up by the adjacent active marker. It appears purely random if verbal vowels become dominant or not.
(d) /hʁ̥hshs/	*xhks* 'bird'	This is a very difficult sequence for distinguishing segments, hence why /h/ is shown here to change in a few ways. Some /h/s became the new phoneme /x/ to distinguish them better, and here we also see the /hshs/ sequence become contemporary /ks/. In this instance, the vowel doesn't acquire voicing and becomes /h/.

2.3 Phonotactics

Phonetic realisations vary a lot because of the difficulty of producing the long strings of fricatives that so often appear in Cu syllables. However, there are only 3 consistently-respected phonotactic rules.

1. If two vowels meet across a morpheme boundary, the first is elided ('Cau' is underlyingly /ca + u/).
2. /lç/ → [ɬ].
3. Unstressed sonorants between fricatives are devoiced.

3 Morphology

Cu is heavily agglutinative and extensively incorporates dependents into antecedents (i.e. verb modifiers and participants onto a verb). It also boasts a rich, Finnish-like case system (Kiparsky 2001) and rich verbal morphology. Verbs are the only word class that may have dominant vowels in its isolated form, and all concatenated nouns and adjective vowels will maintain their height but acquire the frontness of the verb.

3.1 Nominals

3.1.1 Pronouns

Table (6). Paradigm of Cu pronouns. Cu has 3 persons and 3 politeness forms, as well as an animacy distinction in the third person.								
Person	**Singular**				**Plural**			
	Plain	Formal	Deferent	Inanimate	Plain	Formal	Deferent	Inanimate
1	c	hshc	scfulumuhshc	—	huc	uhshc	uscfulumuhshc	—
2	hus	fhs	θstsuxhs	—	uhus	ufhs	uθstsufhs	—
	Animate			Inanimate	Animate			Inanimate
3	cux	schm	θstsuschm	θc	ucu	uschm	uθstsuschm	uθc

3.1.2 Interrogative Pronouns

Table (7). List of interrogative pronouns in Cu.	
Interrogative pronouns	
Who	ʃsu
What	ʃuhu
When	ʃfu
Where	ʃθu
How	ʃtu
Why	ʃku

Sentence (1) shows the structure of a question in Cu. These interrogative pronouns may also be used as subordinating conjunctions, as in English 'I will have a snack when I get home'.

(1) His-   à-   kc-   så   -ʃsi   → Hisåkcsåʃsi.
    2SG.NOM- ACT- INTERR- COP -who

    "Who are you?"

3.1.3 Possession: Possessive noun modifiers are just compounded personal pronouns with genitive case marking.

3.1.4 Politeness: See also verbal politeness in §3.2.1. Similar to Japanese, Cu features a system of grammatical politeness. All Japanese verb conjugations have a polite and plain form, usually formed with the addition of the *-masu* morpheme (Kageyama 2016), (with layers of additional complexity on top of that). Cu, however, distinguishes *three* levels of politeness, similarly formed with the insertion of an honorific morpheme:
  - 'plain', for addressing equals, inferiors and inanimate objects
  - 'formal' for addressing someone superior (but not significant in wider society)
  - 'deferent' for the most important people (i.e. religious/political leaders).

The formal forms attempt to emulate the protolanguage and the speech of the snake deity, which is assumed to be proper and correct and therefore formal. The deferent

forms have the affixed modifier *scfulumu* ('humble') for the first person and *θstsu* ('exalted') for the second and third persons. These terms have been grammaticalised, and tend not to be used as independent modifiers in a noun phrase anymore, with people opting for more flowery words to show respect to higher-ups.

When speaking to someone two ranks inferior (i.e. the inferior uses deferent forms and the superior uses plain forms) the higher-up may choose to speak in breathy voice to assert their superiority. This is also to imitate the protolanguage (only known by Cu speakers in its written form, but understood to be phonetically more serpentine than the contemporary, human language) and to signal snake-ness in the voice, because the snake deity is at the very peak of the hierarchy. On a further note, one's hierarchical position endures after death, and is mostly determined by hereditary closeness to Ca̧. Breathy voice is attested as a tool for creating phonological contrasts in languages like Phuthi (Bantu) (Donnelly 2007), but not for this codified inferior-directed speech function.

These forms are selectively used to emphasise admirable acts and to avoid the taboo of reducing a respected individual to a generic pronoun. The copula *sà* is never marked for politeness.

3.1.5 Nouns and case morphology

Noun morphology is exclusively found in case markers (see Table 8) and derivational morphemes (see §3.4). Cu doesn't mark grammatical number, though reduplication may be used in cases where plurality is really important, but not if the noun is already modified by a cardinal number, as in Indonesian (Dalrymple & Mofu 2012).

The translative case in the table below reveals that Cu has no verb 'to become', but simply uses the copula with the experiencer of the change marked as essive and the goal of the change marked as translative.

	Prefix	English equivalent	Example	Translation
Table (8). Cu case markers and example uses.				
	Prefix	**English equivalent**	**Example**	**Translation**
Grammatical				
nominative	∅-	—	*Ȧjȧhȧ-∅-**c**.*	'**I** breathe.'
accusative	∅-	—	*∅-**kucl**ankscic*	'I eat **meat**.'
genitive	-aθa-	of	*Kla**θ**ac.*	'**My** tent'.
dative	-atsa-	(i.e. given) to	*Shsaratjac**atsan**.*	'I give the grass **to the cow**.'
Locative (internal)				
inessive	su-	in	***Sikl**ȧθȧcȧsȧc.*	'I am **in** my **tent**.'
elative	scu-	out of	***Scunkraj**aθacanhl cuc.*	'I vomit **out of my mouth**.'
illative	cha-	into	***Chakl**ajusuc.*	'I walk **into a tent**.'
Locative (external)				
adessive	ta-	at/on	***Tȧshs**.*	'It's **on the grass**.'
ablative	lu-	from	*Kicll**ȧn**.*	'It's meat **from a cow**.'
allative	la-	to, onto	***Lakl**aθacuxajusuc.*	'I am walking **to his/her tent**.'
Essive				
essive	xa-	as	***Xȧntsȧj**ȧsȧc.*	'I am happy **as a worker**.'
translative	ma-	into (becoming)	***Mȧnstȧj**ȧsȧxac.*	'I am becoming **a worker**.'
Marginal				
instructive	tʃu-	with (using)	***Tʃurux**mhcuc.*	'I cook with/using fire.'
abessive	xtʃu-	without	***Xtʃikl**ȧsȧc.*	'I am homeless', lit. 'I am without a tent'.
comitative	ju-	together with	**Jukcl**mch.	'Tomorrow.' lit. **'Together with the** rising **sun**.'

3.2 Verbs

Verbs always end in a vowel, and may begin with a harmonising low vowel if they're transitive, ditransitive or unaccusative. The first segment of all verb roots is a sonorant, with the exception of the copula, *sȧ*, because it's common for highly-frequently-used lexical items to adopt irregularities (Lyle 2013). To demonstrate, *(ȧ)nksci* 'to eat'; *lu* 'grass' *(a)lsmu* 'to drink'; *skux* 'water'.

3.2.1 Politeness: Additional morphemes are added when addressing a member higher in the social hierarchy which is so deeply embedded in Cu society. These precede all other verbal infixations, apart from the obligatory active/passive marker *a-/u-*. Informal is unmarked, formal requires the infix *-fala-*, and deferent speech requires the infix *-scfuluma-*, which comes from *scfulumu* ('humble', 'humbly').

3.2.2 Aspect: There are four aspects, perfective (*-h-*), imperfective (*-∅-*), habitual (*-ʃ-*) and iterative (*-ts-*). Aspect markers proceed the active/passive marker on agentive verbs and precede tense markers.

3.2.3 Tense: There are three tenses with determinate and indeterminate forms for past and future, where the determinate is for when the speaker knows exactly when the verb will happen or has happened: past det. (*-θan-*), past indet. (*-θ-*), present (*-∅-*), det. future (*-can-*) and indet. future (*-c-*). Tense markers proceed aspect markers and precede modal elements.

3.2.4 Mood: Cu has a rich mood system to avoid auxiliary words and maximise the agglutinative nature of the language, shown in Table (9). The indicative is unmarked (*-∅-*), and comes alongside the conditional (*-ks-*) (≈'if'), presumptive (*-kh-*) (≈'might'), inferential (*-kf-*) (≈'allegedly'), interrogative (*-kc-*) (≈upward inflection), imperative (*-s-*), progressive (*-kʃ-*) and infinitive (also *-∅-*).

	Cu	English

Table (9). Examples of the use of different moods for the base sentence 'I eat grass and I drink water'.

	Cu	English
Indicative	*Shsånkscic θaskuxalsmuc.*	'I eat grass and drink water.'
Conditional	*Shsàksnkscic θaskuxakslsmuc…*	'If I'm eating grass and drinking water…'
Presumptive	*Shsàkhnkscic θaskuxakhlsmuc.*	'I may be eating grass and drinking water.'
Inferential	*Shsàkʃnkscic θaskuxakʃlsmuc.*	'Allegedly, I eat grass and drink water.'
Interrogative	*Shsàkcnkscihus θaskuxakclsmuhus?*	'Do you eat grass and drink water?'
Imperative	*Shsàsnkscihus θaskuxaslsmuhus.*	'(You must) eat grass and drink water.'
Progressive	*Shsàkʃnkscic θaskuxakʃlsmuc.*	'I'm eating and drinking.'
Infinitive	*Nksci θalsmu.*	'To eat and to drink.'

3.3 Additional grammatical morphemes

Table (10). A list of additional grammatical morphemes.

Morpheme type and Leipzig gloss	Cu morpheme	Syntactic position
Negator (NEG)	x-	Verbal or nominal suffix.
Conjunction (CONJ)	θa-	Occupies the C-head; clausal prefix.
Disjunction (DISJ)	xθa-	Occupies the C-head; clausal prefix.
Relative pronoun (REL)	cjca-	Acts as a subject, occupies Comp,VP.
Copula (COP)	(-à)sà-	Normal verbal position, see §4.1.2.

The disjunction (DISJ), *xθa-*, can alternatively be analysed as NEG-CONJ, given that it's not known if there's an underlying morpheme boundary. The two analyses would therefore be /xθL/ or /x+θL/

3.4 Derivational morphology

3.4.1 From verbs

- All conversion from verbs will make its vowels recessive.
- The suffix *-m* can be added to nominalise a verb and describe the act of that verb taking place e.g. *nksci* 'to eat' → *nkscum* 'the eating'.
- The suffix *-j* can be added to nominalise a verb and describe an object typically related to the action e.g. *lsmu* 'to drink' → *lsmuj* 'a drink'.
- Simply make vowels recessive and change the last vowel to high if needed to make a verb into a modifier.

3.4.2 From nouns

- Nouns can be compounded (arguably adjectivised) without any morphological change. However, to make a 'true' adjective, they simply need to be made to end in a high vowel, if they don't already e.g. *tʃra* 'blood' → *tʃru* 'bloody'. Denominal adjectives that end in a high vowel in the base form are effectively homonyms, but underlyingly end in /…H+H/ with the first vowel elided by phonotactic processes, e.g. *nsu* 'hill' → *nsɨ + u → nsu* 'hilly'.
- Nouns can be made into verbs by matching the verbal phonological template: 1) adding the necessary verbal prefixes (active/passive, politeness, aspect, tense, mood) if the first segment of the base noun isn't a sonorant, one is inserted that is closest to (ideally matching) the place of articulation of the first segment of the base noun, and 3) if the base noun doesn't end in a vowel, an *u* is affixed.

3.4.3 From modifiers

- Abstract nouns can be made from modifiers by affixing *-hk* e.g. *fcu* 'good' → *fcuhk* 'goodness'.
- Verbs can be made following the same process as for verbalising a noun e.g. *fcu* 'good' → *amfcu* ≈'engoodening'.

Any of these suffixes may sometimes be creatively applied to any category to make new lexemes, e.g. (*a-/u-*)*lsmuju* (*lsmu* 'to drink' → *lsmu+j* 'a drink' → *lsmuj+u* verb related to

the noun 'drink') could be a verb that means 'making something into a drink' (≈'endrinkening'?).

4 Morphosyntax

Cu syntax is quite fixed despite its rich case system. It has an OVS order, utilises incorporation to concatenate words together (Massam 2017). Cu objects incorporate to the left of verbs, like in Chukchi (Dunn 1999), alongside a far more extensive system that leads to the incorporation of whole clauses into a single word.

A full generative syntactic analysis is beyond the scope of this grammar, so I have opted for a head-initial analysis, in line with Kayne's Universal Base Hypothesis (Kayne 1994). Diagram (1) shows a potential syntactic tree analysis for sentence (2) and an analysis for the DP *kuclmhcu*, 'cooked meat'. The raised subject had to be below C, because there had to be space for a conjunction morpheme to prefix the whole clause, so I imagine tense/mood/politeness/aspect morphemes attach to the verb through downward Agree from I to v.

(2) Ø-   Kucl- -mhcu-   a-   lfushlcu -Ø-   -c   → Kuclmhcalfushlcuc.
     ACC   meat- -cook.ADJ-   ACT   smell   -NOM -1SG

     "I smell cooked meat."
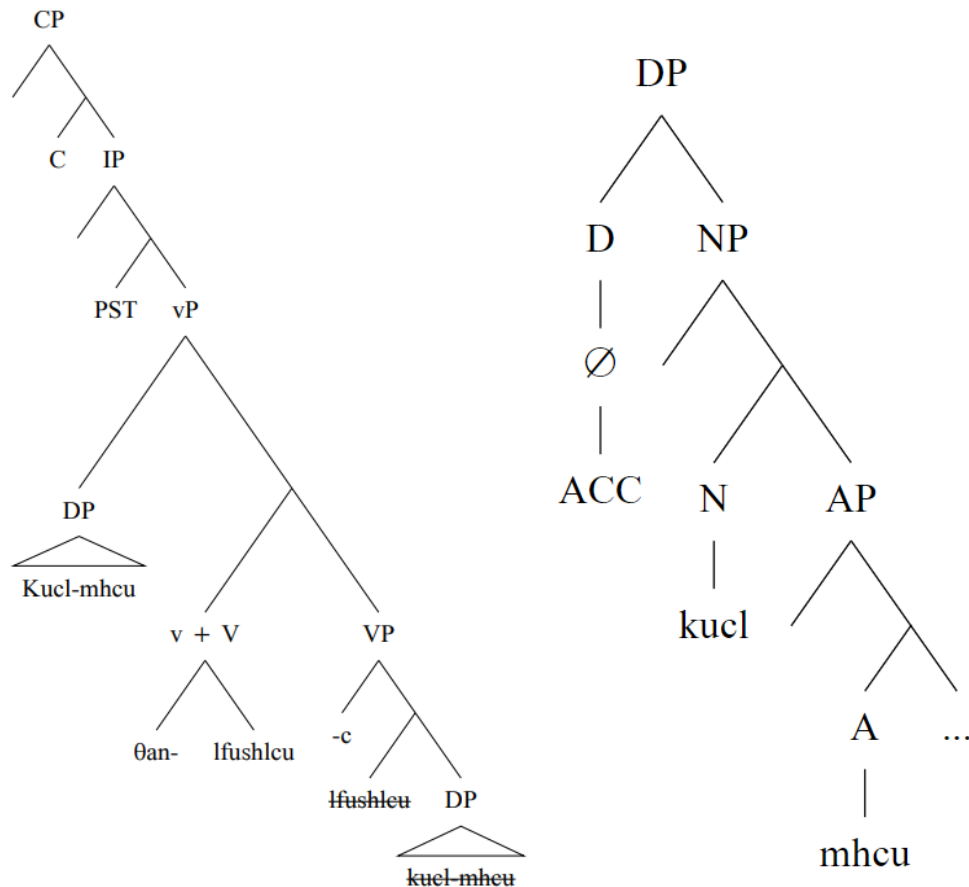
Diagram (1). Trees to show head-initial analysis of sentence (1) (left) and its DP (right).

4.1 Clause structures

Clauses are constructed about an obligatory verb, which may be unergative, unaccusative, transitive or ditransitive, each with differing participant slots. Unergative verbs have only one nominative participant slot, obligatorily as a suffix, and unaccusative verbs have the same singular obligatory nominative participant slot, but as a prefix. Transitives take the shape ACC-VP-NOM, and ditransitives ACC-VP-NOM-DAT. The suffix position immediately after the verb is always nominative, and is unmarked, and the immediate prefix is always accusative, also unmarked. Dative nominals must, and genitive nominals may, affix onto the subject, distinguished by the case marking -aθa- (GEN) or -atsa- (DAT). Genitive nominals will affix whichever nominal they relate to, and adjectives prefix the noun that they are in a phrase with. Cu even agglutinates conjunctions onto the start of the clausal word, and this all-encompassing agglutination is why a rich case system is necessary: the many non-grammatical cases avoid the need for adpositions.

4.1.1 Structures of clauses with different verb types

A typical independent clause with only the obligatory elements headed by…

i.   an unergative verb

[[active/passive marker-politeness (P)-aspect (A)-tense (T)-mood (M)-verb stem$_{VP}$]-[NOM nominal$_{NP}$]$_{CP}$]

ii.   an unaccusative verb

[[NOM nominal$_{NP}$]-[ACT-P-A-T-M-verb stem$_{VP}$]$_{CP}$]

iii.   a transitive verb

[[ACC nominal$_{NP}$]-[ACT-P-A-T-M-verb stem$_{VP}$]-[NOM nominal$_{NP}$]$_{CP}$]

iv.   a ditransitive verb

[[ACC nominal$_{NP}$]-[ACT-P-A-T-M-verb stem$_{VP}$]-[NOM nominal$_{NP}$]-[DAT nominal$_{NP}$]$_{CP}$]

4.1.2 Copula clauses

For copula clause constructions, if the subject is being coupled with an adjective, it will take the shape

sà + noun.NOM + adj

(3)   Sà -∅-   -an -rafu → Sånràfi.
       COP -NOM- -cow -big

       "The cow is big."

but with another nominal, it will take the shape

noun.ACC + ACT + *sà* + noun.NOM

(4)   ∅- Ntsàj- à-   sà -∅-   -c → Ntsàjàsàc.
       ACC- worker- ACT- COP -NOM- -1SG

       "I am a worker."

Also, the construction 'It is …' is often simplified to just the noun on its own with strong vowels from the underlying copula:

(5)   ∅- An- (à-   sà -∅-   -cux)   → Àn(àsàcix). → Àn.
       ACC- cow- (ACT- COP -NOM- -3SG.ANI)

       "It is a cow."

A different verb is used to show an approximal equivalence, i.e. 'is like':

(6) Ø- Cux- à- nàcà -Ø- -c → Cixànàcàc.
   ACC- 2SG- ACT- be.like -NOM- -1SG

"I am like you."

Equally, it's still possible to say 'we are alike', using *sà* instead of *nàcà*:

(7) Sà -Ø- -huc -cncu → Sàhiccnci.
   COP -NOM- -3PL -alike

"We are alike."

4.1.3 Passive clauses

For passive constructions, the preverbal *a* is replaced by *u*, the nominalised nominal remains in the prefixtual position, the adjunctivised nominal takes the semantically appropriate locative case, usually instructive:

ACC-ACT-verb-NOM → NOM-*u*-verb-LOC.

(8) a. Ø- Hus- à- mhsà- -Ø- c → Hisàmhsàc.
      ACC- 2SG- ACT- see- -NOM- 1SG

   "I see you."

   b. Ø- Hus- i- mhsà- -tʃu- c → Hisimhsàtʃic.
      NOM- 2SG PASS- see- -INSTR- 1SG

   "You are seen by me."

5 Lexicon

5.1 Syntactic categories

Cu only has nouns (N), verbs (V), modifiers (M) and a few conjunctions (C). Modifiers fulfil the roles of the two modifying word classes as described by Hengeveld (2013), namely 'noun-modifiers' and 'verb-modifiers'. The job of prepositions is fulfilled by a case-marking system which features 11 locative cases, mostly inspired by Finnish (Kiparsky 2001).

5.1.2 No prepositions: Finnish has some "adpositions" which refer to the concepts of 'in front of' and 'behind', and take the construction [NP+genitive [P]] or [NP+partitive [P]] (Nikanne 2003). I think that the fact that these "adpositions" bare case morphology could enable the argument that they are, in fact, nouns (granted, nouns that are obligatorily dependent on another noun, and perhaps grammaticalised to also require

some locative case). Cu communicates these slightly more complex locative expressions in a similar manner without need for obligatorily dependent noun elements: 'front' and 'back' (nouns) can be independent, and when suffixed onto a genitive noun in an appropriate locative case, the construction is complete. Cu won't have the alternative [NP+partitive [P]] construction, because Cu doesn't have the partitive case.

5.1.3 Conjunctions: Conjunctions are affixed onto the front of the clausal word and serve to mark its separation from a previous clause. These prefixtual conjunctions are inspired by the conjunction + pronominal clitic construction one finds in Frisian (Tiersma 1999).

5.1.4 Phonological distinction of syntactic categories: Verbs always start with a sonorant (because they are usually preceded by a ((V)C)CV case morpheme) and end with a vowel, and nouns typically end with a consonant (because they usually precede the verbal active marker *a-* or passive marker *u-*). The only exception is the copula *sà*. Modifiers always end in a high vowel and conjunctions always end in a low vowel.

5.2 List of Cu lexical items

Table (11). A list of Cu lexical items by semantic category.							
Cu	English	PoS	Category	Cu	English	PoS	Category
làchsi	revere	verb	action	msucuhk	sacrifice	noun	concept
ràxhx	destroy	verb	action	krakhk	safety	noun	concept
lkisà	attack	verb	action	mtsucuj	life	noun	concept
runu	surround	verb	action	θa	and	conjunction	conjunction
lucksa	create	verb	action	fa	if	conjunction	conjunction
mhcu	cook	verb	action	lca	because	conjunction	conjunction
lskclu	shine	verb	action	sà	COP	verb	copula
ntsà	work	verb	action	nàcà	be similar	verb	copula
mhci	remember	verb	action	knkn	wall	noun	environment
lximi	forget	verb	action	frus	the world	noun	environment

Cu	English	PoS	Category	Cu	English	PoS	Category
mchi	rise/upward movement	verb	action	nsu	hill	noun	environment
nithi	fall/downward motion	verb	action	shs	grass	noun	environment
msucu	sacrifice	verb	action	kcl	sun	noun	environment
kθc	animal	noun	animal	rux	fire	noun	environment
luc	fish	noun	animal	kl	tent	noun	environment
xhks	bird	noun	animal	huxk	stone	noun	environment
fhs	beast	noun	animal	fcuc	sky	noun	environment
an	cow	noun	animal	rultsu	towards	modifier	motion
ca	snake	noun	animal	jusu	walk	verb	motion
shx	bug	noun	animal	rultsu	come	verb	motion
cashx	worm	noun	animal	nsȧxȧ	jump	verb	motion
sx	skin	noun	animal product	ntusu	know	verb	perception action
kucl	meat	noun	animal product	ntsaj	worker	noun	person
tʃar	blood	noun	animal product	raj	person	noun	person
kanf	bone	noun	animal product	rafu	big	modifier	property
lsmu	drink	verb	body action	sclcu	long	modifier	property
nksci	eat	verb	body action	hahu	wide	modifier	property
nȧθfi	bite	verb	body action	θtshtsu	thick	modifier	property
lʃci	suck	verb	body action	hahka	heavy	modifier	property
chxku	spit	verb	body action	cucu	small	modifier	property
nhlcu	vomit	verb	body action	fkʃu	short	modifier	property

Table (11). A list of Cu lexical items by semantic category.

Cu	English	PoS	Category	Cu	English	PoS	Category
lhhu	blow	verb	body action	*tsafu*	narrow	modifier	property
jähä	breathe	verb	body action	*fsu*	every	modifier	property
jlchutu	laugh	verb	body action	*xafu*	many	modifier	property
mtsici	live	verb	body action	*ru*	some	modifier	property
ràci	die	verb	body action	*kfu*	few	modifier	property
mhsà	see	verb	body action	*chxcu*	scared	modifier	property
lfiltʃì	hear	verb	body action	*tsulu*	happy	modifier	property
lfushlcu	smell	verb	body action	*slaxu*	sad	modifier	property
nkra	talk	verb	body action	*cncu*	alike	modifier	property
mtaxa	shout	verb	body action	*flulcl*	in love	modifier	property
ʃlakhc	body	noun	body part	*mchu*	rising	modifier	property
mhsaj	ear (hear-er)	noun	body part	*xntusu*	unknown	modifier	property
lfultʃuj	eye (see-er)	noun	body part	*ntusu*	known	modifier	property
lfushlcuj	nose (smell-er)	noun	body part	*θsu*	first	modifier	quantifier
nkraj	mouth (talk-er)	noun	body part	*mhxuhxu*	decay	verb	state
tsxu	red	modifier	colour	*lilhi*	stay	verb	state
clufu	green	modifier	colour	*nàsà*	exist	verb	state
urutsu	yellow	modifier	colour	*uljuf*	present	noun	time period
hcu	light/bright	modifier	colour	*anc*	past	noun	time period
fxu	dark	modifier	colour	*astsc*	future	noun	time period
run	circle	noun	concept	*tjuc*	gift	noun	tool
fks	danger	noun	concept	*ratja*	give	verb	transfer
krak	safe	modifier	concept				

Table (11). A list of Cu lexical items by semantic category.

6 Glossed Text

Below is a paragraph written in Cu, and below that (§6.3) is an interlinear gloss of the paragraph sentence by sentence, just after the glossing key (§6.2). Vertical lines indicate a clause break.

6.1 Unglossed text

6.1.1 Romanised version

Frisfcicȧhθnȧsȧslcli ʃfumtsucujascfulumaθratjaCatsacuθsu. θsȧcichxci θaθstsuschmascfulumaθratjaCatsatjucaθankraj θascfulumaʃθnkrajuθstsuschm. θsȧmȧCą̇flilcllȧCi. Cȧθlkisȧfhsjikclxntisi θȧcixȧscfilimȧhθrȧxhxCą̇. θsȧmȧCą̇chxcȧtsȧCȧθȧkrȧkhk θaknknascfulumahθlucksaθstsuschmtʃuʃlakhc. θstsischmȧscfilimȧθlilhȧθȧkclxȧfi θȧmȧhixkȧθsȧxȧʃlȧkhc. Nsurafurafascfulumaθlucksaθstsuschm frusshsaθkʃrunucjca hucakʃrkrakhkucjcascufks. Mchikcl θȧnithi θamhxuhxunsurafu θȧCiθkʃlximitʃihic. Msicihkrȧfȧsmhcihic ʃsucjcascfulumaθratjaCatsahuc θajikclfsȧslȧchsihic.

6.1.2 Cu orthography
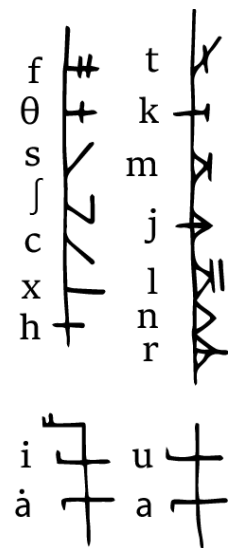
To the left, Diagram (2) shows the correspondence of glyphs to sounds in the Cu writing system. Diagram (3) below shows the text from §6.1.1 in Cu orthography. Writing in Cu culture would be done by carving into sheets of leather, given that there are very few trees and plenty of cows. For this reason, I tried to make the glyphs use fewer strokes, to economise writing effort. I borrowed the angularity of Elder Futhark for this reason, but tried to make it aesthetically similar to Traditional Mongolian script, since the Cu plains are similar to Mongolia and the whole culture is most inspired by that region. An existing blend of these two styles can be found in Ogham, a script for old Celtic languages, which uses simple notches to carve writings into stone, with no restriction on directionality (Coulmas 1999).

Diagram (2). Key to show glyph-sound correspondence in Cu orthography

Diagram (3). Text from §6.1.1 written in Cu orthography.

6.2 Glossed text

6.2.1 Glossing key

1,2,3= 1st/2nd/3rd person	DEFR = deferent	PFV = perfective
ACC = accusative	ELA = elative	PL = plural
ACT = active	ESS = essive	PROG = progressive
ALL = allative	GEN = genitive	PST = past
ANI = animate	HAB = habitual	REL = relative pronoun
CONJ = conjunction	IMP = imperative	SG = singular
COM = comitative	INSTR = instructive	TRANS = translative
COP = copula	NOM = nominative	
DAT = dative	PASS = passive	

∅- Fris- fcuc- à- h- θ- nàsà -slcli | ∫fu- ∅- mtsucuj- a-
ACC- World- sky ACT- PFV- PST- exist -long | when- ACC- life- ACT-
  scfuluma- θ- ratja -∅- -Ca̧ -atsa -cu -θsu
  DEFR- PST- give -NOM -Ca̧ -DAT -Cu -first

"The world existed for a long time, when Ca̧ gave life to the first Cu."

θ- sà -∅- -ci -chxci | θa- ∅- θstsuschm- a- scfuluma-
PST- COP -NOM- -Cu -scared | CONJ- ACC- 3SG.ANI.DEFR- ACT- DEFR-
  θ- ratja -∅- -Ca̧ -atsa- -tjuc -aθa- -nkraj | θa- a- scfuluma-
  PST- give -NOM- -Ca̧ -DAT- -gift -GEN- -mouth | CONJ- ACT- DEFR-
  ∫- θ- nkra -ju- -uθstsuschm
  HAB- PST- talk -COM- -3PL.DEFR

"The Cu was frightened, so Ca̧ gave them the gift of speech, and they spoke together."

θ-   så   -må-   -Cą̊ -flilcl -là-   -Ci
PST- COP -TRANS- -Cą̊ -in.love -ALL- -Cu

"Cą̊ fell in love with the Cu."

∅-   Ci- å-   θ-   lkiså -∅-   -fhs   -ji-   -kcl -xntisi | θå-
ACC- Cu- ACT- PST- attack -NOM- -beast -COM- -sun -unknown | CONJ-
   ∅-   cix- å-   scfilimå- h-   θ-   råxhx -∅- -Cą̊
   ACC-3SG.ANI- ACT- DEFR- PFV-   PST- destroy -NOM- -Cą̊

"One day, a beast attacked the Cu, and Cą̊ destroyed it."

θ-   så   -må-   -Cą̊ -chxci -åtså- -Ci -åθå-   -kråkhk | θa-   ∅-
PST- COP -TRANS- -Cą̊ -scared -DAT- -Cu -GEN- -safety | CONJ- ACC-
   knkn- a-   scfuluma- h-   θ-   lucksa -∅-   -θstsuschm   -tʃu
   wall- ACT- DEFR-   PFV- PST- create -NOM- -3SG.ANI.DEFR -INSTR-
   -ʃlakhc
   -body

"Cą̊ became fearful for the Cu's safety, so they created a wall from their body."

∅-   θstsischm-   å-   scfilimå- θ-   lilhi -åθå- -kcl -xåfi | θå-
NOM- 3SG.ANI.DEFR- ACT- DEFR-   PST- stay -GEN- -sun -many | CONJ-
   må-   hixk- å-   θ-   så   -xå-   -ʃlåkhc
   TRANS- rock- ACT- PST- COP -ESS- -body

"They remained for many years and their body became petrified."

∅-   Nsu- -rafu -rafu- a-   scfuluma- θ-   lucksa -∅-   -θstsuschm
ACC- Hill- -big   -big   ACT- DEFR-   PST- create -NOM- -3SG.ANI.DEFR
   | ∅-   frus-   -shs-   a-   θ-   kʃ-   runu   -∅-   -cjca | ∅-
   | ACC- world- -grass- ACT- PST- PROG- surround -NOM- -REL | ACC-
   huc   a-   kʃ-   rkrakhku -∅-   -cjca -scu- -fks
   1PL-   ACT- PROG- protect   -NOM- -REL -ELA- -danger

"They formed the great mountains around the Plains, protecting us from danger."

Mchi -∅-   -kcl | θå-   nithi | θa-   mhxuhxu -∅-   -nsu -rafu | θå-
Rise -NOM- -sun | CONJ- fall | CONJ- decay   -NOM- -hill -big | CONJ-
   ∅-   Cą̊- i-   θ-   kʃ-   lximi -tʃi-   -hic
   NOM- Cą̊- PASS- PST- PROG- forget -INSTR- -1PL

"Time passes and the mountains crumble, and Cą̊ is forgotten by us."

Ø-	Msicihk-	-ràfi-	à-	s-	mhci	-Ø-	-hic	∫su-	Ø-	cjca-
ACC-	Sacrifice-	-big-	ACT-	IMP-	remember	-NOM-	-1PL	what-	ACC-	REL-

a-	scfùluma-	θ-	ratja	-Ø-	-Cą̊	-atsa	-huc	θà-	ji-	kcl-
ACT-	DEFR-	PST-	give	-NOM-	-Cą̊	-DAT-	-1PL	CONJ-	COM-	sun-

-fsi-	à-	s-	làchsi	-Ø-	-hic
-every-	ACT-	IMP-	revere	-NOM-	-1PL

"We must remember the great sacrifice Cą̊ made for us and honour them every day."

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