Alfred Kroeber's Documentation of Inuktun (Polar Inuit)

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Abstract. In 1897 and 1898, Franz Boas's graduate student Alfred Kroeber was given the task of documenting the language and culture of six Inughuit (Polar Inuit) people infamously brought by Robert Peary from northern Greenland to New York City. Kroeber's notebooks from this work, archived at the University of California, Berkeley, are largely unknown to linguists and others interested in Inuit languages and people. Kroeber's notebooks contain about fifty unpublished texts and significant linguistic detail from two generations before what was previously thought to be the first substantial documentation of Inuktun, the language of the Inughuit people. Also included are thirteen pages of lexical and text documentation in Boas's own hand.

1. Background. Few episodes in the history of American anthropology and linguistics are as disturbing as the treatment of six Inughuit (Polar Inuit) people brought from northern Greenland to New York City in 1897 at the behest of Franz Boas. Living in the world's northernmost permanently inhabited place, later dubbed Thule by Knud Rasmussen, Inughuit people were objects of fascination for Americans and Europeans. This was partly due to their environment (with its 3½-month winter night and seven months of solid sea ice) and proximity to the North Pole, but also because of their apparent isolation. Inughuit people occupy "an island in an ocean of ice" (Gilberg 1984:577) and were thought to have been unaware of other people before the arrival of European explorers. In short, they were exemplars of the ethnographic fantasy of "uncontaminated" indigenes.

Boas had spent a year (1883–1884) on Qikiqtaaluk (Baffin Island) and was interested in Inuit

cultures and languages. By 1897, he had positions at Columbia University and the American Museum of Natural History (AMNH). The Polar explorer Robert Peary was planning a voyage to remove fragments of the Cape York meteorite from Inughuit land for the AMNH; Boas asked him to "bring a middle-aged Eskimo to stay here over winter. This would enable us to obtain leisurely certain information, which will be of the greatest scientific importance."[1] No doubt Boas was surprised when Peary delivered six people at the end of September 1897, including two children: Qissuk and his son Minik; Atangana, Nuktaq, and Atangana's daughter Aviaq; and Uisaakavsak, a young man betrothed to Aviaq.[2] But he professed no surprise when they almost immediately became ill. "They were bound to be sick sooner or later," he explained ("One Eskimo" 1897), "and the influenza, or grip, from which they are suffering, is the very thing above all others which they might have been expected to have right away." They were sent to Bellevue Hospital, "which proved to be tuberculosis-infected" (Kroeber 1955-56); later they were moved to less urban locations in the Bronx and upstate New York. Four of the six died of tuberculosis: Qissuk on February 17, 1898; Atangana on March 16; her husband Nuktaq on May 14; and her daughter Aviaq later in May.

Grotesquely, Boas and other AMNH officials organized a sham burial of Qissuk for his young son Minik, who learned several years later that his father's body had in fact been defleshed, like the bodies of his three compatriots, with all four sets of bones retained as scientific artifacts. Boas insisted in 1909 that this had been "perfectly legitimate" and did not merit "severe criticism" (Harper 2000:85). In any case, Uisaakavsak returned to Greenland in July 1898; Minik was adopted by AMNH employee William Wallace and his wife Rhetta, and lived in the United States until 1909. He subsequently moved between Greenland and the United States, where he died in the influenza pandemic in 1918. It was only in 1993, after a long pressure campaign, that the remains of the four Inughuit who died in 1898 were finally repatriated to Qaanaaq in northern Greenland.

A minor figure in this story, with no AMNH affiliation, was Boas's second-year Ph.D. student

Alfred Kroeber, aged 21 in October 1897. Despite having asked for an Inughuaq person from northern Greenland to benefit science, Boas was busy with other work when the six arrived, so Kroeber had the task of documenting their language (Inuktun) and culture. He undertook this off and on from October 1897 through December 1898, publishing a detailed description of sociocultural practices and material culture and a short paper with English versions of stories (Kroeber 1899a,b). These are well known. Holtved (1952:20) called Kroeber's and Stein's (1902) papers "the best contributions" to the study of Inuktun. Unfortunately, he added, "they mainly consist in isolated words (personal and geographical names). The same may be said of K. Birket-Smith's [1928] certainly more comprehensive and varied vocabulary. The want of connected texts was severely felt."[3]

Unknown to Inuit specialists, comparative linguists, and Greenlandic people, as far as I know, are Kroeber's original documentary materials. They are in the Bancroft Library at the University of California, Berkeley, where they have likely not been examined since they were deposited after Kroeber's 1960 death. Few researchers would look for Inuktun documentation in Berkeley, and few California users of Kroeber's materials would appreciate the significance of folders labelled simply "Eskimo." Through this paper, I aim to make interested parties aware of this corpus and to highlight its notable features. Not least is that it includes some fifty (mostly short) texts dictated in Inuktun by well-known and cruelly-treated Inughuit people. One is even transcribed by Boas. The full corpus also shows that some distinctive Inuktun linguistic innovations were absent or nascent in 1897.

I have come to this project, a spin-off of a book about Kroeber's work with Indigenous languages and stories (Garrett 2023), primarily as a historical linguist and linguistic philologist. I am not trained as a specialist in Inuit, let alone in Kalaallisut or the Greenlandic languages. I have done my best to interpret material in a resource of great cultural, historical, and linguistic value. Figures 1-2 show some of those who were involved in creating it. Note that the endonym *Inughuaq* literally means

'great person' (plural *Inughuit*); the language name *Inuktun* is the Equalis form of *inuk* 'person' with the final stop nasalization described in §7.1 below.

[Figures 1 and 2 near here]

Eight sections follow. In §§2-5, I present overviews of Inuktun, of Kroeber's documentation, of the geographical and historical information in the corpus, and of its texts. In §6, I describe some conspicuous morphosyntactic patterns. Phonological patterns are the focus in §7, with attention to salient differences from the later language. In §8, I offer a précis of Kroeber's final work with Minik, a child who had to make a new home in the United States at the turn of the twentieth century. A short conclusion appears as §9.

2. Inuktun. Spoken at the turn of the twenty-first century by about 750 people around Qaanaaq, Greenland, and in the nineteenth century by about 250 people, Inuktun belongs to the Inuit branch of the Inuit-Yupik-Unangan ("Eskimo-Aleut") language family.[4] Inuit dialects form a relatively shallow dialect continuum and do not fit well in a family tree. Four groups are often distinguished — Inupiaq (in Alaska and far western Canada), Western Canadian Inuit, Inuktitut (Eastern Canadian Inuit), and Greenlandic — but isoglosses cross these boundaries. Inuktun itself is one of three main Inuit dialects in Greenland; the others are Kalaallisut (West Greenlandic) and Kalaattisit (Tunumiisut or East Greenlandic). Inughuit people may have come to Greenland as recently as the eighteenth century, and their speech may be genealogically closer to Inuktitut or even Western Canadian Inuit dialects (Rischel 1985, Fortescue 1986, 2023). Some Inughuit families also came from Qikiqtaaluk in 1861, bringing songs, narratives, and technological innovations (Gilberg 1984:578). More recently, Inuktun has been in contact with Kalaallisut (since the founding of Rasmussen's and Peter Freuchen's Thule station in 1910), Danish, and English. Leonard (2015:12) describes a triglossic environment in which Inuktun is "used in every non-institutionalised context" and Kalaallisut and Danish are the languages

of education and most media.

Inuktun has been documented by several researchers in the twentieth and twenty-first centuries. Birket-Smith's (1928) comparative vocabulary includes linguistically precise transcriptions of Inuktun based on fieldwork between 1921 and 1924. Two generations after Kroeber's work, Holtved's fieldwork in 1935–1937 and 1946–1947 led to a rich corpus of 178 dictated and recorded texts, mostly narratives. These were published with phonetically precise transcriptions and a volume of free translations (Holtved 1951a,b); a short paper on linguistic features of Inuktun followed (Holtved 1952).[5] Later documentation includes a substantial thematic dictionary and grammatical sketch by Fortescue (1991), a phonetic study by Jacobsen (1991), and linguistic and ethnolinguistic notes by Leonard (2015).

Inuktun has also been called North Greenlandic, Thule Inuit (or Eskimo), and Polar Inuit (or Eskimo).[6] I will refer to the language as described in the last forty years as Modern Inuktun (MI), and to the late nineteenth-century stage documented by Kroeber and Boas as Early Inuktun (EI). All Modern Inuktun forms in this paper are cited from Fortescue (1991).

Inuit languages are highly polysynthetic, featuring words derived with a root, a series of derivational suffixes (postbases), and inflectional endings that may express person, number, case, and mood. I will use traditional names for the cases and moods:

(1a)   Cases: Absolutive, Relative (a.k.a. ergative), Modalis (a.k.a. instrumental), Ablative, Equalis (a.k.a. equative), Terminalis (a.k.a. allative), Localis (a.k.a. locative), Vialis (a.k.a. perlative)

(1b)   Moods: Indicative, Imperative, Interrogative, Optative, Contemporative, Participial (also Causative, Conditional, and Dubitative, not exemplified below)

I capitalize these names to stress that they refer to formal categories whose functions may differ from language to language. Regardless of synchronic functions, verbs with labial-initial endings like -

punga are Indicative; those with coronal-initial endings like *-tunga* are Participial.[7]

[Table 1 near here]

Inuktun has six vowel phonemes: short and long *i*, *u*, and *a*. As in all Inuit dialects, high vowels are realized as mid vowels before uvulars. The Modern Inuktun consonant inventory is shown in Table 1. Note that *g* and *r* are fricatives in Inuktun and its reconstructed ancestors. Fortescue (1991) and Jacobsen (1991) write that word-final *t*, *k*, and *q* are usually either unreleased or pronounced as *n*, *ng*, and [ɴ], respectively; the same realizations are described by Holtved (1952:21) and are regular in EI documentation (see §7.1 below). On *h*, sometimes realized as an oral fricative, see §7.2 below.

All segments in Table 1 other than *h* and *j* occur as geminates (*nng* = /ŋŋ/), as do the consonants *ss*, *ts*, *gh* (= /xx/), *rh* (= /χχ/), and *rng* (= /ɴɴ/). Though *ss* and *ts* are in part also the geminate counterparts of *h* and *j*, respectively, other geminates have arisen from assimilation in consonant clusters and were sometimes still pronounced as clusters by older people in the 1980s.

3. Kroeber's documentation. Though only a second-year student and without much training in what we would now call linguistics, Kroeber was not unprepared for the task assigned to him. In 1896, his first seminar with Boas involved reading texts and elucidating grammatical structures in several North American languages, including Inuit. At the end of the semester, they were joined by Esther Eneutseak Bien, an Inuk woman from Labrador who had come to the 1893 World's Columbian Exposition in Chicago (where Inuit people were exhibited and she met Boas) and later settled in New York.[8] With her, the students elicited vocabulary and sentence patterns, so Kroeber was exposed to Inuktitut speech (T. Kroeber 1970:47). He also had access to publications like Kleinschmidt's Kalaallisut grammar and dictionary (1851, 1871) and Boas's study of Nunavut Inuit culture (1889) and Qikiqtaaluk Inuktitut vocabulary (1894), which he used for reference and to guide some elicitation. But Eneutseak, who was recruited to help the Inughuit visitors and served as their

interpreter, was surely also a vital intellectual contributor to the documentation project.[9]

Kroeber's Inuktun material consists of five original notebooks and a folder of loose notes, all of which are now accessible online.[10] Included are a five-page text and eight loose sheets that were transcribed by Boas:

(2a)   Notebook 1 (cited as 1.1–28): Vocabulary and grammatical elicitation. The date on page 1.1 is October 12, 1897.

(2b)   Notebook 2 (cited as 2.30–80): Texts and vocabulary. Dates are December 22, 28, and 30, 1897. One text is transcribed by Boas (2.58–62).

(2c)   Notebook 3 (cited as 3.90–157): Texts, vocabulary, grammar, personal names. Dates are January 10 and 13, 1898. Inserted in this notebook are eight loose sheets (cited as B1–8) with vocabulary and other notes by Boas.

(2d)   Notebook 4 (cited as 4.401–495): Ethnography, texts, toponymy, vocabulary. Dates are February 5 (on page 4.401), February 10, 11, 12, 18, and M[arch? May?] 12, 1898.

(2e)   Notebook 5 (cited as 5.501–547): Ethnography, texts, vocabulary. Dates are May 24, June 1, and December 30, 1898.

(2f)   Notes: A folder of text transcripts (copied in a secretarial hand) and notes on grammar, phonology, vocabulary, and texts.

Dates and consultant names are not always recorded. The tellers of stories in notebooks 1–2 and 5 are named, but the texts in notebooks 3–4 are not attributed to anyone. It may be that all of them were told by Uisaakavsak, since he told the last text in notebook 2 and the first text in notebook 5 and he was the only Inughuaq adult who did not die of tuberculosis in the first half of 1898. If Kroeber was working only with one person, he might have felt he did not need to write his name down.

[Figure 3 near here]

Other details are also confusing. In Figure 3, for instance, English translations are in the middle column, with Inuit words to the left and right.[11] Only the left column has Inuktun; the right column compares other data. For example, apparently based on Kleinschmidt (1871:353), Kroeber notes that Kalaallisut *takungnat* 'pupil' is "obs[olete]." Usually he compares Kalaallisut, but sometimes Labrador Inuktitut is cited, presumably sometimes from Eneutseak's speech.

In a short memoir written late in life, Kroeber (1955-56) explained why he never published the Inuktun texts he had transcribed 58 years earlier: "the phonetics was not reliable (with k and q especially confounded) and the syntax suffered from omissions resulting from the informants' impatience at my writing not being able to keep up with their natural speech rate." Certainly his transcriptions contain many inaccuracies, including rampant confusion of velars and uvulars, omission of uvulars, and neglect of vowel and consonant length. Compared with the texts later recorded by Holtved, those that Kroeber wrote down are short and syntactically unelaborated; they are hardly naturalistic performances. The work was surely challenging both for him and for those he asked to tell traditional Arctic narratives in a cottage in the Bronx. But given how well Inuit languages are documented today, including Inuktun in the decades after Kroeber, these are relatively small obstacles to interpreting what he wrote.

Word-internal morphological interpretations below are mine; Boas and Kroeber translate only full words. Except as noted, I quote forms as they appear in manuscripts, without correcting transcription errors. Intervocalic *g* is not always written, for example, leading to orthographic vowel sequences in words like *teriániaq* 'fox' (1.4, MI *tiriganniaq*) and *tudluáq* 'raven' (1.5, MI *tulugaq*).

Two additional details merit comment. First, corresponding to MI *h*, Boas and Kroeber write *s* and *ss* (§7.2 below). Second, as in his Inuktitut vocabulary (1894:97), Boas writes stress with a vertical stroke after the stressed vowel. Kroeber does not indicate stress, but does write an acute accent mark on some long vowels; Boas uses macrons for vowel length. Boas also uses circumflex

accent marks, maybe to indicate allophonic vowel qualities; they do not correspond to vowel or consonant length.[12]

4. Geographical and historical information. The two publications that resulted from Kroeber's work with Inughuit people (1899a,b) do not emphasize language, but they do report many cultural and ethnographic details from his notebooks. Others details remain. One notebook lists thirty placenames (4.435–436). Another has geographical information about Akpat (a.k.a. Appat or Saunders Ø), a major island south of Qaanaaq, and demographic and genealogical details about families living there (3.131–134). A sketch of Akpat shows the locations and inhabitants of four tents, four houses, and two double houses ("one door & porch," 3.132). One of the latter was occupied by Panigpak, an immigrant's son who five years later shared memories and stories with Rasmussen (1908:24–26, 207–208).

[Figure 4 near here]

Though the transcriptions by Boas included with Kroeber's notebooks are mostly on language, they also report valuable historical information. Figure 4 shows five lines from one loose sheet (B4):

(3a) *píssîˈksē* bow [MI *pihighiq*]. (deer antlers) not of musk ox horn.[13]

(3b) *qáqssuq* arrow [MI *qarhuq*].

(3c) *Talakatîˈna* sagten sie zeigte ihne Pfeil und Bogen zu machen. ['They say T. showed them how to make arrow(s) and bow(s).']

(3d) *Qumañgāˈpîk*, kam auf Schlitten herüber und zeigte es ihnen. Sein Vater (Nuktang's Vater) lebte damals. Kam er, wo sie aushängen(?) tattooed. Padluˈq seine Frau. ['Q. came over on sledges and showed it to them. His father (Nuktang's father) was alive then. ... Padluq (was) his (i.e., Q.'s) wife.']

These lines are a mix of transcribed Inuktun, translations and notes in English, and longer German

notes written in the shorthand that Boas had used for many years (Hatoum 2016). For interpreting these shorthand notes, I am extremely grateful to Rainer Hatoum.

The notes in (3) have historical interest. Mentioned in (3d) are two immigrants from Qikiqtaaluk in 1861, Patdloq and Qumangâpik, whose lives and separate deaths from freezing were described by the latter's brother Merqusâq to Rasmussen (1908:34–35). And (3c) independently confirms what Merqusâq told Rasmussen (1908:32): "We [Qikiqtaaluk immigrants] taught them [Inughuit people] to shoot with bows and arrows" (see also Gilberg 1984:578).

5. Texts. Texts are the most important component of Kroeber's Inuktun documentation. In all there are 49, not counting multiple versions of a story. A few are only a sentence long, barely "texts" (despite being given titles by Kroeber); most are one or two pages long; a dozen or so are longer. A full list is in the Appendix. Most of the texts are traditional narratives ("myth" or "folktale"), and many of these can be compared with much longer, syntactically richer versions in Holtved's (1951a, 1951b) collection. A few texts are anecdotes or procedural descriptions; one is an invented conversation.

[Figure 5 near here]

A representative short text is Qissuk's "Origin of ptarmigan," dictated in December 1897 (2.37). The manuscript is in Figure 5 and the full text is in (4).

(4a)   *inuk*   *kopanung*

      person(ABS)   snow.bunting(ABS)

      'Snow bunting (was) a person.'

(4b)   *inuk*   *agekssir*

      person(ABS)   ptarmigan(ABS)

      'Ptarmigan (was) a person.'

(4c) *agexssinuktun*   *inuk*

     ptarmigan:become:PART.3SG   person(ABS)

     'A person became a ptarmigan.'

(4d) *tingisson*   *nunamin*   *qiăsson*

     fly:PART.3SG   land:ABL.SG weep:PART.3SG

     'He flies from land. He weeps.'

All but one of the words in this text end in underlying stops. Kroeber's spellings show how indistinctly he heard them: final /k/ is written *k* in *inuk* and *ng* in *kopanung*, final /t/ is written *n* in *nunamin*, and final /q/ is written *n* (for uvular [N]) in the verbs. The bird names in Figure 5 are also mistranslated: 'partridge' is an ornithological error, and presumably neither Qissuk nor Eneutseak knew an English name of the *qupanuk*. And though Kroeber translated *tingisson* as plural, it is more likely singular, since the plural's final /t/ would not trigger lowering of the preceding /u/ to [o]. The manuscript also shows that Kroeber revised the word order recorded in three sentences. As revised, each sentence is predicate-initial, including the first two sentences with nominal predicates. But the whole text is like an abstract of a version of the same story later told by Amaunalik, "The Child which was Transformed into a Sparrow [sic] and the Grandmother into a Ptarmigan" (Holtved 1951a:244-246). Her version is not only longer but has more syntactic elaboration, increased verbal synthesis, and adverbial, deictic, and focus expressions like *imaa* 'thus', *taja* 'then', and *ʃuli* 'even' (MI *huli*). In minimalist texts like Qissuk's in (4), Inughuit consultants' goals may have been to share the main plot elements of a story rather than to tell one.

As Kroeber became more familiar with Inuktun and his Inughuit collaborators more accustomed to the work, he transcribed somewhat more elaborate texts. An example is a version of the story of the origin of the narwhal, dictated by Uisaakavsak in May 1898.[14] It is the longest of three versions of this story dictated to Kroeber, though, with 72 words, it is less than a tenth as long as a version

recorded in 1937 by Amaunalik (Holtved 1951a:152–165).[15] Uisaakavsak's telling begins as follows (5.509):

(5a) *audlalerqessun*   *inu[qang]itumun*

  leave:INCP:PART.3SG   person:have:NEG:PART.3SG:TERM.SG

  'He started for where there are no people.'

(5b) *pisserqiá*   *isserqangidluni*   *toqoxassong*

  shoot:CMPL:PART.3SG>3SG   eye:have:NEG:CONT.4SG   be.dead:PART.3SG

  'He shot (a bear, even) though he did not have eyes. It was dead.'

(5c) *pidlaluqiá*   *ningioxssup*   *igadlerqiá*

  cut.up:a.little:CMPL:PART.3SG>3SG   old.woman:AUGM.REL   cook:INCP:PART.3SG>3SG

  'The old woman cut it up (and) started cooking it.'

(5d) *irngni*   *neressingniqiá*

  son(ABS)   eat:CAUS:NEG:CMPL:PART.3SG>3SG

  'She did not feed it to (her) son.'

(5e) *iss[erq]a[ng]iton*   *anilerqesson*

  eye:have:NEG:PART.3SG   go.out:INCP:PART.3SG

  'The one who did not have eyes started out.'

(5f) *qaxssaxssoa*   *qienilangmun*

  loon:AUGM.ABS   out.there:TERM.SG

  'A big loon (red-throated diver) was outside.'

(5g) *neaqóminun*   *ingerqordlirá*

  head:4SG.POSS.TERM   sit.down:CAUS:PART.3SG>3SG

  'It made him sit down on its head.'

(5h)   *tingutirqigá*   *udluminun*

       fly:VAL:CMPL:PART.3SG>3SG   nest:4SG.POSS.TERM

       'It flew him to its nest.'

The language is complex, not only because of highly synthetic words occurring later in the text, like *imixssaxssierqulirsoñ* 'he looked for water to drink' (5.511) and *sauninguangikatersuliré* 'he put her bones together' (5.513). The sentences in (5a) and (5b) feature verbs with the denominal postbase *-qar* 'exist, have' (PIY *-ŋqar) in subordinate clauses: a relative clause 'to where there are no people' (Terminalis case) and an adverbial clause 'though/while he did not have eyes' (negative Contemporative mood).

In (5g) and (5h), the "fourth-person" (reflexive or proximate) possessed nouns in *-minun* /-minut/ indicate that the possessor has the verbal subject as its antecedent. So, in (5h), the loon flew to its own nest, not to the boy's nest. The argument structure of a causative verb implies two logical subjects, the causer and the subject of the caused verb. It is thus notable that the reflexive antecedent in (5g) is the main-clause subject (the loon) rather than the causee (the boy, the implied subject of 'sit'), though the latter could be analyzed syntactically as a closer subject.

Throughout (5), Uisaakavsak uses verbs with two aspectual postbases, completive *-qi* and inceptive *-lir.* The Kalaallisut cognate of *-lir* is sometimes used in imperfective contexts (Fortescue 1984:279, Kahn and Valijärvi 2022:205). In (5), the contrast is between actions that are complete at the narrative reference time (*-qi*) and those that are still ongoing (*-lir*). This highlights Uisaakavsak's comfort with higher-level discourse structuring.

[Figure 6 near here]

In December 1897, Boas himself transcribed a version of "The man who married a goose," perhaps told by Qissuk.[16] See Figure 6 for the second of its five manuscript pages. Half of this page and all of the first page are crossed out because Boas or Kroeber decided that their contents are from

a different part of the narrative or a different story altogether. The crossed-out text ends with an

episode absent in other versions: a woman who did not want to marry escaped, stumbled, and spilled

material that turned into little auks, grey seagulls, and murres. Below the crossed-out text, the

narrative begins again:

(6a) *Pissuāˈluktung*   *nirdlirit*   *takoniyēˈi*

      walk:here.and.there:PART.3SG   goose:PL   see:PART.3SG>3PL

      'He walked here and there, he saw geese.'

(6b) *anurāˈñgin*   *qadliriyēˈi*

      anorak:3PL.POSS   sit.on:INCP:PART.3SG>3PL

      'He sat on top of their garments (i.e., feathers they had set aside).'

(6c) *tuniyoradlirēˈi*   *anurāˈñgingin*

      give:one.by.one:INCP:PART.3SG>3PL   anorak:3PL.POSS.MOD

      'He gave them their garments.'

(6d) *māˈrdlung*   *tūningiking*

      two   give:NEG:PART.3SG>3DL

      'To two (of the geese-women) he did not give (back their garments).'

(6e)   *aipāˈ*   *tuniyāˈ*   *tīngiqissung,*

      one.of.two   give:PART.3SG>3SG fly:INCP:PART.3SG

      'To one of the two he gave it, she took flight.'

(6f) *aipa*   *nuliaridlirāˈ*

      one.of.two wife:have.as:INCP:PART.3SG>3SG

      'The other one he married.'

Other versions of this story were told by Nuktaq to Kroeber and, in 1937, by Amaunalik to Holtved

(1951a:140–152). Amaunalik's is by far the longest and most detailed version, often explaining what

is presupposed in the others. But when they describe the same event, they often use the same word —

not just a similar expression or the same verb base, but a closely related or identical word form.

Every word in (6) except *māˈrdlung* 'geese' has a counterpart derived from the same base in the

corresponding part of Amaunalik's narrative. Corresponding to the first word in (6a) is Amaunalik's

piʃuraluglune 'wandering about' (Holtved 1951a:140), which differs mainly in that it is in the

Contemporative (a subordinate-clause) mood. Corresponding to (6d) is a sentence that includes

identical words (Holtved 1951a:141, spelling normalized):

(7)   *taakua marlung arnang   tuningerqing*

     these   two   woman(ABS)   give:NEG:PART.3SG>3DL

     'Those two women he did not give (their clothes).'

According to Holtved (1951a:10), "Amaunalik knew her narratives so perfectly that she stopped at a

given signal, when a disc should be changed, and nearly automatically continued, when the next one

was ready." Qissuk's telling forty years earlier, a decade before Amaunalik was born, highlights the

stability of lexical choice in traditional Inuktun narrative.

6. Morphosyntax. What Kroeber and Boas recorded about morphology and syntax mostly reinforces

what later documentation revealed. An example is the preservation of the dual. Among many other

duals in the EI corpus are the pronoun *uvaˈguk* 'we two' (B6); verbs in (6d), (7), and (8a); and a

series of verbs in two versions of "The woman who married a dog," including commands (to pairs of

children) like *qablunaiwiting* 'be white people!' and *amaroiting* 'be wolves!' (3.144–145). The dual

was lost in the other Greenlandic dialects but endures in Canadian Inuit. Because it is an archaism,

however, its presence does not illuminate the dialect position of Inuktun.

6.1. Alignment. Inuit alignment patterns have long been of interest to linguists, as have their

interactions with the denominal postbase constructions that are often treated as noun incorporation. Kroeber was well aware of these phenomena and worked to elicit relevant examples. In his first notebook, after eighteen pages of lexical elicitation, he records elicitation of transitive clauses. He prepared in advance, with prompts written in ink: "the bear eats rabbit, man hits his dog, wound hurts the man," etc. Here and throughout the texts, a range of relevant sentence types are documented, as in (8):

(8a) *inup   ongnikíng   kixssaniaxssuk   tuluang*

man:REL   go.to:PART.3SG>3DL   falcon(ABS)   raven(ABS)

'A man approached the falcon (and) raven.' (Nuktaq, "Falcon and raven," 2.75)

(8b) *ukadlimik   nerissuk   tulua*

arctic.hare:MOD eat:PART.3SG   raven(ABS)

'Raven eats hare.' (1.19, elicitation)

(8c) *atatami   atianing   atigisson*

father:4.POSS.REL hood:3.POSS.MOD put.clothing.on:DETR:PART.3SG

'He put on his (own) father's hood.' ("Tutuatuin," 3.114)

In (8a), a transitive subject has Relative case and the (dual) object is Absolutive; the verb agrees with both. The pattern is different in (8b) and (8c): the subjects are Absolutive (if expressed) and objects have Modalis case; the verbs agree only with the subject. Both the transitive (a.k.a. ergative) pattern in (8a) and the semitransitive (a.k.a. antipassive) pattern in (8b) and (8c) are clearly documented in Early Inuktun.[17] A detransitivizing postbase (*-i*) is present in (8c), but some verbs, as in (8b), do not require overt morphology to occur in the semitransitive pattern.

In some dialects of Inuktitut, according to Johns (2001a,b, 2006), the transitive pattern is losing ground to the semitransitive pattern as part of a drift toward nominative-accusative alignment. This is said to be evidenced by the increased use of the semitransitive pattern and by its use with new types

of patient and theme arguments. In Early Inuktun, however, semitransitives are relatively uncommon, with no indication of the drift found elsewhere.

The EI semitransitive construction is also clearly documented in constructions with a nominal base and a verbalizing postbase, deriving stems with meanings like 'be(come) X, have X'. In (9), the Modalis object is understood as as specifying a nominal base:

(9)   *Nuliaqtāˈqtung*   *nirdlingming*

        wife:get.a.new:PART.3SG   goose:MOD.SG

        'He got a goose as wife.' (Qissuk, "The man who married a goose," 2.58)

Whether this is noun incorporation and how similar it is to canonical cases of that phenomenon have been debated at least since papers by Kroeber (1910, 1911) and Sapir (1911). Kroeber's view was that "the apparent incorporation … is etymological [i.e., derivational], whereas noun-incorporation, if it exists, is essentially syntactical" (1910:573). A modern debate around precisely this question features prominent work by Sadock (1980, 1986), Mithun (1984, 1986), and many other analysts over the last forty years.

Verbs with nominal bases and verbalizing postbases also occur in the transitive construction:

(10)   *inung*   *qimip*   *nuliagigá*

        person(ABS) dog:REL   wife:have.as:PART.3SG>3SG

        'A dog had a person as a wife.' ("The woman who married a dog," 3.141)

The postbase *-gi* in (10) 'have as' derives transitive verbs; *-taar* 'get a new' in (9) derives intransitives.[18]

The sentence in (10) is narrative-initial, but transitive sentences can refer to already-mentioned discourse participants. The sentences in (11) refer to three such discourse participants: the subject in (11a) and both arguments in (11b).

(11a) *uχssuq*   *nangmaxiá*   *torngup*   *iglúmun*

bearded.seal(ABS) carry.on.back:CMPL:PART.3SG>3SG spirit:REL house:TERM.SG

'The *tuneq* (shaman's helper spirit) carried a seal on its back to a house.' (Nuktaq, "The man

who married a tuneq," 2.71)

(11b) *aglirqá*   *tuluqám*   *kixssariaxssuq*

spot:provide.with:PART.3SG>3SG raven:REL falcon(ABS)

'The raven put spots on the falcon.' (Nuktaq, "Falcon and raven," 2.75)

The examples in this and previous sections show that subjects and objects can be definite or

indefinite in the transitive construction, overt or expressed only through agreement. In the EI corpus,

as noted, the semitransitive construction is also rarer than the transitive construction. These patterns

align with Kalaallisut and other Inuit dialects; they contrast with innovative patterns that have been

described for some Inuktitut dialects undergoing the accusative drift (Johns 2017, Yuan 2022). Like

retention of the dual, this is an archaic trait and therefore not probative for dialectology.

6.2. Mood. In Kalaallisut, the Indicative mood (with forms like consonant-stem 1SG -*punga*) is used

in main-clause statements and the Participial mood (e.g., -*tunga*) in complement clauses.[19] In Inuktun,

Fortescue (1991:173) refers instead to an "indicative/participial" paradigm, consisting mostly of

Participial forms; Holtved (1952:24) writes that Indicative forms "are hardly ever met with" in the

texts he collected in the 1930s and 1940s. The rarity of Indicative forms and the main-clause use of

Participial forms sharply distinguish Inuktun from Kalaallisut, aligning it instead with some Canadian

dialects (Fortescue 1983:33). In Siglit (WCI) Inuit, according to Lowe (1985:117), the Participial or

"simple declarative" (his term) "is generally used to make simple statements." The Indicative or

"*kiitaimma* declarative" has a use that "belongs to the narrative style and seems to be restricted to

story telling" (144). In this use, an Indicative "usually shows up at the end of a story or at the end of

an episode, after the suspense of the action has been maintained for a while by the speaker." Lowe translates 'and finally, in the end, he X-ed' and observes that this use often occurs with the adverbial *kiitaimma* 'finally, in the end'. Fortescue (1983:14) makes the same observation for Inupiaq dialects: the Indicative "is limited to 'narrative' utterances describing vivid action, usually in conjunction with the adverbial **kiisaimmaa** (finally)."[20]

In Early Inuktun, as the examples in §5 and §6.1 illustrate, most documented main-clause verbs are Participial. Very few Indicative forms occur in texts. In Kroeber's notes from grammatical elicitation, there are both Participial forms like *kainiortunga* 'I make a kayak' (3.93, with intransitive 1SG *-tunga*) and Indicative forms like *patigpâ* 'he slaps him' (1.12, with transitive 3SG>3SG *-paa*) and the full paradigm of *kaijarakpunga* 'I have a canoe' (1.21, with intransitive 1SG *-punga*). But lexical elicitation reveals nothing about the contexts in which such forms might be used.

Among hundreds of verbs in the texts transcribed by Kroeber and Boas, I have seen three Indicatives in two texts. This is not much to go on, but all three examples seem to suit Lowe's and Fortescue's descriptions. One is in a short anecdote told by Qissuk, dubbed by Kroeber "Accident in Kayaking" (2.35).[21] The text begins as follows:

(12a) *kayaktorlunga*   *qingussunga*

      kayak:use:CONT.1SG   capsize:PART.1SG

      'While paddling a kayak, I capsized.'

(12b) *agirssut*   *qainén*   *amirglissiun*   *qiluvánga*

      come:PART.3PL kayak:PL   many   pull.up:IND.3PL>1SG

      'Many kayaks came, they pulled me up.'

(12c) *aiveq*   *audlaqtong*   *naulinginamni*

      walrus(ABS) leave:PART.3SG harpoon:before:1SG

      'The walrus went away before I could spear it.'

The Indicative *qiluvánga* 'they pulled me up' in (12b) occurs precisely "at the end of an episode, after the suspense of the action has been maintained for a while." A six-word "episode" is abbreviated, to be sure, but this may just reflect the external constraints on Kroeber's documentation.

The other two textual EI Indicative forms are in the story of Aningaaq ('moon'), told to Kroeber in January 1898. Aningaaq came to live with a girl and, instead of hunting food, provided many foxes. The unidentified teller describes this as follows (3.103, translation after Kroeber 1899b:180):

(13) *aningana oxaqton ...   taima oxarpon   audlaqpon*

A.   say:PART.3SG thus   say:IND.3SG leave:IND.3SG

'Aningaaq said, ("For the cohabitation I shall cause to present themselves to you a great number of foxes.") So he said, (and) left.'

The two Indicative forms are preceded by *taima*, a relative of Siglit (WCI) Inuit *kiitaimma* and a common word in Inuktun narratives. It often occurs near the end of an episode or story in the texts edited by Holtved (1951a), reiterating or summarizing what has taken place. Whether the patterns described by Lowe (1985, 1988) can be replicated even partly in a large corpus like Holtved's remains to be seen, but the evidence of the earlier texts transcribed by Kroeber is at least suggestive.

7. Phonology. If EI morphosyntax is largely congruent with that of the later language, Kroeber's and Boas's documentation of the sound system paints a mixed picture. In 1897, Inuktun had some of the phonological features recorded later, but other key sound changes were not yet entrenched or even begun. Since Proto-Inuit serves as a point of reference in what follows, its phonological inventory is given in Table 2; compare the Inuktun inventory in Table 1. Except for some symbol choices, the inventory in Table 2 is equivalent to the inventories of Bobaljik (1996) and Hitch (2017).[22]

[Table 2 near here]

7.1. Coda consonants. Several processes affect coda consonants in Inuit dialects, including Inuktun.

Word-finally, as noted in §2 and §5, stops often surface as nasals. Among many other examples in the Kroeber-Boas corpus are *nanum* /nannup/ 'polar bear' (Relative case, 1.19), *inung* /inuk/ 'person' (passim), *kayang* /qajaq/ 'kayak' (3.93), and even the names *Mining* 'Minik' (2.73) and *Nuktang* 'Nuktaq' (B7). This is a widespread Inuit pattern. It is found in Western Canadian Inuit and Kalaattisit and was reported in eighteenth-century Kalaallisut (Fortescue 1983:8,29, Dorais 1986:30–31, 2010:35); Boas (1894) lists many examples in Qikiqtaaluk Inuktitut. Its presence in Early Inuktun is not surprising or dialectologically revealing.

Medial coda consonants are also affected by sound changes. This involves assimilation ($*C_1C_2 >$ C_2C_2), metathesis ($*C_1C_2 > C_2C_1$), or both (metathesis followed by assimilation: $*C_1C_2 > *C_2C_1 >$ C_1C_1). Assimilation patterns show a west-to-east cline, with Kalaallisut generally the most advanced and western Inuit dialects retaining more cluster types.[23] Table 3 shows some Inuktun outcomes. Clusters whose first member is a coronal assimilate in Early Inuktun; several other cluster types assimilate in the modern language. For later stages of the language, Holtved (1951a), Fortescue (1991), and Jacobsen (1991) record variation: unassimilated clusters are sometimes heard, at least among conservative or elderly speakers. What is significant in Kroeber's and Boas's corpus is that there is no evidence at all for assimilation in the labial-initial and velar-initial clusters in Table 3. Yet this too may be unrevealing dialectologically: assimilation is a drift-like Inuit tendency, and Early Inuktun was apparently just conservative in this respect.

[Table 3 near here]

Unlike assimilation, CC metathesis was fully entrenched in Early Inuktun. In all three Greenlandic Inuit dialects (Kalaallisut, Kalaattisit, and Inuktun), according to Dorais (1986:42), the noncoronal continuants *g*, *r*, and *v* "have generally undergone metathesis ... when they occur in an etymological cluster whose first element is a bilabial ... or an alveolar."[24] Table 4 shows this for PIY *ðg, *lv, *lr, and *nr in Inuktun (EI clusters beginning with PIY bilabials are not recorded). But if

this constellation of metatheses is uniquely Greenlandic, each specific pattern occurs elsewhere in Inuit (Dorais 1986, Fortescue et al. 2010). It is striking that the Inuktun patterns tout court match only the Greenlandic ensemble, but it is not necessary to conclude that this requires positing a specific historical connection. The shared features may be a by-product of drift.

[Table 4 near here]

7.2. Sibilants. Inuktun has a fricative that Fortescue (1991) analyzes as /h/; its realizations include [h] and [ç].[25] Several analysts treat the debuccalization of this fricative in Inuktun as significant for dialectology, comparing other Inuit dialects with /h/ (Fortescue 1983:8, Woodbury 1984:60, Dorais 1986:27). Inuktun /h/ has at least four diachronic sources, including two conditioned changes:

(14a) PIY/PI *c (e.g., PIY *əcur- 'be murky' > MI *ihuqtaaq* 'grey (color of young beluga)')

(14b) PIY *ð > PI *ž (e.g., PIY *əðə > MI *ihi* 'eye')

(14c) PIY *y > PI *c / i ___ in certain contexts and words (Fortescue et al. 2010:xvii, e.g., PIY *iyaqur > MI *iharuq* 'wing')

(14d) Assibilation: PIY/PI *t / i(C) ___ V (e.g., PIY *itəgar > MI *ihigak* 'foot', PIY *niqtuq- 'praise' > MI *nirhuraa* /niχχuraː/ 'praises her/him' (Dorais 2010:50))

The partial merger in (14c) occurred in Proto-Inuit. The one in (14d) occurred only in some Inuit dialects, and only after original PIY/PI *i ("strong i"). Assibilation did not occur after PIY/PI *ə ("weak i"), which later merged with *i in most Inuit dialects, as in PIY *mətər > EI *mitíq* 'eider duck' (1.5). It is possible that the only consonants that could intervene between the trigger and target of assibilation were uvulars.[26]

In almost all EI examples of the contexts in (14), Boas and Kroeber write *s* or *ss*. This follows Kleinschmidt's (1851, 1871) Kalaallisut orthography, which uses *s* and *ss* for two sibilants that still contrast in some dialects. For *ss*, in phonological representations, I will use the symbol /š/ (Fortescue et al. 2010).[27] The two sibilants have merged as /s/ in the standard language, and the *s*-*ss* distinction

was abandoned in the 1973 orthography revision. Were EI *s* and *ss* categorically distinct? Were they conditioned variants? Or were they in free variation?

The evidence indicates that /s/ and /š/ contrasted in Early Inuktun and were respectively written *s* and *ss* by Boas. To establish this, I focus on bases (roots) in Boas's documentation. Sibilants in bases transcribed by Boas are organized by origin and phonological context in Tables 5–7.[28]

[Table 5 near here]

Beginning with the context in (14a), Table 5 shows that reflexes of PIY *c are spelled *s*. There is one exception, not listed in Table 5: *ssako* /šakkuq/ 'sharp point' (B8) < PIY *caðku (MI *hakkuq*). Significantly, in this word, *ð would have yielded Boas's *ss* /š/ if it had not assimilated to the following *k. As an ad hoc explanation for this word's initial *ss*, I suggest that its erstwhile second sibilant affected the first one before (or in tandem with) cluster assimilation: *saškuq > *šaškuq > /šakkuq/.

[Table 6 near here]

Turning to the context in (14b), Table 6 shows that the reflexes of PI *ž (PIY *ð) are spelled *ss* except in one phonological context, namely, immediately after back stops (PI *k, *q), where Boas instead writes *s*.[29] This is evidenced in three words and reflects an otherwise Canadian Inuit change of PIY *ð (PI *ž) to *c after *k and *q (Woodbury 1984:59). The comparanda cited in Table 6 confirm this interpretation. In words like 'antler' and 'arrow', other Inuit dialects have palatal glides as the reflexes of PI *ž, but comparanda for 'belt', 'loon', and 'throwing board' have only sibilants. At some relatively early date, PI *ž (or its reflex, e.g., *š) shifted to PI *c (or its reflex, *s) in these words, but not in 'antler', etc.

The evidence in Tables 5–6 thus indicates that two sibilants contrasted in Early Inuktun: PIY/PI *c > EI /s/, written *s* by Boas; and PIY *ð > PI *ž > EI /š/, written *ss*. The contexts in (14c) and (14d) both involve partial mergers whose outcomes are /s/ in several Inuit dialects. I will use the term

"secondary *s" for these instances of /s/ that did not come from PIY/PI *c. The expected outcome of secondary *s in Early Inuktun is /s/, written *s* by Boas.

[Table 7 near here]

Table 7 shows the outcomes of secondary *s in EI forms recorded by Boas. Most result from the assibilation in (14d), but two derivatives of PIY *piyug- 'walk' reflect the change of PIY *y > PI *c in (14c). Whether Boas writes *s* or *ss* is predictable based on phonological context. I interpret the data as showing the Inuktun sound change in (15), which has cross-linguistic parallels in languages such Karuk (Garrett et al. 2023:1173), Northern Paiute (Babel 2009), and Yurok (Robins 1958:9).[30]

   (15)   *s > š / i __

This change would not apply to PIY *ð (Table 6), but it would apply to PIY/PI *c after a high front vowel. By chance, there are no attested examples of this context: the intervocalic examples of PIY/PI *c in Table 5 are preceded by other vowels.[31]

Kroeber's more extensive EI transcriptions do not show the regular patterning of Boas's documentation. Even where Boas writes *s*, Kroeber often writes *ss*. Word-initial examples are *ssiko* 'sea ice' (1.6) and *ssina* 'edge, shore' (1.6); medial examples are *tassirn* 'lake' (1.8) and *ilipsse* 'you (PL)' (1.9). All these examples with *ss* (and many others) are from PI *c. Kroeber usually writes *ss* in non-initial position. Initially, where all sibilants come from PI *c, he writes *s* and *ss* about equally often. He himself expressed uncertainty about the sibilants, writing that "s seems generally to be ss" and that words begin with *ss*, "which they do not in Gr[eenlandic]" (3.139).

To interpret Kroeber's failure to distinguish EI /s/ and /š/ reliably, it is helpful to know that he made a similar error in transcribing Yurok starting in 1900. This language of northern California has two sibilants: /ʃ/ (as in English) and alveo-palatal /ɕ/ (pronounced as [ɕ] by twentieth- and early-twenty-first-century first-language speakers and as [s] by second-language speakers today). Kroeber wrote Yurok /ʃ/ as *c* (then the symbol for /ʃ/), but he wrote /ɕ/ unpredictably as *s* or *c*. It was heard as

intermediate between [s] and [ʃ], so he sometimes used one symbol and sometimes the other.

Kroeber apparently did the same thing in transcribing EI /s/, which he sometimes heard as closer to /s/ and sometimes as closer to /ʃ/. This only makes sense if EI /s/ was intermediate between the two. This is plausible. In the northernmost dialect of Kalaallisut, some 400 miles south of Inuktun, Thalbitzer (1904:89) describes /s/ as "formed differently from the European *s*- and *š*-sounds," with the tongue tip against the lower teeth and the tongue blade raised. It has a "slightly *š*-like quality," he writes, and "can be said to be slightly postpalatalized."[32] It is plausible that a researcher who later variously heard Yurok /ɕ/ as /s/ and /ʃ/ would hear the Inuktun sound in the same way. By contrast, whether due to his prior experience or for some other reason, Boas heard the contrast accurately, writing *s* for /s/ (PIY/PI *c) and *ss* for /š/ (PIY *ð > PI *ž). In short, Early Inuktun had two sibilant phonemes.

Complete debuccalization to [h] is documented far less often in the EI corpus than in Holtved's later material and may thus be relatively recent.[33] It is recorded in two distinct ways in two distinct contexts. In non-word-initial position, Kroeber wrote aspiration (either <ʻ> or *h*) above *ss* in four words: *pinga**ss**uning* (1.20), *miki**ss**ungwak* (2.32), *ag**ss**ut* (2.73), and *ka**ss**igiak* (4.413). He may have perceived a sound with some *h* quality and some sibilant-like quality, perhaps equivalent to Jacobsen's [h͡ç] or Holtved's [hˢ].

Word-initially, two words are recorded with *h*. One is *hamona* 'go further in!' (Minik, 5.525), which Holtved (1951a:37) writes [hamuŋa, hˢamuŋa] 'down there' (PIY/PI *cam- 'down below, down-slope'). A second is *hierqtaq*, glossed with a sketch of the constellation Orion (1.17). Boas (1894:111) defines Qikiqtaaluk Inuktitut *sieˈktung* as 'Orion's belt = standing in a row', comparing Kalaallisut *siagtut* 'the three bright stars in Orion's belt' (Kleinschmidt 1871:320), now written *Siattut*. Its base is PIY *ciðag- 'spread out' > PI *ciag-. In at least these two words, word-initial PI *c > EI *h*.[34]

It is tantalizing that EI *h* is written by itself only in cases where its source is PIY/PI *c, and that it is *ss* that has aspiration written above it. If there were more such data, this would support the hypothesis that complete debuccalization first arose with /s/ and that /š/ changed first into /h͡š/.[35] In any case, EI sibilant transcriptions open an invaluable window on a stage of phonological evolution no longer visible in later documentation.

7.3. Inuktun *ts*. The Modern Inuktun affricate *ts* has several sources. First, it reflects the merger of PIY *jj and *cc (a.k.a. *tc), which surface in different Inuit dialects as *tt*, *ts*, etc. Plural formation can involve internal consonant gemination, sometimes resulting in phonologically opaque alternations. For example, the Kalaallisut plurals of *nujaq* 'a hair' and *taseq* 'lake' are *nutsat* (*jj) and *tatsit* (*cc).

Second, MI *ts* reflects *tt assibilation in nearly the same context as *t assibilation: *tt > ts / i __ V, including at morpheme boundaries /it-tV/. Representative are the Participial 3SG verb forms *aqitsuq* 'is soft' (PIY *aqit-), *pukkitsuq* 'is low' (PI *pukkit-), and *takpiitsuq* 'is blind' (PIY *takviŋit-), each of which has base-final *it* followed by *-tuq*. Compare *ikkattuq* 'is shallow' (PIY *ətgat-), *ipiktuq* 'is sharp' (PIY *ipəg-), and *iviqtuq* 'sings a satirical song' (PI *ivəq-), which have other VC-tV sequences.

Though *ts* is recorded in all later work with Inuktun, it is virtually absent in Kroeber's and Boas's documentation.[36] Where *ts* would subsequently be recorded, they write *t(t)*, consistent with /tt/. An example is PIY *najjir 'ringed seal' > MI *natsiq* 'sealskin parka'. The EI form has no affrication: *nateq* 'hair seal' (1.3), *natîq* 'seal' (B4), i.e., /nattiq/. A second example is PIY *accag > MI *atsak* 'paternal aunt', recorded as EI *attiga* (2.39), *attǃíga* (2.41); others are plural *kaˈnatut* 'sculpin(s)' (B6, singular *kaˈnajoq*), *nutat* 'hairs' (1.8), and *tatit* (1.8), *tatīˈt* (B6) 'lakes'. For 'hairs' and 'lakes', compare the Kalaallisut cognates above.[37]

In the *tt assibilation context (i __ V), too, Kroeber never writes affricates. A morpheme-internal

example is PIY *agittar- 'open mouth' > *aitaqpong* 'gapes, yawns' (2.78; cf. MI *aitsauqtuq*); a

derived example is *amitón* 'it is narrow' (2.79, /amit-tuq/, MI *amitsuq*). The pattern is also regular

with the negative marker. In Inuktun, according to Compton and Dresher (2011:211), the "negation

marker /ŋŋit/ consistently triggers palatalization of participial inflection markers, such as /-tuŋa/." An

example is MI *maninngitsuq* 'is uneven, rough' (PIY *manig-* 'smooth'), with Participial 3SG /-tuq/.

This never happens in Early Inuktun. In the examples in (16), negative /-ŋŋit-/ is followed by a /t/-

initial ending, either /-tuq/, its plural /-tut/, or its 1SG counterpart /-tuŋa/. The resulting /tt/ sequence is

spelled *t*, not *ts*:

(16)   *audlayang**it**unga* 'I'm not going away' (2.38)

         *issiissarangn**it**úng* 'he did not see it' (2.75)

         *pilakssamang**it**ung* 'he has not cut them' (3.87)

         *artornang**it**on* '(it's) not heavy' (3.107)

         *averang**it**on* '(he) has no walrus' (3.111)

         *neringn**it**uun* '(they) don't eat' (3.111)

         *ssining**it**on* '(it's) not asleep' (3.145)

         *tiking**it**on* '(he did) not come' (4.481)

In the early 1920s, when Birket-Smith's (1928) Inuktun wordlist was collected, an affricate was

heard in many words (given here in his orthography).[38] One is the negative Participial form *iluäŋ˙itˢɔq*

'it is bad', literally 'it is not good', with a sequence /ŋŋitsuq/. Examples in underived contexts include

atˢäk 'father's sister' and *nätˢEq* 'sealskin frock' (cf. EI *attiga*, *nateq* above); a derived plural is *nutˢät*

'hairs' (cf. *nutat* above). Interestingly, the Inuktun developments seem to show that [ts] developed

directly from [tt] — not from [cc], as might be expected for a geminate going back to PIY *cc and

*jj.[39]

A final window on the evolution of Inuktun *ts* is provided by the second-person pronouns. Their (Absolutive) paradigm is recorded as follows at three distinct stages:

(17a)　Early Inuktun (1.9, B6): singular *iblín*, *iblîn*; dual *iliptík*, *ilîˈptíñg*; plural *ilipsse*, *ilîpsēˈ*

(17b)　Early 1920s (Birket-Smith 1928:42): singular *iᵛdlit*, *iblit*; dual *ilivtik*; plural *ilivse*

(17c)　Modern Inuktun (Fortescue 1991:172): singular *illit*, dual *ilitsik*, plural *ilissi*

As noted above, affricates had emerged by the 1920s. But cluster assimilation had not yet occurred in the second-person pronouns in (17b), such as dual *ilivtik*. When it did affect these words, the resulting geminates were affected by assibilation — hence *ilitsik* in (17c), not †*ilittik*. In short, assibilation was productive enough in Inuktun that it targeted newly created /tt/ sequences.

8. Minik's voice. Qissuk shared vocabulary, sentences, and tales of his life and people in his work with Kroeber. To one of these tales, dictated in December 1897, Kroeber gave the title "Coming to America" (2.46).[40] Like other early texts he transcribed, it is very abbreviated:

(18a)　*amaulikan   audleáqtut*

　　　America   leave:PART.3PL

　　　'They [Peary and his crew] went to America.'

(18b)　*avungaxssuaq   audleaqtúgun*

　　　far:AUGM   leave:PART.1PL

　　　'We went far away.'

(18c)　*audlauminardluaq   angirdlámun*

　　　leave:to.be.wished:a.little   homeward

　　　'I sort of wish I could go home.'

Qissuk died on February 17, 1898, after three and a half months in New York.

By the summer of 1898, Uisaakavsak and Qissuk's son Minik were the only surviving members of the Inughuit group brought by Peary in the previous year. Uisaakavsak then returned to northern Greenland, where he described his experiences of New York, its people, and their ways of living. "People lived up in the air like auks on a bird cliff," he is reported to have said (Gilberg 1969-70:85). He was similarly quoted in his own language (Stein 1902:197):

(19)   *iglŭ̆hsuin*   *tɛm̄ă̆to*   *kākă̆hsuin*   *Akpă̆ni*

       house:AUGM.PL   be.thus:PART.3PL   mountain:AUGM.PL   Akpat:4.POSS.ABS

       'The houses are like the cliffs of Akpat.'

Uisaakavsak's stories were not believed; he was dubbed a "big liar" (Gilberg 1969-70, Harper 2000:177–181). He died in tragic circumstances in 1910.

After Uisaakavsak's departure for Greenland, only Minik remained. The last pages of Kroeber's last Inuktun notebook record work with Minik on June 1 and December 30, 1898 (four pages from each day). They have linguistic and cultural information and an anecdote about fighting a bear, including this line (5.529):

(20)   *nauliriá*   *inúng*   *niaqoagun*   *toqoqassong*

       harpoon:PART.3SG>3SG   person(ABS)   head:3SG.POSS.VIAL   be.dead:PART.3SG

       'A person speared it through its head. It was dead.'

An English summary explains: "A woman saw it, & her brother, a boy, came & speared [the] bear through [its] eyes. He ran around blind a while & then died." Minik's use of the third-person (rather than fourth-person) possessive Vialis suffix *-agun* /-agut/, confirming that the bear is the antecedent, shows his command of his language after fourteen months away. Yet he also uses Absolute *inúng* /inuk/ 'person' rather than the Relative form /inup/ expected in a transitive construction. It is the only such example in the EI corpus. Minik was about eight years old in December 1898 and had spoken mainly English for at least half a year, so perhaps his lapse reflects English influence; or it might

reflect the challenges of text dictation for a child. Fortescue and Lennert Olsen (1993) identified occasional examples of the same Absolutive-for-Relative error in their study of Kalaallisut acquisition, including in a five-year-old child (the oldest whose speech they studied). Minik's Absolutive *inúng* might be what any Inuk child would occasionally say.

[Figure 7 near here]

The last numbered page of Kroeber's last Inuktun notebook is shown in Figure 7. Minik's new signature is prominent, with his adoptive surname Wallace. (His English-based spelling *Mene* omits a nasalized, unreleased, or weakly articulated final consonant.) There is also an anecdote about Minik's dog back home: one night, Tereniaq (*tiriganniaq* 'fox') frightened away a dangerous spirit. With this, and a memory about children's play, Kroeber's record of the Inughuit people and their language ends.

9. Conclusion. For linguists, this paper made two main contributions. The first was to highlight some linguistic features of Inuktun still present in its earliest significant documentation at the end of the nineteenth century. In particular, uses of the Participial and Indicative moods (§6.2) and the historical phonology of sibilants and assibilation (§7.2-3) signal closer dialectological connections with Western Canadian Inuit dialects than with Greenland.

A second contribution for linguists is methodological. Despite Kroeber's own modest assessment of his Inuktun linguistic work (§3), the work can be used and remains of great value academically and culturally. Documentary linguists should know that what they record will live on in ways they may not anticipate. And those interested in a language with any history of documentation should attend to all its earlier records, despite errors and analytic weaknesses.

Finally, bringing to light the Inuktun corpus recorded by Kroeber gives some voice to a set of accomplished Inughuit people whose lives were changed and ended in ways they neither chose nor anticipated. I hope that what they had to say will endure and be of interest in Greenland and beyond.

Appendix: Early Inuktun texts

Inuktun texts transcribed by Kroeber and Boas are listed below. Parallel narratives from Holtved (1951a) are cited as H (37 = text 37), those from Rasmussen (1908) are cited as R (135 = p. 135), and translations by Kroeber (1899b) are cited as K (6 = text VI). Tellers are named if identified; it is likely that all the texts in Kroeber's notebooks 3–4 (texts 24–47) were told by Uisaakavsak. Titles are adapted from Kroeber.

1. The origin of the narwhal (Qissuk, 2.32–33, 2.48–49; Nuktaq, 2.67; Uisaakavsak, 5.509–513; cf. H 37, K 6, R 169–170)

2. Walrus hunting (Qissuk, 2.30–31)

3. Bear hunting (Qissuk, 2.34)

4. Accident in kayaking (Qissuk, 2.35)

5. The origin of the bearded seal (Qissuk, 2.36)

6. The origin of the ptarmigan (Qissuk, 2.37; cf. H 70, K 10)

7. Burial (Qissuk, 2.38)

8. Supposed dialogue (Qissuk, 2.38)

9. The woman who married a dog (Qissuk, 2.44–45; unidentified teller, 3.141–145; cf. H 11, K 5, R 81–82)

10. Coming to America (Qissuk, 2.46)

11. Spearing fish (Qissuk, 2.47)

12. Making a sledge (Qissuk, 2.50)

13. Igimasuxssuq (Nuktaq, 2.51; unidentified teller, 4.415–417; cf. H 49, K 22, R 184–186)

14. Qituarssuk (Qissuk, 2.52; cf. H 18, K 30.5)

15. Akssait igoxié ['he cut off her fingers'] (Qissuk, 2.53; Nuktaq, 2.63; cf. K 25)

16. Unknown or incomplete content (Qissuk, 2.54–55)

17. Qigexssuung (Nuktaq, 2.56–57, cf. K 19)

18. The man who married a goose (Qissuk (?) with Boas, 2.58–62; Nuktaq, 2.64–66; cf. H 36, K 7, R165–167)

19. Hunting (Nuktaq, 2.68–69)

20. Whale hunting (Nuktaq, 2.70)

21. The man who married a tuneq (Nuktaq, 2.71–72; cf. K 3)

22. Falcon and raven (Nuktaq, 2.75; cf. H 61, K 13.4)

23. Hunting (Uisaakavsak, 2.76–77)

24. Qauaxssaqssux (3.96–98, 3.105–106; cf. H 34, K 23, R 201–204)

25. Aningaaq ['moon'] (3.103–104; cf. K 27, R 174–175)

26. Tutuatuin (3.114–115, 3.145; 3.145–147; cf. H 19, K 1, R 135)

27. Irdlivirisissong (3.119; cf. K 28)

28. Ituiton (3.120–121)

29. The origin of the Pleiades (3.139; cf. H 6, K 12)

30. Inukpan (3.149–151; cf. K 2)

31. Kiviuq (3.153–155; cf. H 33, K 21, R 195–197)

32. Naulaxssuqton (4.405–409; cf. K 11)

33. Qautipalung (4.427–429; cf. K 8, R 180)

34. The origin of the bear (4.431; cf. K 9)

35. The kivitoq woman and bear (4.445–447; cf. K 18)

36. Raven, geese and snowbird (4.449–455, 4.481; cf. H 60, K 13.3)

37. Angakok visits gull and raven (4.457–459; cf. K 13.2)

38. Raven (4.465; cf. K 13)

39. Gull (4.473–475, 4.479; cf. K 15)

40. The boy who ate his father and mother (4.477)

41. Fox and qogluviaq (4.479)

42. The woman who had a bear for a son (4.483; cf. K 20)

43. Walrus (4.485)

44. Agli-hunters (4.487; cf. K 17)

45. Kivitoq who killed her husband (4.488–489)

46. Talitaxssuang (4.489)

47. Sun and moon (4.491; cf. H 3, K 26, R 173–174)

48. The tornit and the adlit (Uisaakavsak, 5.521; cf. K 4)

49. Fighting a bear (Minik, 5.529)

Notes

Abbreviations. C = consonant, V = vowel; ABL = Ablative, ABS = Absolutive, AUGM = augmentative, CAUS = causative, CMPL = completive, CONT = Contemporative, DETR = detransitivizer, DL = dual, INCP = inceptive, IND = Indicative, MOD = Modalis, NEG = negative, PART = Participial, PL = plural, POSS = possessive, REL = Relative, SG = singular, TERM = Terminalis, VAL = valence changing, VIAL = Vialis; 1, 3, 4 = first, third, "fourth" person; CAY = Central Alaskan Yupik, ECI = Inuktitut (Eastern Canadian Inuit), EI = Early Inuktun, K = Kalaallisut (West Greenlandic), MI = Modern Inuktun, NAI = North Alaskan Inuit, SPI = Seward Peninsula Inuit, WCI = Western Canadian Inuit; PI = Proto-Inuit, PIY = Proto-Inuit-Yupik (a.k.a. Proto-Eskimo); AMNH = American Museum of Natural History. Except as stated otherwise, PIY and PI reconstructions and forms from Inuit-Yupik languages other than Inuktun are cited from Fortescue et al. (2010).

1. See Harper (2000:9) and Zumwalt (2019:306–307). On the whole episode and Minik's later life, see Harper (2000, 2002); on broader implications, see Huhndorf (2000) and Pöhl (2008).

2. I spell their names as Kroeber did in his notes, except for Uisaakavsak (Gilberg 1969-70), whom Kroeber calls Uyagaqapssuk.

3. Holtved could also have mentioned an ethnographic study by Steensby (1910) that includes incidental vocabulary.

4. Overviews and comparative studies of Inuit and Inuit-Yupik-Unangan languages include Fortescue (1983), Woodbury (1984), Bergsland (1986), Dorais (1986, 2010), Fortescue et al. (2010), Berge (2016, 2018), Johns (2020), and Compton (2024). I refer to Inuit "dialects" without meaning to imply that some are not separate "languages."

5. Holtved's sound recordings are at the Danish Folklore Archives and the Danish National Museum. Knud Rasmussen's diaries apparently also have entries written in Inuktun (Gilberg 1988:52).

6. Thalbitzer's (1904) "North Greenland" is the area of northwest Kalaallisut speech, far to the south of Inughuit land.

7. Dorais (2010) and others use the term "declarative" for the Inuktitut cognate of the Kalaallisut Indicative and "indicative" for the cognate of the Kalaallisut Participial.

8. On Eneutseak, see Harper and Potter (2010) and Zumwalt (2019:305–306). Her daughter Columbia Eneutseak, born at the World's Columbian Exposition, was a film performer and screenwriter.

9. For instance, on December 22, 1897, Kroeber transcribed a story told by Qissuk in which he wrote very few interlinear glosses (and some of those were plainly written later, in ink). On the facing page, he wrote "sick husband" and later "[Esther]" (2.52 rev). It may be that she was unavailable on that day and therefore Kroeber could not interpret the story.

10. With the kind permission of Arthur Kroeber on behalf of the Kroeber family, the original manuscripts (Kroeber 1897-1898) are accessible online (Kroeber 2024).

11. "S" indicates shamanistic vocabulary. I do not know what "x" means next to "nose" and other words, or the symbols written before *qáblud*, *tablu*, and *ssudluqtá*.

12. Nor do Boas's *i* and *î* correspond to the historical distinction between "strong" *i and "weak" *i, the latter being originally *ə. Cf., e.g., *igdlu* 'stone house' (B2) < PIY *əŋlu, *pîñgo* 'hill' (B2) < *pəŋur, and *qîdléñg* 'sky' (B2) < *qilag.

13. Later on the same page, Boas notes: "Old time did not kill muskoxen."

14. The teller and date are unspecified in Kroeber's notebook, but the date May 24 appears a few pages later (5.519). By May 1898, Uisaakavsak was the only surviving adult member of the Inughuit

group. Beginning on June 1, Kroeber's remaining notes are with Minik, but nothing documented with Minik is as elaborate as this text.

15. I have emended the text in (5) in two places. In (5a), Kroeber writes the second word as *inuitumun*, apparently missing a syllable he had transcribed in Qissuk's version of the same story, which has *inuqangitumun* (2.48). The two tellings have other verbal echoes: *pisserqiá* in (5b) is identical to Qissuk's *bissirqigá* (2.48); and *pidlaluqiá* in (5c) is in Qissuk's telling *pilaqigá* (2.48), a form that lacks the postbase *-luk* 'a little' but is otherwise identical (/pila-qi-gaa/ 'cut.up-CMPL-PART.3SG>3SG'). In (5e), I correct Kroeber's *issaiton*, which must have the same stem as *isserqangidluni* in (5b); Kroeber not infrequently missed uvulars and velar nasals. Both emendations involve restoring a semantically necessary negative postbase *-nngit*.

16. The narrator is identified only by Kroeber, after the fact, as "Kissu (?)" (2.58), but the immediately previous and following texts in the same notebook are attributed to Nuktaq, who was the consultant in Boas's lexical elicitation (B1-B8)

17. The term "semitransitive" in this context is used by Schultz-Lorentzen (1945) and Fortescue (1984), among others.

18. See Fortescue (1984:171–172) and Fortescue (1980:274), respectively, for the valence of these postbases' Kalaallisut cognates.

19. See Fortescue (1984:34) and Kahn and Valijärvi (2022:145,184) on Kalaallisut usage.

20. Elsewhere Lowe (1988) refers to the Siglit Indicative and Participial as "actualizing" and "virtualizing," respectively, writing that the Indicative "implies that an event whose realization could be envisaged only as a possibility has finally actually occurred" (157). Possibly related accounts are found in Inuktitut descriptions. One suggests that Indicatives may express polarity focus (Inuit Uqausinginnik Taiguusiliuqtiit 2018:64); Johns (1995:132) mentions "a meaning of surprise or immediacy."

21. In (12a), Kroeber first wrote *kayaktorlunga* (Contemporative 'while I was paddling') and then added an *a* above the *u* (Optative *kayaktorlanga* 'let me paddle'); I print the originally transcribed form. In (12c), Kroeber wrote *naulinginúmni* and added later that Nuktaq suggested instead *naulinginamni*, which is the form I print.

22. Bobaljik's *s, *ɹ are *c, *ž in Table 2. Hitch (2017) analyzes PI *c (< PIY *c) as /c/, since some early sources write *ch*, *sh*, or *tch*. PI *ž is the reflex of a PIY consonant also written *ř (Bergsland 1986) or *ð (Fortescue et al. 2010). The inventory in Table 2 does not assume the contrast between PI *j² and *ž reconstructed by Dorais (1986:23); his *j² corresponds to *ž in Table 2. But he cites no examples of the putative *ž, and Dorais (2010) does not reconstruct a PI inventory.

23. For discussion, see Fortescue (1983:22), Dorais (1986, 2010:31–49), and Bobaljik (1996).

24. See also Sadock (1972) and Rischel (1974:276-279); Dorais's term "alveolar" is not quite right if PIY *ð > PI *ž was not alveolar. On crosslinguistic coronal-noncoronal metathesis patterns, see Blevins and Garrett (2004:126–127,136–138).

25. Fortescue (1991:3) describes [ç] as a conditioned variant of /h/ "for most middle generation speakers." Jacobsen (1991) adds [h͡ç], [ʰç], and [s] to the dossier of surface realizations. Holtved's (1951a, 1952) transcriptions include [ʃˠ], [ʃ], [ʃh], [hʃ], [s], [ˢh], [hˢ], [ᵖh], and [h], but Holtved (1951a:26) calls [ʃ] "palatal" and may mean the palatal fricative [ç].

26. The formulation in (14d) implies that *itV and *ittV assibilation were concurrent (see Dorais 1986:44), but §7.3 below shows that this is not the case.

27. Rischel (1974) and Fortescue (1984) use the symbol /ṣ/.

28. Omitted are sibilants whose origins I do not know, as in *aqissiq* 'mill (?) stones' (B4) and *sîgîpquˈñg* 'needle ...' (B7). I focus on bases rather than postbases because individual sibilant-initial postbases may potentially have undergone leveling (morphological generalization). Still, it is striking that postbases beginning with PIY/PI *c are always written with *s* by Boas (e.g., -*siun* 'instrument for

X-ing' < PIY *ci(C)un, in *îqsuˈqsit* 'skin-scraper' (B8)) and that those beginning with PI *ž (PIY *ð) are written with *ss* (e.g., *-ssuq* 'part.3sg' < PIY *-ður*, in *anissuq* 'went out' (2.58)).

29. Boas never writes *ss* after PI *k or *q. He writes *ss* after orthographic *k* and *q* in several words in Table 7, but these reflect fricatives *g or *r, not stops. Both Boas and Kroeber often confuse velar and uvular stops and fricatives.

30. In all three languages, the affected sibilant is not precisely [s]; for example, the Northern Paiute sibilant is "best described as an alveo-palatal sibilant, /ɕ/" (Babel et al. 2012:239). See further below.

31. Fortescue et al. (2010) list very few examples of PIY or PI *ic. If EI reflexes of PI *ica- 'molt' or *icumaˈthink' had been recorded, the proposed analysis predicts that Boas would have written *ss*.

32. This is consistent with Fortescue's (1984:334) description of Kalaallisut /s/ as "lamino-alveolar," with the tongue tip "pointed downwards," and "slightly palatalized in the environment of /i/."

33. It is notable that the young Inughuaq man Qalaherriaq, who was about 16 when he left on a British ship in 1850 and who was then brought to England and never allowed to return home, had his name recorded as Kallihirua (Qalasirssuaq in Kalaallisut; Høvik and Jeremiassen 2023). This implies that debuccalization was present for some Inuktun speakers two generations before Boas's and Kroeber's documentation.

34. An initial *h* also appears in one word transcribed by Boas: *hēXqtāˈq* (B8), where *X* stands for an illegible letter and the gloss too is not fully legible. Conceivably this is the same word as *hierqtaq* with an unexpected gloss.

35. Another plausible trajectory is that /s/ became /h/ and /š/ became /hʲ/ before the two laryngeal fricatives merged. A careful analysis of Holtved's transcriptions and sound recordings might cast light on this matter.

36. Apparent affricates are written three times instead of *s* or *t* (not *tt*). One is recorded by Boas: *ta'tˢiq* 'lake' (B1) for /tasiq/. The others are transcribed by Kroeber: *angirdlayalirtsúnga inaiarlirdsunga* 'I am going home, I am lying down' (2.38), with *-tunga* 'part.1sg' spelled *-tsúnga, -dsunga* after inceptive *-lir* 'start'. This may be partial assibilation of single *t* across an intervening consonant. None of these are examples of /tt/ assibilation.

37. The Kalaallisut plural of *kanajoq* 'sculpin' is *kanassut*, with irregular *ss* rather than *ts* (Schultz-Lorentzen 1945:21).

38. Two decades later, however, Schultz-Lorentzen (1945:10) writes that "*ts* in North Greenland [i.e., Inuktun] has the sound of a double *t,*" evidently referring to non-affrication. And a referee points out that the /tt/ outcome is found today in some Western Canadian Inuit dialects (e.g., Negative /-ŋŋit/ + Participial /-tuq/ = /-ŋŋittuq/).

39. A hint of complexity is Kroeber's *att!íga* 'my paternal aunt,' whose exclamation mark would usually mean an ejective. This is implausible for Inuit, but Kroeber must have perceived some atypical release: aspiration as a precursor to assibilation?

40. Kroeber glosses the verb in (18a) as 'you are going', but its form is 3PL. I do not understand the *n* in *amaulikan*; Kroeber glosses 'to Amer[ica]' (which should mean a Terminalis form), but could it be an Absolutive singular subject? In (18c), Kroeber writes the verb as *audla(u)mina(r)luaq*; the parentheses were added later and the *d* inserted above the *r*. I interpret this as *aullaq-* 'leave' with the cognates of K *-uminar* 'to be wished' and *-luaq* 'nearly, a little' (Schultz-Lorentzen 1945:78,87). In Canadian Inuit, "verbal endings now tend to disappear after a post-base expressing ... a mental restriction" (Dorais 2010:126); something similar, I speculate, explains the apparent absence of an inflectional ending in *audlauminardluaq*.

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STOPS	p	t		k	q
NASALS	m	n		ng (= /ŋ/)	
FRICATIVES	v			g (= /ɣ/) r (= /ʁ/) h (= [h] ~ [ç])	
GLIDES		l (= /ʟ/) j			

Table 1: Modern Inuktun consonants (Fortescue 1991, Jacobsen 1991).

STOPS	p	t	c	k	q
NASALS	m	n		ŋ	
FRICATIVES	v	ł	ž (= /ʐ/) g (= /ɣ/) r (= /ʁ/)		
GLIDES		l	j		

Table 2: Proto-Inuit consonants (Bobaljik 1996, Hitch 2017).

PIY	EARLY INUKTUN		MODERN INUKTUN	
*ðk	*ssako* /ša**kk**uq/ (B8)		*ha**kk**uq*	'thin harpoon blade'
*tg	*ūkusîˈk* /u**kk**usiq/ (B8)		*u**kk**uhighaq*	'soapstone'
*pk	*takui**pk**in* 'I see you' (3.127)		*-gi**kk**it*	'I ... you'
*pn	*î**mn**aq* (B4), *i**mn**axssuarmun*		*i**nn**aq*	'cliff'
	'big cliff' (TERM, 5.509)			
*pc	*qoli**pss**íu* (1.17), *koli**fs**iun* (2.47),		*quli**ss**iut*	'pot'
	*qudlî**fs**īˈut* (B8)			
*vl	*i**bl**au* (1.14)		*i**ll**auq*	'seal fetus'
	*uˈ**bl**uq* (B2), *u**bl**urangorqton*		*u**ll**uq*	'day'
	'he became a star' (4.407)			
*gl	*í**gdl**u* (1.3), *i**gdl**u* (B2)		*i**gl**u*	'(stone) house'
*kt	*ssini**kt**on* (2.56, 2.63)		*hini**kt**uq*	's/he sleeps'
	*qauuq**t**un* (3.118)		*kau**kt**ut*	'twenty'
*km	*qi**ngm**íq* (1.3)		*qi**mm**iq*	'dog'
*ŋm	*umi**ngm**añ* (1.4)		*umi**ngm**ak*	'muskox'

Table 3: Inuktun assimilation patterns in selected *C_1C_2 clusters with coronal, labial, and velar *C_1. PIY clusters are based on Fortescue et al. (2010).

PIY	Early Inuktun		Modern Inuktun	
*ðg	*aqigssîˈr* (B3)		*aqighiq*	'ptarmigan'
*lv	*iblín* (1.9), *iblîn* (B6)		*illit*	'you' (sg.)
*lr	*angirdlámun* (2.46)			'homeward'
	mardlung (2.44), *māˈrdlung* (Figure 6)		*marluk*	'two'
*nr	*árngvaq* (1.9), *ārngoaq* (B6)			'amulet'
	qiturngaq (B6)		*qiturngaq* /qituððaq/	'child'
	erngnutága ('my g.', 2.42)		*irngutaq* /iððutaq/	'grandchild'

Table 4: Selected Inuktun CC metathesis patterns. PIY clusters are based on Fortescue et
al. (2010).

CONTEXT	INUKTUN VOCABULARY RECORDED BY BOAS
#__	*sauˈnêq* 'bone' (B6; *hauniq*)
	sárvaq 'current' (B3; *harvaq* < PIY *carvar)
	sināˈ 'edge, shore' (B3; *hinaa* < PIY *cinə), *sinōiˈne* 'at the edge' (B4)
	sîqūˈn 'gun' (B2; *hiqquut* < PIY *ciŋqur- 'crack(le)')
	sîrmîrng 'island' (sic B4; K *sermeq* 'glacier' < PIY *cirmir)
	saˈvik 'knife' (B7; *havik* < PIY *cavig)
	sīˈoraq 'sand' (B2; *hiuraq* < PI *ciuraq)
	sīˈko (B3; *hiku* < PIY *ciku), *sikup* 'sea ice' (REL, B5)
	sissoa 'sledge (shaman's word)' (B2; PIY *citurar- 'slide down repeatedly')
	sīnîkssāˈq 'thin thong' (B8; *hingighaaq* 'thin sealskin cord' < PIY *ciŋir 'bootlace')
V __ V	*taˈsîrn* 'lake' (B6; *tahiq* < PIY *tacir)
	ūkusîˈk 'flat stone to rest on' (B8; PIY *utgucig), *ūkusîˈkssaq* 'steatite' (B8; *ukkuhighaq*)
C __ V	*uxsîˈrn* 'eye of trace' (B2; *urhiq* < PIY *uqciq)
	qudlîfsīˈut 'kettle' (B8; *qulissiut* < PIY *quləmcirun)
	ilîpsēˈ 'you (abs.pl)' (B6; *ilissi* = CAY *əłpəci*)

Table 5: PIY/PI *c > EI *s* in bases as transcribed by Boas. Italicized forms in parentheses are Modern Inuktun; comparanda are cited from Fortescue et al. (2010).

CONTEXT	INUKTUN VOCABULARY RECORDED BY BOAS

V __ V   *ss*   *qîssuk* 'wood' (B2; *qihuk* < PIY *qəðug)

issialugēˈ 'it is all eyes' (B1; *ihi* 'eye' < PIY *əðə); also 'similar to eye' below

auˈssaq 'summer' (B2; *auhaq* = ECI *auyaq*)

{g, r}__ V   *ss*   *naˈkssua* 'its antler' (B8; *naghuk* 'antler' < PI *nagžuk; cf. ECI, WCI *nayyuk*)

qáqssuq 'arrow' (B1; *qarhuq* < PIY *qarður; cf. ECI *qaryuk*, WCI *qaryuk*)

ūgssuk 'bearded seal' (B2; *ughuk* < PIY *ugðug; cf. ECI, WCI *uyyuk*)

aqigssîˈr 'ptarmigan' (B3; *aqighiq* < PIY *aqəðgir; cf. ECI *aqiggiq*, WCI *aqiygiq*)

îˈgssut 'sod' (B2; cf. PI *əgžutət 'heather-like plant' > K *iššutit*, Caribou WCI *ixxutit*)

{k, q} __ V   *s*   *qaqsuvautāˈ* 'belt' (B7; cf. K *qaššuaat*, Labrador ECI *qaksuŋaut*,

WCI *qaksutaun*, SPI *qakšuaun* < PI *qakšugaun)

qaxsāˈoq 'loon' (B1; *qarhauq* < *qaqða(C)ur; cf. ECI *qarsauq*, WCI *qaqsauq*,

NAI, SPI *qaqšauq*)

nuqsaq 'throwing board' (B2; *nurhaq* < *nuqðar; cf. Iglulik ECI *nursaq*,

WCI *nuqsaq*, NAI, SPI *nuqšaq*)

Table 6: PIY *ð > PI *ž in EI bases as transcribed by Boas. Italicized forms in parentheses are Modern Inuktun; comparanda are cited from Fortescue et al. (2010).

CONTEXT			INUKTUN VOCABULARY RECORDED BY BOAS

i __	*ss*	*qāˈssaq* 'brains' (B6; *qaahaq* < PIY *qaqitar; cf. K *qarasaq*, NAI *qaqisaq*)
		pissikpain 'you hit it' (B1; PIY *pitəg-; cf. K *pisig-*, NAI *pisɨk-*);
		'bow', 'quiver' in Table 5
		issiqtuˈq 'went in' (2.62; *ihiqtuq* < PIY *itər-; cf. K *isir-*, NAI *isɨq-*)
		sissoa 'sledge (shaman's word)' (B2; PIY *citurar- 'slide down repeatedly')
		pissuāˈluktung 'he walked here and there'
		(2.59; *pihuktuq* 'walks' < PIY *piyug- 'walk');
		pîssukaiˈtiaq 'fox (shaman's word)' (B3; cf. PI *picukkaaq 'fox' < PIY *piyug-)

elsewhere	*s*	*îqsuˈqsit* 'skin-scraper' (B8; *irhurhit* < PIY *irtur- 'break skin')
		alîˈqsē 'stocking' (B7; *alirhiq* < PIY *ałirtə)

Table 7: Secondary *s in Early Inuktun as transcribed by Boas. Italicized forms in parentheses are Modern Inuktun; comparanda are cited from Fortescue et al. (2010).

Figure 1: Participants in Inuktun documentation (from left): Nuktaq, Uisaakavsak, Minik, and Qissuk. Photo by Roland Dixon, New York, 1898 (Harper 2000: Fig. 14).

Figure 2: Participants in Inuktun documentation (from left): Franz Boas (with his daughter Gertrude), ca. 1895; Esther Eneutseak (with her daughter Florence), Seattle, October 25, 1909; Alfred Kroeber, New York, December 3, 1899. (Franz Boas Personal and Professional Papers, APSimg2383, U5-1-8, American Philosophical Society Library; Library of Congress LC-USZ62-136051; A. L. Kroeber Family Photographs, ca. 1870–1969, Box 1, BANC PIC 1978.128, Bancroft Library, University of California, Berkeley.)

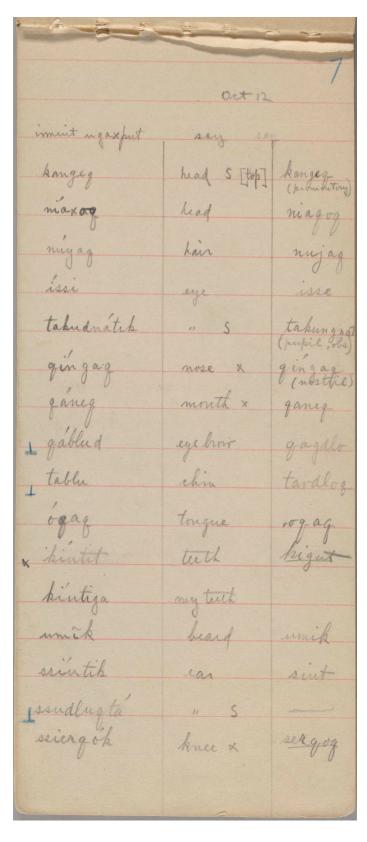|	Oct 12	
immuit ugaxput	say say	
kangeq	head S [top]	kangeq (promontory)
niaxoq	head	niagoq
nujaq	hair	nujaq
issi	eye	isse
takudnátik	" S	takungnat (pupil, obs)
qíngaq	nose x	qíngaq (nostril)
qáneq	mouth x	qaneq
qáblud	eye brow	qagdlo
tablu	chin	tavdloq
óqaq	tongue	oqaq
kíutit	teeth	kigut
kíutiga	my teeth	
umĭk	beard	umik
ssiutik	ear	siut
ssudluqtá'	" S	—
ssierqók	knee x	serqoq

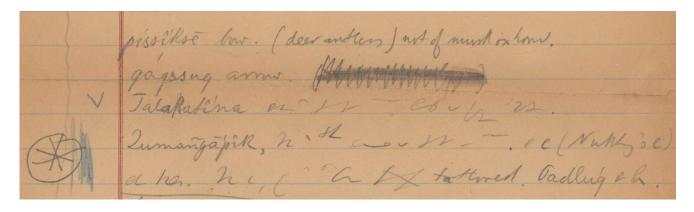Figure 3: Kroeber's Inuktun Notebook 1, page 1, October 12, 1897 (1.1)

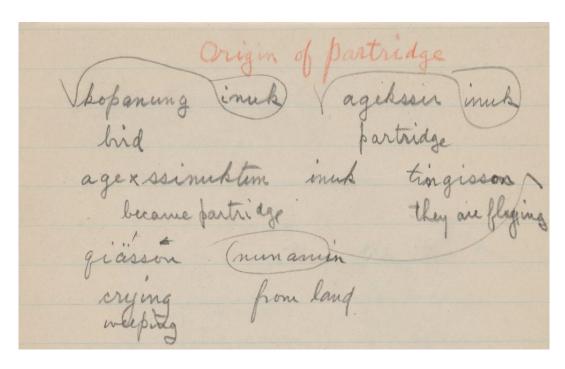Figure 4: Notes by Boas, working with Nuktaq on vocabulary, ca. January 1898 (B4).

Figure 5: Qissuk, "Origin of ptarmigan ['partridge']" (transcribed by Kroeber, December 1897, 2.37).

Igajudtung namta ayang pequn

    Name   his daughter she would   she would not

gigā' audlartug pādlegtung

allow it   drift   fell down

agpaliagsungugtun   nayanug

    brown dovekie   loon gulls.

tun agpangtun.

        brown loons.

_____

    Pismáluktung nivdlivit takoqiyei

        Walking far.   geen   he saw

anurāngier Gdldigiyei tunsigovadtivei

their garments he lay on it.   Uggan tim

anurāngingin mārtlung tumingikong

    their garments   2   did not gin it

aipā' tumiyā' tingigimung, aipa

one   he gan it   st flew it   the other

nuliaridtivā' Rujageyā' nāgtivimung

he marned   he cohabited   she was will child

59

Figure 6: A page of "The man who married a goose," told by Qissuk (?) and transcribed by Boas,
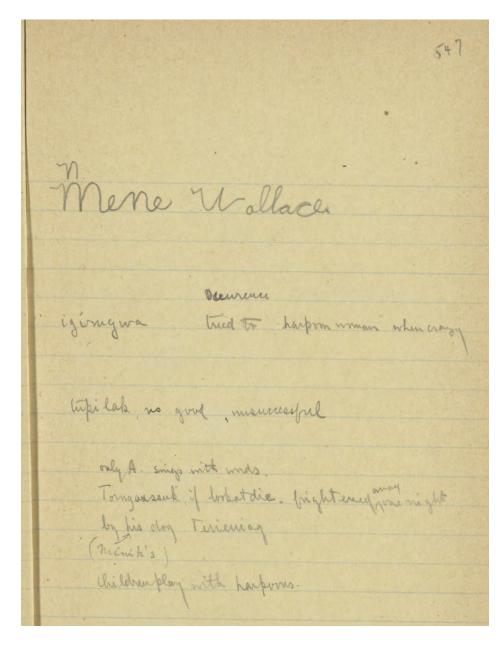
December 1897 (2.59).

Figure 7: Last numbered page of Kroeber's last Inuktun notebook, with Minik, December 30, 1898 (5.547).