Languages of the World/Materials

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Ket

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Abbreviations

Ket dialects (and the primary villages where they are spoken today)

CK - Central Ket (Baklanikha, Surgutikha)
NK- Northern Ket (Maduika, Kureika)
SK - Southern Ket (Kellog, Sulomai)

Morpheme glosses

ABL	ablative case suffix; in finite verbs, this gloss marks a derivational morpheme denoting motion away or, less commonly, accompaniment
ABS	zero-marked absolutive case head noun
AC	animacy classifier
ADES	adessive case suffix; in finite verbs, a derivational affix denoting motion towards
ADJ	suffix used to create adjectives
AN	animate class
AL	applicative infix (specifies that a transitive action involves a second object or instrument of some sort, such as a tool or means of conveyance)
AP	animate plural (in position -1 of finite verbs this gloss marks subject agreement)
AT	atelic (morpheme that appears in some verbs lacking a built-in completion point)
BEN	benefactive case suffix
CAR	caritive case suffix
COND	conditional particle
D	durative marker (appears in many stative and activity verbs)
DAT	dative case suffix

F	feminine class (a subset of animate class)
FUT	future tense particle
GEN	genitive case suffix
IC	involuntary causative (denotes an event occurring naturally or by accident)
IDF	indefinite particle
IMP	imperative mood
INCEPT	inceptive
INSTR	instrumental case suffix (also conveys comitative, or 'together with' meaning)
INT	intensive affix, a derivational morpheme in verbs denoting intensity of action
INTR	intransitive
IT	marker that appears in certain verbs with an incorporated theme-role argument
ITER	iterative
L	a gloss used for any lexical morpheme shape whose meaning is undecipherable
LOC	locative case suffix
M	masculine class (a subset of animate class)
MOM	single event, rather than multiple event
MS	morphotactic separator (connector element in finite verb forms)
MT	classifier of mental states and attitudes
N	neuter (=inanimate) class; either singular or plural
NEG	negative
NOM	nominalizing suffix (converts other stems into nouns or predicate nominals)
O	verb-internal direct-object agreement affix, or direct-object pronoun
PART	particle
PL	plural
PRES	present tense
PT	past tense
POS	possessive clitic (proclitic on noun phrases; derived from genitive-case suffixes)
PT	past tense
PROS	prosecutive case suffix
R	resultative marker in verbs (denoting a state caused by a previous action)
RS	redundant subject agreement marker
S	singular
SEMEL	semelfactive (instantaneous or sudden action)
SJ	verb-internal subject agreement affix, or subject pronoun
SU	superessive adposition (verb affix denoting superficial contact with an object)
TR	transitive
TRL	translative case suffix
VOC	vocative case suffix

Phonetic symbols

Tones and accents

ˀ – glottal stop; like the stoppage in the English exclamation "O-ho". In Ket it always follows a vowel pronounced with rise in tone that breaks at the point of glottal stricture

˗ – high-even or slightly rising tone; vowels with this tone are usually pronounced half-long; this half-length can be indicated by a raised triangular dot, [˙]

˴ – when this mark appears on the first syllable of a Ket word, it denotes a sharply descending tone

˷ ˷ – regular rising/falling tone; spread over two syllables or over a single long (geminate) vowel; geminate vowels may be indicated either by doubling the vowel letter or by adding [:], e.g., geminate [a] is either [aa] or [a:]

˷ ˶ – rising/high-falling tone; nearly always over two syllables; the falling portion begins at a higher register is the case with the regular rising/falling tone, so that the acoustic effect is similar to a stress accent on the second syllable

ˊ – a single rising accent on a Ket word indicates a regular stress accent, as in the English noun *récord* vs. the verb *recórd*. Non-musical stress occurs instead of pitch accent in recent Russian loan words, in nouns used in the vocative case, and in certain partially detoned words

vowels

ɨ – like English 'u' in 'just', only higher and more tense; Ket /i/ sounds like the 'ee' in 'see'

ɛ – like 'e' in English 'get'. Ket /e/ is pronounce like this except with high-even tone, when /e/ is pronounced closer to the vowel in English 'gate'

ɔ – like 'o' in English 'or'; Ket /o/ is pronounced like this except with high-even tone, in which case /o/ is pronounced closer to the 'o' in 'own'.

ʌ, ə – like the last vowel in English 'sofa' or the first vowel in English 'about'; Ket /ə/ usually sounds like this too, except in high-even tone words, where it is pronounced with the tongue a bit higher and more tense.

æ – like 'a' in English 'bad'

ɑ – like 'a' in General American English 'saw'; Ket /a/ is most often pronounced more open, like 'a' in New England English 'far'

ʊ – like oo' in English 'foot'; superscript ᵘ indicates 'w' sound in English 'how'; Ket /u/ is usually pronounced like 'oo' in English 'food'

consonants

j – the sound of English 'y' in 'yes', NOT 'j' in 'jet'

ʰ – after a consonant, superscript ʰ indicates an extra puff of air; after a vowel (in Yugh) it indicates a gravelly quality produced by tightening the throat muscles (called pharyngealization)

ʲ – indicated the preceding consonant is palatalized (pronounced with the middle of the tongue raised toward the roof of the mouth)

ʷ – indicates labialization (lip-rounding) of the preceding consonant

ɬ – a voiceless fricative /l/ sound, with more the acoustic quality of 'f'.

x – voiceless velar fricative; a sort of heavy /h/ sound pronounced with the back of the tongue slightly raised up

ɣ – voiced velar fricative; the same heavy /h/, but with the vocal cords vibrating

χ – voiceless uvular fricative; another heavy /h/ sound, but pronounced farther back in the throat

ʁ – voiced uvular fricative; like χ, but with the vocal cords vibrating

ŋ – velar nasal; the 'ng' sound of 'sing'

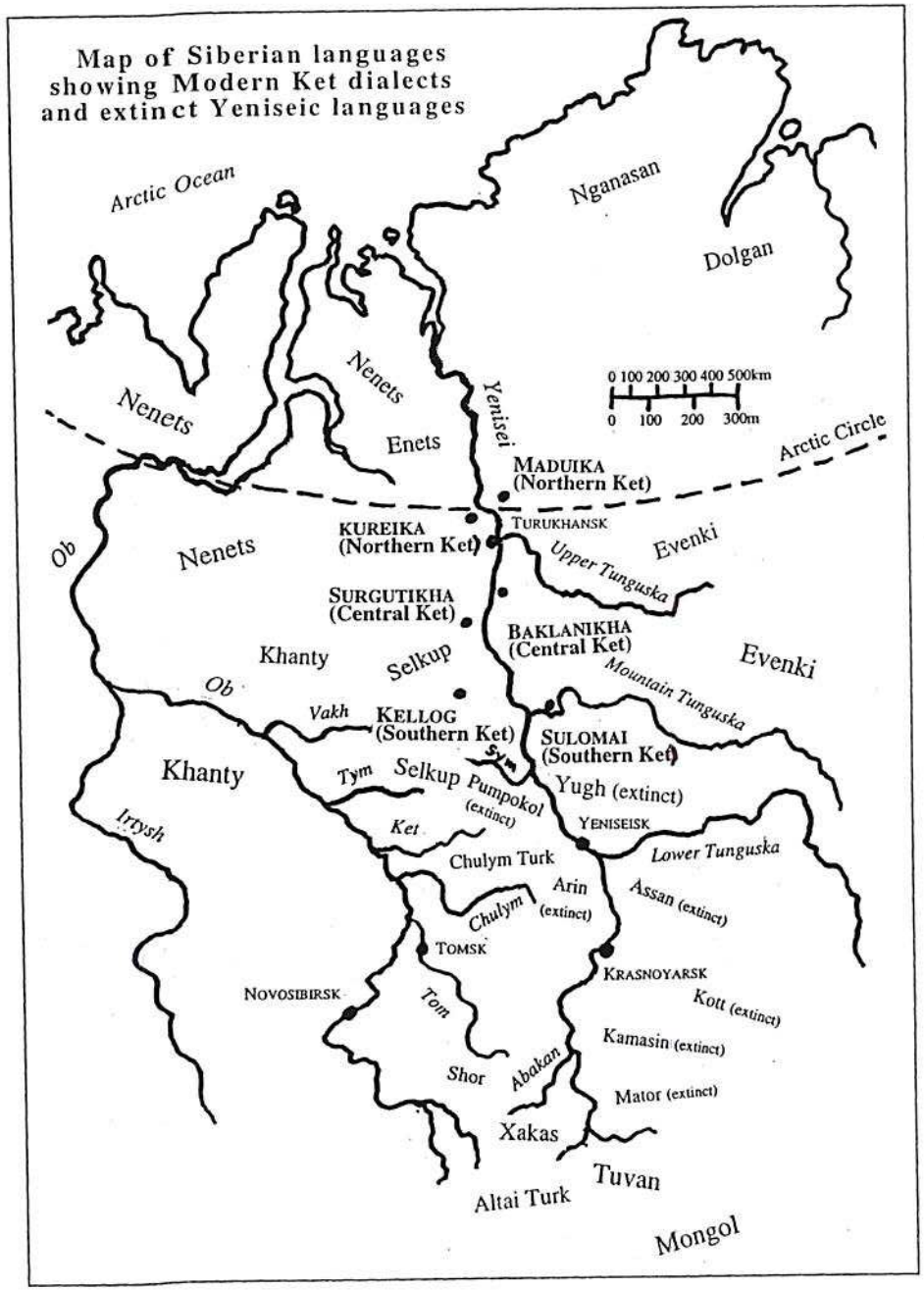
ɾ – the flapped sound found in American English when /t/ or /d/ are pronounced between vowels or /r/: 'water', 'ladder'

β – a /v/ sound pronounced with both lips instead of the top lip and bottom teeth

š or ʃ – like 'sh' in 'she'

č or tʃ – like 'ch' is 'church'

ž – like 'zh' in 'Zhanna'



0. Introduction

The Ket are arguably one of the most enigmatic peoples of Eurasia. Yeniseic (or Yeniseian) languages, of which Ket is now the sole living example, differ strikingly from their Uralic, Turkic, and Tungusic neighbors (Comrie 1981:261-6). Aside from easily recognizable loanwords of Samoyedic, Turkic, or Russian provenance, the vocabulary lacks any obvious connection with other Eurasian languages. The phonology and grammar likewise display features absent elsewhere in aboriginal Siberia. Instead of vowel harmony (suffixes that mimic root vowel quality), one of five phonemically distinct tones marks each phonological word. Agreement reflects a class division between masculine animate, feminine animate, and inanimate (or neuter). The verb is a rich polysynthetic complex in which the strategy used to express subject/object coordination is an idiosyncracy of each stem. This creates lexically competing verb-internal agreement patterns: active/inactive, ergative/absolutive, nominative/accusative, and two that use redundant subject markers to express such meanings as action performed without a tool or conveyance. Subject and direct object noun phrases are zero-marked regardless of which pattern appears in the verb. Ket linguistic structure offers much of interest to typologists.

As a family, Yeniseic includes the three surviving Ket dialects (Southern, Central, and Northern). Several extinct Yeniseic speech forms were also documented. Yugh lost its last fluent speaker in 1991. Kott disappeared before 1850. Assan, Arin, and Pumpokol vanished in the 1700s. Other historic groups can be identified as Yeniseic-speaking through inspection of tsarist fur-tax revenue records (Dolgikh 1960:223-74). These include the little-known Yarin (Buklin), Yastin, Baikot, the Ashkyshtym among the Turkic-speaking Bachat Teleuts, and the Koibalkyshtym among the Samoyedic-speaking Koibal (themselves now extinct). Besides a few toponyms and clan names, nothing survives of the languages these peoples spoke. Other language forms related to Ket undoubtedly vanished before the Russians arrived in the late 16th century. By the mid-19th century only Ket and Yugh remained, their southern relatives all having been absorbed into Turkic, Samoyedic, or Russian-speaking communities. Many contemporary ethnic groups of South Siberia – the Turkic-speaking Shor, Xakas, Northern Altai, Todzhi Tuvans, and Tofalars; as well as the western Buryat Mongols – retain varying degrees of linguistic and ethnic influence from some bygone Yeniseic-speaking population (cf. map on page v).

Yeniseic languages probably began diverging from a common ancestor in the South Siberian forest-steppe zone at least 1,500 years ago during the rise of the First Turkic Kaganate or possibly as early as 2,200 years ago in the early Hunnic period. Linguists have attempted to link Ket with a colorful roster of isolates and families outside Siberia, including Basque, Abkhaz-Adygh, Nakh-Dagestanian, Burushaski, Sino-Tibetan, and Na-Dene. For an exhaustive listing of attempts to find linguistic relatives for Ket, see Vajda (2001b). None of these proposals has received broad acceptance, and Ket is still regarded as an isolate by most linguists. My own research (Vajda 2002a, 2003a, 2004) has noted significant parallels with Athabaskan-Eyak-Tlingit (though not with Haida). These are manifested in verb affixes as well as in core vocabulary reconstructed by deriving the Yeniseic tones from simplified consonant articulations. The list of plausible cognates is still too meager to argue a strong case of genetic relatedness (though see Werner (2004b) for a more optimistic assessment). At this point I suspect that Yeniseic is genetically closer to Athabaskan-Eyak-Tlingit than to any other living family but lack the evidence needed to demonstrate it convincingly. My ongoing effort to reconstruct Proto-Yeniseic may shed additional light on this question.

Although Ket is most often celebrated for its linguistic uniqueness, it also shows convergence in phonology and grammar with South Siberian Turkic and other North Asian languages (Anderson 2003). Areal features represented in Ket include a paucity of word-initial nasals, a lack of syllable-initial consonant clusters, a system of a dozen agglutinative nominal inflections, and the use of postpositions and case suffixes as clausal subordinators.

Most of the nearly 1,200 Ket live today in north central Siberia along the middle reaches and tributaries of the Yenisei. Toponymic evidence indicates Yeniseic-speaking peoples once inhabited vast expanses of Inner Eurasia. River names with Yeniseic etymologies stretch from Xinjiang and western Mongolia northward across southern Siberia from the Irtysh to the Angara (Dul'zon 1959; Vajda 2001b: xxvii). Attempts have been made to link Ket with various prehistoric archeological complexes, most promisingly with the sedentary Karasuk Culture (1,200-700BC) of the Minusin Basin of the Upper Yenisei (Chlenova 1975), which supplanted earlier, presumably Indo-European food-producing cultures in the same area. A link with early pastoral cultures is also plausible, though unproven. Yeniseic groups may have been present among the nomadic Xiong-nu and perhaps even in the later Hun confederation. Vovin (2000, 2002) suggests that at least some of the Xiong-nu tribes may have spoken a language related to Ket. The extant data is too limited to permit a firm conclusion, since the Xiong-nu are linguistically known only from a scattering of words and phrases, and the Huns from even less. Regardless of their ultimate origins, the Ket have lived near Yenisei long enough for the root *ti-*, 'downriver', to have acquired the meaning 'north', while *ut-* means both 'upriver' and 'south'.

Although Ket culture contains elements borrowed from early Indo-European farming/stockbreeding cultures, Samoyedic taiga-dwelling reindeer herders, and even Turkic-speaking steppe pastoralists (Nikolaev 1985), the Ket themselves were a predominantly food-extracting people until the mid-20th century. The use of domesticated reindeer by some Ket groups was a recent acquisition from the Selkup or Nenets, and much of traditional Ket culture as it existed only a few generations ago reflects sub-Neolithic subsistence patterns (Alekseenko 1967). Before Stalin's forced collectivization and sedentarization of Siberian native groups in the 1930s and Khrushchev's consolidation of the resultant Ket settlements into larger, multi-ethnic villages in the early 1960s, the Ket represented the last island of true hunter-gatherer-fishers anywhere in Northern Eurasia outside the Pacific Rim. The traditional Ket economic cycle perhaps offers something akin to a glimpse into the remote prehistory of the Eurasian interior. In spring, several Ket families would converge to erect their teepee-like birchbark tents (*qu'ŋ*) beside rivers, lakes, and other fishing sites. During the intense, brief summer heat, some took up residence in large covered houseboats (*áslĕneŋ*), which they maneuvered out into the deep current beyond the clouds of bloodsucking insects infesting the riverbanks. Fall and early winter were a time of wandering, when the group bid farewell to the river and dispersed back to the taiga interior. Many sailed up the Yenisei's tributaries to reach their traditional hunting grounds. Each family had its own hunting trail (*kàŋ*). The men would journey into the forest to hunt reindeer (*sèl*), elk (*qàj*), or bear (*qòj*), as well as fur-bearing animals and game birds. Accompanied by their dogs (*ta'p*), hunters traveled on foot, each day moving a bit farther from their family's encampment. During the coldest months, when daylight was shortest, hunting would virtually cease and families subsisted on their stored provisions. The entire group waited out this cold, dark period in a kind of semi-subterranean dwelling (*báŋŋàs*) of extremely archaic design. When the days began to lengthen again, the hunters resumed their forays. Leaving their women, children, and elderly family members for

successively longer periods each trip, the men traversed long distances on wide, padded skis (*áslèneŋ*), dragging their supplies behind them on a hand sled (*súùl*). After the spring thaw, the Ket would reoccupy their fishing sites at the water's edge. These subsistence patterns, recorded in the early 20th century, provide a view of daily life as it must have existed before the Turko-Mongol pastoralist and Samoyedic or Tungusic reindeer herding lifestyles came to dominate every other corner of land-locked North Asia.

Alongside their linguistic and cultural peculiarities, the Ket exhibit physical traits atypical for the rest of aboriginal northern Asia, such as a more prominent nose and near lack of epicanthic fold. Despite centuries of intermarriage with other Siberians, they bear molecular-genetic affinities with Tibetans and particularly Native Americans (Alekseev & Gokhman 1984). It appears that the original Yeniseic-speaking tribes physically resembled peoples that moved into the Americas at the beginning of the Holocene (Debets 1947; Levin 1951). Both culturally and physically, if not linguistically as well, the Ket are likely a remnant of Inner Asia's Ice Age population that stayed behind during those migrations.

The 1989 Soviet census counted 1,113 Ket. Only 48.3 per cent at that time reported being able to speak Ket, while virtually all were fluent in Russian. This percentage is declining rapidly and probably irrevocably in favor of Russian (Krivonogov 1998). It appears there are now fewer than a couple hundred fluent speakers. The language is still being acquired by some children in at least three small villages – Kellog, Surgutikha, and Maduika – where the Ket constitute a majority, though even here most no longer speak the language. Each village contains a slightly different dialect: Southern Ket, with the most speakers, is found in Kellog; Central Ket in Surgutikha; and Northern Ket in the Maduika area. In other Turukhansk District villages, the Ket are a minority in imminent danger of losing their linguistic and ethnic identity. Thanks to persistent efforts by linguist Heinrich Werner, in 1988 the Soviet Ministry of Education sanctioned the use of a Cyrillic-based alphabet for Ket consisting of 39 letters (Werner 1997b). A Latin-based alphabet, created by Nestor K. Karger in the late 1920s on the basis of Central Ket, was used to write a single primer published in 1934. Unfortunately, Karger soon fell victim to Stalin's purges and his efforts toward Ket literacy were banned. Werner's new alphabet has been more successful. Several elementary-school language textbooks and readers have appeared, and more are currently in preparation. Ket is now taught as an elective in a few Turukhansk District elementary schools and has been used as a written medium by some native-speaker scholars. Nevertheless, its long-term viability even as a spoken idiom is in serious doubt. Economic conditions in the Turukhansk District are precarious and show no signs of improving. The success of efforts to maintain let alone expand the current level of Ket language teaching cannot be taken for granted.

A variety of names have been applied to the Ket and Yugh. Before the soviet era, both groups were usually referred to as the "Yenisei Ostyak." Russians traditionally applied "Ostyak" – a word borrowed from the Tatars – to any non-Muslim, non-Turkic group living in the West Siberian taiga. Russians apparently adopted it around the time of Yermak's victory over Khan Kuchum in 1582, the event that led Russia's annexation of all North Asia, including territory inhabited by Yeniseic-speaking tribes. In tsarist times, Russians also referred to the Ugric-speaking Khanty as "Ostyaks," and the Selkup as "Ostyak-Samoyeds." The ambiguity generated by this word, together with its negative social connotations, led to its abandonment as an ethnonym in the Soviet Union during the 1930s. In the case of the Ket, it was replaced in Russian first by *jeniséjtsi* 'Yeniseians' and soon after by *kéti* 'Ket people' (from the native Ket word *ke't*, meaning 'human being').

When speaking their native tongue, the Ket traditionally referred to themselves as *kə́ndèŋ* "earthly people" – literally "daylight people" in contrast to denizens of the underworld. They also adopted *ósʃ̌ik* (pl. *ósʃ̌ɣan*) 'Ostyak'. When speaking Russian, they use *kéti*, though some prefer the vocative singular form *ketó* as an ethnonym for their nationality. Linguists who regard Ket and Yugh as one language refer to Yugh as "Sym Ket" or the "Sym dialect of Ket," and Ket proper as "Imbat Ket" (derived from the Inbaks, an 18th-century Ket territorial grouping). The Southern dialect in Kellog is referred to as "Upper Imbat Ket," and the downriver Central and Northern dialects as "Lower Imbat Ket."

The present sketch is the first monograph-length description of Ket written in English. Its strives to portray all major aspects of the phonology and grammar in a systematic way. The verb system, which has doubtless caused the greatest hardship for anyone studying the language, receives extensive attention. The detailed sections on verb morphology are aimed at demystifying the hitherto enigmatic Ket verb, which I demonstrate as conforming to a finite and comprehensible, albeit complex and typologically unique, set of patterns.

Another impediment to a more informed knowledge of Ket has been the confusion attendant most previous attempts to write a tonal language using an exclusively segmental alphabet or an overly narrow phonetic transcription that obscures the language's basic phonological patterns. The present book effects a sort of compromise. My examples are written in a Latin-based script that indicates tones and vowels phonemically, but consonants according to their allophonic pronunciation. Consonant allophones depend on a complex array of segmental, prosodic, and morphological factors; transcribing them using a strictly phonemic system would significantly obscure the sound shape of Ket words. Vowel quality and length, on the other hand, are readily predictable from a syllable's tonal contour, so that a narrow transcription of vowel allophones is unnecessary. The five phonemic word-tones are symbolized as follows: glottalized ˀ, falling◌̀, high-even◌̄, rising/falling◌̂, and rising/high falling◌̌. Section §1 keys my transcription scheme to the phonology of Southern Ket and also explains dialectal differences in pronunciation.

The book is based on Southern Ket (SK), the dialect spoken by most native speakers today. Yugh is mentioned only in passing for comparative purposes. Lexical and morphological differences between Yugh and Ket are fairly substantial (Werner 1997a); unless otherwise mentioned, the description should be understood as excluding Yugh. The examples represent SK unless specifically marked otherwise, but the descriptions of grammar and morphology largely reflect Central (CK) and Northern Ket (NK) as well, since SK differs from the two northern dialects mainly in phonetics and lexicon. Putting aside differences in vocabulary, my discussion of phonology will generally enable the reader to ascertain the proper pronunciation of all examples in each of the three dialects.

The material presented derives from my own interviews with native Ket speakers over the past six years, as well as extensive analysis of archived cassette recordings and field notes left by previous scholars. Several non-English publications on Ket have aided me greatly, particularly Andreas Dulson's *Ketskij jazyk [The Ket language]* (Dul'zon 1968), which initially inspired my interest in Ket; E. A. Krejnovich's *Glagol ketskogo jazyka [The Ket verb]* (Krejnovich 1968); M.N. Vall and I. A. Kanakin's *Ocherk fonologii i grammatiki ketskogo jazyka [A sketch of Ket phonology and grammar]*; and especially Heinrich Werner's indispensible *Die ketische Sprache [The Ket language]* (Werner 1997b). Examples taken from these or other published sources are so credited. The present sketch largely concurs with Werner (1997b), but offers a slightly different phonological

interpretation of the tones (first introduced in Vajda 2000) and a radically different analysis of finite verb morphology (already presented in Vajda 2002b, 2003a, 2004).

During the past several years I have met or at least corresponded with nearly every living Ketologist. I am grateful to all of them for sharing their extensive knowledge with me. Special thanks go to Zoya Maksunova, a trained linguist and native speaker of Central Ket from Baklanikha; Valentina Romanenkova, a Southern Ket informant originally from Kellog but now living in Krasnoyarsk; and especially to Heinrich Werner (Bonn), creator of the Ket alphabet, founder of the Ket ethnic language program, and mentor and friend to all Ketologists. I also thank Stefan Georg (Bonn); A. P. Volodin (St. Petersburg); E. A. Alekseenko (Museum of Anthropology and Ethnography, St. Petersburg); Natalya Grishina and Sergei Butorin (Novosibirsk); and Olga Osipova, Telmina Porotova, Alexandra Kim-Maloney, Elizaveta Kotorova, Andrei Filchenko, and Marina Zinn of the Siberian Languages Laboratory of Tomsk Pedagogical University for their generous assistance during and after my visit to Siberia in winter 1998 sponsored by a US government-funded Fulbright-Hayes Faculty Research Abroad Fellowship.

1. Phonology

1.1. Vowels

When the effects of phonemic tone have been accounted for (cf. §1.3), all Ket dialects contain only seven vowel phonemes: high /i, ɨ, u/; mid /e, ə, o/; and low /a/. Articulation of /i, ə/ falls between canonical central [ɨ], [ə] and the back unrounded [ɯ], [ɤ] found in Korean and other languages. Each vowel phoneme is realized in several distinct allophones depending on the tonal contour of the given syllable. Most of these variations do not appear in my transcription, since vowel allophones are easily predicted from the tonal prosody. Allophonic differences induced by tone include glottalized vs. neutral voice quality, and short, half-long, or geminate quantity. Unlike other allophonic vowel features, gemination is indicated in my spelling, since long vowels are the prosodic equivalent both synchronically and diachronically of two separate syllables. Most important, the three mid-vowel phonemes are realized as [e, ə, o] in conjunction with high-even tone, but as [ɛ, ʌ, ɔ] elsewhere. The place of articulation for /i, ɨ, u, a/ does not vary systematically with tonal contour. In the speech of many SK speakers, /a/ varies freely between [a] and [æ]. In CK, /a/ is sometimes realized as [ɑ] (Werner 1997b:11-15).

Native Ket phonology does not tolerate consecutive vowel segments within the domain of the phonological word. Across a clitic boundary, such combinations are separated by a hiatus: *da-áʃ̀àtij* [da.ájàtij] 'she grows'. Otherwise, when vowels of different quality meet across a morpheme boundary, the result is either deletion of one segment or the creation of a geminate vowel of homogenous quality: *su^{ʔ}k* 'back' + *a^{ʔ}t* 'bone' -> *sə̂ət* [sə̂ːt] 'heel'. What may appear to be a sequence of two heterogeneous vowels within the phonological word actually contains [ɤ], often elided in fast speech: [táòks] < *táɣòks* 'staff'. Diphthongs occur in SK only where original word-final /āka/ underwent the following changes: [āka] -> [āɣa] -> [ā^{ʊ}ɣ], and further to [ā^{ʊ}]: *tāu* [tā^{ʊ}] 'crane (bird)'; *bāu* [bā^{ʊ}] 'block of wood'.

1.2. Consonants

All Ket dialects contain 12 consonant phonemes, /b, m, n, s, t, d, l, j, k, ŋ, q, h/. The glottal stop /^{ʔ}/ is a suprasegmental feature inherent to one of the tonemes. Recent Russian loan words contain additional consonants, which form a phonological subsystem in the speech of contemporary native speakers, all of which are now at least as fluent in Russian

as in Ket. In native words, both /t/ and /d/ yield allophone [t] word finally (the difference emerges when vowel-initial suffixes are added). The phones [d/ɾ], [b/p/β], [q/ʁ], and [k/g/ɣ] are non-contrastive. However, the complementarity of their distribution cannot be explained in segmental terms alone, but also involves tonal and other higher prosodic features. For this reason my transcription scheme conveys these sounds more or less phonetically (with letter *v* for [β] and *r* as [ɾ]). A few marginal cases of quasi-phonemic /p/, /g/ and /ɣ/ in native Ket words are discussed in §1.2.1.

1.2.1. Phonological changes involving consonants

Palatalization and slurring. The phoneme /s/ is pronounced /ʃ/ in CK. In SK and NK, articulation of /s/ varies freely from apico-alveolar to slurred post-apico-alveolar, often giving the acoustic impression of palatalization. This slurred or lisped effect characterizes all Ket alveolar consonants, /s, d, t, l, n/, to some degree. Semi-palatalization is an allophonic variation in any consonant before a front vowel. Full palatalization operates phonemically only in the subsystem of recent Russian loan words (see §1.4).

Phonotactics. Modern Ket tolerates only single consonants in word-initial position. Sonorants /n, l, j/ appear word initially mainly in loanwords: *nárò* 'need' (< Russ. *nádo* 'need'); *jo^{ʔ}t* 'iodine' (< Russ. *jod* 'iodine'); *la^{ʔ}k* 'Selkup' (< Selkup *lak* 'friend'). The phoneme /m/ is relatively uncommon, though it appears in several items of basic vocabulary: *ām* 'mother'; *ma^{ʔ}m* 'woman's breast'; *mánmɨ̄ŋ* 'they speak'. Word-initial /ŋ/ is impossible even in borrowed words. Conversely, /h/ occurs only phonological-word initially: *híssèj* 'taiga'; *hi^{ʔ}t* 'glue'. Uvular /q/ does not occur in the coda of native syllables containing a high vowel /i, ɨ, u/, where it has changed to /k/ (Vajda 2003:78f). The few exceptions are loanwords such as *qájmɨ̄q* 'fly'. Several biconsonantal clusters occur word-finally, most involving /t/ or /s/: *dənt* 'dragonfly', *qōqt* 'visera', *ōks* 'tree'. Cluster-final nasals and liquids syllabify and may carry a descending tonal contour: *kítǹ* 'hemp', *lóql̀* 'runny' (said of liquids), *qóqǹ* 'shirt of mail armor'. Such configurations may involve two nasals: *témǹ* 'ducks', *kúnǹ* 'wolverines'. Word-final clusters of all types in native words are often transparantly bimorphemic, and it is likely that a morpheme boundary originally divided them: *témǹ* 'ducks' < *tēm* 'duck' + *n* plural; *ōks* 'tree' < *o k* 'stick.up' + *s* (nominalizer). Original Proto-Yeniseic clusters and secondary articulations like labialization or glottalization appear to have reduced, yielding as compensation the tones of Modern Ket (Vajda 2002a). Words and syllables in the native Ket lexicon thus begin either in a vowel or a single consonant, and may end in a vowel, single consonant, or biconsonantal cluster (in loanwords or in cases where a consonantal suffix has been added). In pre-tonal Proto-Yeniseic, it is likely that all syllables began as well as ended in some sort of consonant articulation.

Phonological rules. The following patterns govern consonant distribution within the domain of the phonological word. They apply to all three dialects unless otherwise noted:

Change of [ns] to [ntʃ]. This allophonic change has been recorded sporadically in each of the three dialects: *kīns* [kīˑns] ~ [kīˑntʃ] 'Russian'. Otherwise, [tʃ] occurs only in loanwords and in a few verbal gestures, such as *kīč*, an call used to summon dogs.

Word-final devoicing of sonorant codas occurs after glottalized or descending-tone vowels: *èm* [èm̥] 'flying squirrel'; *i^{ʔ}n* [íˀn̥] 'needle'; *ba^{ʔ}ŋ* [báˀŋ̊] 'earth'; *sèl* [sèl̥] 'reindeer'; *ke^{ʔ}j* [kɛ́^{ʔ}j̊] 'wing'. Sonorants may optionally devoice at the end of polysyllabic words or syllables containing a geminate vowel, but remain voiced at the end of half-long, high-even tone monosyllables: *īm* [īˑm] 'pine nuts'; *sīn* [sīˑn] 'old, decrepit'; *bōŋ* [bōˑŋ] 'corpse'; *īl* [īˑl] 'breath'; *ēj* [ēˑj] 'pine tree'. Word-final devoicing of sonorants is thus predictable from the phonemic word tone.

S-induced devoicing of adjacent plosives. Any plosive devoices before or after /s/ in the same phonological word: *séstì ŋte* 'to the river' (< *sēs-diŋte*); *díptèt* 'he hits it' (< *di-b-tet*). Unlike other obstruents, Ket /s/ never becomes voiced in any environment, though Yugh /s/ voices to [z] before a voiced obstruent: *sézbès* 'along the river' (cf. Ket *séspès* < *sēs* 'river' + *bes* 'along').

Anticipatory voicing assimilation in clusters of /b, k, q, d, t/. Word-internal voicing assimilation is regressive in clusters of plosives within the domain of the phonological word: *ígbès* 'male rabbit' (< *i^{ʔ}k* 'male' + *be^{ʔ}s* 'rabbit'); *sáɢdì ŋal* 'from the squirrel' (< *sa^{ʔ}q-diŋal*); *úddèŋ* 'southerners' (< *ūt* 'south' + *de^{ʔ}ŋ* 'people'); *íddì ŋal* 'from a tooth' (<*it-diŋal*); *díptàŋ* 'I drag it' (< *dí-b-tàŋ*). This process does not apply across a word boundary.

Spirantization of /b, k~g, q/ to [ß, ɣ, ʁ] and rhotization of /d/ to [ɾ]. This process operates in SK and NK, affecting all plosives except /t/: *qʃvāŋ* 'grandfathers' (< *qīb+aŋ*); *táɣìm* 'white' (< *tīk* 'snow' + *am*); *óʁìn* 'branches' (< *āq+in*); *kéràs* 'with a person' (< *kɛ^{ʔ}d+as*). Exceptions include a few sound-symbolic morphemes, where [k] may appear intervocalically: *lákèj* 'make a cracking sound'. In CK, lenition affects only /k/ and /q/, leaving [b] and [d] intact. Intervocalic lenition in SK may also affect /bd/ and /bq/ in verb forms where /d/ or /q/ historically represents a clitic (*daávròp* [da.áβɾòp] 'she drinks it' < *da-a-b-d/op*) or where a vowel has elided between the consonants in question (*ʃvʁò* 'it dies' < *i-b-ə-qo*). Geminate /bb/, /dd/ and /qq/ created by the same processes are unaffected, however: *dʃbbèt* [dʃbːèt] 'I make it'. Word-final /k, q, d/ lenite in descending-tone syllables: *jùɣ ~ jùx* 'Yugh' (< /jùk/); *dɔ̀ʁ ~ dɔ̀χ* 'flying' (< /dɔ̀q/); *tìɾ* 'root' (< /tìd/). Lenition also occurs sporadically in other tonal types where a final vowel has elided (cf. §1.3).

Word-final devoicing of morphophonemic /d/ and /b/. Otherwise, word-final /d/ devoices to [t]: *ki^{ʔ}t* 'price' (< /ki^{ʔ}d/, cf. *kʃràn* 'without price)'; *húùt* 'animal's tail' (< /húùd/, cf. *húrèŋ* 'tails'). And /b/ devoices to [p] word-finally in all tonal types in all dialects: *ōp* 'father' (< /ōb/, cf. *óvāŋ* [ɔ́βɑ̄ŋ] 'fathers').

Post-sonorant voicing of /k, q/ to /g, ɢ/. Within the phonological word, [k] and [q] voice to [g] and [ɢ] between a sonorant and a vowel: *háŋgùs* 'female cow' (< *hàŋ + ku^{ʔ}s*); *háŋɢìt* 'she-wolf' (< *hàŋ + qīt*). After /j/, uvular /q/ spirantizes to /ʁ/ in SK: *qójʁò* 'bear's den' (< *qɔ̀j + qo*).

Suffix-induced gemination. The suffix *-as* 'step-' causes gemination of the stem-final consonant: *ámmàs* 'stepmother' (*ām* 'mother' + *-as* 'step-'), *húnnàs* 'stepdaughter' (*hu^{ʔ}n* 'daughter' + *as* 'step-'); stem-final plosives are devoiced as well as lengthened, producing the language's only instances of geminate [p]: *óppàs* 'stepfather' (*ōp* 'father' + *-as* 'step-'). The suffixes *-as* 'with' and *-an* 'without' cause the same effect, though usually not with plosives: *ámmàs* 'with mother', but *óvàs* 'with father'. Comparison with other Yeniseic languages show these suffixes originally contained an initial consonant of undetermined articulation (cf. Yugh *pas* 'step-'). In Modern Ket, these suffixes cannot be said to begin with /p/, since this is not a phoneme in native words. Nor do they begin with /h/, which elides after a consonant in the same phonological word: *dʃvə̀* 'I weave it' (< *dī* 'I' + *b* 'it' + *hə̀ə̀* 'weave'); *déstìj* 'eye socket' (< *dēs* 'eye' + *d* 'genitive' + *hīj* 'stomach'). The suffixes that create geminate consonants such as [pː] are best regarded as involving a morphophonemic rule of plosive devoicing and consonant gemination. This eliminates the need to posit a rare instance of phonemic /p/.

Excrescent [g] and [ɣ]. Most appearances of [ɣ] and [g] in native Ket words are unambiguous allophonic realizations of /k/ conditioned by the surrounding vowels or sonorants. A few are not. Some verb bases acquire an excrescent [g] onset which probably derives from the same segment that caused the gemination effect described above: *bátìbgit* 'I sense it' (*git* < *ɾ̄t* 'to smell'). The few morphemes involving excrescent [g] are best regarded as involving a special rule of onset voicing. Many other bases trigger special morphophonological rules when they combine with other finite verb morphemes (cf. the previous discussion of the clusters /bd/ and /b/q/).

In three cases, fricative [ɣ] is likewise morphophonemically distinct from /k/. The first occurs when the morphemes *-as* 'with' or *-an* 'without' are added to vowel-final stems: *qóɣàn* 'without ice' < *qō* 'ice'; *búɣàs* 'with him/her'. Excrescent [ɣ] in such combinations is simply the vowel-stem reflex of the gemination effect described above. The second is the ɣ-separator that appears between morphemes belonging to certain position classes in finite verb forms: *dí ɣàq* 'I exit' (see §2.2.6). Being intervocalic, the ɣ-separator is in complementary distribution with [k] and can simply be regarded, from a synchronic perspective, as belonging to /k/. The third occurs sporadically during word formation when a coda-final glottal stop is lost through addition of a vowel-initial syllable: *kíɣòks* 'spindle' < *ki*^{ʔ} 'yarn' + *ōks* 'tree, pole'; *tə́ɣùl* 'salt water' < *tə*^{ʔ} 'salt' + *ūl* 'water'. The same occurs with descending tone and high-even tone monosyllables: *qáɣàm* 'it is big' (< *qà* 'big' + *am* 'neuter-class concord'; *táɣòks* 'ski pole' (< *tā* 'staff' + *ōks* 'tree'). Vowel-final root syllables that add excrescent [ɣ] are best regarded as occurring in two allomorphs: *ki*^{ʔ} ~ *kiɣ* 'yarn', *tə*^{ʔ} ~ *təɣ* 'salt', *qà* ~ *qaɣ* 'big', *tā* ~ *taɣ* 'staff', etc.

The situation with excrescent [ɣ] and [g], as well as geminate [p] is typical of the problems that arise when phonemic segmentation is applied to a tonal language, particularly one like Ket where the tones historically derive from and occasionally still alternate morphophonemically with consonant segments. On a purely segmental level, these sounds seem phonemic. But when morphological and prosodic factors are fully considered, their appearance is entirely predictable.

1.3. Prosody

1.3.1. Tonemes and the phonological word

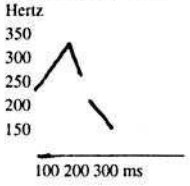
As can be discerned from the preceding discussion, word-based prosodic features play a key role in the distribution of consonant and vowel allophones. Ket is a word-tone rather than a syllabic-tone language. One of five characteristic melodies extends over the first syllable or first two syllables of every phonological word (though particles and other syntactically dependent words may be detoned in connected speech). Besides demarcating the left phonological word boundary, these tonemes also form numerous minimal pairs conveying either lexical or grammatical meaning. Phonetically, tonal prosody involves: 1) the number of syllables involved, one or two; 2) the tonal melody (rising, even, falling, rising/falling, or rising/high falling); 3) voice quality (glottal or neutral, and in Yugh, pharyngeal as well); 4) vowel duration (short, half-long, or geminate); and 5) a raised [e, ə, o] or lowered [ɛ, ʌ, ɔ] articulation of the mid-vowel phonemes /e, ə, o/. Phonologically, all of these features, including the glottal stop accompanying one of the tonemes, are suprasegmental rather than segmental in nature.

Here is a description of the five tonemes in the three Ket dialects as well as Yugh, along with an account of allotonic variations.

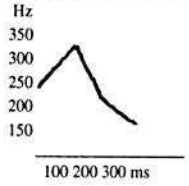
Glottalized toneme. This toneme occupies a short vowel nucleus in the leftmost syllable of the phonological word. Its melody rises but abruptly ceases as a laryngeal stricture or (optionally) a full glottal stop interrupts the vowel. In open syllables, the vowel briefly resumes after the glottal stricture. In closed syllables the coda consonant, including sonorants, devoices and may optionally lengthen. This toneme can be represented by the symbol [ʔ], which also signifies the halted rising tone of the preceding vowel. It is identical in all Ket dialects and lacks allotones except the length-producing effect caused by the syllable coda type.

(1) Glottalized monosyllabic toneme (identical in all Ket dialects)

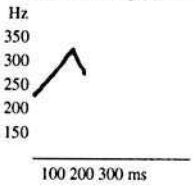
A. open syllable *qa*^{ʔ} [qáˀa] 'word'



B. sonorant coda *qa*^{ʔ}*j* [qáˀj] 'wooded hill'



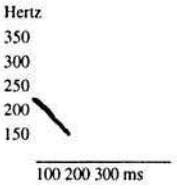
C. obstruent coda *ke*^{ʔ}*t* [kɛ́ˀt] 'person' </ke^{ʔ}d/



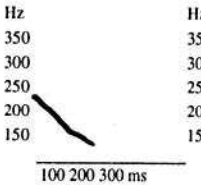
Falling toneme. This word tone varies significantly across the three dialects. In CK and NK its falling melody is spread over a long vowel, and an excrescent vowel always follows, forming a second, non-tonal syllable: NK [ì:ti], CK [ì:tɛ] 'tooth'; NK [qà:ji], CK [qà:jɛ] 'elk'. In Yugh, there is no excrescent vowel, but the falling-tone geminate vowel is pharyngealized: [ì:^{ʰ}t] 'tooth'; [χà:^{ʰ}j] 'elk'. The falling toneme in SK involves neither pharyngealization nor an excrescent second syllable, and its nucleus is short rather than geminate: *ìt* [ìt] 'tooth'; *qàj* [qàj] 'elk'. Also, any word-final /k/, /q/, or /d/ in SK lenites to [ɣ~x], [ʁ~χ], or [ɾ], respectively: *tìɣ~tìx* 'snake (< /tìk/); *dàʁ~dàχ* 'laughter' (< /dàq/); *qùɾ* 'pike (fish)' (</qùd/). This feature, which typically occurs intervocalically, suggests the earlier presence of an excrescent vowel after SK falling-tone syllables, as well.

(2) Falling toneme: short-vowel monosyllable in SK — disyllable in CK and NK

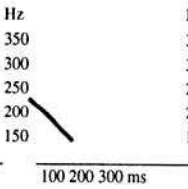
A. open syllable *qà* 'big'



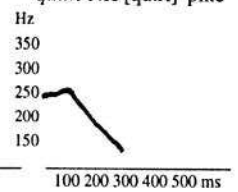
B. sonorant coda *qàj* 'elk'



C. obstruent coda *qùɾ* < /qùd/ 'pike'



D.geminate + excr.vowel *qùude* CK [qù:dɛ] 'pike' *qùuri* NK [qù:ɾi] 'pike'



The falling toneme apparently developed from the loss of a fricative element in a syllable-final cluster. This explains both the pharyngealization and length in Yugh, and the excrescent vowels in NK and CK (and formerly in SK as well), which prevented the cluster from occurring word-finally.

High-even toneme. This toneme, symbolized here as [¯] and as superscript [^{1}] in Werner (1996, 1997b) and Vajda (2000), contains a high-even or slightly rising melody distributed over a half-long vowel. This is the only toneme containing the mid-high allophones [e, ə, o], which are normally realized as mid-low [ɛ, ʌ, ɔ] in conjunction with other tonal melodies: *tēm* [tē·m] 'goose' vs. *témǹ* [témǹ] 'geese'; *kāq* [kā·q] 'soot' vs. *káqtù* [kʌ́qtù] 'sooty'; *qōs* [qō·s] 'ten' vs. *qósàm* [qɔ́sàm] 'tenth'; and *dēs* [dē·s] 'eye' vs. *dès* [dès] 'pair of eyes of one individual'. The high-even tone has two separate origins, whose reflexes are still readily apparent in CK and NK. In SK, all high-even tone words are monosyllabic. In CK and NK many words of this tonal type have a final excrescent vowel of unpredictable quality (either /a/, /e/, /i/, or /ə/) as a second, non-tonal syllable:

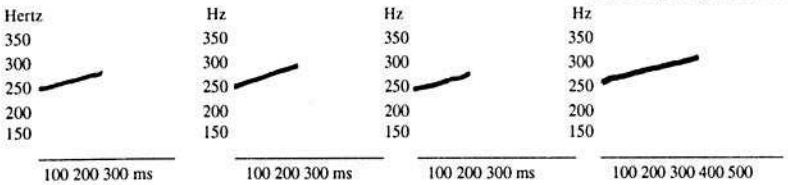
(3) High-even tone in Southern Ket in CK and NK

A. open *qā* [qā·] 'at home'

B. sonorant coda *sīl* [sī·l] 'summer'

C. obstruent coda *kāt* [kā·t] 'winter'

D.half-long + excr.vowel *sīle* CK [ʃī·lɛ] 'summer' *sīli* NK [sī·li] 'summer'



The excrescent vowels in CK and NK resemble those found after the falling toneme because they likewise developed from a reduction in the consonant coda – though in this case usually from the loss of a non-fricative element. High-tone words in CK and NK that lack an excrescent vowel (and thus are identical to their SK cognates) developed from a reduction of the consonant onset rather than the coda. Reflexes of these two distinct tonogenetic processes – the simple high tone and extended high tone – are also found in Yugh. Yugh high-tone cognates to NK or CK words without excrescent vowels have a short vowel nucleus. For example: *ūl* 'water' (cf. Arin *kul* 'water', which preserves the initial consonant) is pronounced as [ū·l] in all Ket dialects but as short-vowel [ŭr] in Yugh. Yugh cognates to CK and NK high-tone words with excrescent vowels contain a half-long vowel: SK and Yugh *kāt* [kā·t] 'winter' vs. CK *kāte* [kā·tɛ] and NK *kāti* [kā·ti].

The simple and extended high-tone variants are marginally distinguishable in SK, as well. Which SK high-tone words correlate with disyllables in the two northern dialects (i.e., which ones derive from a reduced coda rather than a reduced onset) is evident in words ending in a consonant susceptible to intervocalic lenition (/k/, /q/, or /d/). SK high-tone syllables deriving from reduced codas involving /k/ and /q/ end in [ɣ] and [ʁ] rather than [k] and [q]: *tīɣ* 'swan' (CK [tī·gɛ], NK [tī·ɣʌ]); *ǯʁ* SK 'branch' (CK [ǯ·ʁa], NK [ǯ·ʁʌ]). The spirantized allophones occur because an excrescent vowel once followed these codas, just as in the northern dialects. Compare *tīk* 'snow', where /k/ does not spirantize because /k/ here was originally a simple consonant and thus failed to generate a following excrescent vowel. Modern SK *tīɣ* 'swan' and *tīk* 'snow' constitute a minimal pair, which can be accounted for synchronically only by positing an elided final vowel in the former word (SK *tīɣ* 'swan', in fact, may still be pronounced with a supershort final vowel: [tī·ɣᵊ]). Lenition in SK also affects high-tone syllables ending in /d/, which

rhotacizes to [ɾ]: *qār* 'fur' (CK [qā·dɛ] and NK [qā·ɾʌ]). In contrast to the other obstruents, word-final /b/ in SK high-tone monosyllables devoices to [p] instead of leniting to [β], even in cases where an excrescent vowel appears in the other dialects: SK *dīp* 'I eat it' (CK *dība* [dī·ba], NK *dīva* [dī·βa]). But /b/ here originated as a pronominal clitic, and Yeniseic clitics obey a special set of assimilatory rules (§1.3.2).

Rising/falling toneme. This tonal melody extends over two vowel segments. It may occur in words of two or more syllables, in which case it occupies the first two syllables. Or it may appear over a single long vowel in cases where an intervening consonant has elided to produce a monosyllabic word with a geminate nucleus. In either case it will be transcribed as [ˆ]. Werner (1997b) and Vajda (2000) marked geminate monosyllables with [^{3}] and disyllables with [^{5}]. But this tonal contour is best regarded as a single toneme wherever it occurs. Its melody is basically identical across all dialects and syllable types. The rising contour peaks at the end of the first nucleus (or the first vowel mora in geminate monosyllables) and falls on the second. In words where the two vowels are separated by a consonant, the falling tone resumes at a lower register than where it ended on the first syllable: *bógdòm* 'rifle'; *qólàp* 'half, side'. In fast speech, this creates the impression of a dynamic word accent on the first syllable.

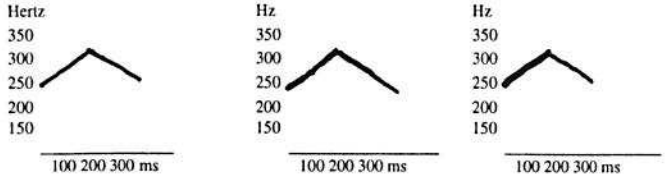
In monosyllables formed through the elison of an intervocalic consonant, the entire contour occupies a single geminate vowel. Sometimes the monosyllable exists in free variation with its etymological disyllable: *ǯʁìn* [ʌʁìn] ~ *ǯən* [ʌ̂:n] 'branches'. Otherwise, the etymology of such words is less clear. Words such as *súùl* [sû:l] 'hand sled' or *táàl* [tâ:l] 'dog food' probably originated as compounds too (? *súùl* < *su*$^{?}$*k* 'back' + *ul* 'pole' and *táàl* < *ta*$^{?}$*p* 'dogs' + *ūl* 'liquid').

(4) Rising/falling melody in monosyllables (all dialects)

A. open *ſi* [ſ:] 'steam (in cold air)'

B. sonorant coda *súùl* [sû:l] 'hand sled'

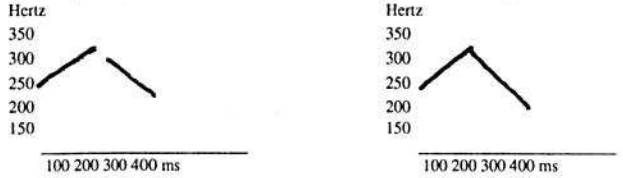
C. obstruent coda *tſìt* [tſ:t] 'stern of boat' (< tſìd)



(5) Rising/falling melody in disyllables (all dialects)

A. two short-vowel nuclei *tſrèŋ* [tſrèŋ] 'sterns of boats'

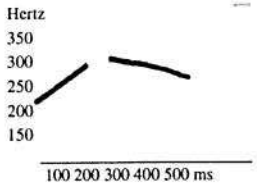
B. syllabic sonorant in the 2nd syllable *kúnṇ* [kúnṇ] 'wolverines'



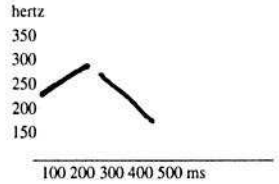
The quality of the vowel /a/ exhibits considerable free variation in the falling portion of the rising/falling toneme, as well as in non-tonal, third or fourth syllables. This is particularly true when /a/ appears epenthetically in a suffix and carries no specific meaning of its own: *súlàm ~ súlèm* 'red'; *qúsdìŋta ~ qúsdìŋte* 'in the tent'.

Rising/high falling toneme. The disyllabic toneme symbolized here as [᷄] and in Werner (1996, 1997b) as [^{6}] consists of a gently rising melody on the first syllable and a high falling tone on the second. It differs from the regular rising/falling melody described above in that the melody resumes on the second syllable at a higher register than where the rising portion leaves off on the first syllable. This gives the acoustic impression of a dynamic word accent on the second tonal syllable rather than on the first. Diagram (6) compares this melody with the rising/falling toneme described above.

(6) Rising/high falling melody (all dialects)
bə́ntə̀n 'mallard ducks'



Rising/falling melody (all dialects)
bə́ntə̀n 'mallard duck'



In fast speech, the rising/high falling contour may appear to occupy a geminate vowel due to elision of intervocalic [ɣ]: */ókɣ̀ən/* -> [*óɣ̀ən*] ~ [*óə̀n*] 'he went'. Coda-final /k/ lenites in words with rising/high-falling melody, suggesting that this melody arose due to the loss of some element at the end of the second syllable: *bɔ́ŋtŭɣ ~ bɔ́ŋtŭx* < /bóŋtŭk/ 'herring'; *útĭɣ ~ útĭx* < /útĭk/ 'worm'; *atĭɣ ~ atĭx* < /átĭk/ 'loach (fish)'. This process presumably would likewise apply to /q/ and /d/, though no examples are attested in my material.

The phonetic contrast between the rising/falling and rising/high falling tonemes does not vary from one Ket dialect to another, or between Ket and Yugh.

Chart (7) shows the allophonic realization of all five tonemes across the Ket dialects, with Yugh cognates added for comparison. This list also illustrates tonal minimal pairs:

(7)	SK	CK	NK	Yugh
sūl 'blood'	[sū·l]	[ʃū·l]	[sū·l]	*sūr* [sūr]
su^{ʔ}l 'Siberian salmon'	[sú^{ʔ}l]	[ʃú^{ʔ}l]	[sú^{ʔ}l]	*su^{ʔ}l* [sú^{ʔ}l]
súùl 'hand sled'	[sûːl]	[ʃûːl]	[sûːl]	*sóòr* [sɔ̂ːr]
sùl 'hook'	[sùl]	[ʃùːlɛ]	[sùːli]	*sùl* [sùːʰl]
áslèneŋ 'felt-padded skis'	[áslèneŋ]	[áʃlènɛŋ]	[áslènɛŋ]	*áslìŋ* [áslìŋ]
áslẽneŋ 'houseboats'	[áslẽneŋ]	[áʃlẽnɛŋ]	[áslẽnɛŋ]	*ásður* [ásðuriŋ]
qōj 'uncle/aunt'	[qō·j]	[qō·j]	[qō·j]	*χōj* [χōj]
qo^{ʔ}j 'want'	[qɔ́^{ʔ}j]	[qɔ́^{ʔ}j]	[qɔ́^{ʔ}j]	*χo^{ʔ}j* [χɔ́^{ʔ}j]
qóòj 'neighboring'	[qɔ̂ːj]	[qɔ̂ːj]	[qɔ̂ːj]	*χóòr* [χɔ̂ːr]
qòj 'bear'	[qɔ̀j]	[qɔ̀ːjə]	[qɔ̀ːji]	*χòj* [χɔ̀ːʰj]
ī 'sun'	[ī·]	[ī·]	[ī·]	*ī* [ī]
i^{ʔ} 'day'	[í^{ʔ}]	[í^{ʔ}]	[í^{ʔ}]	*i* [ìːʰ]
ĩi 'steam' (in cold air)	[ĩː]	[ĩː]	[ĩː]	*ip* [ìːʰp]

īt 'smell'	[ī·t]	[ī·t]	[ī·t]	*īt* [īt]
ìt 'tooth'	[ìt]	[ìːtɛ]	[ìːti]	*ìt* [ìʰt]
tìr < /tìd/ 'root'	[tìr]	[tìːdɛ]	[tìːri]	*tìt* [tìːʰt]
tĩĩt < /tĩĩd/ 'stern of boat'	[tĩːt]	[tĩːt]	[tĩːt]	*tĩĩt* [tĩːt]
ūs 'bear spear'	[ū·s]	[ū·ʃ]	[ū·s]	*ūs* [ūs]
īn 'to stand'	[ī·n]	[ī·n]	[ī·n]	*ĩfin* [ifin]
i^{ʔ}n 'needle'	[í^{ʔ}n̩]	[í^{ʔ}n̩]	[í^{ʔ}n̩]	*i^{ʔ}n* [í^{ʔ}n̩]

1.3.2. Phonological processes across the clitic boundary

Ket contains two sets of clitics: nominal possessive prefixes (§2.1.1.2) and verbal agentive/ergative series subject prefixes (§2.2.1.2.1). Either set may appear as enclitics or proclitics, depending on a combination of phonetic and morphological factors. The genitive suffixes of personal pronouns may become possessive enclitics. For instance, 1st-person genitive form *āp* 'my' has several realizations in SK. When emphasized for pragmatic purposes, the non-clitic pronominal forms [āp], [āp] or [ábì] are used: *ábì ām ~ āp ām* [ábì ām ~ āp āːm] 'my mother'. Otherwise, only the consonantal portion appears. Before vowels, it retains the form [b]: *b-ām* 'my mother'. If the preceding word ends in /s/, however, it appears as [p]: *ōks p-qīp…* 'the tree my grandfather…'. Otherwise, it takes the spirantized form [β] and may cause the following consonant to undergo voicing/lenition, as well: *v-ʁīp* 'my grandfather'. The feminine possessive morpheme has the variants [it], [t], [d], and [r]: *bū-r ām ~ d-ām* 'her mother', *bū-r-ʁīp ~ it-qīp ~ t-qīp ~ r-ʁīp* 'her grandfather'. Similar phonological rules affect the active/transitive series prefixes in finite verbs, but with additional morphological complications (cf. §2.2.6 and Vajda 2002b).

1.3.3. Higher prosodic levels

Most noun stems are phonological words, but verb forms with polysyllabic incorporates are phonological phrases (Vajda 2002b). On the level of the phonological phrase, tonal features are generally preserved intact, except that the glottal stricture elides everywhere except in the final syllable of the phonological phrase, leaving only its rising-tone portion elsewhere: *ki^{ʔ} ki^{ʔ}* [kí kí^{ʔ}] 'new yarn' (<*ki^{ʔ}* 'new' + *ki^{ʔ}* 'yarn'). At prosodic levels above the phrase, defocussed function words are often partly or completely detoned. In connected speech, the two disyllabic tones tend to reduce to dynamic accents on the peak syllable, and a final vowel /i/ may elide, leaving only the rising-tone syllable: *súјdì* 'scarf' ~ *súјt*. Further study is needed of the phonetic effects that prosodic domains higher than the phrase produce on word forms, as they are crucial to understanding the distribution of certain allophones in Ket. For instance, in at least some speakers' pronunciation, intonation-phrase final /l/ is rhotacized to /r/: *āt távì ūl* [āːt táβì ūːr] 'I ladle out water'. This phonetic transcription is based on the pronunciation of U.K. Kamenskikh, a native speaker of SK from Sulomai, as tape-recorded by Heinrich Werner in 1971. In the remainder of this book, my transcription of Ket words conveys tones and segments on the level of the phonological word and ignores the effect of higher prosodic levels. In connected speech, intonation tends to level out the contour of certain tones, particularly on pragmatically defocussed elements.

1.4. The phonology of recent Russian loans

Because all Ket speakers today are bilingual in Russian, there is a tendency to pronounce Russian loan words in Ket without assimilating them to the native rules of

phonology outlined in §1.2.1. Before the late-20th century, Russian loans were usually assimilated phonologically. Early examples include pre-19th century *ho$^{?}$p* 'priest' (< Russ. *pop* 'priest'); and 19th-century *táskà* 'cup' (< *čaška*), *póstŏp* 'shot glass' (< *stopka*), and *póčìta* 'post office' (< *počta*). The last two words contain [p] and [tʃ], which could be considered marginal, emerging phonemes in early 20th-century Ket. The contemporaneous Turkic loan *kánčà* 'pipe (for smoking)' likewise contains [tʃ], even in the pronunciation of speakers who otherwise pronounce /ns/ as [ns] rather than [tʃ]. Words containing initial, non-allophonic [p, v, g, r, j] as well as [ʒ, z, f, ʃ, tʃ, ʃtʃ] and other non-traditional Ket sounds abound in 20th-century Russian borrowings: *škóla, vódka, gaz, žurnál, rádio, flag*, etc. The use of phonetically unassimilated loans by bilingual speakers is best regarded as sub-sentential code switching rather than as proof that Ket has acquired new phonemes from Russian. Textbooks used in the Ket ethnic schools instruct students to pronounce such words as they would in Russian, complete with non-tonal, dynamic stress. Additional phonemic symbols are therefore needed to write recent Russian loans: *v, f, g, p, r, x, č, š, šč, z, ž*, and the palatalization superscript ^{j}; on multisyllabic words, the mark [ˊ] can be used to denote dynamic word-stress: *ščóti* 'abacus'; *magazín* 'store'.

A final note about using a standardized alphabet for Ket. The presence of so many Russian loans containing contrastive /r/, /g/, /p/, /v/ makes it difficult to avoid using letters such as *r, g, p, v* to reflect consonant allophones in native Ket words. This is the principle I have followed here. Heinrich Werner does the same using a Cyrillic alphabet in his 4,000-word *Ket-Russian/Russian-Ket Learner's Dictionary* (Werner 1993), the only lexicon aimed at Ket native speakers yet published.

2. Morphology

2.1. Nominal morphology

Nominal inflectional morphology in Ket is strongly suffixing and agglutinating and bears strong areal similarities to neighboring Turkic and Samoyedic. Nominal stem creation relies primarily on compounding, due to the paucity of derivational affixes. The most unusual morphological feature of nouns is their propensity for grammatically redundant inflectional affixes to be used as derivational elements in stem creation.

2.1.1. Noun

2.1.1.1. Noun stem creation

Ket basic vocabulary includes numerous non-derived stems, many of them mono-syllabic. Some can serve as either verbal or nominal roots: *bēj* 'wind', 'to blow'; *i$^{?}$l* 'song', 'to sing', 'singing'. In general, morphological conversion is quite prevalent in Ket. The majority of other noun stems are complexes formed either by compounding or by the addition of an affix-like derivational morpheme, nearly always transparently linked etymologically to a free root morpheme. Ket nominal derivational morphology thus tends toward the isolating pole, at least from a diachronic perspective.

Compounding. By far the most common noun stem formation technique in Ket is compounding. Unlike free phrases, most compound nouns represent a single phonological word and nearly always involve a change of tonal contour during stem formation. Compare the free phrase *hánà ūl* 'small water' with the compound word *hánùl* 'puddle'. Diverse compounds can be created by merging roots in this way, triggering many unpredictable phonological changes: *áqqùt* 'rainbow' (< *ékŋ* 'lightning' + *qo$^{?}$t* 'road'); *úldìs* 'droplet' (< *ūl* 'water' + *dēs* 'eye'); *ássèl* 'wild animal' (< *ēs* 'heaven'+ *sèl* 'reindeer'); *dĺkkŭt*

'candle' (< *dīk* 'pitch' + *ki$^{?}$t* 'fat'). Compounds that involve noun roots in a possessive or synechdochic semantic relationship often include the genitive suffix *-d* as a connector. The noun *bógdòm* 'gun' literally denotes 'fire's arrow' (< *bo$^{?}$k* 'fire' + *d* 'genitive' + *qām* 'arrow'). Other examples include *mámtkùp* 'nipple' (< *ma$^{?}$m* 'breast' + *d* 'genitive' + *kŭp* 'point, end') and *déstùl* 'teardrop' (<*dēs* 'eye' + *d* 'genitive' + *ūl* 'water').

Certain compound words represent phonological phrases rather than phonological words, though they may involve a partial change in tone when compared to their constituent roots pronounced in isolation: *móràt bōk* 'Northern Lights' (< *mórà* 'ocean' + *d* possessive + *bo$^{?}$k* 'fire'); *kánqo$^{?}$* 'Venus' (< *kə$^{?}$n* 'bright' + *qo$^{?}$* 'star'). The phonological phrase boundary between the two roots in *kánqo$^{?}$* is also evident in the preservation of /q/. Compare the compound word *háŋgìt* 'she-wolf', where /q/ becomes [g] after sonorant /ŋ/.

Noun derivation. Several noun roots (for a thorough survey, see Werner 1997b:50-4) function similarly to derivational prefixes or suffixes. None is extremely productive, and some occur only in a handful of stems. Roots that approach the status of derivational prefixes include *ik-* 'male, he-' (< *i$^{?}$k* 'male') and *haŋ-* 'female, she-' (< *hàŋ* 'female'): *íktìp* 'male dog'; *háŋgòn* 'mare'. Roots resembling derivational suffixes include *-am* (< *qĭm* 'woman'), and *-kit, -git* (< *kə$^{?}$t* 'children of one family'): *sénàm* 'female shaman'; *kóngìt* 'foal'.

Some nouns contain fossilized consonantal prefixes (either *d-* or *b-*, both probably deriving from 3rd-person possessive proclitics) that appear to have originally served a nominalizing function: *īt* 'to smell' vs. *dīt* 'a smell (something's smell)', *ūl* 'pole' vs. *dūl* 'a handle (something's pole)' and *būl* 'a leg (someone's pole)', *kŭp* 'beak, fish's mouth' vs. *du$^{?}$p* 'a fishhook' (lit. 'something's beak)'. This type of noun-stem creation is completely unproductive and reflects an ancient pattern in the language.

By far the most productive nominalizing suffix in Ket is *-s* (*-ši* in CK, *-si* in NK and Yugh), which may be added to practically any infinitive or modifier. It is used to make actor nouns from verb roots (similar to English *-er* in *worker*): *lóvèt* 'to work, working, work' -> *lovèts* 'worker, one who works'. It also creates substantives denoting the effect of the action named in the stem: *ĺlbèt* 'break' -> *ĺlbèts* 'broken thing, one that is broken'. Some forms have either possible reading: *bèr* 'making, to make' -> *bèrs* 'that which is made, one who makes, the making of'. It also creates substantives from inflected noun stems: *óbdàs* 'one/something belonging to father' (< *ōb* 'father' + *da* genitive suffix + *s*); *éŋ ŋùŋdiŋtas* 'one/something in the house' (< *éŋŋùŋ* 'house' + *diŋta* adessive suffix + *s*). Finally, *-s* productively forms substantives from adjectives. Some of these have an abstract as well as a concrete meaning, and some have acquired more idiosyncratic meanings as well: *úgdè* 'long' -> *úgdès* 'length, one/something that is long'; *qà* 'big' -> *qàs* 'boss, one/something that is big'. All stems in *-s* function syntactically as nouns: unlike true adjectives, they may take case suffixes. Also unlike adjectives but like other nouns, stems in *-s* cannot take predicate concord suffixes (§3.2.1.2).

Noun stem formation, particularly the process of compounding, involves a host of idiosyncratic morphophonemic sound alterations. Here are three select examples.

1. Lenition of /d/ to [r] after /ŋ/ in *háŋrìt* 'female grouse' (< *hàŋ+dīt*) occurs because of the original word-final vowel of the first component. This process does not occur at the stem/inflection boundary: *háŋdìŋte* 'to the female' (<*hàŋ-diŋte*).

2. Metathesis of /b/ + /q/. Across a root + root boundary in the same phonological word, these stops metathesize, retaining [p] instead of following the regular, regressive

order of voicing assimilation in such clusters: *qóp + qùn -> qóqpùn* 'cuckoo (bird)'. This metathesis does not occur across most other types of morpheme or prosodic boundaries.

3. /q/-induced consonant gemination. Adding /q/ to a syllable ending in a consonant results in gemination of the first consonant: *bəs* ('former' < *b* 'nominalizer + *-as* 'step-') + *qīm* 'wife' -> *bássèm* 'widow'; *se$^{?}$n* 'reindeer' + *qu$^{?}$s* 'tent' -> *sénnùs* 'reindeer shed; *ba$^{?}$ŋ* 'earth' + *qu$^{?}$s* 'tent' -> *báŋŋùs* 'winter dugout'. This change is morphophonemic, since many morphological constructions involving sequences of consonant + /q/ result in either simple addition: *ɬŋɑùs* (<*iŋ+qu$^{?}$s*) 'house; or in elision of /q/ with no gemination of the preceding consonant: *dɬnð* 'I died' (< *di-in+qo*).

2.1.1.2. Nominal inflectional forms and categories

2.1.1.2.1. Gender and animacy

Every Ket noun belongs to one of three grammatical genders (masculine, feminine, or neuter) and is also animate or inanimate grammatically. Gender and animacy dovetail to form a tripartite class distinction (masculine-animate, feminine-animate, and neuter or inanimate). Neuter gender coincides completely with the grammatical notion of inanimacy. Masculine- or feminine-class nouns are always grammatically animate, regardless of whether they denote living beings. In the plural, masculine and feminine merge into an animate superclass which contrasts with the neuter/inanimate class. Both animacy and gender are formally covert in the noun stem itself, though certain roots used in compound nouns may logically identify class membership. These include the preposed roots *i$^{?}$k* 'male' and *hàŋ* 'female': *ígbès* 'male rabbit', *háŋbès* 'female rabbit'. Similarly, the postposed root *ke$^{?}$t* 'person' builds masculine animate nouns: *kójgèt* 'hunter' (< *kə$^{?}$j* 'walk around' + *ke$^{?}$t* 'person'). Otherwise, class distinctions formally appear only in the inflectional morphology. Class dictates the form of several oblique case suffixes (§2.1.1.2.4). Animacy plays a role in determining plural suffixes on nouns (§2.1.1.2.2) and regulates the agreement pattern found in certain number phrases (§2.1.3). Animacy also blocks a noun from forming the locative case, while inanimate-class nouns do not normally form the vocative (§2.1.1.2.4). Most strikingly, animacy and gender distinctions permeate the entire system of verb-internal subject/object markers (§2.2.2.2) and predicate concord suffixes (§3.2.1.2).

Noun class only partly coincides with real-world distinctions in gender and animacy. Still, nouns denoting male human beings are predictably masculine-class, words denoting female humans are feminine-class, and words for most inanimate objects are neuter-class. However, nouns denoting non-human living entities, including plants, as well as some nouns for man-made objects or natural phenomena, are often grammatically masculine or feminine for reasons that reflect traditional Ket cultural values and sensibilities. In general, masculine-class items are perceived as having "greater vital force" than feminine-class ones, with neuter/inanimate-class items perceived as having even less or none at all. Grammatical gender and animacy tend to be lexically fixed. For example, the noun *ke$^{?}$t* 'human being' is grammatically masculine and animate regardless of whether the person referred to is a man or a woman or is even alive; *sa$^{?}$q*, 'squirrel', is likewise invariably feminine and animate. Only a few animate-class nouns have separate masculine and feminine readings reflecting the real-life gender of their denotate in speech. The kinship term *be$^{?}$p* is masculine-class when used to mean 'husband of eldest daughter', and feminine-class in the meaning 'wife of eldest son'; *bɬsɛ̀ep* 'sibling' is masculine-class in the meaning 'brother', feminine-class in the meaning 'sister'. Other fluid-gender nouns include

the kinship terms *qàl* 'grandson/granddaughter', *qōj* 'uncle/aunt (younger sibling of one's parent)', *qòj* 'male relative/female relative', and its probable derivative *qòj* 'he-bear/she-bear' (bears were regarded as reincarnated human relatives). Class membership in some nouns varies according to the specific meaning expressed in context. The word *a$^{?}$q* is animate-class when it means 'living trees' but inanimate-class in the meaning 'firewood'; *sèl* 'reindeer' is masculine-class when it denotes 'reindeer' in a generic sense, but can be feminine-class when referring specifically to a female reindeer. Animate nouns built with the suffix *-kitl-gitl-ɣit* 'young' (phonemic /kid/) retain the generic class of the root: *kōn* 'horse' (masc.) -> *kóngìt* 'foal' (masc.); *be$^{?}$s* 'rabbit' (fem.) -> *béskìt* 'baby rabbit' (fem.).

Below is a thesaurus showing the class membership of a selection of Ket nouns (cf. Krejnovich 1961:114-16; Werner 1994 and 1997b:88-96):

Masculine-class nouns include the following groups:

All nouns specifically referring to male human individuals: *ōp* 'father'; *hi$^{?}$p* 'son'; *qīp* 'grandfather'; *báàt* 'old man'; *híppàs* 'step-son'; *óppàs* 'step-father; *tēt* 'husband'; *hīɣ* 'man'; *hɬgdìl* 'boy'; *èn* 'husband of younger daughter'. This also includes all male proper names.

All nouns that refer to human individuals generically by profession, nationality, etc.: *séniŋ* 'shaman'; *ósl̃ik* 'Ostyak, Ket'; *jùɣ* 'Yugh'; *la$^{?}$k* 'Selkup'; *kīns* 'Russian'; *dájgìt* 'Jurak, Nenets'; *hómbà* 'Evenki'; *ke$^{?}$t* 'person, human being', and all words containing this morpheme as a derivational suffix, such as *básliɣit* widower'; *bɬɣìt* foreigner' (<*bīk* 'other'); *ɬmgìt* 'dwarf' (<*īm* 'pine nuts'); and actor nouns built with the deverbal suffix *-s*: *lóvèts* 'worker'; *nánbèts* 'baker'; *hástèts* 'drummer'; *úddìŋs* 'thief'; *èjs* 'killed person'. The noun *bōŋ* 'dead person, corpse' is also masculine-class.

Names of male deities, spirits and culture heroes: *ēs* 'god' (*Es* refers to both the Christian God and the traditional Ket paternalistic sky god); *Dòχ* 'Doh' (the first Ket shaman and a culture hero), as well as words made from the masculine-class word *kúùs* 'spirit': *qájgùs* (*Qaigus*, a forest spirit); *úlgùs* (water sprite), etc.

All nouns referring specifically to male animals, including generic *i$^{?}$k* 'male' or compounds beginning with it: *íkkòn* 'stallion'; *ígbàn* 'drake (male duck)'; *íkkùs* 'ox'.

Certain generic terms for large or economically important mammal species: *qàj* 'elk' (*Alces alces*); *sèl* 'reindeer' (*Rangifer tarandus*); *a$^{?}$k* 'musk deer (*Moschus moschiferus*)'; *kùn* 'wolverine'; *qīt* 'wolf' (CK *qītɛ*, NK *qītì*); *ájgòn* 'Arctic fox'; *tīp* '(domestic) dog'; *kōn* '(domestic) horse' (< Russ. *kon^{j}*); *táàl* 'river otter'; *kīt ~ kə̄t* 'mink' (< kīd); *kúl̃ep* 'ermine'; *èr* 'sable' (morphonemic /èd/, phonetic SK [èɾ], CK [è:dɛ], NK [è:ɾi], Yugh [è:^{h}t]); as well as *i$^{?}$k* 'male animal', *ássèl* generic for 'wild animal'; and *tēl* 'mammoth'.

Many bird species names, also usually the larger or economically more important ones, including birds of prey and most game birds: *tīɣ* 'swan'; *tāuɣ ~ tāu* [tā^{u}ɣ]~[tā^{u}] 'crane'; *di$^{?}$* 'eagle (*Aquila chrysaetus*)'; *hi$^{?}$j* 'eagle owl (*Bubo bubo*)'; *qa$^{?}$ŋ* 'vulture'; *dīt* 'grouse'; *tēm* 'goose'; *bə$^{?}$n* '(generic) duck', and most species names of ducks.

Species names for large or economically important fish: *bóŋtũɣ~bóŋtũx* < /bóŋtũk/ 'herring'; *qùr* < /qùd/ 'pike' (SK [qùɾ], CK [qù:dɛ], NK [qù:ɾi]); and many others, including *ɬs* ' (generic) fish'.

Words for snakes or worm-like creatures: *tìɣ~ tìx* < /tìk/ 'snake'; *útĩx* < /útĩk/ 'earthworm'; *kīn* 'maggot'; *úrð̃n* < /údð̃n/ 'leech'.

Names of some insect species (probably determined mythologically): *dənt* 'dragonfly'; *qənt* 'ant'; *qɬbbàt* 'bee'; *sūj* 'mosquito'; *bīst* 'wasp'; *ūt* 'black midges (=Russian *gnus*)'.

The generic names of all tree species: *ēj* 'pine'; *ùs* 'birch'; *se$^{?}$s* 'larch'; *ha$^{?}$j* 'Siberian pine' (*Pinus sibirica*, normally referred to as *kedr*, 'cedar' in Russian)'; *dīn* 'fir'; *ʌ̀l* 'aspen', etc. These nouns are masculine when used to denote growing specimens, but neuter when referring to a fallen log or wood used as material. Similarly, the generic noun *ōks* 'tree, wood' (and its plural *a$^{?}$q* 'trees, woods') is masculine when referring to growing plants. But when used in reference to a felled tree or to firewood, *ōks* and *a$^{?}$q* are neuter.

Names for certain heavenly bodies: *sèl* 'Orion' (lit., 'reindeer'); *qàj* 'Big Dipper' (lit., 'elk'). Included here is *qīp* 'moon' (lit., 'grandfather'); *qīp* is also masculine in the meaning 'month' as well as in compounds naming the twelve months: *dángìp* 'May' (< *dáàn* 'grass' + *qīp* 'moon'), *súj dòqqip* 'July' (<*sūj* 'mosquito' + *do$^{?}$q* 'flying' + *qīp* 'moon'), etc.

Names for certain natural events: *ékŋ* 'thunder and lightning'; *úlgìt* 'whirlwind'. Included here are all meteorological terms built with the suffix *-es* (< 'sky, heaven'): *bógdàŋes* 'meteor'. Synonymous pairs of nouns denoting weather or seasons are masculine when they end with the suffix *-es*, but neuter otherwise: *ūl* 'rain' (neuter) vs. *úlès* 'rain, rainy weather' (masc.); *sīl* 'summer' (neuter) vs. *sʌ́lès* 'summer, warm weather' (masc.).

Finally, names for a few objects (all of economic or spiritual importance): *sùl* 'hook (for holding or fastening)'; *bálbès* '(Christian) cross'; *kʌ́yòks* 'spindle'. Included here are words for tent parts or snow-sled parts consisting of poles or hoops (Werner 1997b:93-4).

Feminine-class nouns include the following:

All nouns referring specifically to female human beings, including proper names and nouns expressing profession or nationality: *qīm* 'wife'; *ām* 'mother'; *hu$^{?}$n* 'daughter'; *qímā* 'grandmother'. Included here are nouns containing *ām* 'mother' or *qīm* 'wife' *báàm* 'old woman'; *énèm* 'wife of younger son'; *hámgàm* 'female Evenki'; *júqqìm* 'female Yugh', etc.

Names of female gods, shamans, spirits and culture heroes: *Hósèdam* 'Hosedam (evil witch of the north)'; *Tómàm* 'Tomam (benevolent goddess of the south)'.

All nouns referring specifically to female animals build with *hàŋ-* : *háŋbès* 'female rabbit'.

Many generic species names of mammals (usually smaller or less important economically than masculine-class species names): *be$^{?}$s* 'rabbit'; *sa$^{?}$q* 'squirrel'; *ko$^{?}$p* 'chipmunk'; *kʌ́àn* 'fox'; *ùt* 'mouse'; *újà* 'mole'. Included here are most domestic animal names borrowed from Russian: *kóskà* 'cat'; *ópsà* 'sheep', etc.

The species names of certain birds: *qálèŋ* 'seagull'; *kīl* 'raven'; *qólèt* 'crow'; *qópkùn* ~ *qóqpùn* 'cuckoo'; as well as *dūm* '(generic) small bird', etc.

The species names of lower animal life that do not happen to be masculine-class: *túlʌ̀* 'lizard'; *ə$^{?}$l* 'frog'; *qēs* 'tadpole'; *tə$^{?}$* 'perch (fish)'; *élìm* 'spider'; *dánsòlejs* 'grasshopper', etc.

Species names for a few plants, as well as words for plant parts and plant products: *bólbà* 'mushroom'; *émìlta* 'pine cone'; *ʌ́ə* 'leaf'; *qo$^{?}$* 'a type of wild lily with an edible bulb'; *éèl* 'berries' (generic, or specifically 'red whortleberries'). Included here are Russian loan words for fruits and vegetables, which are invariably feminine and do not follow the Russian noun-class system: *lu$^{?}$k* 'onion' (< Russ. *luk*); *kʌ́ltʌ̄ksa* 'potato' (< Russ. *kartóška*); *jábòka* 'apple' (< Russ. *jábloko*), etc.

Names of body parts, with the exception of *bi$^{?}$s*, 'penis', which is masculine.

Names of skin blemishes: *hīn* 'wart'; *bóksà* 'pimple'; *sʌvàŋ* 'boil', etc.

Names of certain heavenly bodies: *ī* 'sun' *qo$^{?}$* ~ *qòχ* 'star'; *kʌ́nqo$^{?}$* 'Venus'.

Name of the Yenisei and its major tributaries (anthropomorphized as feminine beings): *qūk* 'Yenisei'; *qo$^{?}$l* 'Mountain Tunguska'; *jélòk* 'Yelogui'.

The names of the seven distinct souls the Ket believed each human possessed, as well as *qónìj* 'ghost'. Also, *bo$^{?}$k* 'fire' is conceived of as a feminine being.

The names of certain tools and cultural objects: *pímìl* 'pymyl' (the Ket national instrument, a type of jaw-harp); *kāt* (a stringed instrument); *qóndìs* 'glass bead'; *lōm* '(fishing) float'; *tópàs* 'whetstone', 'checker (game piece)', and a few others.

Neuter-class (or inanimate-class) nouns

All other nouns referring to objects or abstract phenomena are neuter or inanimate class. They account for nearly 90% of the Ket nominal lexicon (Werner 1994:20).

2.1.1.2.2. Number

Most Ket nouns generally distinguish singular from plural morphologically. The singular is rarely marked, but the plural is marked in most stems, usually by one of two suffixes: *-n* or *-ŋ*. These suffixes may be preceded by an epenthetic vowel after consonant-final stems; the quality of this vowel varies from word to word but without apparent significance. Also, the addition of these suffixes normally causes tonal changes in the noun stem. Less often, they trigger unpredictable segmental changes in the rhyme of the final syllable. The following rules, after Porotova (1990), describe the basic distribution of the two plural suffixes in the majority of Ket nouns:

Animate nouns denoting kinship terms form their plural with *-ŋ*: *qòj* -> *qójàŋ* 'relatives'; *be$^{?}$p* -> *bévàŋ* 'aunts/uncles'; *ām* -> *ámāŋ* 'mothers', etc. A few non-kinship animates also do: *ēs* -> *ésāŋ* 'gods'.

Most other animate nouns take *-n*: *qòj* -> *qōn* (< *qòj-n*) 'bears'; *ko$^{?}$p* -> *kóòn* 'chipmunks'; *dūm* -> *dúmʌ̀* '(small) birds'; *sèl* -> *se$^{?}$n* 'reindeer'; *kùn* -> *kúnʌ̀* 'wolverines'; *bólbà* -> *bólbàn* 'mushrooms'; *qòχ*-> *qóòn* 'stars' (grammatically feminine). This includes all actor nouns made with the suffix *-s*: *lóvèts* -> *lóvètsin* 'workers'; *úddìŋs* -> *úddìŋsin* 'thieves'; *éŋŋùŋbers* -> *éŋŋùŋbersin* 'carpenters/builders'. A few animate-class nouns with stem-final */n/* take *-ŋ* instead: *bálʌ̀* -> *bálnàŋ* 'bird cherry (*Padus avium*) trees; *ájgʌ̀n* -> *ájgònìŋ* 'Arctic foxes; *lūn* -> *lúnāŋ* 'grayling (fish)'.

Inanimate nouns (as well as most body and plant part nouns, whether grammatically animate or not) normally take *-ŋ*: *húùt* -> *húrèŋ* '(animal) tails'; *ìt* -> *ítàŋ* 'teeth'; *àj* -> *ájèŋ* 'sacks'; *óòl* -> *ólèŋ* 'bottles'; *ʌ́ə* -> *ʌ́əŋ* [ʌ̀ːŋ] '(plant) leaves'. In a few phonetic types of stems *-ŋ* shows a tendency to change to *-n*. These include inanimate-class stems (or body-part nouns) ending in */ŋ/*: *àŋ* -> *áŋèn* 'ropes'; *làŋ* -> *láŋèn* 'hands'; or, with less regularity, stems ending in a vowel, labial */m/* or */p/*, or alveolar obstruent */l/*, */d/*, or */s/*: *qóbdè* -> *qóbdèn* 'palms (of hand)'; *bésàm* -> *bésàmn* #rabbit-fur coat'; *kūp* -> *kúùn* 'beaks'; *kākt* -> *kʌ́ktèn* necks'; *ságdè* -> *ságdèn* 'boots'; *árès* -> *árèsn* 'iron nails'. The same tendency appears, to a lesser extent, in animate nouns such as kinship terms that would otherwise be expected to take *-ŋ*: *bʌ́ssèm* -> *bʌ́ssèmn* 'widows'.

A significant number of nouns, mostly basic vocabulary, have plurals involving idiosyncratic stem changes; some have no plural suffix at all: *ōks* -> *a$^{?}$q* 'trees'; *ke$^{?}$t* 'person' -> *de$^{?}$ŋ* 'people'; *bʃsèp* -> *bʃsìnmin* 'brothers/sisters'; *qàj* -> *qīn* 'elks'; *hīj* -> *hàj* 'stomachs'; *sēs* -> *sàs* 'rivers'; *hās* -> *hàs* '(shaman's) drums'; *hə$^{?}$l* -> *hʌ̀l* 'fish swim bladders'; *se$^{?}$s* -> *sēj* 'larch (trees)'; *tīp* -> *ta$^{?}$p* 'dogs'; *tōk* -> *tòx* 'axes'; *qóqpùn* -> *qóqpʌ̄n* 'cuckoo birds'; *dīt* -> *dékŋ* 'grouse (birds)'; *i$^{?}$* -> *ékŋ* 'days'; *ī* -> *ʃyʌ̄n* 'suns'; *sít* -> *sʌ́kŋ* 'years'; *qùr* -> *qúkŋ* 'pike (fish)'; *qi$^{?}$t* -> *qə$^{?}$ŋ* 'bow (weapon)'; *ti$^{?}$s* -> *tə$^{?}$ŋ* 'stones'; *qu$^{?}$s* -> *qu$^{?}$ŋ* 'tents', and many others. These exceptions can be accounted for as vocalic reflexes produced by the simplification

of coda consonant clusters during the rise of phonemic tones. There is no evidence of a bygone system of internal flection in Yeniseic.

Diminutives in *-git* usually form their plural by changing this syllable to *-gat*: *dílgìt* -> *dílgàt* 'children', though some instead add a plural suffix or vacillate between the two techniques: *dúmgìt* -> *dúmgìtn* ~ *dúmgàt* 'fledgling birds'. The rules of noun plural formation show growing fluidity as younger generations of speakers mix patterns or overgeneralize certain rules (cf. Porotova 1990:76-8).

A few animate nouns have the same form in singular and plural: *sūj* 'mosquito(es)'; *ɪ̄s* 'fish(es)'; *bəˀn* 'duck(s)'. Grammatical number is revealed by the subject/object affixes they trigger verb-internally during phrase formation: *sūj dáʁèj* 'I killed a mosquito' (< *d* 'I' - *a* 'him' - *q* 'past' - *ej* 'kill') vs. *sūj dáŋɢèj* 'I killed the mosquitoes' (< *d* 'I' - *aŋ* 'them' - *q* 'past' - *ej* 'kill'). The number of such words is also revealed by the singular as opposed to plural case suffixes they take *bándà kūp* 'a duck's beak' (< *bəˀn* 'duck' + *da* 'masculine singular possessive') vs. *bánnà ásèŋ* 'duck feathers' (< *bəˀn* 'duck' + *na* 'plural animate possessive').

A few nouns, most of which denote naturally paired objects, have three morphological number forms: *dēs* 'eye', *dès* 'pair of eyes of one individual'; *déstàŋ* 'many eyes'.

A few nouns combine two or more plural suffixes redundantly: *sújdì* -> *sújdìniŋ* 'scarves'; *diˀ* -> *díníŋ* 'hats'; *uˀj* -> *úŋníŋ* 'cradles', *qaˀj* -> *qáŋníŋ* 'wooded hills'. One plural noun actually contains four plural suffixes: *dēŋ* 'swamp' -> *déŋníŋin* 'swamps' (< *deˀ* 'pond' + *ŋ-n-iŋ-in*). The shapes *-n* and *-ŋ* tend to alternate in such concatenations.

Animate plural noun *kəˀt* 'children (of one family)' was once paired with the singular noun *keˀt* 'person, human being', which originally meant 'one's own child, son, member of one's own tribe'. Technically, Ket lacks inanimate *pluralia tantum* nouns, though some neuter-class stems appear to contain a plural affix: *tə̄ŋ* 'hair'; *qókŋ* 'pine grove'. Since inanimate-class agreement does not distinguish number, it is not possible to determine whether such nouns are *pluralia tantum* or *singularia tantum*. Ket does have many *singularia tantum* nouns denoting substances or abstract concepts: *ūl* 'water'; *beˀt* < /beˀd/ '(falling) snow'; *qəˀt* 'flotsam (during spring flooding)'; *dəˀk* 'life'; *baˀt* 'truth'.

Several singulative suffixes can be added to mass nouns. One is *-dis/-des* (< *dēs* 'eye'), which denotes a single drop of liquid or a single small roundish object': *ūl* 'water' -> *úldìs* 'water droplet'; *qōn* 'beads' -> *qóndìs* '(single) bead'; *ɪ̄m* 'pine nuts' -> *ɪmdìs* '(single) pine nut'; *qō* 'ice' -> *qórìs* '(single grain of) sleet'; *éèl* 'lingonberries' -> *éldìs* '(single) lingonberry'; *hīt* 'glue' -> *hɪttìs* 'drop of glue'. Others are *-lamt* (< *laˀm* 'board'), which denotes a larger irregular or flattish piece: *ókslàmt* 'piece of wood'; *hɪtlàmt* 'glob of glue'; and *-les/-las* (original meaning unknown), which conveys a smaller flexible piece: *qótlès* 'piece of cloth', *qájlès* 'portion of elk hide'. Singulatives form their plurals according to the regular rules given above: *úldìs* -> *úldìsn* 'water droplets'; *ókslàmtaŋ* 'pieces of wood', etc.

2.1.1.2.3. Possession

Possession is expressed by clitics that derive from the genitive case forms of personal pronouns: *āp ām* -> *b-ām* 'my mother'; *ūk ām* -> *k-am* 'your mother'; *būr ām* -> *d-ām* 'her mother'; *búrà ām* -> *da-ām* 'his mother'. The clitic *na-* conveys any animate-class plural possessor: *ɜ́tnà/ɜ́kŋnà/búŋnà ām* -> *na-ām* 'our/your/their.AN mother'. Similarly, *d-* expresses 'her', 'its', or plural 'their' in reference to inanimates: *d-úlòŋ* 'her/its/their.N-echo'. Possessive clitics normally attach to the following (possessum) noun phrase but may encliticize to a preceding word in the same phonological phrase if one is available. As

proclitics, they create morphological-word initial consonant clusters and concatenations of vowel segments – features that never occur at the beginning of phonological words.

There is no formal distinction between alienable and non-alienable possession. However, a number of nouns denoting body or tool parts, attributes, or kinship relations, contain the fossilized proclitics *d-* or *b-*: *ūl* 'pole' vs. *dūl* 'a handle (something's pole)'. This suggests that such nouns were once obligatorily expressed in conjunction with a possessor. Also, nouns describing inalienably possessed items retain initial sonorants such as /l/ or /m/, which were generally not preserved morphological word-initially elsewhere in the native lexicon: *lōn* 'lip', *laˀŋ* 'wrist', *láŋàt* 'hand', *maˀm* 'breast', etc. This also suggests the presence of an obligatory possessive clitic on such nouns at one time in the history of the language. Finally, kinship and body part terms elicited by 19th-century explorers from speakers of the now-extinct southern Yeniseic languages normally show possessive proclitics recorded as part of the word.

2.1.1.2.3. Case

Ket has twelve cases, if one includes the zero-marked absolutive forms used to express the subject and direct object, the vocative forms used to hail animate beings, and the translative forms used with motion verbs to express such meanings as 'in order to get x, for the purpose of doing/becoming x'. The translative suffix (*-esaŋ*) has not been described as an inflection in previous descriptions of Ket. Werner (1997b) regards it as a particle rather than a case suffix. Because *-esaŋ* behaves like other case suffixes in terms of prosody and syntax when added to nominal stems, I will treat it as a grammatical inflection.

The genitive case suffixes are identical to the 3rd person possessive clitics discussed above and show the same distinctions in grammatical class: *-d(i)* for feminine singular and inanimate singular and plural; *-da* for masculine singular; and *-na* for animate plural. These formants also serve as stem augments for building the dative, benefactive, ablative, and adessive case forms. The remaining six cases involve adding what appears to be a single morpheme to the noun stem.

The chart below shows the case endings using the stems *ōp/óvàŋ* 'father/fathers', *ām/ámǎŋ* 'mother/mothers', and *súùl/súlàŋ* 'sled/sleds'. Locative case is restricted to inanimate-class nouns, while the vocative is normally used only with animates.

(8)

	animate				inanimate	
	masculine class		feminine class		neuter class	
	singular	plural	singular	plural	singular	plural
Absolutive	*ōp*	*óvǎŋ*	*ām*	*ámǎŋ*	*súùl*	*súlàŋ*
Genitive	*ób-dà*	*óvǎŋ-na*	*ām-d(i)*	*ámǎŋ-na*	*súùl-d(i)*	*súlàŋ-d(i)*
Ablative	*ób-dàŋal*	*óvǎŋ-naŋal*	*ám-dìŋal*	*ámǎŋ-naŋal*	*súl-dìŋal*	*súlàŋ-diŋal*
Dative	*ób-dàŋ(a)*	*óvǎŋ-naŋ(a)*	*ám-dìŋ(a)*	*ámǎŋ-naŋ(a)*	*súl-dìŋ(a)*	*súlàŋ-diŋ(a)*
Benefactive	*ób-dàt(a)*	*óvǎŋ-nat(a)*	*ám-dìt(a)*	*ámǎŋ-nat(a)*	*súl-dìt(a)*	*súlàŋ-dit(a)*
Adessive	*ób-dàŋt(a)*	*óvǎŋ-naŋt(an)*	*ám-dìŋt(a)*	*ámǎŋ-naŋt(an)*	*súl-dìŋt(a)*	*súlàŋ-diŋt(a)*
Locative	-	-	-	-	*súl-kà*	*súlàŋ-ka*
Prosecutive	*ób-bès*	*óvǎŋ-bes*	*ám-bès*	*ámǎŋ-bes*	*súl-bès*	*súlàŋ-bes*
Instrumental	*óv-às*	*óvǎŋ-as*	*ám-as*	*ámǎŋ-as*	*súl-às*	*súlàŋ-as*
Caritive	*óv-àn*	*óvǎŋ-an*	*ám-àn*	*ámǎŋ-an*	*súl-àn*	*súlàŋ-an*
Translative	*óv-èsaŋ*	*óvǎŋ-èsaŋ*	*ám-èsaŋ*	*ámǎŋ-èsaŋ*	*súl-èsaŋ*	*súlàŋ-èsaŋ*
Vocative	*ov-ó*	*ovaŋ-ó*	*am-á ~ am-ɜ́*	*amaŋ-ɜ́*	-	-

The forms, *súl-kà* and *súlàŋ-ka* are normally pronounced *súlgà* and *súlàŋga*, since monomorphemic inflectional suffixes generally merge with the stem to form a single phonological word. Case endings that begin with a possessive clitic *d-* or *b-* may or may not merge with the stem to create a single phonological word. With ablative, dative, benefactive, adessive and prosecutive, the degree to which phonological-word related processes apply across the stem/inflection boundary depends on functional sentence perspective. Nouns in focus tend to undergo less phonetic reduction: *sēs-diŋta* 'to the *river*' vs. [sésdìŋta] or [séstìŋta] 'to the river'. Etymologically, polymorphemic case endings are detoned phonological words. A noun stem plus its inflection always forms a single morphological word, but may or may not fully merge as a phonological word. The /d/ that begins the feminine singular or neuter endings of the ablative, dative, benefactive, and adessive cases often fails to rhotacize even in SK. Also, most case endings can serve as phrasal enclitics, being added to finite verb forms to express various forms of subordination (§3.2.2.2). The influence of pragmatic factors on the phonological relationship between nominal stem and disyllabic case inflection requires further study. Because my transcription indicates consonants allophonically on the level of the phonological word, it reflects varying degrees of phonological merger between stem and inflection depending upon the speech of the informant being recorded.

Nouns in the vocative represent a special type of intonation phrase in which a dynamic stress appears on the vocative ending and all lexical tones are elided. Feminine singular add the proximal vocative *-á* to call someone nearby and distal vocative *-ɔ́* (pronounced [ʌ́]) when the addressee is farther away or out of sight. Interestingly, proper names are generally not used for direct address. Instead, kinship terms or nouns denoting age or social standing most often appear in the vocative: *amɔ́* 'Mother!', *bisebó* 'Brother!, *baamɔ́* 'Old woman!, etc.

The main syntactic and pragmatic functions of the other eleven cases are as follows:

Absolutive is the name given to the uninflected form of nouns and pronouns used as the subject or direct object. The formal difference between these two arguments is expressed by the language's normal SOV word order and by the formally distinct verb-internal coordination affix that each term triggers[1]:

(9) *hīɣ qʃmdil dʃtòŋ* [*du*^{8}-*ʃ*^{6}-*t*^{5}-*a*^{4}-*oŋ*^{0}]
man girl he.sees.her [3M.SJ^{8}-3F.O^{6}-SU^{5}-D^{4}-see^{0}]
'The man sees the girl.'

qʃmdil hīɣ daátòŋ [*da*^{8}-*a*^{6}-*t*^{5}-*a*^{4}-*oŋ*^{0}]
girl man she.sees.him [3F.SJ^{8}-3M.O^{6}-SU^{5}-D^{4}-see^{0}]
'The girl sees the man.'

The suffixless absolutive forms are also used in durative expressions such as *òn sʃkì* 'many years', *kásnà sʃ̄l* 'each summer', or *bʃ́ldè kɔ̄t* 'all winter'. Such stems could be regarded either as nouns in the absolutive case or as adverbs created from the respective nouns by morphological conversion.

[1] The complexities of finite verb morphology are explained in section §2.2.

Genitive. Unlike the other case endings, genitive *d(i)* (feminine-class singular, neuter-class singular, or neuter-class plural), *-da* (masculine-class singular), and *-na* (animate-class plural) are phrasal enclitics rather than suffixes, though they may reduce to become part of the same phonological word as the preceding stem. The genitive is used to express all types of possession: *ób-dà tīp* 'father's dog'; *kéd-dà ī* 'person's name'; *lám-d(i) būl* 'table's leg'; *ām-d ógdèn* 'mother's ears'; *sén-nà ʃŋòltaŋ* 'the hides of the reindeer'; *ób-dà sén-nà ʃŋòltaŋ* 'the hides of father's reindeer (lit., 'father's reindeers' hides'); *ósʃ̄ɣan-na qa*^{7} 'Ket language' (lit., 'Ostyaks' speech').

GEN is also used to connect a noun to a postposition: *ób-dà dóyòt* 'for father's sake' ('father-M.GEN share' (cf. §2.1.6 for more on postpositions). The neuter-class GEN suffix *-d* (allophonically pronounced in SK as [d], [t], or [r]) can also be used to subordinate a finite verb phrase to the following head noun in the function of modifier:

(10) *hʃssèj-ka dóldìn*[*du*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}-*n*$^{-1}$]-*t kə*^{7}*t*
taiga-LOC they.lived[3AP.SJ^{8}-D^{4}-PT^{2}-live^{0}-AP^{-1}]-N.GEN children
'children who had lived in the forest' (literally, 'taiga-in they-lived's children')

Ablative conveys spatial point of origin and related meanings. A few verbs, including those denoting 'be afraid of' govern ABL. In connected speech, the ABL endings may shorten from *-daŋal*, *-diŋal*, and *-naŋal* to *-dal*, *-dil*, *-nal*, or *-nil*:

(11) *hʃg-dil táj-dì-ŋal (=tájdìl) bɔ̄n tqósàŋatn* [*du*^{8}-*qosaŋ*^{7}-*a*^{4}-*tn*^{0}]
man-child cold-N-ABL NEG he.is.afraid [3M.SJ^{8}-fear^{7}-D^{4}-go^{0}]
'The boy is not afraid of the cold.'

ətn tʃt-nàl (=tʃt-nà-ŋal) bɔ́slàn qárèŋ dəŋìbdil [*dəŋ*^{6}-*q*^{5}-*b*^{3}-*dil*^{0}]
we black.midges-AP.ABL thick clothes we.put.it.on [1PL.SJ^{6}-inside^{5}-AL^{3}-put.through^{0}]
'We put on thick clothing (as protection) from midges.'

sa^{7}*q óks-dà-ŋal datólàraq* [*da*^{8}-*t*^{5}-*o*^{4}-*il*^{2}-*a*^{1}-*daq*^{0}]
squirrel (fem.) tree-M-ABL she.fell [3F.SJ^{8}-SU^{5}-D^{4}-PT^{2}-3S.RS^{1}-fall^{0}]
'The squirrel fell from the tree.'

ɔ́t-nà de^{7}*ŋ sés-dì-ŋal úskà dʃmbèsin* [*du*^{8}-*ik*^{7}-*in*^{2}-*bes*^{0}-*n*$^{-1}$]
1PL-AP.GEN people river-N-ABL back they.came [3AN.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}]
'Our people came back from the river.'

dūm daʃndòq [*da*^{8}-*in*^{2}-*doq*^{0}] *hálsèj-di-ŋal* (Vall & Kanakin 1985:31)
bird she.flew [3F.SJ^{8}-PT^{2}-fly^{0}] nest-N-ABL
'A bird flew up from the nest.'

qój-dì-ŋal bū ʃɣòvilde [*ʃ*^{6}-*k*^{5}-*o*^{4}-*b*^{3}-*il*^{2}-*de*^{0}]
neighbor-F-ABL 3F she.heard [3F.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-perceive^{0}]
'From a neighbor woman (is how) she heard it.'

ABL is also used in inceptive temporal constructions: *qónòks-di-ŋal* 'since morning'; *sʃ́lès-da-ŋal* 'beginning with warm weather' (*sʃ́lès* is masc.), *ánòks-di-ŋal* 'starting tomorrow'. ABL can be encliticized to verb phrases to express the same meaning:

(12) *bū qáśèŋ dóldàq[du⁸-o⁴-il²-daq⁰]-di-ŋal do⁷ŋ sɨkŋ úɣòn [u⁶-k⁵-o⁴-(in²-t)n⁰]*
3M there he.lived[3M.SJ⁸-D⁴-PT²-live⁰]-N-ABL three years it.went[3N.SJ⁶-ABL⁵-D⁴-PT²-go⁰]
'Since grandfather has been living there three years have passed.'

ABL is used in conjunction with predicate adjectives to make statements of comparison:

(13) *āt úk-dà-ŋal (úg-dìl) kɨtèj-di*
1S 2S-M-ABL young-1S.PRED
'I'm younger than you.' (Literally, 'I you-from young-I.am'.)

qīt kún-dà-ŋal (kún-dìl) qá-dù
wolf wolverine-M-ABL big-3M.PRED
'A wolf is bigger than a wolverine.' (Literally, 'Wolf wolverine-from big-he.is'.)

Dative marks the recipient or addressee. This case would most accurately be termed the "dative/allative" since in addition to indirect objects it also conveys spatial destination. In the latter meaning, DAT can be used with either animate-class or neuter-class nouns. Also, a number of verbs obligatorily mark their logical object in DAT. These include verbs meaning 'answer', 'tell', 'help', 'get mad at', 'listen to', 'get married to', and a number of others. Arguments marked DAT do not trigger verb-internal agreement.

(14) *ēs híb-dà-ŋa bárà hítè kóòŋ déŋ-nà-ŋa* (Werner 1997b:383)
Es son-M-DAT said down go.IMP people-AP-DAT
'(Then) Es (the Ket sky god) said to (his) son, "Go down to the people".'

hi⁷p és-dà-ŋa úskà tósà óɣòn [o⁶-k⁵-o⁴-(in²-t)n⁰] (Werner 1997b:383)
son Es-M-DAT back up he.went [3M.SJ⁶-ABL⁵-D⁴-PT²-go⁰]
'The son went back up to Es.'

báàm ti⁷n datàŋúksìvet [da⁸-taŋ⁷-u⁶-k⁵-(s)-bet⁰] híg-dìl-gat-na-ŋa
old.woman kettle she.drags.it [3F.SJ⁸-drag⁷-3N.O⁶-ABL⁵-(MS)-ITER¹] man-child-PL-AP-DAT
'The old woman is dragging a kettle over to the boys.'

énqòŋ āt dɨmbès [di⁸-ik²-in²-bes⁰] qɨb-dà qús-dì-ŋa
today 1S I.came [1SJ⁸-here⁷-PT²-come⁰] grandfather-M.GEN tent-N-DAT
'Today I came to grandfather's tent.'

de⁷ŋ dɨmbèsin [du⁸-ik²-in²-bes⁰-n⁻¹] sénàŋ-da-ŋa
people they.came [3AN.SJ⁸-here⁷-PT²-come⁰-AP⁻¹] shaman-M-DAT
'The people came (to see/visit) the shaman.'

áksdìŋt ū bən tóvìngi [ku⁸-t⁵-o⁴-b³-in²-kt⁰] ám-dì-ŋa
why 2S NEG you.S.tell.it [2SJ⁸-SU⁵-3N.O³-PT²-tell⁰] mother-F-DAT
'Why didn't you tell (your) mother?'

qɨm-dìl datɨvì [da⁸-t⁵-b³-i⁰] qím-ǹ-na-ŋa
woman-child 3F.SJ-ask [3F.SJ⁸-MT⁵-AL³-ask⁰] woman-PL-AP-DAT
'The girl asks the women.'

be⁷s dán-dì-ŋa daqójbesavet [da⁸-qojbes⁵-a⁴-bet⁰]
hare grass-N-DAT she.gets.angry [3F.SJ⁸-angry⁷-D⁴-make⁰]
'The hare gets angry at the grass.'

The neuter forms of DAT can be added to entire verb phrases to express destination:

(15) *qà a⁷q dután[du⁸-h⁵-a⁴-td⁰-n⁻¹]-dì-ŋa dɨmbès [du⁸-ik²-in²-bes⁰]*
big trees they.stand[3AN.SJ⁸-straight⁵-D⁴-extend⁰-AP⁻¹]-N-DAT he.came [3M.SJ⁸-here⁷-PT²-come⁰]
'He came to where big trees grew.'

Suffixed to temporal nouns, DAT expresses the meaning 'till', 'up to', 'toward', 'by': *qónòks-di-ŋa* 'till morning'; *bɨs-dì-ŋa* 'toward evening'. Such time expressions can optionally include the root *-baŋ*, (< *ba⁷ŋ* 'earth', 'place', 'time'): *qónòks-báŋ-dì-ŋa* 'till morning'; *ìr-báŋ-dì-ŋa* 'till spring', *ánòks-baŋ-di-ŋa* 'Goodbye!' (literally, 'tomorrow-time-until').

DAT also marks the causal agent of a natural event:

(16) *qà béj-dì-ŋa a⁷q hásàŋtiɣin [du⁸-ha⁷-(s)-aŋ¹-tey⁰-n⁻¹]*
big wind-N-DAT trees they.break [3AN.SJ⁸-straight⁷-(MS)-3AP.RS¹-hit⁰-AP⁻¹]
'Trees break in strong wind.'

DAT marks the sentient experiencer in certain impersonal constructions:

(17) *kɔ̄t déŋ-nà-ŋa táj-àm*
winter people-AN.PL-DAT cold-N.PRED
'In winter people feel cold.'

qo⁷k dɨl-dà-ŋa sélòvʉron [sēl⁷-o⁴-b³-qon⁰]
one child-M-DAT it.became.bad [bad⁷-D⁴-3N.SJ³-PT.INCEPT⁰]
'Alone the boy got to feeling bad.'

ɨsqȍs-da-ŋa únàŋ nárò
fisherman-M-DAT net need (< Russ. *nádo* 'need')
'A fisherman needs a net.'

Benefactive is used to express the beneficiary of an action or an action's ultimate intended purpose. Unlike DAT, which confirms receipt, BEN merely expresses the subject's intent without conveying whether the intended recipient actually received anything:

(18) *qímā dɨl-dà-ta hónà dɨltìj dabɨllìvet [da⁸-b³-il²-bet⁰]*
grandmother child-M-BEN little boat she.made.it [3F.SJ⁸-3N.O³-PT²-make⁰]
'Grandmother made a little boat for (her) grandson.'

ōp ánìŋs-in dɨlgàt-na-ta d-kɨt-ìl-bet [du⁸-kit⁷-il²-bet⁰]
father toy-PL children-AP-BEN he.paid.for [3M.SJ⁸-price⁷-PT²-make⁰]
'Father bought toys for the children.'

sɨ-dì-ta de⁷ŋ dán-gȕs dúbbètn [du⁸-b³-bet⁰-n⁻¹] (Werner 1997b:114)
night-N-BEN people grass-tent they.make.it [3AN.SJ⁸-3N.O³-make⁰-AP⁻¹]
'For (spending) the night, people make a grass hut.'

As with the other case forms, BEN can express its characteristic meaning in conjunction with an entire verb phrase, in which case the neuter form is added to the finite verb form:

(19) *íŋɢùs díbbèt*[*di*^{8}-*b*^{3}-*bet*^{0}]-*di-ta* *āt lés-dì-ŋal aˀq ttàŋúksìbet* [*di*^{8}-*taŋ*^{7}-*u*^{6}-*k*^{5}-(*s*)-*bet*^{0}]
house I.make.it[1SJ^{8}-3N.O^{3}-make^{0}]-N-BEN 1S forest-N-ABL wood I.drag.it [1SJ^{8}-drag^{7}-3N.O^{6}-ABL^{5}-(MS)-ITER^{1}]
'To build a house I bring wood from the forest.'

BEN is used with verbs that denote calling out to someone or telling, singing, thinking, reading, writing, crying, or asking about someone or something.

(20) *háŋ-sèl* *óllàs-da-ta* *daésìj* [*da*^{8}-*es*^{7}-*a*^{4}-*ij*^{0}]
female-reindeer calf-M-BEN she.calls [3F.SJ^{8}-call^{7}-D^{4}-ITER^{1}]
'The doe calls for her calf.'

da-ám-dì-ta *dánsìvet* [*du*^{8}-*an*^{7}-(*s*)-*bet*^{0}]
3M.POS-mother-F-BEN he.thinks [3M.SJ^{8}-mind^{7}-(MS)-make^{0}]
'He thinks about his mother.'

bíldè kəˀt dúvèln [*du*^{8}-*b*^{3}-*iˀl*^{0}-*n*$^{-1}$] *ə́t-nà* *éŋŋùŋ-di-ta*
all kids they.sing.it [3AN.SJ^{8}-3N.O^{3}-sing^{0}-AP^{-1}] 1PL-AP.GEN village-N-BEN
'All the kids are singing about our village.'

Adessive is used in possessive constructions to mark an animate-class possessor. The characteristic suffix *-ŋta* is often shortened to *-ŋt*. When added to animate-class plurals, a redundant plural morph may appear: *-naŋt(a) -> -naŋtan*. Possessive and existential statements made with the help of ADES contain the predicate copula *úsàŋ* 'be present' or *bə́nsàŋ* 'not be present'. The item that is present or possessed appears in the zero-suffixed absolutive case form:

(21) *qáj-dà-ŋta* *qē-ŋ* *qoˀŋ* *úsàŋ*
elk-M-ADES big-PL horns be.present
'An elk has large horns.'

ū-k *hún-dì-ŋta* *súlem* *qólàr-aŋ* *úsàŋ*
2S-GEN daughter-F-ADES red cheek-PL be
'Your daughter has red cheeks.'

āp *qíp-dà-ŋta* *īn* *taˀp* *úsàŋ*
my grandfather-M-ADES two dogs be.present
'My grandfather has two dogs.'

ə́t-nà *déŋ-nà-ŋta* *ò n* *seˀn* *úsàŋ*
1PL-AP.GEN people-AP-ADES many reindeer.PL be.present
'Our people have many reindeer.'

āp *bísȅp-da-ŋta* *tīp* *bə́nsàŋ*
1S.GEN brother-M-ADES dog not.be.present
'My brother doesn't have a dog.'

bū láɣ-ìn-nà-ŋta *òn* *síkŋ* *dóldàq* [*du*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}]
3M Selkup-PL-AP.ADES many years he.lived [3M.SJ^{8}-D^{4}-PT^{2}-live^{0}]
'He lived among the Selkups (=at their camp) for many years.'

This case could also be called "animate essive," though nouns denoting non-sentient entities may also take ADES rather than LOC as a stylistic device to denote location involving the idea of possession or belonging:

(22) *hī* *ávȁtij* [*a*^{4}-*b*^{3}-*a*^{1}-*tij*^{0}] *báln-dà-ŋta*
cherries they.N.grow [D^{4}-3N.SJ^{3}-3S.RS^{1}-grow^{0}] bird.cherry.tree-M-ADES
'Cherries grow on a bird cherry tree.'

ósǐɣ-an *qúk-dì-ŋta* *dúɣȉn* [*du*^{8}-(*ɣ*)-*a*^{4}-*daq*^{0}-*n*$^{-1}$]
Ostyak-PL Yenisei-F-ADES they.live [3AN.SJ^{8}-(MS)-D^{4}-live^{0}-AP^{-1}]
'The Ket live on the Yenisei.'

ísqȍ *keˀt* *díltìj-di-ŋta* *tséstè* [*du*^{8}-*ses*^{7}-*a*^{4}-*td*^{0}]
fish.kill man boat-N-ADES he.sits [3M.SJ^{8}-place^{7}-D^{4}-extend^{0}]
'The fisherman sits in the boat.'

A number of verbs govern ADES, including verbs denoting 'thinking about, narrating about'. With some of these, ADES appears to be in free variation with BEN.

(23) *bū* *dájàŋ* *qímȁ-di-ŋta* *daánìŋílbèt* [*du*^{8}-*aniŋ*^{7}-*il*^{2}-*bet*^{0}]
3F sick grandma-F-ADES she.thought [3M.SJ^{8}-think^{7}-PT^{2}-ITER^{0}]
'The granddaughter was thinking about her sick grandmother.'

ADES can be used to denote the purpose for which something was procured:

(24) *bú bógdòm-di-ŋta kiˀt* *tkájnàm* [*du*^{8}-*kaj*^{7}-*in*^{2}-*am*^{0}] (Vall & Kanakin 1985:34)
3M gun-N-ADES grease he.took.it [3M.SJ^{8}-L^{7}-PT^{2}-take^{0}]
'He got grease for the gun.'

Locative is the normal ending added to inanimate-class nouns to convey location in, at, or on, though ADES is sometimes possible as a stylistic option (see above):

(25) *qō* *sen* *bílùs* [*b*(*in*^{7}-*b*^{3}-)*il*^{2}-*us*^{0}] *sés-kà*
ice already it.melted [self^{7}-3N.SJ^{3}- PT^{2}-warm^{0}] river-LOC
'The ice already melted on the river.'

kə́ən *də́ɣàraq* [*də*^{8}-(*ɣ*)- *a*^{4}-*daq*^{0}] *qúk-kà*
fox she.lives [3F.SJ^{8}-(MS)-D^{4}-live^{0}] burrow-LOC
'A fox lives in a burrow.'

úù-ɣa *dáàn* *bíldè* *boˀk* *də́bìl* [*də*^{8}- *b*^{3}-*il*^{2}-*a*^{0}]
meadow-LOC grass all fire she.ate.it [3F.SJ^{8}-3N.O^{3}-PT^{2}-eat^{0}]
'In the meadow the fire burnt up (literally, 'ate') all the grass.'

Because LOC is never suffixed to nouns denoting people or animals, it could be called the "inanimate essive case."

Finally, LOC appears as a phrasal enclitic on finite verb forms to denote the generic concept 'when'. LOC-marked verb phrases express background action in discourse:

(26) *ti^{7}n kɔ́mà kásnèm* [*kas^{7}-in^{2}-am^{0}*] *ūl qān úɣàʁan* [*u^{6}-k^{5}-a^{4}-qan^{0}*]*-ga*
kettle away take.IMP [L^{7}-IMP^{2}-take^{0}] water let it.boils [3N.SJ^{6}-ABL^{5}-D^{4}-cook^{0}]-LOC
'Take the kettle away (=off the fire), when the water boils.' (Werner 1997b:354)

Prosecutive conveys the meanings 'through' or 'along':

(27) *tsqɔ̃ de^{7}ŋ sés-bès ɔ́ŋɔ̃tn* [*oŋ^{6}-k^{5}-a^{4}-tn^{0}*]
fish.kill people river-PROS they.go [3AP.SJ^{6}-ABL^{5}-D^{4}-go^{0}]
'The fisherman are going along the river.'

tám-gìt-n dɔ̃qtà dáàn-bes ttájàŋɢotn [*du^{8}-t/a^{4}-(j)-aŋ^{1}-qotn^{0}*]
goose-kid-PL fast grass-PROS they.walk [3AN.SJ^{8}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}]
'The goslings disperse quickly through the grass.'

PROS also creates adverbs conveying means of communication (like Russian *po* in *po-russki* 'in Russian'): *ósɬɣan-bes* 'in Ket'; *húmgàn-bes* 'in Evenki'; *kísɲ-bes* 'in Russian', etc.

When suffixed to finite verb forms, PROS expresses concurrent background action:

(28) *ū-k hi^{7}p dúrèn*[*du^{8}-den^{0}*]*-bes tséstè* [*du^{8}-ses^{7}-a^{4}-td^{0}*]
2S-GEN son he.cries[3M.SJ^{8}-cry^{0}]-PROS he.sits [3M.SJ^{8}-place^{7}-D^{4}-extend^{0}]
'Your son sits (there) crying.' (Werner 1997b:354)

bū dbɬlèl [*du^{8}-b^{3}-il^{2}-i^{7}l^{0}*] *óɣɔ̃tn*[*o^{6}-k^{5}-a^{4}-tn^{0}*]*-bes*
3M he.sang.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-sing^{0}] he.goes[3M.SJ^{6}-ABL^{5}-D^{4}-go^{0}]-PROS
'He sang (while) walking along.' (Werner 1997b:354)

Instrumental, which could just as appropriately be called **comitative**, conveys either accompaniment or the instrument used to perform an action (just like English 'with'). It is also used to mark means of conveyance, as in the second example below:

(29) *da-bɬsɛ̃p qàj dáqèj* [*du^{8}-a^{4}-q^{2}-ef^{0}*] *bógdòm-as*
3M.POS-brother elk he.killed.him [3M.SJ^{8}-3M.O^{4}-PT^{2}-kill^{0}] gun-INSTR
'His brother killed an elk (masc.) with a gun.'

dɨ̃l-gàt sól-àŋ-as tkúllùnavetn [*du^{8}-kulhun^{7}-a^{4}-bet^{0}-n^{-1}*]
child-PL sled-PL-INSTR they.ride [3AN.SJ^{8}-ride^{7}-D^{4}-ITER^{0}-AP^{-1}]
'The children are riding on sleds.'

bú-rà bɬsɛ̃b-as ánòks dɬksìvesin [*du^{8}-ik^{7}-(s)-bes^{0}-n^{-1}*]
3-M.GEN brother-INSTR tomorrow they.come [3AN.SJ^{8}-here^{7}-(MS)-come^{0}-AP^{-1}]
'He and his brother (< he with his brother) will come tomorrow.'

Although there is no regular passive transformation in Ket, INSTR occasionally marks animate agents in conjunction with resultative verbs:

(30) *súùl óv-às bɬmbàvet* [*bin^{7}-b^{3}-a^{1}-bet^{0}*]
snow.sled father-INSTR it.is.made [self^{7}-3N.SJ^{3}-R^{1}-make^{0}]
'The sled is one my father made.'

In most instances, INSTR conveys a comitative meaning with nouns denoting people and an instrumental meaning with nouns denoting objects.

Caritive conveys the lack or absence of the item so marked: *óv-àn* [father-CAR] 'without father'. CAR can also appear as a sort of derivational affix in adjectives: *óv-àn dɨ̄l* [father-CAR child] 'fatherless child'. The CAR suffix sometimes appears in conjunction with the borrowed Russian preposition *bez* 'without', forming a sort of circumfix around the noun so marked: *bes óv-àn* [without father-CAR] 'without father'. In such phrases, *bes* 'without' behaves like a procliticized particle. Otherwise, Ket lacks prepositions altogether.

Translative can be added to nouns or to infinitives to mark the goal or purpose of another action (i.e., 'to do x, to fetch x, to get x'). TRL also identifies the goal in sentences expressing a desire to become or acquire something. It also appears with predicate nominals in phrases meaning 'like' or 'as', as well as with verbs of calling or naming, where it marks the name used in calling:

(31) *bū-ŋ úl-èsaŋ dé-dì-ŋa dɬmbèsin* [*du^{8}-ik^{7}-in^{2}-bes^{0}-n^{-1}*]
3-AP water-TRL lake-N-DAT they.came [3AN.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}]
'They came to the lake for (=to fetch) water.'

áqtɬà sɬràq-esaŋ be^{7}k da-qo^{7}j
good study-TRL always (< Russ. *vek*) 3M.POS-wish
'He always wants to study well.'

de^{7}ŋ be^{7}k mɬrà-esaŋ na-qo^{7}j (Werner 1997b:337)
people always peace-TRL (< Russ. *mir*) 3AP.POS-wish
'People always want peace.'

qīm bɔ́j-gìt t-hún-èsaŋ daɬrùntus [*da^{8}-i(t)^{4}-in^{2}-tos^{0}*]
woman orphan-child 3F.POS-daughter-TRL she.raised.her [3F.SJ^{8}-3F.O^{4}-PT^{2}-raise^{0}]
'The woman raised the orphan girl as her daughter.'

ósɬɣ-an ɬk-qòn qɬb-èsaŋ ili bɔ́ɔr-esaŋ désàŋojin [*du^{8}-es^{7}-aŋ^{6}-k^{5}-a^{4}-ij^{0}-n^{-1}*]
ostyak-PL male.bear.PL granddad-TRL or old.man-TRL they.call.them [3AN.SJ^{8}-call^{7}-3AP.O^{6}
'The Ket call male bears "granddad" or "old man".' -ADES^{5}-D^{4}-ITER^{0}-AP^{-1}]

As a clausal subordinator, TRL conveys the meaning of 'just before' in the sense that one action was performed in preparation for the action marked TRL:

(32) *ɔ́tɬ lóvèt-èsaŋ tqónòksájdɔ̃olbetn* [*di^{8}-qonok/saj/do^{7}-o^{4}-il^{2}-bet^{0}-n^{-1}*]
1PL.SJ work-TRL we.ate.breakfast [1SJ^{8}-morning/tea/drink^{7}-D^{4}-PT^{2}-ITER^{0}-AP^{-1}]
'Before working we had breakfast.'

2.1.2. Pronouns

Ket personal pronouns take the same case suffixes as nouns, except locative (which cannot attach to animate-class words) and vocative (since pronouns are not used in direct

address). Like nouns, pronouns lack an absolutive case suffix, except the /d/ that appears on the first person singular subject/object pronoun *āt* 'I':

(33) Personal pronouns

	1S	2S	3S.M	3S.F	1PL	2PL	3AP
ABS	*āt (< ād)*	*ū ~ ūk*	*bū*	*bū*	*ə̄tǹ*	*ə̄kŋ̀*	*būŋ*
GEN	*āp ~ b*	*ūk ~ k*	*(bú)da*	*(bú)d(i)*	*ə̄tǹ-na*	*ə̄kŋ̀-na*	*búŋ-nà*
ABL	*áv-àŋal*	*úɣ-àŋal*	*(bú)dàŋal*	*(bú)diŋal*	*ə́tǹ-naŋal*	*ə́kŋ̀-naŋal*	*búŋ-nàŋal*
DAT	*áv-àŋ(a)*	*úɣ-àŋ(a)*	*(bú)dàŋ(a)*	*(bú)diŋ(a)*	*ə́tǹ-naŋ(a)*	*ə́kŋ̀-naŋ(a)*	*búŋ-nàŋ(a)*
BEN	*áv-àt(a)*	*úɣ-àt(a)*	*(bú)dàt(a)*	*(bú)dit(a)*	*ə́tǹ-nat(a)*	*ə́kŋ̀-nat(a)*	*búŋ-nàt(a)*
ADES	*áv-àŋt(a)*	*úɣ-àŋt(a)*	*(bú)dàŋt(a)*	*(bú)diŋt(a)*	*ə́tǹ-naŋt(a)*	*ə́kŋ̀-naŋt(a)*	*búŋ-nàŋt(a)*
PROS	*ád-bès*	*úg-bès*	*bú-bès*	*bú-bès*	*ə́tǹ-bes*	*ə́kŋ̀-bes*	*búŋ-bes*
INSTR	*ár-às*	*úɣ-às*	*bú-ɣàs*	*bú-ɣàs*	*ə́tǹ-as*	*ə́kŋ̀-as*	*búŋ-às*
CAR	*ár-àn*	*úɣ-àn*	*bú-ɣàn*	*bú-ɣàn*	*ə́tǹ-an*	*ə́kŋ̀-an*	*búŋ-àn*

Among pronouns, translative is attested only with interrogative *ánȁ ~ ánȅt* 'who' (*ánȁ-esaŋ ~ ánȅt-esaŋ* 'for whom, to fetch whom?') and *ákùs* 'what' (*áks-èsaŋ* 'for what, why?').

Relative pronouns agree in class and number with their antecedents: *qō ~ qōr* 'who, which, that' (masculine-class antecedent); *qorȅ* 'who, which, that' (feminine-class singular or neuter-class of any number); *qónȅ* 'these/those' (plural animate). Cf. also example (131).

(34) *āt qīm díɣaro [di^8-i^6-k^5-a^4-do^0] qó-rȅ sóòŋ dəɣàraq [də^8-(ɣ)-a^4-daq^0]*
1S woman I.see.her [1SJ^8-3F.O^6-ADES^5-D^4-look^0] who-F there she.lives [3F.SJ^8-(MS)-D^4-live^0]
'I am looking at the woman who lives there.'

bíldȅ deʔŋ qó-nȅ sóòŋ dólīn [du^8-o^4-il^2-daq^0-n^{-1}] dúnȍn [du^8-in^2-qo^0-n^{-1}]
all people who-AP here they.lived[3AN.SJ^8-D^4-PT^2-live^0-AP^1] they.died[3AN.SJ^8-PT^2-die^0-AP^1]
'All the people who lived here have died.'

Demonstrative pronouns resemble relative pronouns in that the singular forms reflect gender, while plural forms reflect animacy. There are three demonstrative stems, each denoting a different degree of proximity. The neutral-deixis stem, whose neuter-class form doubles as the anaphoric pronoun 'it', is based on the root *tu*: *tūr* 'this/that' (masc.); *túrȅ* 'this/that' (fem. sing. or neuter); *túnȅ* 'these/those' (plural animate). The root *ki-* conveys that the referent is in close proximity to the speaker: *kīr* 'this/that' (masc.); *kírȅ* 'this/that' (fem. sing. or neuter); *kínȅ* 'these/those' (plural animate). And *qa-* emphasizes the referent is at a significant distance from the speaker: *qār* 'this/that' (masc.); *qárȅ* 'this/that' (fem. sing. or neuter); *qánȅ* 'these/those (plural animate). Demonstratives used as attributive modifiers take no case endings. When not under emphasis, singular demonstratives may be detoned and reduced to their bare root; *ki keʔt ~ kīr keʔt* 'this person', *tu éŋŋùŋ ~ túrȅ éŋŋùŋ* 'that (aforementioned) village', *qa baʔŋ ~ qárè* 'that land (over there)'. When used as freestanding anaphors, demonstratives combine with all of the case suffixes used with nouns. Agreement in class is expressed twice in such forms: once in the stem itself *tūr* (masc.) vs. *túrȅ* (fem./neuter), and again by the suffix *da* (masculine) vs. *di* (feminine singular or neuter):

(35) *āt dánsivet [di^8-an^7-(s)-bet^0] tú-rȅ-di-ta*
1S I.think [1SJ^8-mind^7-(MS)-make^0] that-N-N-BEN
'I am thinking about that (thing).'

ū kánsivet [ku^8-an^7-(s)-bet^0] tú-t-dà-ta
2S you.S.think [2SJ^8-mind^7-(MS)-make^0] that-M-M-BEN
'You.S are thinking about that (person).'

ə́t-nà íŋɢùs kí-rȅ-di-ŋal bímbàvet [bin^7-b^3-a^1-bet^0]
1PL-AP.GEN house this-N-N-ABL it.is.made [self^7-3N.SJ^3-R^1-make^0]
'Our house is made from this (material).'

In adverbial expressions of time, plural rather than singular demonstrative forms are used: *kínȅ i^7* 'this day, *túnȅ sīl* 'that summer', *qánȅ síi* 'that year (long ago)', etc.

Interrogative pronouns use different stems to reflect class distinctions: *bítsè* 'who' (specifically referring to a single masculine-class referent), *bésà* 'who' (single feminine-class referent), and *bílàŋsan* 'who' (any group of animates). There are also the forms *ánȁ ~ ánȅt* 'who (singular, either gender)' and *ánȅtaŋ* 'who (plural)', the latter being essentially synonymous with *bílàŋsan*. There is no functional difference between *ánȁ* and *ánȅt*; either may trigger masculine or feminine concord, though masculine concord is used in cases where gender is unspecified. The pronouns *bítsè* or *bésà*, being gender-specific, can be used in rhetorical questions (36a) or when the speaker knows the gender of the person asked about (36b, 36c). Being less specific, *ánȁ ~ ánȅt* is typical of generic statements (36d). Otherwise, there is considerable overlap in usage (36e):

(36) a. *bítsè tárèŋ dūp [du^8-b^3-a^0] tū-r sèl*
who.M moss he.eats.it [3M.SJ^8-3N.O^3-eat^0] that-M reindeer
'Who eats reindeer moss?' 'A reindeer does.'

b. *bítsè díksives [du^8-ik^7-(s)-bes^0] bésà daíksives [da^8-ik^7-(s)-bes^0]*
who.M he.comes [3M.SJ^8-here^7-(MS)-come^0] who.F she.comes[3F.SJ^8-here^7-(MS)-come^0]
'Who (male) is coming?' 'Who (female) is coming?'

c. *bésà mīr-d qótil qīm kosmonávt tú-rȅ valentína tereškóva*
who.F world-N.GEN first woman cosomonaut that.F Valentina Tereshkova
'Who is the world's first woman cosmonaut?' 'It's Valentina Tereshkova.'

d. *ánȁ bən dlóvèravet [du^8-lobed^7-a^4-bet^0] tū-r bən tsīj [du^8-si^7-a^4-a^0]*
who NEG work [3M.SJ^8-work^7-D^4-ITER^0] that-M NEG he.eats [3M.SJ^8-exist^7-D^4-eat^0]
'Who(ever) doesn't work, doesn't eat.'

e. *ánȁ (=bítse) díksives [du^8-ik^7-(s)-bes^0] ánȁ (=bésà) daíksives [da^8-ik^7-(s)-bes^0]*
who.M he.comes [3M.SJ^8-here^7-(MS)-come^0] who.F she.comes [3F.SJ^8-here^7-(MS)-come^0]
'Who (male) is coming?' 'Who (female) is coming?'

The inanimate interrogative *ákùs* 'what' is replaced by *aj* 'just what' when the narrative focus falls on the direct object rather than on the predicate in general (cf. (142) for examples). All interogative pronouns except object focus *aj* 'what' combine with the pronominal case endings listed in (33):

(37) *kí-rȅ quʔs ánȁ-ra (=bítsè-ra) kí-rè quʔs ánȁ-ri (=bésà-ri)*
this-N tent who-M.GEN this-N tent who-F.GEN
'Whose (= what male's) tent is this?' 'Whose (= what female's) tent is this?'

ū *án̈ɛr-as* *kúɣàraq* [*ku*^{8}*-(ɣ)- a*^{4}*-daq*^{0}]
2S who-INSTR you.S.live [2SJ^{8}-(MS)-D^{4}-live^{0}]
'Who do you live with?'

sèl *án̈ɛt-da-ŋal* *hɔ́na-dù*
reindeer who-M-ABL small-3M.PRED
'What (animal) is a reindeer smaller than?' (Lit., 'Reindeer from whom small-is')

ɔ́k-nà *ínɢùs* *áks-dì-ŋal* *kúbbètin* [*ku*^{8}*-b*^{3}*-bet*^{0}*-n*$^{-1}$]
2PL-AP.GEN house what-N-ABL you.PL.make.it [2SJ^{8}-3N.O^{3}-make^{0}-AP^{-1}]
'What are you making your house out of?'

The interrogative adjective *ásès* (which may reduce to *as*) 'what kind of' shows no class or number distinction: *ásès bi*^{ʔ} 'what kind of thing?', *ásès ke*^{ʔ}*t* 'what kind of person?' Like other attributive modifiers, *ásès* is indeclinable.

(38) *ásès* *sēs* *qo*^{ʔ}*l*
what.kind river Mountain.Tunguska
'What kind of a river is the Mountain Tunguska?'

as (=*ásès*) *qím-dɨl* / *bū* *áqtā-ra*
what.kind woman-child / 3F good-F.PRED
'What kind of girl?' / 'She's a good girl.'

This pronoun can also be used in exclamatory statements:

(39) *ásès* *sēs* *qūk*
what river Yenisei
'What a river the Yenisei is!'

__Reflexive and intensive pronouns__. The root *bin* 'self' (probably from *b-* 'nominalizer + *in* 'person') serves as the basis for expressing both reflexive and intensive meanings. Free-standing intensive or reflexive pronouns (i.e., those not used as attributive modifiers) have the following case forms:

(40)	myself 1S	yourself 2S	himself 3M	herself 3F	ourselves 1PL	yourselves 2PL	themselves 3AP
ABS	*bín(dì)*	*bín(gù)*	*bín(dù)*	*bín(dà)*	*bíndàŋ*	*bíngàŋ*	*bínàŋ*
GEN	*bíndìba*	*bíngùk*	*bíndùra*	*bíndàri*	*bíndàŋna*	*bíngàŋna*	*bínàŋna*
ABL	*bíndìbaŋal*	*bíngùkaŋal*	*bíndùdaŋal*	*bíndàdiŋal*	*bíndàŋnaŋal*	*bíngàŋnaŋal*	*bínàŋnaŋal*
DAT	*bíndìbaŋa*	*bíngùkaŋa*	*bíndùdaŋa*	*bíndàdiŋa*	*bíndàŋnaŋa*	*bíngàŋnaŋa*	*bínàŋnaŋa*
BEN	*bíndìbata*	*bíngùkata*	*bíndùdata*	*bíndàdita*	*bíndàŋnata*	*bíngàŋnata*	*bínàŋnata*
ADES	*bíndìbaŋta*	*bíngùkaŋta*	*bíndùdaŋta*	*bíndàdiŋta*	*bíndàŋnaŋta*	*bíngàŋnaŋta*	*bínàŋnaŋta*
PROS	*bíndìbes*	*bíngùbes*	*bíndùbes*	*bíndàbes*	*bíndàŋbes*	*bíngàŋbes*	*bínàŋbes*
INSTR	*bíndìɣas*	*bíngùɣas*	*bíndùɣas*	*bíndàɣas*	*bíndàŋas*	*bíngàŋas*	*bínàŋas*
CAR	*bíndìɣan*	*bíngùɣan*	*bíndùɣan*	*bíndàɣan*	*bíndàŋan*	*bíngàŋan*	*bínàŋan*

Here are some examples of these forms used as reflexive personal pronouns:

(41) *bū* *óɣɔ̀tn* [*o*^{6}*-k*^{5}*-a*^{4}*-tn*^{0}] *bín-dù-ɣas* *dásqàssij*[*du*^{6}*-asqət*^{7}*-(s)-ij*^{0}]*-ɣa*
3M he.goes [3M.SJ^{6}-ABL^{5}-D^{4}-go^{0}] self-3M-INSTR he.talks[3M.SJ^{7}-story^{7}-(MS)-ITER^{0}]-LOC
'He walks along while talking to himself.' (H.Werner p.c.)

bū-ŋ *bínàŋ-naŋa* *dánìŋsivetn* [*di*^{8}*-aniŋ*^{7}*-(s)-bet*^{0}*-n*$^{-1}$]
3-AP self-3AP-DAT they.think [1SJ^{8}-think^{7}-(MS)-ITER^{0}-AP^{-1}]
'They are thinking about themselves.'

The absolutive forms are used to modify a subject noun. With a singular subject, the bare stem *bīn* can optionally be used in place of the suffixed forms *bín-dù*, *bín-dà*:

(42) *bīn bū ó-ɣɔ̀n* = *bū bín-dù ó-ɣɔ̀n* = *bín-dù ó-ɣɔ̀n*
self 3M he-went = 3M self-3M he-went = self-3M he-went
'He went himself.'

bīn bū ú-ɣɔ̀n = *bū bín-dà ú-ɣɔ̀n* = *bín-dà ú-ɣɔ̀n*
self 3F she-went = 3F self-3F she-went = self-3F she-went
'She went herself.'

When intensive pronouns appear in apposition to a personal pronoun, case suffixes co-occur on both forms. Also note the redundant person marking in the reflexive pronoun itself, a feature found throughout the paradigm of oblique reflexive case forms:

(43) *áv-àta* *bín-dì-ba-ta* *túrè* *ínɢùs* *tkítìlbet* [*du*^{8}*-kit*^{7}*-il*^{2}*-bet*^{0}]
1S-BEN self-1S-1S-BEN that.N house he.paid.for [3M.SJ^{8}-price^{7}-PT^{2}-make^{0}]
'He bought that house for *me* (not someone else).' (Werner 1997b:144)

When intensives are used as attributive modifiers, the absolutive forms *bín-dù* (masc.), *bín-dà* (fem./neuter), *bín-àŋ* (plural), appear in all case constructions.

(44) *bū* *dímbès* [*du*^{8}*-ik*^{7}*-in*^{2}*-bes*^{0}] *bín-dà* *hósèdam-di-ŋa*
3M he.came [3M.SJ^{8}-here^{7}-PT^{2}-come^{0}] self-F Hosedam-F-DES
'He came to (the witch) Hosedam herself.'

tēt *bín-dà* *qím-dì-ŋa* *ájèt* *áɣɔ̀vinsaŋ* [*a*^{6}*-k*^{5}*-o*^{4}*-b*^{3}*-in*^{2}*-saŋ*^{0}]
husband self-F woman-F-DAT anger he.felt [3M.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-INCEPT^{0}]
'The husband got mad at his wife.'

To express reflexive possession, genitive forms of *bin-* are used. Reflexive possessive pronouns are included only for logical emphasis:

(45) *b-ōp* (=*bín-dì-b-ōp*) *dlúvèróɣàvet* [*du*^{8}*-lubid*^{7}*-o*^{6}*-k*^{6}*-a*^{4}*-bet*^{0}]
1S.POS-father (own-1S-1S.GEN-father) I.love.him [3M.SJ^{8}-love^{7}-3M.O^{6}-ABL^{5}-D^{4}-ITER^{0}]
'I love my (*own*) father.'

tángì [*t*^{5}*-a*^{4}*-in*^{2}*-ki*^{0}] *kí-rè* *bín-gùk* *éj-às* (Werner 1997b:144)
say.it-2S.IMP [SU^{5}-D^{4}-IMP^{2}-tell^{0}] this-N.ABS own-2S.GEN tongue-INSTR
'Say it in your *own* language.'

bū da-súùl dúbbèt [*du*^{8}-*b*^{1}-*bet*^{0}]
3M 3M.POS-sled he.makes.it [3M.SJ^{8}-3N.O^{3}-make^{0}]
'He is making his (own or someone else's) sled.'

bū bín-dù-ɾa súùl dúbbèt
3M own-3M-GEN sled he.makes.it
'He is making his *own* sled.'

Absolutive forms of *bin-* can be included in transitive or intransitive verb phrases:

(46) a. Transitive phrase with focus on participants
bū-ŋ ttúɣùnáŋtàɣitn [*du*^{8}-*tuɣun*^{7}-*aŋ*^{6}-*t*^{5}-*a*^{4}-*kit*^{0}-*n*$^{-1}$]
3-AP they.comb.them [3AN.SJ^{8}-comb^{7}-3AP.O^{6}-SU^{5}-D^{4}-rub^{0}-AP^{-1}]
'They comb them (or themselves).'

bū-ŋ bín-àŋ ttúɣùnáŋtàɣitn [*du*^{8}-*tuɣun*^{7}-*aŋ*^{6}-*t*^{5}-*a*^{4}-*kit*^{0}-*n*$^{-1}$]
3-AP self-3AN they.comb.them [3AN.SJ^{8}-comb^{7}-3AP.O^{6}-SU^{5}-D^{4}-rub^{0}-AP^{-1}]
'They comb *themselves*.' (i.e. not anyone else)

b. Intransitive phrase with focus on the action and its result
bū-ŋ ttúɣùnbútàɣitn [*du*^{8}-*tuɣun*^{7}-*bu*^{6}-*t*^{5}-*a*^{4}-*kit*^{0}-*n*$^{-1}$]
3-AP they.get.combed [3AN.SJ^{8}-comb^{7}-3RS^{6}-SU^{5}-D^{4}-rub^{0}-AP^{-1}]
'They get combed (whether by themselves or by someone else is not expressed).'

bū-ŋ bín-àŋ ttúɣùnbútàɣitn [*du*^{8}-*tuɣun*^{7}-*bu*^{6}-*t*^{5}-*a*^{4}-*kit*^{0}-*n*$^{-1}$]
3-AP self-3AN they.get.combed [3AN.SJ^{8}-comb^{7}-3RS^{6}-SU^{5}-D^{4}-rub^{0}-AP^{-1}]
'They *themselves* get combed.'

Reciprocity and singularity. The denominal form *bɪkkèt* 'each other' (< *bīk ke*^{7}*t* 'other person') or the adverbs *qújbàŋ* 'together' or *qústìŋa* 'together' can be included in the verb phrase to specify reciprocal action. Verbs intransitivized by the inclusion of a redundant subject affix (§2.2.1.2.1) may convey either reflexive, reciprocal, or agentless meaning, depending on the verb's lexical meaning (cf. 46b). The intransitive verb 'to meet', given in the first example of (47), normally expresses reflexivity. In cases where ambiguity arises between potential reflexive and reciprocal readings, the intended meaning can be clarified by adding adverbs or pronouns, as in the remaining examples below:

(47) *bū-ŋ bōt tsúnòtbúɣàvetn* [*du*^{8}-*sunot*^{7}-*bu*^{6}-*k*^{5}-*a*^{4}-*bet*^{0}-*n*$^{-1}$]
3-AP often they.meet [3AN.SJ^{8}-meet^{7}-3RS^{6}-with^{5}-D^{4}-ITER^{0}-AP^{-1}]
'They often meet (with each other).'

bū-ŋ bɪk-kèt ttúɣùnáŋtàɣitn [*du*^{8}-*tuɣun*^{7}-*aŋ*^{6}-*t*^{5}-*a*^{4}-*kit*^{0}-*n*$^{-1}$]
3-AP other-person they.comb.them [3AN.SJ^{8}-comb^{7}-3AP.O^{6}-SU^{5}-D^{4}-rub^{0}-AP^{-1}]
'They comb each other.'

bū-ŋ qústìŋa tqónòksájdŏolbetn [*du*^{8}-*qonok/saj/do*^{7}-*o*^{4}-*il*^{2}-*bet*^{0}-*n*$^{-1}$]
3-AP together they.ate.breakfast [3AN.SJ^{8}-breakfast^{7}-D^{4}-PT^{2}-ITER^{0}-AP^{-1}]
'They had breakfast together.'

dílgàt qújbàŋ dánìstan [*du*^{8}-*an*^{7}-*(s)-ta*^{0}-*n*$^{-1}$]
children together they.play [3AN.SJ^{8}-mind^{7}-(MS)-extend^{0}-AP^{-1}]
'The children play together.'

ín-dèŋ dássàniɣan [*du*^{8}-*asqanij*^{7}-*a*^{4}-*kɪ*^{0}-*n*$^{-1}$]
two-people they.converse [3AN.SJ^{8}-conversation^{7}-D^{4}-say^{0}-AP^{-1}]
'The two converse with each other.'

'Alone' or 'by oneself' is expressed by *qo*^{7}*k* 'one.AN' or *qókkèt* (literally, 'one person').

(48) *hu*^{7}*n lés-kà qók-kèt daqórèŋʃjàvet* [*da*^{8}-*qodeŋij*^{7}-*a*^{4}-*bet*^{0}]
daughter forest-LOC one-person she.is.frightened [3F.SJ^{8}-fear^{7}-D^{4}-ITER^{0}]
'The daughter feels frightened alone in the forest.'

Attributive pronouns. Ket contains the following attributive pronouns: *útàl* 'the whole'; *bíldè* 'all, a whole'; *kásnà* 'each, every' (< Russ. *kážd*ij); *bɪk* 'other, the other, another, else' (also 'foreign'), *sámlà* 'the rest, the other' (used only with plural count nouns); *tam ánùn* 'some' (when used with singular mass nouns), or 'a certain number of' (with plural count nouns). Being modifiers, these words take no plural or case suffixes: *útàl* can modify either a singular noun or a singular or plural pronoun; *kásnà* modifies singular nouns; *bíldè* and *bɪk* may modify singular or plural nouns; *sámlà* and *tam ánùn* modify only plural nouns. When modifying a subject, *bíldè* and *útàl* are often postposed.

(49) *āt útàl dúlnà* [*dɪ*^{8}-*ul*^{7}-*in*^{2}-*a*^{0}]
1S whole it.got.wet [1SJ^{8}-water^{7}-PT^{2}-active.event^{0}]
'I got all wet.'

tél-àŋ bíldè ɪnàm dúnŏn [*du*^{8}-*in*^{2}-*qo*^{0}-*n*$^{-1}$]
mammoth-PL all long ago they died [3AN.SJ^{8}-PT^{2}-die^{0}-AP^{1}]
'The mammoths all died a long time ago.'

ta^{7}*p sen dbɪlàn* [*du*^{8}-*b*^{1}-*il*^{2}-*a*^{0}-*n*$^{-1}$] *bíldè táàl*
dogs already they.ate.it [3AP.SJ^{8}-3N.O^{3}-PT^{2}-eat^{0}-PT^{-1}] all dog.food
'The dogs already ate up all the food.'

kásnà sèl désìj [*du*^{8}-*es*^{7}-*a*^{4}-*ij*^{0}] = *bíldè se*^{7}*n désìjn* [*du*^{8}-*es*^{7}-*a*^{4}-*ij*^{0}-*n*$^{-1}$]
each deer he.calls [3M.SJ^{8}-call^{7}-D^{4}-ITER^{1}] = all deer.PL they.call[3AN.SJ^{8}-call^{7}-D^{4}-ITER^{0}-AP^{-1}]
'Each reindeer calls out.' = 'All the reindeer call out.'

bɪk ke^{7}*t dɪmbès* [*du*^{8}-*ik*^{7}-*in*^{2}-*bes*^{0}]
other person he.came [3M.SJ^{8}-here^{7}-PT^{2}-come^{0}]
'Someone else (a different person) came.'

Indefinite pronouns. Indefinite pronouns are formed by preposing the detoned particle *tam* to a question word: *tam bɪtsè* 'someone (specifically male)', *tam bésà* 'someone (female)'; *tam ánà* ~ *tam ánĕt* 'someone' (gender unspecified, though this word triggers masculine concord affixes in the verb); *tam bɪlàŋsan* 'some people (specifically plural animate)'; *támàks* ~ *tam ákùs* 'something'; *tam ásès* 'some (kind of)'. These forms take the same case suffixes as their interrogative counterparts.

(50) *dúm-ǹ tam áks-tì-ŋal tqósàŋatn* [*du*^{8}-*qosaŋ*^{7}-*a*^{4}-*tn*^{0}-*n*$^{-1}$]
bird-PL IDF what-N-ABL they.are.afraid [3AN.SJ^{8}-fear^{7}-D^{4}-go^{0}-AP^{-1}]
'The birds are afraid of something.'

The pronoun *bíldë* 'everything, everyone' functions like a noun and can take case endings. Indefinite pronouns and adverbs are formed by preposing *qōr* (< Russ. *xot'* 'at least'): *qōr bítsè* 'anyone'; or by postposing *nimat* (< Russ. indefinite particle *nibud'*): *bítsè nimat* 'anyone'.

Negative pronouns are built by postposing the negative indefinite particle *áàna* to the forms described above. Case suffixes can be added to the pronoun component. Verbs used with negative indefinite pronouns are obligatorily negated by the preposed particle *bən*:

(51) *qórès tam ánà áàna bən dímbès* [*du*^{8}-*ik*^{7}-*in*^{2}-*bes*^{0}]
yesterday IDF who NEG.IDF NEG he.came [3M.SJ^{8}-here^{7}-PT^{2}-come^{0}]
'Yesterday no one came.'

āt bən dátpìli [*di*^{8}-*a*^{6}-*t*^{5}-*b*^{3}-*il*^{2}-*l*^{0}] *tam ánà-daŋ áàna*
1S NEG I.asked.him [1SJ^{8}-3M.O^{6}-MT^{5}-AL^{3}-PT^{2}-ask^{0}] IDF who-DAT NEG.IDF
'I didn't ask anyone.'

Indefinite adverbs are formed similarly, using interrogative adverbs as a base (*áskà* 'when', *bíʃà* 'how', etc.): *tam áskà* 'at one time', *tam bíʃà* 'somehow', *tam áskà áàna bən* 'never', *tam bíʃà áàna bən* 'no way', etc. (for more on adverbs, see §2.1.5).

2.1.3. Numerals

Cardinal numbers. Non-derived roots express the cardinal numbers one to seven, as well as ten, twenty, and one hundred. Other number words are transparant derivations of these based on the decimal system. The lack of basic roots for 'eight' and 'nine' suggests that decimal counting is a later innovation. An examination of Ket number words reveals traces of earlier count systems based on the five fingers of one hand, as well as the number seven, which was sacred for the Ket (Werner 2004a). Cardinal numbers can be used as attributive modifiers (with plural nouns required after numbers greater than one), as well as in predicate position. When used attributively or as a separate noun phrase, distinct animate- and inanimate-class stems for 'one' exist, but not for the other cardinal numbers. When used predicatively, the number 'one' has distinct masculine, feminine and neuter forms, while 'two' through 'five' have distinct animate and inanimate forms. The cardinal numbers six and higher have only a single predicate form for all classes:

(52)

	attributive forms of cardinal numbers	predicate forms of cardinal numbers
1	*qo$^{?}$k* (AN) *qūs* (N)	*qógdù* (M) *qógdà* (F) *qúsàm* (N)
2	*īn* (all classes)	*ínàŋ* (AN) *ínàm* (N)
3	*dōŋ* "	*dóŋàŋ* (AN) *dóŋàm* (N)
4	*sīk* "	*sí yàŋ* (AN) *sí yàm* (N)
5	*qāk* "	*qáyàŋ* (AN) *qáyàm* (N)
6	*ā ~ à* "	*às ~ áyàm* (all classes)
7	*o$^{?}$n* "	*òns ~ ónàm* "
8	*ínàm bánsàŋ qō* (< two lacking ten)	*ínàm bánsàŋ qōs* (~*qóyàm*)
9	*qúsàm bánsàŋ qō* (< one lacking ten)	*qúsàm bánsàŋ qōs* (~*qóyàm*)
10	*qō* "	*qōs ~ qóyàm* "
20	*e$^{?}$k* "	*èks ~ éyàm* "
100	*ki$^{?}$* "	*kís ~ kíyàm* "

Cardinal numbers above five never reflect distinctions in animacy or gender. The numbers 30 to 90 are built in heterogenous ways. Some are formed by adding *-ha* 'times', which reduces to [a]: 30 *dóŋà ~ dóŋà qō* (< *dōŋ-ha* + *qō* 'three-times + ten'), 60 *áyà ~ áyà qō* < 'six times ten'; some are recent loans: 40 *so$^{?}$l* (< Russ. *sórok*); and others are compounds built by simple division or subtraction: 50 *qólèp ki$^{?}$* < 'half a hundred', 70 *dóŋ às bánsàŋ ki$^{?}$* < '30 lacking 100', 80 *èks bánsàŋ ki$^{?}$* < '20 lacking 100', 90 *qō bánsàŋ ki$^{?}$* < '10 lacking 100'. Multiple hundreds are made in the following way: 200 *īn ki$^{?}$*, 300 *dōŋ ki$^{?}$*, 800 *ínàm bánsàŋ qō ki$^{?}$* < 'two lacking 1,000', 900 *qúsàm bánsàŋ qō ki$^{?}$* < 'one lacking 1,000'. Larger numbers are expressed by simple addition or by Russian loans: 1,000 *qō ki$^{?}$* < 'ten + hundred' or *tísà* (< Russ. *tísjača*). Multi-digit numbers ending in 1 to 7 contain *áyàm*, meaning 'extra', 'beyond': 11 *qúsàm áyàm qō* < 'one beyond ten', 12 *ínàm áyàm qō* < 'two beyond ten', 21 *qúsàm áyàm e$^{?}$k* < 'one beyond twenty', 22 *ínàm áyàm e$^{?}$k* <'two beyond twenty', etc. Multi-digit numbers ending in 8 or 9 are formed with *bánsàŋ* 'not', 'lacking': 18 *ínàm bánsàŋ e$^{?}$k* < 'two lacking 20', 19 *qúsàm bánsàŋ e$^{?}$k* < 'one lacking 20'.

Ordinal numbers are formed with the suffix *-amas*: *qúsàmas* 'first', *ínàmas* 'second', *qúsàm áyàm qóyàmas* 'eleventh', *ínàm bánsàŋ éyàmas* 'twenty eighth', *qólèp kíyàmas* 'fiftieth', etc. These forms can be used attributively or predicatively and show no class distinctions. When used as substantives they can be pluralized with the suffix *-in*: *dóŋàmas* 'the third one', *dóŋàmasin* 'the third ones'. Used as substantives, basic number word roots beginning in a vowel (*īn* 'two', *ā* six, *o$^{?}$n* 'seven') optionally take the thematic prefix *d-*: *dínàmas ~ dínàmas* 'the second one', *dáyàmas ~ dáyàmas* 'the sixth one', *ónàmas ~ dónàmas* 'the seventh one'. This prefix derives historically from the genitive pronominal clitic *d-* 'someone's', which also occurs in certain noun stems (cf. §2.1.1.1).

Other types of number words. Ket adds the distributive suffix *-sa* to the predicate forms of cardinal numbers to create distributive forms: *qúsàmsa* 'one.N at a time', *qógdàsa* 'one.AN at a time', *ínàmsa* 'two.N at a time, by two', *ínàŋsa* 'two.AN at a time, by two'. Iterative numerals can be created by adding the suffix *-a* (< *-ha* 'times') to the attributive stems of numbers greater than one: *ínà* 'twice', *dóŋà* 'thrice', *síyà* 'four times', etc. A special root, *sīn*, denotes 'once'. Some numbers participate in compound word formation: *índèŋ* 'a group of two people' (< *īn* 'two' + *de$^{?}$ŋ* 'people'), *dóŋdèŋ* 'a group of three people', etc.; *índàŋ* 'both of us', *íngàŋ* 'both of you', *ínàŋ* 'both of them'.

2.1.4. Adjectives

Adjective stems differ from nouns primarily in being unable to take case suffixes unless substantivized or nominalized by a suffix. Also, nouns, even deadjectival ones, cannot take concord suffixes in predicate position, while adjectives may do so (§3.2.1.2).

Roots. Several dozen simple non-derived adjectival stems exist, though some of these may include fossilized derivational affixes: *áqtà* 'good', *sēl* 'bad', *hánà* 'small', *qà* 'big', *qū* 'quiet', *tū* 'raw', *sīn* 'old' (of a person), *ka$^{?}$t* 'old' (of a thing), *ki$^{?}$* 'new' (of a thing), *hi$^{?}$l* 'fair (weather)', *kə$^{?}$n* 'bright, sunny (air), clear (water)', *qónìj* 'dark', *tīl* 'deaf', *sən* 'green', *bīl* 'firm, strong (in build or composition)', *ta$^{?}$j* 'cold', *ūs* 'warm', *ho$^{?}$l* 'short', *úgdè* 'long', *qīl* 'wide', *qīl* 'swift', *hìs* 'crooked', *u$^{?}$t* 'bent', *èt* 'alive', *qóòj* 'neighboring', *bíl* 'distant', *to$^{?}$t* 'shallow', *ūt* 'full', *hòχ* 'deep', *sóò* 'heavy, difficult', *bósl* 'thick (object)', *bo$^{?}$l* 'thick, fat (living being)', *hōl* 'fat' (in consistency), etc. Other basic adjectives are root compounds: *kítèj* 'young' (< *ki$^{?}$* 'new' + *tìj* 'grow').

Derivation. A few suffixes change other parts of speech into adjectives:

Suffix *-tu* is highly productive. It is added to noun stems to convey possession of the quality expressed in the noun: *kúltù* 'bearded' (< *kūl* 'beard'), *tə̀ɣtù* 'salty' (< *tə^{ʔ}* 'salt'), *súltù* 'bloody' (< *sūl* 'blood), etc. This suffix can also appear on compound modifiers made from adjective + noun phrases: *táɣìm-tə̀ŋ-tù báàm* 'white-haired woman'.

Suffix *-an*, which derives from the caritive suffix, is also highly productive. It builds adjectives with a meaning opposite of *-tu*: *kúlàn* 'beardless' (< *kūl* 'beard'), *tə̀yàn* 'unsalted' (< *tə^{ʔ}* 'salt'), *súlàn* 'bloodless' (< *sūl* 'blood), *qáʁàn* 'mute' (< *qa^{ʔ}* 'word, language'), etc.

The suffix *-aŋ* is unproductive as an adjective-forming suffix and only appears in a few stems, including: *hɬlàŋ* 'sweet' (< *hi^{ʔ}l* 'birch sap'), *qə́làŋ* 'bitter' (< *qə̀ə̀l* 'bile'), *áàŋ* 'hot (to the touch)' (< *ā* 'heat'), *béjìŋ* 'light (in weight)' (< *bēj* 'wind').

The suffix *-(a)m* (sometimes pronounced [*em*] or [*im*]) appears in a handful of stems, where it builds modifiers on the basis of noun roots. The resultant adjectives denote some quality associated with the entity named by the noun: *súlàm* 'red' (< *sūl* 'blood); *táɣàm* ~ *táɣìm* 'white' (< *tīk* 'snow'); *hîtìm* 'low' (< *hîta* 'below'). The adjectives *tūm* 'black' and *hútùm* 'fluffy (of fur)' likewise appear to contain this suffix.

The suffix *-bes* added to plural demonstratives derives adjectives expressing intensity of quality: *kɬnbès* 'such as this (here in prime view or attention)'; *túnbès* 'such as that (nearby or aforementioned)', *qánbès* 'such as that (located some distance away)'.

The suffix *-la*, probably derived from a root originally meaning 'arm' or 'extend', adds the meaning 'rather' to virtually any qualitative adjective: *qálà* 'rather large', *túmlà* 'rather black', *súlèmla* 'rather red', etc. These adjectives are used attributively (53).

Recall from §2.1.1.2 that Ket uses the ablative case for stating direct comparisons involving quantity or quality. In attributive position the comparative degree is expressed using the preposed adverb *bólà* 'more' (< Russ. *bóleje*). The superlative degree of an adjective is conveyed by preposing the adverb *hîtìŋ* 'most' (literally, 'real', 'genuine'):

(53) Degrees of adjectives used attributively

neutral	comparative degree		superlative degree
qà ōks	*qá-là ōks*	*bólà qà ōks*	*hîtìŋ qà ōks*
big tree	big-extend tree	more big tree	most big tree
'a big tree'	'rather big tree'	'bigger tree'	'biggest tree'

(54) Degrees of adjectives used predicatively

neutral	comparative degree		superlative degree
ōks qá-rù	*se^{ʔ}s ús-dà-ŋal qá-rù*		*tū-r ōks hîtìŋ qá-rù*
tree big-M.PRED	larch birch-M-ABL big-M.PRED		that-M tree most big-M.PRED
'A tree is big.'	'A larch is bigger than a birch.'		'That tree is the biggest.'

Distributive forms of adjectives. Ket adjective stems normally take plural suffixes only when nominalized by the suffix *-s*. Stems containing this suffix are syntactically nouns rather than adjectives. Attributive adjectives are normally indeclinable, taking neither plural nor case suffixes. Only a handful of simple adjective stems, all describing visible shapes or sizes, may take a plural suffix (always *-ŋ*). This suffix is optional: *qà qu^{ʔ}ŋ* ~ *qēŋ qu^{ʔ}ŋ* 'big tents'; *bo^{ʔ}l de^{ʔ}ŋ* ~ *bólàŋ de^{ʔ}ŋ* 'fat people'. Pluralizing preposed modifiers of shape or size appears to be a stylistic device used to emphasize the visual impression created by the quality being described. The plural suffix in such instances acts more as a stylistic, derivational affix than a grammatical inflection.

Complex modifiers. Any phrasal compound or inflected noun form can serve as an attributive modifier, without the addition of an adjectival affix. Werner (1997b:120-1) gives the following examples: *qó-t-hìta-ɣa ɪ̄s* [ice-GEN-bottom-LOC fish] 'a fish under the ice'; *hól-àŋ búl-àŋ ke^{ʔ}t* [short-PL-leg-PL person], 'a short-legged person'. Recall that the adjectival suffix *-tu* may optionally appear on such modifiers (see above).

Modifiers used predicatively or in apposition. Adjectives used predicatively normally require a concord suffix marking agreement in number and class with the subject noun phrase (55b). Nouns used as predicate nominals take no concord suffix (55a):

(55) a. predicate nouns

kɪ̄-r sēl tīp
this-M bad dog
'This is a bad dog.'

kɬ-rə̄ sēl hu^{ʔ}n
this-F bad daughter
'This is a bad daughter.'

kɬ-rə̄ sēl qu^{ʔ}s
this-N bad tent
'This is a bad tent.'

kɬ-rə̄ sēl qu^{ʔ}ŋ
these-N bad tents
'These are bad tents.'

kɬ-nə̄ sēl de^{ʔ}ŋ
these-AP bad people
'These are bad people.'

b. predicate adjectives

kɪ̄-r tīp sél-dù
this-M dog bad-M.PRED
'This dog is bad.'

kɬ-rə̄ hu^{ʔ}n sél-dà
this-F daughter bad-F.PRED
'This daughter is bad.'

kɬ-rə̄ qu^{ʔ}s sél-àm
this-N tent bad-N.PRED
'This tent is bad.'

kɬ-rə̄ qu^{ʔ}ŋ sél-àm
these-N tents bad-N.PRED
'These tents are bad.'

kɬ-nə̄ de^{ʔ}ŋ sél-àŋ
these-AP people bad-AP.PRED
'These people are bad.'

In sentences lacking a subject NP, the neuter-class predicate concord suffix is used:

(56) *sóòŋ to^{ʔ}n áqtə̄-m*
there so good-N.PRED
'It's so good there!'

kə́t-d ùgde ɬlgà táj-àm
winter-N.GEN during outside cold-N.PRED
'In winter it's cold outside.'

Complex modifiers may also take predicate concord suffixes (57b). More often, however, they take the nominalizing suffix *-s* (plural *-sin*) instead (57a). This is especially likely with phrasal modifiers such as *hól-àŋ búl-àŋ* 'short-legged', *úgdè-ŋ ógdè-n* 'long-eared', etc., which already contain an adjectival suffix:

(57) a. complex predicates with *-s*

ùt tɬs-t-hìta-ɣa-s
mouse rock-N.GEN-bottom-LOC-NOM
'The mouse is under the rock.'

kɪ̄-r ke^{ʔ}t qáddòq hól-àŋ-búl-àŋ-s
this-M man very short-PL-leg-PL-NOM
'This man is (a) very short-legged (one).'

b. complex predicates without *-s*

ùt tɬs-t-hìta-ɣa-da
mouse rock-N.GEN-bottom-LOC-F.PRED
'The mouse is under the rock.'

kɪ̄-r ke^{ʔ}t qáddòq hól-àŋ-búl-àŋ-du
this-M man very short-PL-leg-M.PRED
'This man is very short-legged.'

Because nominalizing *-s* creates stems that are the syntactic equivalent of nouns, predicates containing it cannot take regular concord suffixes. They do, however, pluralize to *-sin*: *óòŋs* 'healthy one' -> *óòŋsin* 'healthy ones'; compare the same root used attributively, which lacks a plural suffix: *óòŋ ke$^{?}$t* 'healthy person' -> *óòŋ de$^{?}$ŋ* 'healthy people'. Like nouns, stems in *-s* express plurality regardless of whether they reflect animate- or inanimate-class referents. This occurs in predicate position as well, resulting in a sort of predicate number concord: *tə$^{?}$ŋ ón-s-ìn* (rocks many-NOM-PL) 'The rocks are many'. By contrast, predicate adjectives do not agree in number with an inanimate-class subject: *tə$^{?}$ŋ ón-àm* (rocks many-N.PRED). Here are a few more examples:

(58) a. predicate nominals in *-s*

kɬnȅ	*ho$^{?}$n*	*óòŋ-s-in*
these.AP	men	healthy-NOM-PL
'These men are healthy (ones)'		

kɬrȅ	*dɨ́nèŋ*	*kɬ-s-ìn*
these.N	hats	new-NOM-PL
'These hats are new (ones)'		

b. predicate adjectives

kɬnȅ	*ho$^{?}$n*	*óòŋ-aŋ*
these.AP	men	healthy-AP.PRED
'These men are healthy'		

kɬrȅ	*dɨ́nèŋ*	*kɬɣ-àm*
these.N	hats	new-N.PRED
'These hats are new.'		

Like other nouns, forms in *-s* may take case endings: *óòŋsinna qárèŋ* 'clothes of the healthy ones'; compare the same adjective stem used attributively in *óòŋ déŋnà qárèŋ* 'healthy people's clothes'. Nominalized forms are also used as appositives and in complex predicate constructions of various sorts:

(59) *kɬnȅ ho$^{?}$n óòŋ-s-in qórès dɨ́mbèsin* [*du^{8}-ik$^{?}$-in^{2}-bes^{0}-n^{-1}*]
these.AP men healthy-one-s yesterday they.came [3AN.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}]
'These men, the healthy ones, came yesterday.'

júrij gagárin qótìls kósmòs-di-ŋa tkójòk [*du^{8}-k^{5}-o^{4}-ij^{2}-ok^{0}*]
Yuri Gagarin first space-M-DAT he.flew.up [3M.SJ^{8}-ABL^{5}-D^{4}-PT^{2}-move^{0}]
'Yuri Gagarin was the first to fly up into outer space.'

For more on predicate nominal constructions, see §3.2.1.2.

2.1.5. Adverbs

Ket contains the same categories of adverbs found in many other languages. Most qualitative adverbs are identical to the bare-stem forms of the corresponding adjectives, though a few stems are uniquely adverbial and have no adjectival function: *qɬà* 'swiftly' (cf. *dɔ́ktà* 'fast', which can be used either as an adjective or an adverb).

Derivation. Other adverbs are derived from nominalized adjective stems: *qótìls* 'first' (*qótìl* 'first' + *s* nominalizer), *ɬnàm* 'long ago' (< *ìn* 'long' + *am* neuter-class predicate concord affix).

Many adverbs originate from noun or infinitive stems augmented by inflectional suffixes: *kúpkà* 'in front' (*kūp* 'top' + *ka* 'LOC'), *úŋgà* 'seated' (*ùŋ* 'sitting' + *ka* 'LOC'). Some can even function as postpostions (§2.1.6). Here is a semantic inventory of adverb types:

Qualitative adverbs are generally identical in form to the attributive form of the corresponding adjective: *áqtȁ* 'good' ~ 'well', *sēl* 'bad' ~ 'badly', etc.

Adverbs of quantity, intensity, or attitude include *òn* 'many, much', *qómàt* 'few', *éttà qórè* 'like', *hɔ́nùna* 'a little bit', *to$^{?}$n* 'so, so much, thus', *qáddòq* 'very', *qà* 'very' (< *qà* 'big'), *álìŋ* 'loudly, forcefully, extremely', *táŋà* 'only'. The comparative and superlative degrees of adverbs of quality can be made in the same way as those of the corresponding adjectives: by preposing the adverbs *bólà* 'more' and *hɬtìŋ* 'most'. Comparative adverbial constructions are formed with the help of the ablative case:

(60) *kī-r hīɣ áb-ìl áqtȁ dlóvèravet* [*du^{8}-lobe$^{?}$-a$^{?}$-be^{0}*]
this-M man 1S-ABL good he.works [3M.SJ^{8}-work^{7}-D^{4}-ITER^{0}]
'This man works better than I do.'

Adverbs of place usually express a distinction between stationary location and movement toward or away from some point of reference: *ílgà* 'located outside', *ɔ́ɬà* '(motion) outside', *qā* 'at home, inside', *súɣà* 'single movement returning home', *úskà* 'any movement back to a starting point, once or multiple times', *sēŋ* 'here', *sóòŋ* 'there', *kɔ́mà* 'movement away', *kɔ́màl sóòŋ* 'around there, over there', *bɬlàm* 'far away', *kúpkà* 'in front', *qópkà* 'on top', *hɬtà* 'below, downward', *to$^{?}$j* 'above', *tósà* 'upward', *bɬltȍj* 'located far above or in the sky'.

Many adverbs of place are compounds containing the root *ba$^{?}$ŋ* 'earth, place': *bɬlbàŋ* 'far away', *kɔ́jbàŋ* 'at the hunting grounds, out hunting', *tívàŋ* 'in the north' (literally, 'downriver-land)', *údbàŋ* 'in the south' (literally, 'upriver-land)'

Ket has a rich array of adverbs denoting specific types of movement with respect to forest and river: *áɣà* 'moving from riverbank to forest', *ɔ́tà* 'moving from water to riverbank', *ɾgdà* 'moving from forest to riverbank, *étà* 'moving upriver along the ice, *átà* 'moving downriver along the ice, *éskà* 'moving upriver by boat', *tɾɣà* 'moving downriver by boat', etc. (cf. Krejnovich 1968:167-85).

Adverbs of time include *ɔ́ʁàt* 'earlier', *ɾnàm* 'long ago', *ēn* 'now', *qām* 'nearly', *a$^{?}$t* 'soon', *qótìls* 'first', *óŋtìls* 'last', *hī* 'still', *hívàn* 'not yet' (< *hī* 'yet' + *bān* 'not'), *énqòŋ* 'today', *qórès* 'yesterday', *ánòks* 'tomorrow', *qām* 'nearly, in a moment', *qájà* ~ *qárà* ~ *qárì ɣa* 'then, afterward', *tīl* 'since that time', *ánàt* 'recently', *ánàtap* 'at first', etc. Also, any noun stem denoting a time period can appear in the absolutive case (i.e., can be syntactically converted without any change in its morphology) for use as a temporal adverb: *kāt*, 'winter' ~ 'in winter', *sīl* 'summer' ~ 'in summer', *qógdì* ~ *qógd*, 'fall' ~ 'in fall, *ìr* 'spring' ~ 'in spring', etc. Temporal nouns add the suffix *-sa* to denote repetition: *i$^{?}$* -> *ɾsà* 'daily', *sī* -> *sɬsà* 'nightly', *bīs* -> *bɬssà* 'each evening', *qónòks* -> *qónòksa* 'each morning'. The resultant iterative adverbs can optionally be modified by the Russian loan *kásnà* 'each, every. There is no difference in meaning between these variants: *sɬlsà* ~ *kásnà sɬlsà* 'each summer', *kásnà bɬssà* 'each evening', etc.

Adverbs of manner include *úŋgà* 'while sitting', *dúntòj* 'while standing', *távùlaŋ* 'barefoot', *qóbèt* 'usually', etc.

Adverbs of purpose or condition include *qāj* 'although', *úntàn* 'for that reason', *déltàn* 'in vain', etc.

Interrogative adverbs. Below are example sentences using interrogative adverbs:

(61) *áskà tīk bɬmbùs* [*bin^{7}-b^{3}-a^{1}-us^{0}*]
when snow it.melts [self^{7}-3N.SJ^{3}-R^{1}-warm^{0}]
'When does the snow melt?'

áskà sēs bɬmbàtɔ́əl [*bin^{7}-b^{3}-a^{1}-təəl^{0}*]
when river it.freezes [self^{7}-3N.SJ^{3}-R^{1}-freeze^{0}]
'When does the river freeze?'

ū bísèŋ kúγàraq [*ku^{8}-(γ)- a^{4}-daq^{0}*]
2S where you.S.live [2SJ^{8}-(MS)-D^{4}-live^{0}]
'Where do you live?'

ū bísèŋ-ku
2S where-2S.PRED
'Where are you?'

bíltàn ássàno de^{7}ŋ qógdì óŋɔ̀tn [*oŋ^{6}-k^{5}-a^{4}-tn^{0}*]
where.to hunt people fall they.go [3AP.SJ^{6}-ABL^{5}-D^{4}-go^{0}]
'Where do hunters go in the fall?'

bíɾìl kí-nɛ̀ ké-ŋ-àsse-n dínbèsin [*du^{8}-ik^{7}-in^{2}-bes^{0}-n^{-1}*]
where.from these-AN.PL wing-PL-animal-PL they.came [3AN.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}]
'Where did these birds come from?'

bíɾà ɔ́k-nà óv-ǎŋ ɔ́ʁàt dísqòólbètn [*du^{8}-isqo^{7}-o^{4}-il^{2}-bet^{0}-n^{-1}*]
how 2PL-GEN father-PL earlier they.fished [3AN.SJ^{8}-fish^{7}-D^{4}-PT^{2}-ITER^{0}-AP^{-1}]
'How did your (fore)fathers used to fish?"

bíɾà ū-k típ-dà ī
how 2S-GEN dog-M.GEN name
'What's your dog's name?' (Literally, "How is your dog's name?")

ánùn bés-ǹ da-ōp dáŋɢèj [*du^{8}-aŋ^{4}-q^{2}-ej^{0}*]
how.many rabbit-PL 3M.POS-father he.killed.them [3M.SJ^{8}-3AP.O^{4}-PT^{2}-kill^{0}]
'How many rabbits did father kill? '

áksdìŋt (=*áksèsaŋ, átǹ*) *ū qàj bɔ̄n káʁèj* [*ku^{8}-a^{4}-q^{2}-ej^{0}*]
why 2S elk NEG you.SJ.killed.him [2SJ^{8}-3M.O^{4}-PT^{2}-kill^{0}]
'Why didn't you kill the elk?'

2.1.6. Postpositions

Postpositions express a wide range of meanings. Most convey some sort of spatial relation and must be preceded by a noun in the genitive case or a possessive pronoun. When combining with most postpositions, singular masculine-class nouns add the genitive suffix *-da*, plural animate-class nouns *-na*; and singular feminine-class nouns or neuter-class nouns of either number add *-d*: *óks-dà tan* [tree-M.GEN path] 'toward the tree', *qús-t qòn* [tent-N.GEN lip] 'up to/as far as the tent', *áq-nà bál-gà* [trees-AP.GEN interval-LOC] 'between the trees', *ab íl-gà* [my near-LOC] 'near me', *ūk-áγìt-ka* [your.S-behind-LOC] 'behind you'. A few postpositions do not require the genitive and can be used with either a bare noun or a finite verb. The only preposition is the recent Russian loanword *bez* 'without', which can optionally be preposed to nouns already containing the synonymous caritive suffix: *ís-àn ~ bes ís-àn* 'without meat'.

Most postpositions consist of a nominal root, often modified by a case ending: *ɔ́ɔ̀tka* 'on top of' (< *ɔ́qàt* 'back' + *ka* 'LOC'), *kúpkà* 'in front of' (< *kūp* 'beak' + *ka* 'LOC'), *híjgà* 'inside of' (< *hīj* 'belly' + *ka* 'LOC'). A few derive from adverbs, and the etymology of others is unclear. Most postpositional constructions are phonological phrases, and polysyllabic postpositions often carry their own tone. Denominal postpositions have figurative meanings that distinguish them from the homonymous nouns. The nominal origin of spatial pospositions also explains the genitive suffix: etymologically, most postpositional constructions derive from expressions like 'the table's back' ('on the table'), 'the tent's beak' ('in front of the tent'), 'the tree's stomach' ('inside the tree'), etc.

Many spatial postpositions add case suffixes specifying a contrast between location, destination, motion away from, or motion past or through:

(62) Some common spatial postpositions with case endings adding additional meanings

locative	adessive	ablative	prosecutive
ɔ́ɔ̀tka 'on'	*ɔ́ɔ̀tdiŋa* 'onto'	*ɔ́ɔ̀tdiŋal* 'off of'	*ɔ́ɔ̀tbes* 'passing across'
híjgà 'inside of'	*híjdìŋa* 'into'	*híjdìŋal* 'out of'	*híjbès* 'passing through'
hítìγa 'beneath'	*hítìdiŋa* '(to) under'	*hítìdiŋal* 'from under'	*hítìbes* 'passing beneath'
áγìtka 'in back'	*áγìttiŋa* '(to) the back'	*áγìttiŋal* 'from the back'	*áγìtbes* 'passing in back'
kólgà 'behind'	*kóldìŋa* '(to) behind'	*kóldìŋal* 'from behind'	*kólbès* 'passing behind'
bálgà 'between'	*báldìŋa* '(to)between'	*báldìŋal* 'from betw.'	*bálbès* 'passing between'
kíγà 'amid'	*kíγàdiŋa* 'to the middle'	*kíγàdiŋa* 'from the m.'	*kíγàdiŋal* 'through the m.'

A few postpositions also participate in contrasts involving degrees of proximity:

(63) a. immediate vicinity — *ílgà* 'right by', *ílbès* 'passing right by', etc.
b. visible but not in reach — *ítìlga* 'by, near', etc.
c. topographic proximity — *útsìl* 'around, near to', etc.

Spatial postpositions such as *qòn* 'up to' and *tàn* 'toward' convey a single meaning. A few express non-spatial meanings, such as purpose: *dóγòt* 'for use as, for the benefit of' (from the noun *dóγòt* 'share, portion'); replacement: *séjbès* 'in place of, instead of' (*dóγòt* can also be used in this meaning, but conveys some benefit to the object); or togetherness: *qónbès* 'together with'. Like spatial postpositions, these also attach to a genitive-case NP:

(64) *āt bísèb-da qónbès bóγɔ̀n* [*bo^{6}-k^{5}-o^{4}-(in^{2}-t)n^{0}*]
1S brother-M.GEN together I.went [1S.SJ^{6}-ABL^{5}-D^{4}-PT^{2}-go^{0}]
'Brother and I went together.'

ōp bísèb-da dóγòt bógdòm tkájnàm [*du^{8}-kaj^{7}-in^{2}-am^{0}*]
father brother-M.GEN share gun he.took.it [3M.SJ^{8}-L^{7}-PT^{2}-take^{0}]
'Father bought (lit., 'took') a gun for brother.'

bū báltìj-d ɔ́ʁàt tséstè [*du^{8}-ses^{7}-a^{4}-td^{0}*]
3M box-N.GEN back he.sits [3M.SJ^{8}-place^{7}-D^{4}-extend^{0}]
'He's sitting on a box.'

bū qús-t kūp-ka dasésɔ̀lta [*da^{8}-ses^{7}-o^{4}- il^{2}-td^{0}*]
3F tent-N.GEN beak-LOC she.sat [3F.SJ^{8}-place^{7}-D^{4}- PT^{2}-extend^{0}]
'She was sitting in front of the tent.'

Three types of postpositional constructions can serve as the subject of negative existential sentences: *ínèj* 'presence, person' plus the negative copula *bɔ́nsàŋ* or *táàŋ* 'not present' expresses the absence of a person; *bínàmt* the absence of a thing; and *qìŋ* (< *qìŋ* 'flow') appears in constructions expressing that something has run out:

(65) *āb ínèj sóòŋ bɔ́nsàŋ*
1S.GEN person there not.present
'I am not there.'

bú-ɾà ínèj qā bɔ́nsàŋ
3-M.GEN person at.home not.present
'He is not at home.'

ób-dà	*ɪnèj*	*bɔ́nsàŋ*	*ām-d*	*ɪnèj*	*bɔ́nsàŋ*
father-M.GEN	person	not.present	mother-F.GEN	person	not.present
'Father is gone.'			'Mother is gone.'		

nán-t *qìŋ* *bɪ́nùt* [*b(in*^{7}*-b*^{3}*-)in*^{2}*-(a*^{1}*-q)ut*^{0}] *tɪ́t-nà* *bɪ́nàmt* *áqtə̀a-m*
bread-N.GEN flow it.ended [self^{7}-3N.SJ^{3}-PT^{2}-R^{1}-end^{0}] bug-AP.GEN lack good-3N.PRED
'The bread has run out.' 'Being without bugs is good.'

The adjective *úgdè* 'long' can combine with the genitive forms of temporal nouns to express duration: *bís-t-ùgde* 'during the evening', *sɪ́l-d-ùgde* 'through the summer'. The postpositions *báŋdɪŋa* 'until' (< *ba*$^{?}$*ŋ-di-ŋa* ground-N-DAT) and *báŋdɪŋal* 'since' (< *ba*$^{?}$*ŋ-di-ŋa* ground-N-ABL), however, do not require a genitive marker:

(66) *tɪ̄p* *dés̀òlij* [*du*^{8}*-es*^{7}*-o*^{4}*-il*^{2}*-if*^{0}] *útàl* *sɪ-r-ùgde* *qónòks* *báŋdɪ̀ŋa*
dog he.called [3M.SJ^{8}-call^{7}-D^{4}-PT^{2}-ITER^{1}] all night-GEN-long morning until
'The dog howled all night long till morning.'

Postpositions used to subordinate one clause to another do not require a genitive suffix, except that *dúgdè* 'during' appears to retain the same fossilized possessive marker used with temporal nouns. Most clausal postpositions convey temporal meanings: *qárɪ̂ ɣa* 'after' (cf. the differently toned adverb *qárɪ̀ ɣa* 'afterwards'), *kúpkà* 'before' (cf. the nominal postposition *kúpkà* 'in front of'), *kíyà* 'when' (cf. the nominal postposition *kíyà* 'amid').

(67)
dɪ́mbèsn [*du*^{8}*-ik*^{7}*-in*^{2}*-bes*^{0}*-n*$^{-1}$] *kúpkà* *āt* *na-qu*$^{?}$*s* *thómtò* [*dɪ̄*^{8}*-h*^{5}*-o*^{4}*-b*^{3}*-in*^{2}*-to*^{0}]
they.came [3AN.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}] before 1S 3AP.POS-tent I.erected.it [1S.SJ^{8}-straight^{5}-
'Before they arrived, I set up our tent.' D^{4}-3N.O^{3}-PT^{2}-put^{0}]

bérònta [*be*$^{?}$*t*^{7}*-o*^{4}*-in*^{2}*-ta*^{0}] *qárɪ̂ ɣa* *hámgà-n* *dɪ́mbèsn* [*du*^{8}*-ik*^{7}*-in*^{2}*-bes-n*^{0}]
it.snowed [snow^{7}-D^{4}-PT^{2}-extend^{0}] after Evenki-PL they.came[3AP.SJ^{8}-here^{7}-PT^{2}-come^{0}-AP^{-1}]
'After it snowed, the Evenki arrived.'

qɪ́mə̀a *daáàlibet*[*da*^{8}*-aal*^{7}*-bet*^{0}] *dúgdè* *r-hi*$^{?}$*p* *tóʁòt* [*du*^{8}*-t*^{5}*-a*^{4}*-qut*^{0}]
grandma she.makes.soup[3F.SJ^{8}-soup^{7}-ITER^{0}] during 3F.POS-son he.lies[3M.SJ^{8}-SU^{5}-D^{4}-be.positioned^{0}]
'While grandma makes soup, her son sleeps.'

For more on postpositions used as clausal subordinators, see §3.2.2.2.

2.2. Verb morphology

2.2.1. Overview of finite verb structure

Verb morphology is the most involved aspect of Ket linguistic structure. As a rule, each finite verb form conveys the grammatical categories of tense (past or non-past), mood (indicative or imperative), and agreement in person, class, and number with up to two grammatical terms (the subject and direct object). The verb's complexity derives chiefly from how subject/object (= actant) agreement interacts with stem creation. The morpheme positions used to express agreement are an idiosyncrasy of each individual verb. This results in a bewildering array of positional configurations not reducible to any overarching grammatical pattern. Every finite verb stem must be regarded not only as the sum of its lexical morpheme shapes (as is typical for any stem), but also as a position-class formula specifying the choice of agreement strategy. This complexity is entirely verb-internal,

since the cross-referenced subject and direct object NPs appear as unsuffixed (absolutive) forms regardless of which pattern occurs in the verb. Because lexical differences in subject/object coordination cannot be predicted based on any overall syntactic or semantic pattern, Ket has no grammatical alignment – something highly unusual for a polypersonal language.

All finite verbs conform to a model consisting of the following ten position classes:

(68) **Position classes used in Ket verb form creation**

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
valence	incor-porate	**valence**	adposition	durative marker or **valence**	**valence**	*past* tense or *imperative*	**valence**	base	**valence**

The caption "valence" identifies potential agreement positions. Each stem lexically selects a subset of these slots, filling them with the syntactically appropriate subject or object markers. The grammatical tense/mood slot (P2) is labeled in italics. The stem-building morpheme classes in P7, P5, P4, and P0 are underlined.

Every stem obligatorily fills P0 with a form called the "base." There are fewer than 100 bases, and most verbs – in fact, all productive stem patterns – require the presence of an incorporate in P7, as well. There are hundreds if not thousands of P7 shapes, though only some involve true incorporation. Quite a few verbs also fill P5 with a morpheme called an "adposition." Adpositions impart a spatial nuance to the stem's meaning. Three are productive: superessive *t*, adessive *k*, and ablative *k*. Ablative *k* is formally distinguishable from adessive *k* because it labializes a preceeding P6 agreement-marker vowel. Stems denoting temporally complex actions usually contain a durative marker in P4. This marker is *a* in the non-past indicative or imperative forms, and *o* in the past indicative. In verbs that also select P4 to express agreement, durative *a/o* is replaced by a 3rd person animate-class marker (masculine *a/o*, feminine *i*, or plural *ay/oy*). In some durative verbs, the P4 vowel is augmented by a consonant proclitic expressing a more specific nuance of duration such as open-ended repetition of action. Three actant positions – P8, P3, and P1 – sometimes contain morphemes that resemble actant markers but express no grammatical agreement. These "pseudo-actant markers" are simply a category of derivational affixes. A description of each lexical morpheme class – bases, incorporates, adpositions, durative markers, and pseudo-actant markers – is provided in §2.2.4. The least conventional stem component – the formula for expressing subject/object agreement – is discussed in §2.2.3. Many verb forms insert consonants between morphemes from distant position classes that come together in linear adjacency. These "morphotactic separators" are put into parentheses and glossed 'MS' when verbs are divided into their constituent morphemes. Morphotactic (=position-class identifying) features are explained in §2.2.6.

2.2.2. Verbal inflectional categories

2.2.2.1. Tense and mood

Finite verb forms distinguish imperative from indicative mood. Most indicative forms further specify a contrast between past and non-past tense. Other tense- and mood-related meanings, such as the difference between present and future tense, can be conveyed by particles preposed to the verb (§3.4). Most verbs mark tense and mood as shown in (69):

(69) Patterns of tense and mood marking

past indicative: A lexically chosen affix shape (*il*, *in*, or Ø; rarely *ij* or *q*) in P2 and labialization of P4 *a* to *o*

non-past indicative: No P2 affix and no labialization of the P4 vowel

imperative: The same P2 affix shape as in past indicative, but no labialization in P4; the P3 *b* affix and P8 subject markers disappear; valence-reducing *d* appears before most vowel-initial bases (diachronically, imperative formation involved a suppression of agentivity).

Examples (70a-70f) illustrate past tense forms containing each of the P2 variants:

(70a) P2 *-il* (found in most atelic, iterative and stative verbs and also in some telic verbs)

non-past indicative	past indicative	imperative
ku^{8}*-a*^{4}*-b*^{3}*-do*^{0}*-n*$^{-1}$	*ku*^{8}*-o*^{4}*-b*^{3}*-il*^{2}*-do*^{0}*-n*$^{-1}$	*a*^{4}*-il*^{2}*-do*^{0}*-n*$^{-1}$
2SJ^{8}-D^{4}-3N.O^{3}-clip^{0}-AP^{-1}	2SJ^{8}-D^{4}-3N.O^{3}-PT^{2}-clip^{0}-AP^{-1}	D^{4}-IMP^{2}-clip^{0}-AP^{-1}
kávròn 'you.PL clip it'	*kóvìldon* 'you.PL clipped it'	*áldòn* '(you.PL) Clip it!'
ku^{8}*-es*^{7}*-a*^{4}*-ij*^{0}	*ku*^{8}*-es*^{7}*-o*^{4}*-il*^{2}*-ij*^{0}	*es*^{7}*-a*^{4}*-il(d)*^{2}*-ij*^{0}
2SJ^{8}-call^{7}-D^{4}-ITER^{0}	2SJ^{8}-call^{7}-D^{4}-PT^{2}-ITER^{0}	call^{7}-D^{4}-IMP^{2}-ITER^{0}
késìj 'you.S call'	*késölij* 'you.S called'	*ésäldij* (you.S) 'Call!'

(70b) P2 *-in* (found only in certain telic verbs and some verbs denoting changes of state)

non-past indicative	past indicative	imperative
ku^{8}*-a*^{4}*-b*^{3}*-t*^{0}	*ku*^{8}*-o*^{4}*-b*^{3}*-in*^{2}*-t*^{0}	*a*^{4}*-in(d)*^{2}*-t*^{0}
2SJ^{8}-D^{4}-3N.O^{3}-sharpen^{0}	2SJ^{8}-D^{4}-3N.O^{3}-PT^{2}-sharpen^{0}	D^{4}-IMP^{2}-sharpen^{0}
kávì 'you.S sharpen it'	*kóvìni* 'you.S sharpened it'	*ándì* '(you.S) Sharpen it!'
ku^{8}*-b*^{3}*-hə*^{0}*-n*$^{-1}$	*ku*^{8}*-b*^{3}*-in*^{2}*-hə*^{0}*-n*$^{-1}$	*in*^{2}*-hə*^{0}*-n*$^{-1}$
2SJ^{8}-3N.O^{3}-spin^{0}-AP^{-1}	2SJ^{8}-D^{4}-3N.O^{3}-PT^{2}-spin^{0}-AP^{-1}	IMP^{2}-spin^{0}-AP^{-1}
kávən 'you.PL spin it (thread)'	*(k)bínən* 'you.PL spun it'	*ínən* '(you.PL) Spin it!'

The choice of P2 marker shape (*il* or *in*) reflects lexical distinctions in aspect. All verbs that denote static states, atelic activities (events with no logical completion point), iterative (repeated) actions, or cursive (ongoing) actions take *il*. Many verbs denoting changes of state or telic events (actions with logical completion points) also take *il*, however, while others take *in*. The choice of P2 morpheme shape is highly lexicalized. Verbs meaning 'put on a belt' and 'stand up' take *in*, while 'get dressed' and 'lie down', take *il*. Single-event verbs expressing encirclement, placement fully upright, arrival, disappearance, or significant life-phase transitions are especially likely to take *in*. In rare instances, the same stem form allows either *in* or *il*, reflecting a contrast between single and multiple action: *hántèt* 'Break it! (one long object)' [*ha*^{7}*-in*^{2}*-tet*^{0} long.shape^{7}-IMP.MOM^{2}-hit^{0}] vs. *háltèt* 'Break them! (several long objects each in turn)' [*ha*^{7}*-il*^{2}*-tet*^{0} long.shape^{7}-IMP.ITER^{2}-hit^{0}]. Virtually all other stems permit only a single P2 morpheme shape.

Two unproductive P2 affixes appear in a handful of stems. P2 *ij* appears in a few single-action verbs containing the bases *-aq* 'give', *-ok* 'move', or *-a* 'put, touch':

(70c) Examples of verbs that use P2 *ij*:
dívìjaq 'he furnished her with it' [*du*^{8}*-i*^{4}*-b*^{3}*-ij*^{2}*-aq*^{0} 3M.SJ^{8}-3F.O^{4}-AL^{3}-PT^{2}-give^{0}]
dátpìjaq 'he watered it' [*du*^{8}*-at*^{7}*-b*^{3}*-ij*^{2}*-aq*^{0} 3M.SJ^{8}-on.surface^{7}-3N.O^{3}-PT^{2}-give^{0}]
dakójòk 'she flew up' [*da*^{8}*-k*^{5}*-o*^{4}*-ij*^{2}*-ok*^{0} 3F.SJ^{8}-ABL^{5}-D^{4}-PT^{2}-move^{0}]
dáŋtòvija 'he didn't disturb them' [*du*^{8}*-aŋ*^{6}*-k*^{5}*-d/o*^{4}*-b*^{3}*-ij*^{2}*-a*^{0} 3M.SJ^{8}-3AP.O^{6}-ADES^{5}-AC/D^{4}-AL^{3}-PT^{2}-touch^{0}]

The rarest P2 morpheme is *q*, which appears only in single-action verbs with P0 *-ej* 'kill':

(70d) Examples of two verbs that use P2 *q*:
i. *dáɾèj* 'he killed him' [*du*^{8}*-a*^{4}*-q*^{2}*-ej*^{0} 3M.SJ^{8}-3M.O^{4}-PT^{2}-kill^{0}]
dáŋɢèj 'he killed them' [*du*^{8}*-aŋ*^{4}*-q*^{2}*-ej*^{0} 3M.SJ^{8}-3AP.O^{4}-PT^{2}-kill^{0}]
ii. *dúsqèj* 'he slaughtered (any object)' [*du*^{8}*-us*^{7}*-q*^{2}*-ej*^{0} 3M.SJ^{8}-hit^{7}-PT^{2}-kill^{0}]

These verbs are irregular in other ways, as well. In the first verb, P4 *a* does not labialize before P2 *q*. The second verb lacks an object agreement slot.

Two stem patterns do not use P2 to distinguish past and non-past tense. Change-of-state verbs built with P0 *-qan* indicate tense by labializing *a* to *o* in P0 as well as P4:

(70e) *qáyàvan* 'it gets big' [*qa*^{7}*-a*^{4}*-b*^{3}*-qan*^{0} big^{7}-D^{4}-3N.SJ^{3}-INCEPT^{0}]
qáyòvon 'it got big' [*qa*^{7}*-o*^{4}*-b*^{3}*-qon*^{0} big^{7}-D^{4}-3N.SJ^{3}-PT.INCEPT^{0}]

Semelfactives (verbs denoting single quick actions) built with the base *-ges* fail to distinguish tense overtly in any way. It is possible that P2 *ij* appears in these verbs but elides between the final /j/ of P7 and the initial consonant of P0. Elision also seems to effect the s-separator (cf. §2.2.6) that should appear between P7 and P0 in the non-past:

(70f) *kímàrejges* 'a crash rings out' ? < *kímàrej*^{7}*-(s)-ges*^{0} crash^{7}-(MS)-MOM^{0}]
kímàrejges 'a crash rang out' ? < *kímàrej*^{7}*-ij*^{2}*-ges*^{0} crash^{7}-PT^{2}-MOM^{0}]

The irregular verbs 'know' and 'say' do not formally distinguish past from non-past tense, though most of their forms appear to contain a fossilized P2 marker:

(71) Two irregular verbs that do not formally distinguish past from non-past tense

nímà 'I speak/spoke it'	< *di*^{8}*-b*^{3}*-in*^{2}*-a*^{0}	1SJ^{8}-3N.O^{3}-PT^{2}-speak^{0}
kímà 'you.S speak/spoke it'	< *ku*^{8}*-b*^{3}*-in*^{2}*-a*^{0}	2SJ^{8}-3N.O^{3}-PT^{2}-speak^{0}
bárà 'he speaks/spoke it'	? < *b/a*^{3}*-in*^{2}*-d/a*^{0}	3N.O^{3}-PT^{2}-3M.SJ/speak^{0}
mánà 'she speaks/spoke it'	? < *b/a*^{3}*-in*^{2}*-a*^{0}	3N.O^{3}-PT^{2}-speak^{0}
nímãŋ 'we speak/spoke it'	< *di*^{8}*-b*^{3}*-in*^{2}*-a/ŋ*^{0}	1SJ^{8}-3N.O^{3}-PT^{2}-speak/PL.SJ^{0}
kímãŋ 'you.PL speak/spoke it'	< *ku*^{8}*-b*^{3}*-in*^{2}*-a/ŋ*^{0}	2SJ^{8}-3N.O^{3}-PT^{2}-speak/PL.SJ^{0}
mánmãŋ 'theyspeak/spoke'	? < *b/a*^{3}*-in*^{2}*-d/a/ŋ*^{0}	3N.O^{3}-PT^{2}-3AN.SJ/speak/PL.SJ^{0}
ítpàram 'I know/knew'	< *it*^{7}*-ba*^{6}*-di*^{3}*-am*^{0}	sense^{7}-1S.SJ^{6}-1S.SJ^{3}-take^{0}
ítkùm 'you.S know/knew'	< *it*^{7}*-ku*^{6}*-am*^{0}	sense^{7}-2S.SJ^{6}-take^{0}
ítàlam 'he knows/knew'	< *it*^{7}*-a*^{4}*-il*^{2}*-am*^{0}	sense^{7}-3M.SJ^{4}-PT^{2}-take^{0}
ítlàm 'she knows/knew'	< *it*^{7}*-i*^{4}*-il*^{2}*-am*^{0}	sense^{7}-3F.SJ^{4}-PT^{2}-take^{0}
ítdàylam 'we know/knew'	< *it*^{7}*-day*^{4}*-il*^{2}*-am*^{0}	sense^{7}-1PL.SJ^{4}-PT^{2}-take^{0}
ítkàylam 'you.PL know/knew'	< *it*^{7}*-kay*^{4}*-il*^{2}*-am*^{0}	sense^{7}-2PL.SJ^{4}-PT^{2}-take^{0}
ítàŋlam 'theyknow/knew'	< *it*^{7}*-aŋ*^{4}*-il*^{2}*-am*^{0}	sense^{7}-3AP.SJ^{4}-PT^{2}-take^{0}

Agreement marking in these verbs is also irregular. All other stems use one of the strategies discussed in the next two sections.

2.2.2.2. Subject-object agreement affixes

Agreement markers comprise three series: the active (or active/ergative) series in P8 and P-1, the absolutive series in P6, and the inactive series in P4, P3, and P1. Given their overlapping functions across the verbal lexicon as a whole, each series can only be defined negatively. Active/ergative never cross-references an object. Absolutive used alone cannot cross-reference a transitive subject (though see §2.2.4.3 for a few verbs that appear to violate this rule). Inactive used alone never cross-references an active subject. Absolutive or inactive series subject markers often appear with active/ergative subject markers in the same stem, demonstrating a high degree of synonymy among these markers. Table (72) illustrates how the three series generally fail to correlate with specific semantic roles or syntactic functions, as would normally be the case in a polypersonal language with verb-internal agreement.

(72) Ket subject/object agreement affixes (A = transitive subject, O = direct object, S_A = active intransitive subject, S_O = inactive intransitive subject)

position	P8	P6	P4	P3	P1	P-1
series	active/ergative (person/class)	absolutive (person, class and number)	inactive 3 animate class	inactive 3 inanimate class	inactive 1 or 2 person or redundant	active/ergative animate-class plural
functions	all A some S_A, S_O	some O some S_A, S_O	some 3AN.O some 3AN.S_O	some INAN.O some INAN.S_O	some 1/2 O some 1/2 S_O	most A
redundant marker	P6 is coreferential with P8-marked A, S_A, or S_O subject in certain verbs				P1 is coreferential with P8-marked A, S_A, or S_O subject in certain verbs	
1S	*di*	*ba ~ bo*	-	-	*di*	-
2S	*ku*	*ku*	-	-	*ku*	-
3M	*du*	*a ~ o ~bu*	*a* (*o*)	-	*a*	-
3F	*da~də*	*i ~ u ~ bu*	*i*	-	*a*	-
3N (S or PL)	*da~də*	*Ø~i~u~bu*	-	*b*	*a*	-
1PL	*di*	*dəŋ*	-	-	*daŋ*	*n*
2PL	*ku*	*kəŋ*	-	-	*kaŋ*	*n*
3AN.PL	*du*	*aŋ ~ oŋ ~ bu*	*aŋ* (*oŋ*)	-	*aŋ*	*n*

The alternants in some of these positions require explanation. The P8 feminine- and inanimate-class allomorphs vary morphotactically to reflect the position class of the following morpheme (§2.2.6). The labialized P6 forms *bo*, *o*, *u*, *oŋ* precede the P5 ablative *k* adposition, while *ba*, *a*, *i*, *aŋ* appear before all other adpositions (§2.2.4.2). P6 *bu* is used to reduce the stem's valence in various ways (§2.2.3). The P4 variants *a ~ o* and *aŋ ~ oŋ* reflect tense and mood, with the labialized variants occuring only in the past indicative. P4 also displays additional variants discussed in §2.2.6: P4 masculine /a/ occasionally appears as /aj/, /da/, /daj/, /do/ or /o/; P4 feminine /i/ as /ij/, /id/, /it/, /di/, /did/, or /dit/; P4 animate-plural /aŋ/ as /daŋ/, /aŋa/, /aŋs/, /doŋ/, /oŋ/, /oŋo/; and combinations of P4 /i/ with P2 /in/ or /il/ fuse to [irun] or [irul] before a vowel and [itn] or [itl] before a consonant.

2.2.3. Productive subject/object agreement patterns (actant conjucations)

A stem's subject- or subject/object-marking pattern is called its "actant conjugation". Five of these configurations are productive: Active, Absolutive, Coreferential Absolutive, Coreferential Inactive, and Possessive Conjugation. The use of agreement strategy as a stem-building technique insures that Modern Ket is neither active/stative, nor accusative, nor ergative in terms of its overall system of verb-internal subject/object coordination; nor is there any grammatical split in agreement marking. Tables (73-87) illustrate how the three series interact to produce each pattern. Hyphens mark slots never used by the given conjugation. Labels identify slots that may be filled depending on the stem in question, though recall that P0 is filled in every verb form.

Active Conjugation is one of the more common patterns. Transitive verbs of this type (74c) cross-reference the subject by combining an affix in P8 for person/class and another in P-1 for animate-class plural. The object is cross-referenced using the inactive series (P4 for 3rd person animate; P3 for 3rd person inanimate, and P1 for 1st or 2nd person):

(73) Active Conjugation pattern

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
active/ agentive (person/class)	incor-porate	-	adposition	durative marker or **3AN-class patient**	**3N-class patient**	*past tense or imperative*	**1, 2 patient**	base	**active AN-class (plural)**

Subject marking in Active Conjugation intransitives displays two distinct sub-patterns. Intransitives expressing stative events that logically require a sentient subject, such as verbs of awareness or ownership (74a) cross-reference their subjects with inactive series markers in P4 (3rd person) or P1 (1st and 2nd person). Stative intransitives that logically permit inanimate- as well as animate-class subjects, as well as active intransitives, follow a different pattern (74b). In these verbs, animate-class subjects trigger the same combination (P8 + P-1) used for transitive subjects: *dáŋgìstan* 'they.AN are hanging' [*du*^{8}-*aŋ*^{7}-*k*^{5}-*(s)-ta*^{0}-*n*$^{-1}$ 3AN.SJ^{8}-hang^{7}-ABL^{5}-(MS)-extend^{0}-AP^{-1}]. Inanimate-class subjects are normally cross-referenced in P3: *áŋgìpta* 'it is hanging ~ they.N are hanging' [*aŋ*^{7}-*k*^{5}-*b*^{3}-*ta*^{0} hang^{7}-ABL^{5}-3N.SJ^{3}-extend^{0}], though in rare cases they are cross-referenced using P8 *da* instead: *sámòlot dɔ̄roq* 'a plane is flying' [*də*^{8}-*doq*^{0} 3N.SJ^{8}-fly^{0}].

(74) Active Conjugation; sample paradigms showing past tense forms

a. intransitive (1)	b. intransitive (2)	c. fragment of transitive paradigm	
don^{7}-*il*^{2}-*di*^{1}-*bet*^{0}	*di*^{8}-*in*^{2}-*qo*^{0}	*di*^{8}-*in*^{2}-*ku*^{1}-*tet*^{0}	*ku*^{8}-*in*^{2}-*di*^{1}-*tet*^{0}
knife^{7}-PT^{2}-1S.SJ^{1}-have^{0}	1SJ^{8}-PT^{2}-die^{0}	1SJ^{8}-PT^{2}-2S.O^{1}-hit^{0}	2SJ^{8}-PT^{2}-1S.O^{1}-hit^{0}
dónĭldivet 'I had a knife'	*dĭnò* 'I died'	*dingùtet* 'I hit you.S'	*kíndĭtet* 'you.S hit me'
don^{7}-*il*^{2}-*ku*^{1}-*bet*^{0}	*ku*^{8}-*in*^{2}-*qo*^{0}	*ku*^{8}-*o*^{4}-*in*^{2}-*tet*^{0}	*du*^{8}-*in*^{2}-*ku*^{1}-*tet*^{0}
knife^{7}-PT^{2}-2S.SJ^{1}-have^{0}	2SJ^{8}-PT^{2}-die^{0}	2SJ^{8}-3M.O^{4}-PT^{2}-hit^{0}	3M.SJ^{8}-PT^{2}-2S.O^{1}-hit^{0}
dónĭlguvet 'you.S had…'	*kúnò* 'you.S died'	*kóntèt* 'you.S hit him'	*díngùtet* 'he hit you.S'
don^{7}-*o*^{4}-*il*^{2}-*bet*^{0}	*du*^{8}-*in*^{2}-*qo*^{0}	*du*^{8}-*i(t)*^{4}-*in*^{2}-*tet*^{0}	*da*^{8}-*o*^{4}-*in*^{2}-*tet*^{0}
knife^{7}-3M.SJ^{4}-PT^{2}-have^{0}	3M.SJ^{8}-PT^{2}-die^{0}	3M.SJ^{8}-3F.O^{4}-PT^{2}-hit^{0}	3F.SJ^{8}-3M.O^{4}-PT^{2}-hit^{0}
dónòlbet 'he had…'	*dúnò* 'he died'	*dírùntet* 'he hit her'	*daóntèt* 'she hit him'

don^{7}*-i(t)*^{4}*-il*^{2}*-bet*^{0}	*də*^{8}*-in*^{2}*-qo*^{0}	*du*^{8}*-in*^{2}*-di*^{1}*-tet*^{0}	*di*^{8}*-o*^{4}*-in*^{2}*-tet*^{0}
knife^{7}-3F.SJ^{4}-PT^{2}-have^{0}	3F.SJ^{8}-PT^{2}-die^{0}	3M.SJ^{8}-PT^{2}-1S.O^{1}-hit^{0}	1SJ^{8}-3F.O^{4}-PT^{2}-hit^{0}
dónĭ̀tlivet 'she had…'	*dónò* 'she died'	*dìndɨ̀tet* 'he hit me'	*dóntèt* 'I hit him'
	i^{7}*-b*^{3}*-in*^{2}*-a*^{1}*-qo*^{0}	*du*^{8}*-b*^{3}*-in*^{2}*-tet*^{0}	*di*^{8}*-b*^{3}*-in*^{2}*-tet*^{0}
-	L^{7}-3N.SJ^{3}-PT^{2}-3S.RS^{1}-die^{0}	3M.SJ^{8}-3N.O^{3}-PT^{2}-hit^{0}	1SJ^{8}-3N.O^{3}-PT^{2}-hit^{0}
	ímnàʁo 'it died'	*dbíntèt* 'he hit it'	*dbíntèt* 'I hit it'
don^{7}*-il*^{2}*-daŋ*^{1}*-bet*^{0}	*d[i]*^{8}*-in*^{2}*-qo*^{0}*-n*$^{-1}$	*di*^{8}*-i(t)*^{4}*-in*^{2}*-teɣ*^{0}*-n*$^{-1}$	*da*^{8}*-in*^{2}*-daŋ*^{1}*-tet*^{0}
knife^{7}-PT^{2}-1PL.SJ^{1}-have^{0}	1SJ^{8}-PT^{2}-die^{0}-AP^{-1}	1SJ^{8}-3F.O^{4}-PT^{2}-hit^{0}-AP^{-1}	3F.SJ^{8}-PT^{2}-1PL.O^{1}-hit^{0}
dónĭ̀ldaŋbet 'we had…'	*dɪ́nòn* 'we died'	*dirùnteɣin* 'we hit her'	*daíndàŋtet* 'she hit us'
don^{7}*-il*^{2}*-kaŋ*^{1}*-bet*^{0}	*ku*^{8}*-in*^{2}*-qo*^{0}*-n*$^{-1}$	*ku*^{8}*-in*^{2}*-daŋ*^{1}*-teɣ*^{0}*-n*$^{-1}$	*di*^{8}*-in*^{2}*-kaŋ*^{1}*-teɣ*^{0}*-n*$^{-1}$
knife^{7}-PT^{2}-2PL.SJ^{1}-have^{0}	2SJ^{8}- PT^{2}-die^{0}-AP^{-1}	2SJ^{8}-PT^{2}-1PL.O^{1}-hit^{0}-AP^{-1}	1SJ^{8}-PT^{2}-2PL.O^{1}-hit^{0}-AP^{-1}
dónĭ̀lkaŋbet 'you.PL had'	*kúnòn* 'you.PL died'	*kíndàŋteɣin* 'you.PL hit us'	*díngàŋteɣin* 'we hit you.PL'
don^{7}*-oŋ*^{1}*-il*^{2}*-bet*^{0}	*du*^{8}*-in*^{2}*-qo*^{0}*-n*$^{-1}$	*du*^{8}*-in*^{2}*-di*^{1}*-teɣ*^{0}*-n*$^{-1}$	*di*^{8}*-oŋ*^{4}*-in*^{2}*-tet*^{0}
knife^{7}-3AP.SJ^{4}-PT^{2}-have^{0}	3AN.SJ^{8}- PT^{2}-die^{0}-AP^{-1}	3AN.SJ^{8}-PT^{2}-1S.O^{1}-hit^{0}-AP^{-1}	1SJ^{8}-3AP.O^{4}-PT^{2}-hit^{0}
dónöŋolbet 'they had…'	*dúnòn* 'they died'	*dìndɨ̀teɣin* 'they hit me'	*dóŋòntet* 'I hit them'

Agreement in Active Conjugation may involve stem suppletion. One example can be seen in the paradigm of the verb 'die' (74b), where the inanimate-class form contains a redundant subject marker in P1, which means it belongs to Coreferential Inactive rather than Active Conjugation. Also, note the alternation in the base form of the verb 'hit': singular subjects use *-tet*, plural subjects *-teɣ*. Incorporated noun or adjective roots that correlate with a plural theme role often add the suffix *-ŋ*. Compare *dabíttàpsin* 'she strengthens it' [*da*^{8}*-bĭt*^{7}*-q*^{5}*-d/a*^{4}*-b*^{3}*-si/n*^{0} 3 F.SJ^{8}-strong^{7}-cause^{5}-IT/D^{4}-3N.O^{3}-exist/fully^{0}] with *dabírèŋtapsin* 'she strengthens them.N' [*da*^{8}*-bir/eŋ*^{7}*-q*^{5}*-d/a*^{4}*-b*^{3}*-si/n*^{0} 3F.SJ^{8}-strong/PL^{7}-cause^{5}-IT/^{4}-3N.O^{3}-exist/fully^{0}]. Some stative verbs use the base *-qut* with singular subjects and *-damin* for plural: *dútàʁut* 'he lies' [*du*^{8}*-t*^{5}*-a*^{4}*-qut*^{0} 3M.SJ^{8}-SU^{5}-D^{4}-S.SJ.be.positioned^{0}] vs. *dútàramin* 'they.AN lie' [*du*^{8}*-t*^{5}*-a*^{4}*-damin*^{0} 3AN.SJ^{8}-SU^{5}-D^{4}-PL.SJ.be.positioned^{0}]; and *távùt* 'it lies' [*t*^{5}*-a*^{4}*-b*^{3}*-qut*^{0} SU^{5}-D^{4}-3N.SJ^{3}-S.SJ.be.positioned^{0}] vs. *távàramin* 'they.N lie' [*t*^{5}*-a*^{4}*-b*^{3}*-damin*^{0} SU^{5}-D^{4}-3N.SJ^{3}-PL.SJ.be.positioned^{0}]. A few build more extensive suppletive sets reflecting degrees of subject animacy, volition, mobility, or internal cohesion.

(75) Suppletive verbs denoting the general notion 'stand'
- a. human, animal: *ke*^{7}*t dúyìn* 'person stands' [*du*^{8}*-(ɣ)-a*^{4}*-in*^{0} 3M.SJ^{8}-(MS)-D^{4}-stand^{0}]
- b. tree: *ōks dúyàta* 'tree stands' [*du*^{8}*-h*^{5}*-a*^{4}*-ta*^{0} 3M.SJ^{8}-straight^{5}-D^{4}-extend^{0}]
- c. object: *u*^{7}*j újbàʁut* 'cradle stands' [*uj*^{7}*-b*^{3}*-a*^{1}*-qut*^{0} rest^{7}-3N.SJ^{3}-R^{1}-S.SJ.be.positioned^{0}]
- d. structure: *qu*^{7}*s hávùta* 'tent stands' [*h*^{5}*-a*^{4}*-b*^{3}*-a*^{1}*-ta*^{0} straight^{5}-D^{4}-3N.SJ^{3}-R^{1}-extend^{0}]

Active Conjugation represents a classic split-S, or active/agentive pattern, where semantic roles such as agent/patient rather than syntactic functions such as subject/object determine the position and form of agreement markers. But the existence of other productive patterns, notably Absolutive Conjugation, where semantic roles have no independent effect on actant marking, vitiates the claim that Ket possesses active alignment as an overall typological trait. Also, many Active Conjugation verbs have synonyms or near synonyms belonging to other conjugations, demonstrating that meaning alone does not predetermine the position of subject or object markers.

Absolutive Conjugation likewise uses P8 + P-1 to cross-reference a transitive subject. Intransitive subjects, regardless of finer distinctions of agentivity or animacy, are cross-referenced in P6 and nowhere else, not even in P-1. P6 also cross-references the object in transitive stems. The P6 absolutive marker usually precedes a P5 adposition expressing some spatial relation between the participants and the event (cf. §2.2.4.2).

(76) Absolutive Conjugation pattern

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
transitive subject (person/class)	incor-porate	**intransitive subject or direct object**	adposition	durative marker	applicative, involuntary causative, or intensity affix	*past tense or imperative*	result-ative affix	base	**transitive subject (plural)**

Semantic roles are not independently relevant for determining the position of the subject marker. All intransitive subjects are marked in P6.

(77) Absolutive Conjugation intransitives (non-past forms)

bo^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*ba*^{6}*-k*^{5}*-(s)-sal*^{0}	*ba*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
1S.SJ^{6}-ABL^{5}-D^{4}-go^{0}	1S.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	1S.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
bóɣätn 'I am going'	*báɣɨssal* 'I pass the night'	*bátɨbgit* 'I feel'
ku^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*ku*^{6}*-k*^{5}*-(s)-sal*^{0}	*ku*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
2S.SJ^{6}-ABL^{5}-D^{4}-go^{0}	2S.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	2S.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
kúɣätn 'you.S are going'	*kúɣɨssal* 'you.S pass the night'	*kútɨbgit* ' you.S feel'
o^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*a*^{6}*-k*^{5}*-(s)-sal*^{0}	*a*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
3M.SJ^{6}-ABL^{5}-D^{4}-go^{0}	3M.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	3M.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
óɣätn 'he is going'	*áɣɨssal* 'he passes the night'	*átɨbgit* 'he feels'
u^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*i*^{6}*-k*^{5}*-(s)-sal*^{0}	*i*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
3F.SJ^{6}-ABL^{5}-D^{4}-go^{0}	3F.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	3F.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
úɣätn 'she is going'	*ɪ́ɣɨssal* 'she passes the night'	*ɪ́tɨbgit* 'she feels'
u^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*Ø*^{6}*-k*^{5}*-(s)-sal*^{0}	
3N.SJ^{6}-ABL^{5}-D^{4}-go^{0}	3N.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	-
úɣätn 'it (an event) is going'	*kɪ́ssàl* 'it passes the night'	
dəŋ^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*dəŋ*^{6}*-k*^{5}*-(s)-sal*^{0}	*dəŋ*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
1PL.SJ^{6}-ABL^{5}-D^{4}-go^{0}	1PL.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	1PL.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
dáŋätn 'we are going'	*dáŋɨssal* 'we pass the night'	*dáŋtɨbgit* 'we feel'
kəŋ^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*kəŋ*^{6}*-k*^{5}*-(s)-sal*^{0}	*kəŋ*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
2PL.SJ^{6}-ABL^{5}-D^{4}-go^{0}	2PL.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	2PL.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
káŋätn 'you.PL are going'	*káŋɨssal* 'you.PL pass…'	*káŋtɨbgit* ' you.PL feel'
oŋ^{6}*-k*^{5}*-a*^{4}*-tn*^{0}	*aŋ*^{6}*-k*^{5}*-(s)-sal*^{0}	*aŋ*^{6}*-t*^{5}*-b*^{3}*-git*^{0}
3AP.SJ^{6}-ABL^{5}-D^{4}-go^{0}	3AP.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}	3AP.SJ^{6}-MT^{5}-AL^{3}-feel^{0}
óŋätn 'they.AN are going'	*áŋɨssal* ' they.AN pass…'	*áŋtɨbgit* 'they.AN feel'

There are a vast number of Absolutive Conjugation transitives. More are continually being created, since borrowed Russian transitive verbs are normally incorporated in P7 and treated as Absolutive Conjugation transitives. The examples in (78) show past-tense forms with feminine singular subjects:

(78) Absolutive (or Ergative/Absolutive) Conjugation transitives

da^{8}-*ba*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*ba*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*ba*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-1S.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-1S.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-1S.O^{6}-ITER^{5}-AL^{3}-PT^{2}-extend^{0}
dabáɣòldo 'she looked at me'	*dabátòloŋ* 'she saw me'	*dabánblù* 'she gave to me'
da^{8}-*ku*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*ku*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*ku*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-2S.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-2S.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-2S.O^{6}-ITER^{5}-AL^{3}-PT^{2}-extend^{0}
dakúɣòldo 'she looked at you.S'	*dakútòloŋ* 'she saw you.S'	*dakúnblù* 'she gave you.S'
da^{8}-*a*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*a*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*a*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-3M.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-3M.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-3M.O^{6}-ITER^{5}-AL^{3}-PT^{2}-ext^{0}
daáɣòldo 'she looked at him'	*daátòloŋ* 'she saw him'	*daánblù* 'she gave him'
da^{8}-*ɨ*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*ɨ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*ɨ*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-3F.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-3F.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-3F.O^{6}-ITER^{5}-AL^{3}-PT^{2}-extend^{0}
daɨ ɣòldo 'she looked at her'	*daɨtòloŋ* 'she saw her'	*daɨnblù* 'she gave her'
da^{8}-*Ø*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*Ø*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*Ø*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-3N.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-3N.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-3N.O^{6}-ITER^{5}-AL^{3}-PT^{2}-ext^{0}
dagóldò 'she looked at it'	*datólòŋ* 'she saw it'	*danbɨlù* 'she gave to it'
da^{8}-*dəŋ*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*dəŋ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*dəŋ*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-1PL.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-1PL.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-1PL.O^{6}-ITER^{5}-AL^{3}-PT^{2}-ext^{0}
dadáŋgòldo 'she looked at us'	*dadáŋtòloŋ* 'she saw us'	*dadáŋnìblu* 'she gave us'
da^{8}-*kəŋ*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*kəŋ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*kəŋ*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-2PL.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-2PL.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-2PL.O^{6}-ITER^{5}-AL^{3}-PT^{2}-ext^{0}
dakáŋgòldo 'she ~ you.PL'	*dakáŋtòloŋ* 'she ~ you.PL'	*dakáŋnìblu* 'she gave you.PL'
da^{8}-*aŋ*^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*do*^{0}	*da*^{8}-*aŋ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}	*da*^{8}-*aŋ*^{6}-*n*^{5}-*b*^{3}-*il*^{2}-*u*^{0}
3F.SJ^{8}-3AP.O^{6}-ADES^{5}-D^{4}-PT^{2}-look^{0}	3F.SJ^{8}-3AP.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}	3F.SJ-3AP.O^{6}-ITER^{5}-AL^{3}-PT^{2}-ext^{0}
da.áŋgòldo 'she~them.AN'	*da.áŋtòloŋ* 'she~them.AN'	*da.áŋnìblu* 'she gave them.AN'

Both Active and Absolutive Conjugations are unrestricted in the meanings they convey. The formal contrast between them has no systematic correlation based in either semantics or syntax. Compare the Active Conjugation intransitives *dólàq* 'I went out' [*di*^{8}-*o*^{4}-*il*^{2}-*aq*^{0} 1SJ^{8}-D^{4}-PT^{2}-go.MOM^{0}] and *ɨrìvet* 'I spend the day' [ɨ^{7}-*di*^{1}-*bet*^{0} day^{7}-1S.SJ^{1}-make^{0}] with the Absolutive Conjugation intransitives *bóɣòvinden* 'I rushed out' [*bo*^{6}-*k*^{5}-*o*^{4}-*b*^{3}-*in*^{2}-*den*^{0} 1S.SJ^{6}-out^{5}-D^{4}-INT^{3}-PT^{2}-walk.MOM^{0}] and *báɣìssal* 'I spend the night' [*ba*^{6}-*k*^{5}-*(s)-sal*^{0} 1S.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}], which mark their subjects in P6.

Because conjugation membership is not explainable synchronically, the Ket verbal lexicon contains numerous conjugational pairs of this sort. Another is the Active Conjugation transitive *dəbbàk* 'she drags it (once)' [*də*^{8}-*b*^{3}-*bak*^{0} 3F.SJ^{8}-3N.O^{3}-drag^{0}] and its

iterative counterpart *dabágdèŋúyàvet* 'she drags it (often)' [*da*^{8}-*bakdeŋ*^{7}-*u*^{6}-*k*^{5}-*a*^{4}-*bet*^{0} 3F.SJ^{8}-drag^{7}-3N.O^{6}-ABL^{5}-D^{4}-ITER^{0}], which happens to belong to Absolutive Conjugation.

Coreferential Absolutive Conjugation verbs, both transitive and intransitive, cross-reference their subject using the active series (P8+P-1) and the P6 absolutive series simultaneously. The direct object, when there is one, is marked using the inactive series: P1 =for 1st or 2nd person, *dabúgdìt* 'she carries me' [*da*^{8}-*bu*^{6}-*k*^{5}-*di*^{1}-*t*^{0} 3F.SJ^{8}-3RS^{6}-ABL^{5}-1S.O^{1}-MOM.TR^{0}]; P3 for 3rd person inanimate-class, *dabúgbìt* 'she carries it' [*da*^{8}-*bu*^{6}-*k*^{5}-*b*^{3}-*t*^{0} 3F.SJ^{8}-3RS^{6}-ABL^{5}-3N.O^{3}-MOM.TR^{0}]; and P4 for 3rd person animate-class objects, *dabúyàjit* 'she carries him' [*da*^{8}-*bu*^{6}-*k*^{5}-*a*^{4}-*(j)-t*^{0} 3F.SJ^{8}-3RS^{6}-ABL^{5}-3M.O^{4}-(MS)-MOM.TR^{0}]. Agreement is nominative/accusative, since all subjects are marked one way and objects another way.

(79) Coreferential Absolutive Conjugation pattern

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
subject (person class)	incor-porate	**redundant subject marker (person/number)**	adposition	durative marker or **3AN-class object**	**3N-class object**	*past tense or imperative*	**1, 2 object**	base	**subject AN-class (plural)**

The additional subject marker in P6 appears in many (but not all) stems denoting quick round trips or actions performed without a tool or conveyance.

(80) Coreferential Absolutive Conjugation, intransitive stems (examples in past tense)

di^{8}-*ba*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}	*di*^{8}-*ba*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}	*di*^{8}-*kutolej*^{7}-*bo*^{6}-*k*^{5}-*il*^{2}-*a*^{0}
1SJ^{8}-1S.RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}	1SJ^{8}-1S.RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	1SJ^{8}-whistle^{7}-1S.RS^{6}-ABL^{5}-PT^{2}-go^{0}
dbátòlok 'I shuddered'	*dbátlàq* 'I made a (quick) trip'	*tkútòlejbola* 'I whistled'
ku^{8}-*ku*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}	*ku*^{8}-*ku*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}	*ku*^{8}-*kutolej*^{7}-*ku*^{6}-*k*^{5}-*il*^{2}-*a*^{0}
2SJ^{8}-2S.RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}	2SJ^{8}-2S.RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	2SJ^{8}-whistle^{7}-2S.RS^{6}-ABL^{5}-PT^{2}-go^{0}
kkútòlok 'you.S shuddered'	*kkútlàq* 'you.S made a trip'	*kkútòlejgula* 'you.S whistled'
du^{8}-*bu*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}	*du*^{8}-*bu*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}	*du*^{8}-*kutolej*^{7}-*bu*^{6}-*k*^{5}-*il*^{2}-*a*^{0}
3M.SJ^{8}-3RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}	3M.SJ^{8}-3RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	3M.SJ^{8}-whistle^{7}-3RS^{6}-ABL^{5}-PT^{2}-go^{0}
dbútòlok 'he shuddered'	*dbútlàq* 'he made a trip'	*tkútòlejbula* 'he whistled'
da^{8}-*bu*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}	*da*^{8}-*bu*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}	*da*^{8}-*kutolej*^{7}-*bu*^{6}-*k*^{5}-*il*^{2}-*a*^{0}
3F.SJ^{8}-3RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}	3F.SJ^{8}-3RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	3F.SJ^{8}-whistle^{7}-3RS^{6}-ABL^{5}-PT^{2}-go^{0}
dabútòlok 'she shuddered'	*dabútlàq* 'she made a trip'	*dakútòlejbula* 'she whistled'
di^{8}-*dəŋ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}-*n*$^{-1}$	*di*^{8}-*dəŋ*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}-*n*$^{-1}$	*di*^{8}-*kutolej*^{7}-*dəŋ*^{6}-*k*^{5}-*il*^{2}-*a*^{0}-*n*$^{-1}$
1SJ^{8}-1PL.RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}-AP^{-1}	1SJ^{8}-1PL.RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	1SJ^{8}-whistle^{7}-1PL.RS^{6}-ABL^{5}-PT^{2}-go^{0}-AP^{-1}
ddáŋtòlok 'we shuddered'	*ddáŋtùlaʁin* 'we made a trip'	*tkútòlejdəŋlan* 'we whistled'
ku^{8}-*kəŋ*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}-*n*$^{-1}$	*ku*^{8}-*kəŋ*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}-*n*$^{-1}$	*ku*^{8}-*kutolej*^{7}--*kəŋ*^{6}-*k*^{5}-*il*^{2}-*a*^{0}-*n*$^{-1}$
2SJ^{8}-2PL.RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}-AP^{-1}	2SJ^{8}-2PL.RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}	2SJ^{8}-whistle^{7}-2PL.RS^{6}-ABL^{5}-PT^{2}-go^{0}-AP^{-1}
kkáŋtòlok 'you.PL shuddered'	*dkáŋtùlaʁin* 'you.PL made…'	*kkútòlejkəŋlan* 'you.PL whistled'
du^{8}-*bu*^{6}-*t*^{5}-*o*^{4}-*il*^{2}-*ok*^{0}-*n*$^{-1}$	*du*^{8}-*bu*^{6}-*t*^{5}-*il*^{2}-*aq*^{0}-*n*$^{-1}$	*du*^{8}-*kutolej*^{7}-*bu*^{6}-*k*^{5}-*il*^{2}-*a*^{0}-*n*$^{-1}$
3AN.SJ^{8}-3RS^{6}-head^{5}-D^{4}-PT^{2}-move^{0}-AP^{-1}	3AN.SJ^{8}-3RS^{6}-SU^{5}-PT^{2}-go.MOM^{0}-AP^{-1}	3AN.SJ^{8}-whistle^{7}-3RS^{6}-ABL^{5}-PT^{2}-go^{0}-AP^{-1}
dbútòlok 'they.AN shuddered'	*dbútlàʁin* 'they.AN made…'	*tkútòlejbulan* 'they.AN whistled'

Coreferential Absolutive transitives mark the direct object using the inactive series in P4-3-1. The examples in (81) show non-past forms with feminine singular subjects.

(81) Coreferential Absolutive transitives (paradigm fragment)

da^{8}-*bu*^{6}-*k*^{5}-*di*^{1}-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*di*^{1}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*di*^{1}-*aq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-1S.O^{1}-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-1S.O^{1}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/D^{4}-1S.O^{1}-pull^{0}
dabúgdìt 'she carries me'	*dabúgdɪʁos* 'she brings me'	*dabútàddaq* 'she pulls me'
da^{8}-*bu*^{6}-*k*^{5}-*ku*^{1}-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*ku*^{1}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*ku*^{1}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-2S.O^{1}-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-2S.O^{1}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/D^{4}-2S.O^{1}-pull^{0}
dabúgdìt 'she carries you.S'	*dabúkkùʁos* 'she brings you.S'	*dabútàɣuraq* 'she ~ you.S'
da^{8}-*bu*^{6}-*k*^{5}-*a*^{4}-*(j)*-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*a*^{4}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-3M.O^{4}-(MS)-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-3M.O^{4}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/3M.O^{4}-pull^{0}
dabúɣàjit 'she carries him'	*dabúɣàʁos* 'she brings him'	*dabútàraq* 'she pulls him'
da^{8}-*bu*^{6}-*k*^{5}-*ɪ*^{4}-*(j)*-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*ɪ*^{4}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-3F.O^{4}-(MS)-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-3F.O^{4}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/3F.O^{4}-pull^{0}
dabúɣìjit 'she carries her'	*dabúɣɪʁos* 'she brings her'	*dabúttàq* 'she pulls her'
da^{8}-*bu*^{6}-*k*^{5}-*b*^{3}-*(j)*-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*b*^{3}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*b*^{3}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-3N.O^{3}-(MS)-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-3N.O^{3}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/D^{4}-3N.O^{3}-pull^{0}
dabúgbìt 'she carries it'	*dabúgbɪʁos* 'she brings it'	*dabútàbdaq* 'she pulls it'
da^{8}-*bu*^{6}-*k*^{5}-*daŋ*^{1}-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*daŋ*^{1}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*daŋ*^{1}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-1PL.O^{1}-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-1PL.O^{1}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/D^{4}-1PL.O^{1}-pull^{0}
dabúgdàŋit 'she carries us'	*dabúgdàŋgos* 'she brings us'	*dabútàraŋdaq* 'she pulls us'
da^{8}-*bu*^{6}-*k*^{5}-*kaŋ*^{1}-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*kaŋ*^{1}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/a*^{4}-*kaŋ*^{1}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-2PL.O^{1}-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-2PL.O^{1}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-through/D^{4}-2PL.O^{1}-pull^{0}
dabúgkàŋit 'she carries you.PL'	*dabúkkàŋgos* 'she ~ you.PL'	*dabútàɣaŋdaq* 'she~you.PL'
da^{8}-*bu*^{6}-*k*^{5}-*aŋ*^{1}-*(j)*-*t*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*aŋ*^{1}-*qos*^{0}	*da*^{8}-*bu*^{6}-*k*^{5}-*d/aŋ*^{4}-*daq*^{0}
3F.SJ^{8}-3RS^{6}-ABL^{5}-3AP.O^{4}-(MS)-MOM.TR^{0}	3F.SJ^{8}-3RS^{6}-ABL^{5}-3AP.O^{1}-bring^{0}	3F.SJ^{8}-3RS^{6}-out^{5}-3AP.O^{4}-pull^{0}
dabúgàjit 'she carries them.AN'	*dabúɣàŋgos* 'she ~ them.AN'	*dabútàŋdaq* 'she~them.AN'

Many (but far from all) Coreferential Absolutive transitives denote transporting people or objects without the aid of a sled, reindeer, or any secondary means of conveyance. In this case, the additional subject marker in these verbs serves as a sort of "anti-applicative" affix. But "auto-instrumental" stems may belong to other conjugations too. One example is the Active Conjugation verb *dóptàŋ* 'she drags it (using her own arms)' [*da*^{8}-*b*^{3}-*taŋ*^{0} 3F.SJ^{8}-3N.O^{3}-drag^{0}].

The fourth agreement type, **Coreferential Inactive Conjugation**, exhibits a mixture of split-S and nominative/accusative traits. Subject marking involves animacy and agentivity in the following way. Any transitive subject, animate-class intransitive subject, or highly active inanimate-class subject is marked in P8; less active inanimate-class intransitive subjects are marked with P3 *b*. Transitive stems are unproductive in this conjugation, but

the few that do occur mark their direct objects in P6: *daúksàʁa* 'she sells it' [*da*^{8}-*u*^{6}-*k*^{5}-*(s)*-*a*^{1}-*q/a*^{0} 3F.SJ^{8}-3N.O^{6}-ABL^{5}-(MS)-3S.RS^{1}-make/extend^{0}]. The hallmark of any Coreferential Inactive stem is the additional subject marker in P1.

(82) Coreferential Inactive Conjugation pattern

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
animate or transitive subject (person/class)	incorporate	**direct object**	adposition	durative marker **subject**	**inanimate inactive**	*past tense or imperative*	**redundant subject marker (person/number)**	base	-

Unlike other conjugations that use P8 to mark an active or transitive subject, Coreferential Inactive verbs normally do not cross-reference a plural animate subject using the *-n* suffix of P-1. Instead, many add the distributive suffix *-ŋ* to P0 in stems with plural subjects: *ttájàŋdaqŋ* 'they.AN fall (many events)' [*du*^{8}-*t/a*^{4}-*(j)*-*aŋ*^{1}-*d/aq/ŋ*^{0} 3AN.SJ^{8}-AT/D^{4}-(MS)-3PL.RS^{1}-self/go/PL.SJ^{0}]. Distributive *-ŋ* also appears in forms with inanimate-class plural subjects, demonstrating that this morpheme is not the animate-class plural suffix of P-1: *távàraqŋ* 'they.N fall (many events)' [*t/a*^{4}-*b*^{3}-*a*^{1}-*d/aq/ŋ*^{0} AT/D^{4}-3N.SJ^{3}-3S.RS^{1}-self/go/PL.SJ^{0}]. In Coreferential Inactive verbs that do not undergo P0 number suppletion, subject number is expressed only by the otherwise redundant P1 subject marker: *dájäŋtij* 'they grow' [*du*^{8}-*a*^{4}-*(j)*-*aŋ*^{1}-*tij*^{0} 3AN.SJ^{8}-(MS)-D^{4}-3AP.RS^{1}-grow^{0}].

(83) Coreferential Inactive Conjugation, intransitive stems (non-past forms)

di^{8}-*ɾ*^{5}-*a*^{4}-*di*^{1}-*daq*^{0}	*di*^{8}-*a*^{4}-*di*^{1}-*tij*^{0}	*di*^{8}-*ti*^{7}-*di*^{1}-*qo*^{0}
1SJ^{8}-SU^{5}-D^{4}-1S.RS^{1}-fall^{0}	1SJ^{8}-D^{4}-1S.RS^{1}-grow^{0}	1SJ^{8}-bowstring^{7}-1S.RS^{1}-stretch^{0}
ttáddàq 'I fall'	*dáddìj* 'I grow'	*ttʃɾìʁo* 'I load (gun, originally bow)'
ku^{8}-*ɾ*^{5}-*a*^{4}-*ku*^{1}-*daq*^{0}	*ku*^{8}-*a*^{4}-*ku*^{1}-*tij*^{0}	*ku*^{8}-*ti*^{7}-*ku*^{1}-*qo*^{0}
2SJ^{8}-SU^{5}-D^{4}-2S.RS^{1}-fall^{0}	2SJ^{8}-D^{4}-2S.RS^{1}-grow^{0}	2SJ^{8}-bowstring^{7}-2S.RS^{1}-stretch^{0}
ktáɣùraq 'you.S fall'	*káɣùtij* 'you.S grow'	*ktʃ ɣùʁo* 'you.S load (gun)'
du^{8}-*ɾ*^{5}-*a*^{4}-*(j)*-*a*^{1}-*daq*^{0}	*du*^{8}-*a*^{4}-*(j)*-*a*^{1}-*tij*^{0}	*du*^{8}-*ti*^{7}-*(s)*-*a*^{1}-*qo*^{0}
3M.SJ^{8}-SU^{5}-D^{4}-(MS)-3RS^{1}-fall^{0}	3M.SJ^{8}-D^{4}-(MS)-3S.RS^{1}-grow^{0}	3M.SJ^{8}-bowstr^{7}-(MS)-3S.RS^{1}-stretch^{0}
ttájàraq 'he falls'	*dájätij* 'he grows'	*ttʃsàʁo* 'he loads (gun)'
da^{8}-*ɾ*^{5}-*a*^{4}-*(j)*-*a*^{1}-*daq*^{0}	*da*^{8}-*a*^{4}-*(j)*-*a*^{1}-*tij*^{0}	*da*^{8}-*ti*^{7}-*(s)*-*a*^{1}-*qo*^{0}
3F.SJ^{8}-SU^{5}-D^{4}-(MS)-3S.RS^{1}-fall^{0}	3F.SJ^{8}-D^{4}-(MS)-3S.RS^{1}-grow^{0}	3F.SJ^{8}-bowstring^{7}-3S.RS^{1}-stretch^{0}
datájàraq 'she falls'	*da.ájätij* 'she grows'	*datʃsàʁo* 'she loads (gun)'
ɾ^{5}-*a*^{4}-*b*^{3}-*a*^{1}-*daq*^{0}	*a*^{4}-*b*^{3}-*a*^{1}-*tij*^{0}	
SU^{5}-D^{4}-3N.SJ^{3}-3S.RS^{1}-fall^{0}	D^{4}-3N.SJ^{3}-3S.RS^{1}-grow^{0}	–
távàraq 'it falls'	*ávätij* 'it grows/they.N grow'	
di^{8}-*ɾ*^{5}-*a*^{4}-*di*^{1}-*daq/ŋ*^{0}	*di*^{8}-*a*^{4}-*daŋ*^{1}-*tij*^{0}	*di*^{8}-*ti*^{7}-*daŋ*^{1}-*qo*^{0}
1SJ^{8}-SU^{5}-D^{4}-1PL.RS^{1}-fall/PL.SJ^{0}	1SJ^{8}-D^{4}-1PL.RS^{1}-grow^{0}	1SJ^{8}-bowstring^{7}-1PL.RS^{1}-stretch^{0}
ttáràŋdaqŋ 'we fall'	*dáräŋtij* 'we grow'	*ttʃràŋgo* 'we load (gun)'

ku^{8}*-t*^{5}*-a*^{4}*-kaŋ*^{1}*-daq/ŋ*^{0}	*ku*^{8}*-a*^{4}*-kaŋ*^{1}*-tij*^{0}	*ku*^{8}*-ti*^{7}*-kaŋ*^{1}*-qo*^{0}
2SJ^{8}-SU^{5}-D^{4}-2PL.RS^{1}-fall/PL.SJ^{0}	2SJ^{8}-D^{4}-2PL.RS^{1}-grow^{0}	2SJ^{8}-bowstring^{7}-2PL.RS^{1}-stretch^{0}
ktáɣàŋdaqŋ 'you.PL fall'	*káɣäŋtij* 'you.PL grow'	*ktʃɣàŋgo* 'you.PL load (gun)'
du^{8}*-t*^{5}*-a*^{4}*-(j)-aŋ*^{1}*-daq/ŋ*^{0}	*du*^{8}*-a*^{4}*-(j)-aŋ*^{1}*-tij*^{0}	*du*^{8}*-ti*^{7}*-(s)-aŋ*^{1}*-qo*^{0}
3AN.SJ^{8}-SU^{5}-(MS)-D^{4}-3RS^{1}-fall/PL.SJ^{0}	3AN.SJ^{8}-D^{4}-(MS)-3PL.RS^{1}-grow^{0}	3AN.SJ^{8}-bowstring^{7}-(MS)-3PL.RS^{1}-stretch^{0}
ttájàraqŋ 'they.AN fall'	*dájäŋtij* 'they.AN grow'	*ttʃsaŋgo* 'they.AN load (gun)'

The extra P1 subject marker may or may not have any logical connection with reflexivity. Because these markers are obligatory regardless of the context, it is not possible to interpret them as self-benefactives of the type 'load a gun for oneself', etc. The same form can be used to mean 'load a gun for someone else's benefit'. For this reason I cannot agree with Werner (1997b:196-203) that the extra subject markers serve as a grammatical means of signifying "subject version." These markers are simply lexical prerequisites of the stem, as is conjugation membership in general.

A few Coreferential Inactive stems appear to double-mark only plural subjects; however, the presence of a j-separator in the singular suggests that a subject marker formerly occupied P1 in these forms as well. Like other Coreferential Inactive verbs, some of these verbs display subject number suppletion in P0:

(84) Coreferential Inactive verbs that double mark their subject in the plural forms only

di^{8}*-doq*^{0}	*di*^{8}*-den*^{0}	*di*^{8}*-t/a*^{4}*-(j)-ka*^{0}
1SJ^{8}-fly^{0}	1SJ^{8}-cry^{0}	1SJ^{8}-AT/D^{4}-(MS)-one.walks^{0}
díròq 'I fly'	*dírèn* 'I cry'	*ttájgà* 'I walk around'
ku^{8}*-doq*^{0}	*ku*^{8}*-den*^{0}	*ku*^{8}*-t/a*^{4}*-(j)-ka*^{0}
2SJ^{8}-fly^{0}	2SJ^{8}-cry^{0}	2SJ^{8}-AT/D^{4}-(MS)-one.walks^{0}
kúròq 'you.S fly'	*kúrèn* 'you.S cry'	*ktájgà* 'you.S walk around'
du^{8}*-doq*^{0}	*du*^{8}*-den*^{0}	*du*^{8}*-t/a*^{4}*-(j)-ka*^{0}
3M.SJ^{8}-fly^{0}	3M.SJ^{8}-cry^{0}	3M.SJ^{8}-AT/D^{4}-(MS)-one.walks^{0}
dúròq 'he flies'	*dúrèn* 'he cries'	*ttájgà* 'he walks around'
də^{8}*-doq*^{0}	*də*^{8}*-den*^{0}	*da*^{8}*-t/a*^{4}*-(j)-ka*^{0}
3F.SJ^{8}-fly^{0}	3F.SJ^{8}-cry^{0}	3F.SJ^{8}-AT/D^{4}-(MS)-one.walks^{0}
dəròq 'she/it flies'	*dərèn* 'she cries'	*datájgà* 'she walks around'
di^{8}*-daŋ*^{1}*-doq/ŋ*^{0}	*di*^{8}*-daŋ*^{1}*-den*^{0}	*di*^{8}*-t/a*^{4}*-daŋ*^{1}*-qotn*^{0}
1SJ^{8}-1PL.RS^{1}-fly/PL.SJ^{0}	1SJ^{8}-1PL.RS^{1}-cry^{0}	1SJ^{8}-AT/D^{4}-1PL.RS^{1}-many.walk^{0}
dírànɲdoqŋ 'we fly'	*dírànɲden* 'we cry'	*ttáràŋgotn* 'we walk around'
ku^{8}*-kaŋ*^{1}*-doq/ŋ*^{0}	*ku*^{8}*-kaŋ*^{1}*-den*^{0}	*ku*^{8}*-t/a*^{4}*-kaŋ*^{1}*-qotn*^{0}
2SJ^{8}-2PL.RS^{1}-fly/PL.SJ^{0}	2SJ^{8}-2PL.RS^{1}-cry^{0}	2SJ^{8}-AT/D^{4}-2PL.RS^{1}-many.walk^{0}
kúɣàŋdoqŋ 'you.PL fly'	*kúɣàŋden* 'you.PL cry'	*ktáɣàŋgotn* 'you.PL walk around'
du^{8}*-(j)-aŋ*^{1}*-doq/ŋ*^{0}	*du*^{8}*-(j)-aŋ*^{1}*-den*^{0}	*du*^{8}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-(MS)-3AP.RS^{1}-fly/PL.SJ^{0}	3AN.SJ^{8}-(MS)-3AP.RS^{1}-cry^{0}	3AN.SJ^{8}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
dújàŋdoqŋ 'they.AN fly'	*dújàŋden* 'they.AN cry'	*ttájàŋgotn* 'they.AN walk around'

Coreferential Inactive Conjugation contains a few transitive stems, which mark their direct object in P6. Unlike the other actant types discussed so far, this pattern is unproductive. Fragments of two transitive stem paradigms appear in (85):

(85) Coreferential Inactive Conjugation

du^{8}*-bo*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-bo*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-1S.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-1S.SJ^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
dbóksàŋga 'they sell me off'	*dbóktàŋgotn* 'they lead me around'
du^{8}*-ku*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-ku*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-2S.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-2S.O^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
kkúksàŋga 'they sell you.S off'	*tkúktàjaŋgotn* 'they lead you.S around'
du^{8}*-o*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-o*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-3M.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-3M.O^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
dóksàŋga 'they sell him off'	*dóktàjaŋgotn* 'they lead him around'
du^{8}*-u*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-u*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-3F.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-3F.O^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
dúksàŋga 'they sell her/it off'	*dúktàjaŋgotn* 'they lead her around'
du^{8}*-dəŋ*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-dəŋ*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-1PL.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-1PL.SJ^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
ddáɲsàŋga 'they sell us off'	*ddáɲtàŋgotn* 'they lead us around'
du^{8}*-ku*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-ku*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-2S.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-sell^{0}	3AN.SJ^{8}-2S.O^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
tkáɲsàŋga 'they sell you.PL off'	*tkáɲtàjaŋgotn* 'they lead you.PL around'
du^{8}*-oŋ*^{6}*-k*^{5}*-(s)-aŋ*^{1}*-qa*^{0}	*du*^{8}*-oŋ*^{6}*-k*^{5}*-t/a*^{4}*-(j)-aŋ*^{1}*-qotn*^{0}
3AN.SJ^{8}-3AP.O^{6}-ABL^{5}-(MS)-1AP.RS^{1}-sell^{0}	3AN.SJ^{8}-3AP.O^{6}-ABL^{5}-AT/D^{4}-(MS)-3AP.RS^{1}-many.walk^{0}
dóŋsàŋga 'they sell them.AN off'	*dóŋtàjaŋgotn* 'they lead them.AN around'

The semantic difference between Coreferential Inactive and Coreferential Absolutive Conjugation is arbitrary from a synchronic perspective. Although most Coreferential Inactive stems are intransitive, monovalent verbs with similar meanings can be found in every conjugation. Compare the Coreferential Inactive verb *daájätij* 'she grows' [*da*^{8}*-a*^{4}*-(j)-a*^{1}*-tij*^{0} 3F.SJ^{8}-D^{4}-(MS)-3S.RS^{1}-grow^{0}] with the Active Conjugation verb *daqáyàʁan* 'she gets big' [*da*^{8}*-qa*^{7}*-a*^{4}*-qaŋ*^{0} 3F.SJ^{8}-big^{7}-D^{4}-INCEPT^{0}], or the Coreferential Inactive verb *dakájàrij* 'she falls (once)' [*da*^{8}*-k*^{5}*-a*^{4}*-(j)-a*^{1}*-dij*^{0} 3F.SJ^{8}-down^{5}-D^{4}-(MS)-3S.RS^{1}-fall^{0}] with the Absolutive Conjugation verb *úgbùn* 'she slips (once)' [*u*^{6}*-k*^{5}*-b*^{3}*-hun*^{0} 3F.SJ^{6}-down^{5}-IC^{3}-slip^{0}]. Also compare the Active Conjugation semelfactive *dílsìvet* 'I take a breath' [*di*^{8}*-il*^{7}*-(s)-bet*^{0} 1SJ^{8}-breath^{7}-(MS)-make^{0}] with its Coreferential Inactive iterative counterpart *déllŋírvèt* 'I breathe' [*di*^{8}*-ellŋ*^{7}*-di*^{1}*-bet*^{0} 1SJ^{8}-breath/ITER^{7}-1S.RS^{1}-make^{0}]. The prevalence of such pairs underscores the lexical nature of agreement pattern selection in Ket.

The fifth productive agreement strategy can be called **Possessive Conjugation**, even though few of the stems that use it actually denote possession. The subject is cross-

referenced with the help of a possessive pronominal clitic in P7 rather than by one of the regular agreement series:

(86) Possessive Conjugation pattern

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
-	incorporate **+ possessive clitic** **(subject person/number/class)**	-	-	durative marker	involuntary causative affix	*past tense or imperative*	resultative affix	base	-

All verbs in this conjugation are intransitive and portray an event as a spontaneous occurrence (which it may not actually be). Most convey sound effects: *tkútòlejbata* 'she is whistling' (literally, 'her whistling resounds') [*d/kutolej*^{7}-*b*^{3}-*a*^{1}-*ta*^{0} her/whistling^{7}-IC^{3}-R^{1}-extend^{0}]. Possessive Conjugation verbs expressing sound exhibit a distinct pattern for processes as opposed to sudden instantaneous sounds. The latter pattern does not distinguish between past and non-past tense (though see example (70f) regarding a possible etymological difference between the two tenses in these verbs).

(87) Possessive Conjugation paradigms

Iterative (prossesual) forms	Semelfactive (single, instantaneous)
ab/lakej^{7}-*b*^{3}-*il*^{2}-*a*^{1}-*ta*^{0} my/clapping^{7}-IC^{3}-PT^{2}-R^{1}-be.extended^{0} *ablákèjbɬàta* 'I was clapping'	*ab/lakej*^{7}-*ges*^{0} my/clapping^{7}-SEMEL^{0} *ablákèjges* 'I clap/clapped (once)'
ku/lakej^{7}-*b*^{3}-*il*^{2}-*a*^{1}-*ta*^{0} your.S/clapping^{7}-IC^{3}-PT^{2}-R^{1}-be.extended^{0} *klákèjbɬàta* 'you.S were clapping'	*ku/lakej*^{7}-*ges*^{0} your.S/clapping^{7}-SEMEL^{0} *klákèjges* 'you.S clap/clapped (once)'
da/lakej^{7}-*b*^{3}-*il*^{2}-*a*^{1}-*ta*^{0} his/clapping^{7}-IC^{3}-PT^{2}-R^{1}-be.extended^{0} *dalákèjbɬàta* 'he was clapping'	*da/lakej*^{7}-*ges*^{0} his/clapping^{7}-SEMEL^{0} *dalákèjges* 'he claps/clapped (once)'
d/lakej^{7}-*b*^{3}-*il*^{2}-*a*^{1}-*ta*^{0} her~its/clapping^{7}-IC^{3}-PT^{2}-R^{1}-be.extended^{0} *dlákèjbɬàta* 'she/it was clapping'	*d/lakej*^{7}-*ges*^{0} her~its/clapping^{7}-SEMEL^{0} *dlákèjges* 'she/it claps/clapped (once)'
na/lakej^{7}-*b*^{3}-*il*^{2}-*a*^{1}-*ta*^{0} AP.GEN/clapping^{7}-IC^{3}-PT^{2}-R^{1}-be.extended^{0} *nalákèjbɬàta* 'we,you,they were clapping'	*na/lakej*^{7}-*ges*^{0} AP.GEN/clapping^{7}-SEMEL^{0} (once)' *nalákèjges* 'we, you, they clap/clapped

Some Possessive Conjugation verbs have Coreferential Absolutive synonyms emphasizing the deliberate production of the sound using the subject's own body rather than its sensory effect on potential listeners: *dakútòlejbuksa* 'she makes a whistling sound with her lips' [*da*^{8}-*kutolej*^{7}-*bu*^{6}-*k*^{5}-*(s)-a*^{0} 3F.SJ^{8}-whistling^{7}-3RS^{6}-ABL^{5}-(MS)-event.extends^{0}]. A handful of Possessive Conjugation stems express events unrelated to sound, such as *bíkèraʁan* 'I get nauseated' [*b/ike*^{7}-*d/a*^{4}-*qan*^{0} my/nausea^{7}-IT/D^{4}-INCEPT^{0}].

The hallmark of this conjugation is the backgrounded source-role expressed by preposing a possessive clitic to the P7 morpheme naming the effect produced. Possessive Conjugation could be interpreted as involving a polymorphemic incorporated subject, one

part of which (the possessive prefix) happens to correlate with an agent expressible outside the verb complex.

A number of other stems denoting spontaneous events similarly incorporate their subject by placing a noun root in either P7 or P0. Examples include: *úlàta* 'it rains' [*ūl*^{7}-*a*^{4}-*ta*^{0} water^{7}-D^{4}-extend^{0}], *béràta* 'it snows' [*be*^{7}*t*^{7}-*a*^{4}-*ta*^{0} snowflakes^{7}-D^{4}-extend^{0}], *káddàvan* 'winter begins' [*kāt*^{7}-*d/a*^{4}-*b*^{3}-*qan*^{0} winter^{7}-IT/D^{4}-IC^{3}-INCEPT^{0}], *ílbèj* 'wind blew' [*il*^{2}-*bēj*^{0} PT^{2}-wind^{0}], *bíŋsɪʁɪn* 'it flows' [*bin*^{7}-*k*^{5}-*(s)-qīn*^{0} self^{7}-ABL^{5}-(MS)-flow^{0}], etc. Verbs that incorporate their subject using both P7 and P0 usually fill P7 with an adverbial specifier: *tílbèj* 'south wind blew' [*ūj*^{7}-*il*^{2}-*bēj*^{0} downriver^{7}-PT^{2}-wind.blows^{0}], *ʉ́ròbnej* 'north wind blows' [*ūt*^{7}-*o*^{4}-*in*^{2}-*bēj*^{0} upriver^{7}-D^{4}-PT^{2}-wind.blows^{0}]. Although some patterns of intransitive subject incorporation are extremely productive (cf. §2.2.5.3) and constitute a sixth basic stem type, verbs with incorporated subjects technically fall outside the system of the five actant conjugations since they do not actually cross-reference any verb-external NP.

Finally, a number of verbs display unique agreement marker configurations. The past tense forms of one intransitive stem require double subject marking in P6 and P1: *éjbàgbíndɪʁos* I jumped up' [*ej*^{7}-*ba*^{6}-*k*^{5}-*b*^{3}-*in*^{2}-*di*^{1}-*q/os*^{0} up^{7}-1S.SJ^{6}-ADES^{5}-INT^{3}-PT^{2}-1S.RS^{1}-make/rise^{0}]. About a dozen verbs (cf. (85) above) use Coreferential Inactive agreement in the plural: *díràŋdoqŋ* 'we fly' [*d i*^{8}-*daŋ*^{1}-*doq/ŋ*^{0} 1SJ^{8}-1PL.RS^{1}-fly/PL.SJ^{0}], but Active agreement in the singular: *dīroq* 'I fly' [*di*^{8}-*doq*^{0} 1SJ^{8}-fly^{0}]. A few Active Conjugation verbs retain traces of a bygone verbal classifier system. These stems mark the object noun class by adding P4 animacy-classifying *d*: *daháràŋistet* 'she breaks them.AN' [*da*^{8}-*ha*^{7}-*d/aŋ*^{4}*-(s)-tet*^{0} 3F.SJ^{8}-long.shape^{7}-(MS)-AC/PL.O^{4}-hit^{0}], and simply omit this marker in the case of an inanimate object rather than including the expected P3 *b*: *dahástèt* 'she breaks it/them.N' [*da*^{8}-*ha*^{7}-*(s)-tet*^{0} 3F.SJ^{8}-long.shape^{7}-(MS)-hit^{0}]. Such verbs are bygone relics that do not reflect the language's contemporary morphological patterns. Table (100) summarizes all productive and unproductive agreement strategies.

2.2.4. Lexical categories of finite verb morphemes

2.2.4.1. Bases (P0) and incorporates (P7)

Section (§2.2.3) demonstrated that the subject/object agreement positions are stem elements, even though the morphemes occupying them express grammatical agreement. This section discusses actual morpheme shapes that form part of the stem. The core lexical elements normally occupy P7 and P0 – positions that never contain inflectional affixes of any kind. Structurally, every verb fills P0 with what is called a "base," though in rare cases the entire base elides phonologically. Compare *dīp* 'I eat it' [*di*^{8}-*b*^{3}-*a*^{0} 1SJ^{8}-3N.O^{3}-eat^{0}] – where a high-tone vowel-final disyllable reduces to a monosyllable (a normal phonological process in Southern Ket; cf. §1.3.1) – with *dívàn* 'we eat it' [*di*^{8}-*b*^{3}-*a*^{0}-*n*$^{-1}$ 1SJ^{8}-3N.O^{3}-eat^{0}-AP^{-1}], where the suffix *-n* preserves the second vowel. P0 represents the verb's head only in the structural sense that elements in the remaining positions attach to it. The base does not necessarily convey the stem's core meaning, and often acts more like a derivational affix signaling iterativity, semelfactivity, or transitivity. Like most other position classes, P0 may be complex morphologically, at least from a diachronic perspective. Many bases contain initial *d–* a fossilized morpheme that appears to have once served to decrease transitivity or telicity in a variety of ways (analogous to, if not actually homologous with, the D-component of the Athabaskan-Eyak-Tlingit classifier). This element appears in many intransitives with reflexive-type meaning: *dújàruk* 'he moves (himself) aside' [*du*^{8}-*(j)-a*^{1}-*d/ok*^{0} 3M.SJ^{8}-(MS)-3S.RS^{1}-self/move^{0}] (infinitive *dōk* < *d* + *ok* 'self + move'). In other

bases, the *d*-augment serves as a sort of animacy-classifier to mark actions naturally accomplished by the subject's own body, such as drinking, vocalizing, looking, or hearing: *dújàrun* 'he gives a shout' [*du*^{8}-*a*^{4}-*(j)*-*a*^{1}-*dun*^{0} 3M.SJ^{8}-D^{4}-(MS)-3S.RS^{1}-shout.MOM^{0}], *dúvròp* 'he drinks it' [*du*^{8}-*b*^{3}-*dop*^{0} 3M.SJ^{8}-3N.O^{3}-drink^{0}]. This element also occurs on bases associated with fire or burning: *dbóyùldet* 'he made a fire' [*du*^{8}-*bo*^{7}*k*^{7}-*o*^{4}-*il*^{2}-*det*^{0} 3M.SJ^{8}-fire^{7}-D^{4}-PT^{2}-make^{0}]. A *d*-augment also appears in the semantically eroded bases *-da*, *-do*, *-dij*, and *-damin*, which convey iterative or distributive meaning.

Another fossilized element found at the beginning of many bases is *q* (*χ* in Yugh). This morpheme conveys deliberate causation and may derive from a valence-increase marker homologous with the *ɬ*-component of the Athabaskan-Eyak-Tlingit classifier. A few Ket bases appear to reflect alternations between valence-increase *q* and valence-decrease *d*. These prefixes appear, for example, on *ēs* 'up' (< **Hes*):

(88) a. *-tes* 'rise.INTR' <**d-Hes* 'self.go.up'
dahájàtes 'she gets up' [*da*^{8}-*h*^{5}-*a*^{4}-*(j)*-*a*^{1}-*t/es*^{0} 3F.SJ^{8}-straight^{5}-D^{4}-(MS)-3S.RS^{1}-self/rise^{0}]
b. *-qos* 'raise, lift.TR' < **ɬ-Hes* 'cause to go up'
dèttùqos 'I lift her up' [*di*^{8}-*et*^{7}-*t*^{5}-*i*^{4}-*q/es*^{0} 1SJ^{8}-up.to.here^{7}-SU^{5}-3F.O^{4}-make/rise^{0}].

A similar series is associated with P0 *-a* 'event.extends' (<**Ha*): *-ta* 'be extended, extend oneself' (<**d-Ha*), and *-qa* 'extend in one's hand, offer for sale' (<**ɬ-Ha* 'actively extend').

Two other P0 proclitics appear to be of more recent vintage. Several bases contain an initial *b-*, probably etymologically connected with the inanimate-class marker in P3. Pre-base *b-* is found in *-bet* 'make, create', *-bil* 'catch (by chasing)', *-bək* 'find', *-bes* 'arrive', and a few other bases. Although it is difficult to assign a clear meaning to this element, it is regularly replaced by *g* in imperatives: *ingə̀k* 'Find it! (you.S)' [*in*^{2}-*g/ək*^{0} IMP^{2}-find^{0}], demonstrating its separateness from the rest of the base, as well as its relation to P3 *b*, which likewise elides in imperative formation. The bases *-dop* ~ *-dup* 'cover, plug, stop up' appear to be constructed from pronominal *d-* 'its' plus the noun *ūp* 'hole, opening, burrow' creating the meaning 'across.its.hole'. Consequently, verbs containing it do not cross-reference their object term, since the d-proclitic in P0 already does so: *dákìstup* 'I cover it' [*di*^{8}-*k*^{5}-*(s)*-*d/up*^{0} 1SJ^{8}-ABL^{5}-(MS)-across.its/hole^{0}], *dájdòp* 'I cover it up' [*di*^{8}-*a*^{4}-*(j)*-*d/up*^{0} 1SJ^{8}-D^{4}-(MS)-across.its/hole^{0}], *ájàrop* 'it is stopped up' [*a*^{4}-*(j)*-*a*^{1}-*d/up*^{0} D^{4}-(MS)-R^{1}-across.its/hole^{0}]. Pre-base *b*, on the other hand, never takes the place of an actant marker: *díbbə̀k* 'I find it' [*di*^{8}-*b*^{3}-*b/ək*^{0} 1SJ^{8}-3N.O^{3}-find^{0}]. Its valence-increase function appears to involve telicity rather than actancy, and it cannot be regarded as an incorporated syntactic argument.

All pre-base augments – valence-decrease *d-*, valence-increase *q-*, and pronominal *b-* or *d-* – are unproductive relics in Modern Ket. Roots in P0 or P7 may also host the highly productive iterative/stative or detransitivizing suffixes *-ŋ* (*-n* after an alveolar or another *ŋ*) or *-ij* (*-j* after vowels). The mechanism regulating the mutual distribution of *-ŋ* vs. *-ij* remains unclear. Both are valence-decrease markers that replaced or augmented the more archaic pre-base *d-* in the same function. Examples include: P0 *-daq* 'fall (single event)' vs. *-dáqŋ̀* 'fall (many times or many objects individually)', P7 *kámbèt* 'deceive (once)' vs. *kámbèriŋ* 'deceive (many times)', and numerous transitivity pairs where *-ŋ* (*-n*) or *-ij* is suffixed to P0 in the intransitive stem, cf.: *dakávìt* 'she tears it' [*da*^{8}-*k*^{5}-*a*^{4}-*b*^{3}-*t*^{0} 3F.SJ^{8}-ABL^{5}-D^{4}-3N.O^{3}-MOM.TR^{0}] vs. *kávātij* it tears' [*k*^{5}-*a*^{4}-*b*^{3}-*a*^{1}-*tij*^{0} ABL^{5}-D^{4}-3N.O^{3}-3RS^{1}-MOM.INTR^{0}]; and *daqáksìnqajit* 'she makes him hurry' [*da*^{8}-*qəksin*^{7}-*q*^{5}-*a*^{4}-*(j)*-*t*^{0} 3F.SJ^{8}-hurry^{7}-cause^{5}-(MS)-3M.O^{4}-MOM.TR^{0}] vs. *daqáksìnqisatn* 'she is hurrying' [*da*^{8}-*qəksin*^{7}-*q*^{5}-*(s)*-*a*^{1}-*tn*^{0} 3F.SJ^{8}-hurry^{7}-cause^{5}-(MS)-3S.RS^{1}-MOM.INTR^{0}].

Only a few dozen verbs contain P0 as their sole lexical morpheme. Most stems, in fact all productive stem-building patterns, fill P7 as well as P0. The position of the semantic head varies in such compounds. When P7 incorporates a direct object, instrument or directional adverb, the semantic head is normally P0: *daqússìvet* 'she is making a tent' [*da*^{8}-*qu*^{7}*s*^{7}-*(s)*-*bet*^{0} 3F.SJ^{8}-tent^{7}-(MS)-make^{0}], *daínbàyatet* 'she jabs me with a needle' [*da*^{8}-*i*^{7}*n*^{7}-*ba*^{6}-*k*^{5}-*a*^{4}-*tet*^{0} 3F.SJ^{8}-needle^{7}-1S.O^{6}-ADES^{5}-D^{4}-hit^{0}]. An infinitive in P7 normally serves as the verb's semantic head, with P0 functioning more like an affix conveying lexical aspect or valence. Many verbs distinguish single from multiple events by transferring the semantic head from P0 to P7: *éndìsuk* 'I forget (once)' [*en*^{7}-*di*^{1}-*suk*^{0} mind^{7}-1S.SJ^{1}-back^{0}] vs. *énsòkŋbáyàvra* 'I (often) forget' [*en/suk/ŋ*^{7}-*ba*^{6}-*k*^{5}-*a*^{4}-*b*^{3}-*da*^{0} mind/back/ITER^{7}-1S.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-ITER^{0}].

Examples (89-92) illustrate the possible semantic relationships between P7 and P0.

(89) P0 is the semantic head, while P7 incorporates an object or other specifier:

da^{8}-*qo/ŋ/an*^{7}-*ba*^{6}-*k*^{5}-*t/a*^{4}-*do*^{0}	*da*^{8}-*qi*^{7}*t*^{7}-*(s)*-*bet*^{0}
3F.SJ^{8}-horn/PL/ITER^{7}-1S.O^{6}-ADES^{5}-AT/D^{4}-gouge^{0}	3F.SJ^{8}-bow^{7}-(MS)-make^{0}
daqóŋànbátàro 'she (a cow) butts me'	*daqítsìvet* 'she makes a bow'

(90) P7 is the semantic head, while P0 serves as a marker of aspect or transitivity:

di^{8}-*us*^{7}-*q*^{5}-*ku*^{1}-*t*^{0}	*di*^{8}-*us*^{7}-*q*^{5}-*a*^{4}-*ku*^{1}-*da*^{0}
1SJ^{8}-warm^{7}-cause^{5}-2S.O^{1}-MOM.TR^{0}	1SJ^{8}-warm^{7}-cause^{5}-D^{4}-2S.O^{1}-ITER.INTR^{0}
dúsqìyut 'I (will) warm you.S up (once)'	*dúsqàyura* 'I (often) warm you.S up'

(91) P7 + P0 form an appositional compound

aŋ^{7}-*k*^{5}-*b*^{3}-*tə*^{0}	*da*^{8}-*ses*^{7}-*a*^{4}-*tə*^{0}
hang^{7}-ABL^{5}-3N.SJ^{3}-extend^{0}	3F.SJ^{8}-place^{7}-D^{4}-extend^{0}
áŋgìpta 'it is hanging'	*dasésta* 'she is seated'

(92) P7 + P0 form a discontinuous binomial root, neither portion being meaningful apart from the other: *déqsàq* 'I hear' [*di*^{8}-*eq*^{7}-*(s)*-*aq*^{0} 1SJ^{8}-L^{7}-(MS)-L^{0}]. The gloss 'L' here indicates that the given morpheme defies clear definition, given my present knowledge of Ket morphology. Further study may reveal that such verbs belong to one of the other three categories.

P7 is often polymorphemic. An extreme example is found in *daqónòksájdə̄avet* 'she eats breakfast' [*da*^{8}-*qon/ok/saj/do*^{7}-*a*^{4}-*bet*^{0} 3F.SJ^{8}-breakfast^{7}-D^{4}-ITER^{0}], where 'breakfast' derives from *qónòks* 'morning' (< *qón-òk-s* darkness-away-NOM) + *sāj* 'tea' + *dóò* 'drink'.

2.2.4.2. Adpositions (P5) and durative markers (P4)

The most productive lexical affix in Modern Ket is probably the P4 durative marker *a*, which labializes to *o* in the past tense. This morpheme originated from the root **Ha* 'event extends', with the fricative anlaut surviving as the *γ*-separator (§2.2.6): *díyàraq* 'I live' [*di*^{8}-*(γ)*-*a*^{4}-*daq*^{0} 1SJ^{8}-(MS)-D^{4}-live^{0}]. Durative-marked verbs include some single-action events like 'take a step' or 'shudder', as well as multiple-action verbs (a lexical category for which

this marker is nearly obligatory), but no true semelfactives. In Modern Ket, P4 *a* occurs in complementary distribution with the s-separator, which may have originally marked telic accomplishments in contrast to the states and repetitive activites marked by *ɣa*.

Another group of lexical affixes is a set of consonantal affixes that usually add some sort of spatial or temporal nuance to the verb's meaning. Those capable of occurring independently of morphemes in P7, P6 and P4 belong to slot P5 and are called "adpositions." Those which are always prefixed to P4 durative *a* (or, less often, associated with the P4/P1 inactive series markers) are called "proclitics" since they normally co-occur with a P4 vowel (either durative *a* or a 3rd person inactive series agreement marker). Some verbs contain a P5 adposition followed by a P4 durative proclitic: *daóktàjga* 'she leads him around' [*da*[8]*-o*[6]*-k*[5]*-t/a*[4]*-(j)-ka*[0] 3F.SJ[8]-3M.O[6]-with[5]-(MS)-AT/D[4]-walk[0]], demonstrating that each consonant belongs to a different position class.

The P5 adpositions usually contribute a spatial meaning to the verb. They are frequently associated with the P6 absolutive series agreement markers but may occur independently of them, as well. Stem building patterns that include an adposition are only productive if both P7 and P0 are also filled. A much smaller number of stems contain an adposition and base, but no incorporate. Table (93) lists all P5 adpositions and their basic functions. Etymologically, some are pairs or even triplets of homonymous morphemes, formally distinguishable only by comparing each with its Yugh cognate.

(93) Semantic classification of the P5 adpositions

1. P5 *k* that labializes any preceding P6 vowel *a* to *o* appears to be related to the verb root *ok* 'move (away)'. It often denotes concrete motion up, down, off, or away. In transitive verbs of motion, it expresses comitative meaning: *dabóksàq* 'she takes me (walks with me somewhere and back)' [*da*[8]*-bo*[6]*-k*[5]*-(s)-aq*[0] 3F.SJ[8]-1S.O[6]-with[5]-(MS)-go.MOM[0]]. In many verbs it conveys an externally motivated change of state rather than motion. Unless used literally to mean 'up, down, away, with', P5 labializing *k* will be glossed ABL for 'ablative'. The change of P6 *a* to *o*, possibly a reflex of the original *o* of *ok* 'move away', never occurs before any other P5 adposition.
2. P5 *k* that does not labialize a preceding P6 *a* may be related to the proximal-deictic velar in *kírë* 'this', *kísëɣ* 'here' and *ígbès* 'come'. Used with P6 absolutive markers, it often conveys 'dynamic introverted' motion or internally induced changes of state and will be glossed ADES for 'adessive'.
3. P5 *h* probably derives from a classifier of long or straight objects: *hávìta* 'it stands' [*h*[5]*-a*[4]*-b*[3]*-a*[1]*-ta*[0] straight[5]-D[4]-3N.SJ[3]-R[1]-extend[0]]. After the P6 absolutive markers (including the zero inanimate-class marker), P5 *h* has merged with P5 adessive *k* in Modern Ket. Compare *dahávràq* 'she hurls/propels it (using her own hand)' [*da*[8]*-h*[5]*-a*[4]*-b*[3]*-daq*[0] 3.FSJ[8]-straight[5]-D[4]-3N.O[3]-propel[0]] with the applicative stem *dabáyàvraq* 'she hits me (with a propelled object)' [*da*[8]*-ba*[6]*-k*[5]*-a*[4]*-b*[3]*-daq*[0] 3.FSJ[8]-1S.O[6]-ADES[5]-D[4]-AL[3]-propel[0]], where the presence of P6 has triggered the change of *h* to *k*. P5 adessive *k*, whether from shape-classifying *h* or proximal-deictic *k*, can easily be distinguished from ablative *k* because it never labializes the preceding P6 vowel. In Yugh these two morphemes remain formally distinct, since P5 *f* (the regular Yugh reflex of Ket *h*) remains *f* even after a P6 actant marker (cf. Yugh *dakufaχbafatet* 'she punches me once').
4. P5 *t* is actually two homonymous morphemes. The more common one denotes superficial contact with a surface and will be glossed SU for 'superessive': *datísùn* 'she crawls' [*da*[8]*-t*[5]*-(s)-a*[1]*-hun*[0] 3F.SJ[8]-SU[5]-(MS)-3S.RS[1]-slip[0]], *dahíttàyit* 'she applies glue (to a surface)' [*da*[8]*-hit*[7]*-t*[5]*-a*[4]*-kit*[0] 3F.SJ[8]-glue[7]-SU[5]-D[4]-rub[0]]. After a P6 marker this meaning can be literal, as in: *dakéròsinátàyit* 'she rubs kerosene on him (a dog, to remove fleas)' [*da*[8]*-kerosin*[7]*-a*[6]*-t*[5]*-a*[4]*-kit*[0] 3F.SJ[8]-kerosene[7]-3M.O[6]-SU[5]-D[4]-rub[0]], *datúyùnbátàɣit* 'she combs me' [*da*[8]*-tukun*[7]*-ba*[6]*-t*[5]*-a*[4]*-kit*[0] 3F.SJ[8]-comb[7]-1S.O[6]-SU[5]-D[4]-rub[0]]; or more figurative, as in: *dabátsùk* 'she pushes me' [*da*[8]*-ba*[6]*-t*[5]*-suk*[0] 3F.SJ[8]-1S.O[6]-SU[5]-back[0]]; *dabátpès* 'she draws me' [*da*[8]*-ba*[6]*-t*[5]*-b*[3]*-es*[0] 3F.SJ[8]-1S.O[6]-SU[5]-AL[3]-up[0]]. Superessive P5 *t* (also *t* in Yugh) may derive from an ancient verb root meaning 'lie' (cf. Kott *ten* 'lie'). In a small number of stems P5 *t* (which correlates with Yugh *č* rather than *t*) serves as a sort of classifier for mental states or attitudes and may derive from Ket *ti*[7] 'head' (Yugh *či*[2]): *dabútòlok* 'she shuddered' [*da*[8]*-bu*[6]*-t*[5]*-o*[4]*-il*[2]*-ok*[0] 3F.SJ[8]-3RS[6]-head[5]-D[4]-PT[2]-move[0]]. Where its meaning is less concrete, this morpheme is glossed MT for 'mental state': *bátìbgit* 'I sense' [*ba*[6]*-t*[5]*-b*[3]*-git*[0] 1S.SJ[6]-MT[5]-IC[3]-feel[0]].
5. P5 *q* is rare when used in a concrete spatial sense. It too probably represents a conflation of two separate morphemes. One derives from the adverb *qāp* 'lying face down', which occupies P7 in several verbs: *daqávìlɢut* 'she was lying face down' [*da*[8]*-qāp*[7]*-il*[2]*-qut*[0] 3N.O[3]-face.down[7]-PT[2]-S.SJ.occupies.position[0]], *qábbàta* 'it overturns' or, by analogy, 'it becomes known' [*qāp*[7]*-b*[3]*-a*[1]*-ta*[0] face.down[7]-3N.SJ[3]-3RS[1]-event.extends[0]], probably deriving from the belief that a bear's paw tossed so that it lands palm down signifies a negative answer in divination. This morpheme appears to have given rise to P5 *q* in at least one verb, where it denotes air becoming "open" or clear of smoke: *qábɢùt* 'it (smoke) dissipates' [*q*[5]*-a*[4]*-b*[3]*-qut*[0] clear[5]-D[4]-3N.O[3]-S.SJ.be.positioned[0]], *qóvlùt* 'it dissipated' [*q*[5]*-o*[4]*-b*[3]*-il*[2]*-qut*[0] clear[5]-D[4]-3N.O[3]-PT[2]-S.SJ.be.positioned[0]]. The other P5 *q* derives from the adverb *qā* 'inside, at home', which sometimes appears in its full form in P7: *daqásàq* 'she enters' [*da*[8]*-qā*[7]*-(s)-aq*[0] 3F.SJ[8]-inside[7]-(MS)-go.MOM[0]]. P5 inessive *q* appears in verbs where one item is placed inside another, such as running a spit through a piece of meat: *daqívrìl* 'she skewers it' [*da*[8]*-q*[5]*-b*[3]*-d/il*[0] 3F.SJ[8]-inside[5]-3N.O[3]-through.its/extension[0]]. This adposition occurs after a P6 actant marker in verbs denoting the act of putting a body part inside an article of clothing (head into a hat, or arms and torso into a shirt): *dabáʁìvril* 'she puts it on me (puts me inside it)' [*da*[8]*-ba*[6]*-q*[5]*-b*[3]*-d/il*[0] 3F.SJ[8]-1S.O[6]-inside[5]-AL[3]-through.its/extension[0]]. The verb for putting on a flat article of clothing such as a scarf contains P5 adessive *k* instead: *dabáyìpto* 'she lays it on me' [*da*[8]*-ba*[6]*-k*[5]*-b*[3]*-to*[0] 3F.SJ[8]-1S.O[6]-ADES[5]-AL[3]-put[0]]. P5 *q* in either of its spatial meanings is the least common adposition. Below, however, I argue that the highly productive causative affix (also P5 *q*) also developed from *qā* 'inside'.
6. P5 *n* is also fairly uncommon. It generally denotes action around an object or some notion associated with circularity: *danámgìl* 'she cuts off the edges' [*da*[8]*-n*[5]*-a*[4]*-b*[3]*-hil*[0] 3F.SJ[8]-around[5]-D[4]-3N.O[3]-turn[0]], *danámì* 'she brushes snow from around it' [*da*[8]*-n*[5]*-a*[4]*-b*[3]*-i*[0] 3 F.SJ[8]-around[5]-D[4]-3N.O[3]-PT[2]-brush[0]], *dabóʁìnbúnsìvet* 'she has gloves' [*da*[8]*-boqin*[7]*-bu*[6]*-n*[5]*-(s)-bet*[0] 3F.SJ[8]-gloves[7]-3RS[6]-around[5]-(MS)-have[0]]. In one stem, P5 *n* denotes repeated action: *dabánbù* 'she gives me (often)' [*da*[8]*-ba*[6]*-n*[5]*-b*[3]*-o*[0]3F.SJ[8]-1S.O[6]-ITER[5]-AL[3]-stretch[0]]. In a few verbs P5 *n* seems to signify 'head' in the literal sense of a round object: *danóntèt* 'she dove in head-first/disappeared' [*da*[8]*-n*[5]*-o*[4]*-in*[2]*-tet*[0] 3F.SJ[8]-head[5]-D[4]-PT[2]-hit[0]], *dabúnnìyil* 'she winced' [*da*[8]*-bu*[6]*-n*[5]*-in*[2]*-hil*[0] 3F.SJ[8]-3RS[6]-head[5]-PT[2]-turn[0]]. P5 *n* probably ultimately derives from some Proto-Yeniseic nouns for head (possibly preserved in Ket *ánùn* 'mind', *èn* 'forget', etc.). P5 *n* differs from P5 mental *t* in that the latter seems less to involve any specific notion of roundness and instead deals with perceptual qualities associated with the head.

7. One verb contains P5 *ŋ*: *dabúŋsùʁo* 'she looks, searches, waits'. This morpheme may derive from a Proto-Yeniseic word meaning 'eye', which would explain its use here with Coreferential Absolutive marking (signifying auto-instrumental meaning 'using one's own eyes': *da*^{8}-*bu*^{6}-*ŋ*^{5}-*(s)-q/o*^{0} [3F.SJ^{8}-3RS^{6}-eye?^{5}-(MS)-cause/see^{0}]. Regardless of how it is etymologized, P5 *ŋ* is unique to this verb.

The distribution of these P5 adpositions is highly lexicalized in Modern Ket; only rarely do they build minimal pairs. One such contrast occurs in combination with the P0 base *-do*, meaning various types of repetitive actions against an object using a sharp instrument: 'chop, clip, scrape, gouge, etc'. The adpositional meanings are clearly visible when one compares the bare stem *daávrò* 'she clips it (hair)' [*da*^{8}-*a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-D^{4}-3N.O^{3}-cut^{0}] with stems containing various P5 adpositions: *datávrò* 'she rough hews it('s outer surface)' [*da*^{8}-*t*^{5}-*a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-SU^{5}-D^{4}-3N.O^{3}-scrape^{0}], *dakávrò* 'she clears it (a trail, by cutting away branches)' [*da*^{8}-*k*^{5}-*a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-away^{5}-D^{4}-3N.O^{3}-chop^{0}], and *dahávrò* 'she erects it (a tent, by stabbing poles straight into the ground)' [*da*^{8}-*h*^{5}-*a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-straight^{5}-D^{4}-3N.O^{3}-gouge^{0}]. Combination of P5 *n* or P5 *q* + P0 *do* are not attested. A final combination includes *d*, a P4 durative proclitic signifying transverse action: *dadávrò* 'she carves it out (by gouging lengthwise)': *da*^{8}-*d/a*^{4}-*b*^{3}-*do*^{0} [3F.SJ^{8}-across/D^{4}-3N.O^{3}-gouge^{0}].

Although the P5 postpositions often retain a tangible distinction between extroverted action (< ablative *k*), introverted action (< adessive *k*), or surface action (< superessive *t*), they also appear obligatorily in certain derivations irrespective of their concrete functional origins. Intransitive inceptives require absolutive subject marking plus adessive *k* (cf. §2.2.5.3). Transitive stems that combine P0 *-bet* with a P7 incorporate (the usual technique for transforming Russian infinitives into Ket finite verb stems), require ablative *k* regardless of whether the event involves any real 'dynamic extroverted action': *dapómògatbóyàvet* 'she helps me' [*da*^{8}-*pomogat*^{7}-*bo*^{6}-*k*^{5}-*a*^{4}-*bet*^{0} 3F.SJ^{8}-help^{7}-1S.O^{6}-ABL^{5}-D^{4}-ITER^{0}]. The functions of P5 ablative and adessive *k* often resemble the particles in English phrasal verbs such as *help out, finish off, hunt up*, etc.

The chart in (94) shows the attested combinations of P6 absolutive markers plus P5 spatial adpositions. Only the first three are productive, and only ablative *k* labializes *a* to *o*:

(94) Lexical sub-series of P6 absolutive agreement morphemes

	1S	2S	3M	3F	3N	1PL	2PL	3AP	3RS
ablative (ABL)	*bo/k*	*ku/k*	*o/k*	*u/k*	*u/k*	*dəŋ/k*	*kəŋ/k*	*oŋ/k*	*bu/k*
adessive (ADES)	*ba/k*	*ku/k*	*a/k*	*i/k*	*Ø/k~i/k*	*dəŋ/k*	*kəŋ/k*	*aŋ/k*	*bu/k*
superessive (SP)	*ba/t*	*ku/t*	*a/t*	*i/t*	*Ø/t*	*dəŋ/t*	*kəŋ/t*	*aŋ/t*	*bu/t*
mental (MT)	*ba/t*	*ku/t*	*a/t*	*i/t*	-	*dəŋ/t*	*kəŋ/t*	*aŋ/t*	*bu/t*
inessive	*ba/q*	*ku/q*	*a/q*	*i/q*	-	*dəŋ/q*	*kəŋ/q*	*aŋ/q*	*bu/q*
around, round	*ba/n*	*ku/n*	*a/n*	*i/n*	-	*dəŋ/n*	*kəŋ/n*	*aŋ/n*	*bu/n*
eye (?)	*ba/ŋ*	*ku/ŋ*	*a/ŋ*	*i/ŋ*	-	*dəŋ/ŋ*	*kəŋ/ŋ*	*aŋ/ŋ*	*bu/ŋ*

The P6 inanimate-class marker is *u* in the ablative series, but zero or *i* before adessive *k* or superessive *t* (and unattested before the other, unproductive adpositions). Zero is the normal marker: *kíssàl* 'it spends the night' [*Ø*^{6}-*k*^{5}-*(s)-sal*^{0} 3N.SJ^{6}-ADES^{5}-(MS)-pass.night^{0}], *áqbèsaŋ* 'it starts rotting' [*aq*^{7}-*Ø*^{6}-*k*^{5}-*b*^{3}-*saŋ*^{0} rot^{7}-3N.SJ^{6}-ADES^{5}-IC^{3}-INCEPT^{0}], and is replaced by *i* only in compound verbs where P6 begins the second phonological word: *tíʃiŋ#íɣàʁan*

'it (the grass) begins to grow' [*tiʃiŋ*^{7}-*i*^{5}-*k*^{5}-*a-qan*^{0} grow^{7}-3N.SJ^{6}-ADES^{5}-D^{4}-INCEPT^{0}]. No phonological-phrase verbs containing P6 superessive *t* are attested.

Now let us turn to the consonants that appear in P4. Recall that P4 can contain either durative *a* or the 3rd person animate-class inactive series markers – *a* (masculine-class singular), *i* (feminine-class singular), and *aŋ* (animate-class plural), which replace durative *a* in any form where both would be present. Recall also that any P4 *a* labializes to *o* in the past tense (a process unrelated to P6 labialization before P5 ablative *k*).

Atelic/durative P4 *ta* derives from *ɣa* 'event extends' preceded by the same ancient valence-decrease *d* that appears as a pre-base augment in many P0 morphemes. Compare the unidirectional verb *dɔ̄roq* 'she flies (once, in a single direction)' [*dɔ*^{8}-*doq*^{0} 3F.SJ^{8}-fly^{0}] with the atelic *datájdòq* 'she flies (repeatedly or in many directions)' [*da*^{8}-*t/a*^{4}-*doq*^{0} 3F.SJ^{8}-AT/D^{4}-fly^{0}]. Likewise, *datájgà* 'she walks (repeatedly or in many directions)' [*da*^{8}-*t/a*^{4}-*(j)-ka*^{0} 3F.SJ^{8}-AT/D^{4}-(MS)-S.SJ.walk^{0}]. The fact that atelic *t* can appear with or without a P5 adposition demonstrates each of these elements belongs to a different position class: *dabóktàjga* 'she leads me (repeatedly or in many directions)' [*da*^{8}-*bo*^{6}-*k*^{5}-*t/a*^{4}-*(j)-ka*^{0} 3F.SJ^{8}-1S.O^{6}-with^{5}-(MS)-AT/D^{4}-walk^{0}], *dabúntàttiŋ* 'she does something to me' [*da*^{8}-*bu*^{6}-*n*^{5}-*t/a*^{4}-*di*^{1}-*tiŋ*^{0} 3F.SJ^{8}-3RS^{6}-around^{5}-AT/D^{4}-1S.O^{1}-twirl^{0}]. Whenever an animate-class 3rd person inactive marker replaces P4 durative *a*, P4 atelic *t* procliticizes to it instead: *dabúntàjtiŋ* 'she does something to him' [*da*^{8}-*bu*^{6}-*n*^{5}-*t/a*^{4}-*(j)-tiŋ*^{0} 3F.SJ^{8}-3RS^{6}-around^{5}-AT/3M.O^{4}-(MS)-twirl^{0}]. In many verbs, the iterative nuance added by P4 *t* is underscored by P3 *b* used to convey intensity: *dasáqtàptet* 'she keeps taking steps' [*da*^{8}-*saq*^{7}-*t/a*^{4}-*b*^{3}-*tet*^{0} 3F.SJ^{8}-step^{7}-AT/D^{4}-INT^{3}-hit^{0}]. Compare non-iterative *dasáʁàtet* 'she takes a step' [*da*^{8}-*saq*^{7}-*a*^{4}-*tet*^{0} 3F.SJ^{8}-step^{7}-D^{4}-hit^{0}], which lacks both P4 *t* and P3 *b* (for more on the role of P3 *b* as an intensity augment, see §2.2.4.3 below).

The remaining three P4 proclitics appear as *d* in Ket (*d*^{j} in Yugh). P4 transverse *d* (already introduced as a pre-base augment in §2.2.4.1) adds the concrete spatial meaning 'extend through or across': *dadájsùk* 'she fords (a river)' [*da*^{8}-*d/a*^{4}-*(j)-suk*^{0} 3F.SJ^{8}-across/D^{4}-(MS)-back^{0}]. This morpheme connotes the expenditure of considerable energy, while P5 superessive *t* denotes lighter action or more superficial contact with a surface. Compare *dadávrò* 'she carves it out' [*da*^{8}-*d/a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-across/D^{4}-3N.O^{3}-gouge^{0}] with *datávrò* 'she rough-hews it' [*da*^{8}-*t*^{5}-*a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-SU^{5}-D^{4}-3N.O^{3}-gouge^{0}]. Being a P4 proclitic, transverse *d* can follow another spatial determiner, whereas two P5 adpositions never co-occur: *dúgdàvro* 'he carves it (makes a log into a canoe, by scraping or gouging lengthwise with a tool)' [*du*^{8}-*u*^{6}-*k*^{5}-*d/a*^{4}-*b*^{3}-*do*^{0} 3F.SJ^{8}-3N.O^{6}-ABL^{5}-across/D^{4}-AL^{3}-gouge^{0}].

Another P4 *d*-proclitic appears in certain stems that incorporate a theme-role noun or adjective in P7. This morpheme, which appears productively in inceptive verbs and some causatives, will be glossed IT: *qúsbògdaʁan* 'I acquire a tent' [*qu*^{7}*s*^{7}-*bo*^{6}-*k*^{5}-*d/a*^{4}-*qan*^{0} tent^{7}-1S.SJ^{6}-ABL^{5}-IT/D^{4}-INCEPT^{0}], *írdàvan* 'spring begins' [*id*^{7}-*d/a*^{4}-*b*^{3}-*qan*^{0} spring^{7}-IT/D^{4}-INCEPT^{0}], *ābátàʁan* 'I sweat' [*ā*^{7}-*ba*^{6}-*k*^{5}-*d/a*^{4}-*qan*^{0} heat^{7}-1S.SJ^{6}-ADES^{5}-IT/D^{4}-INCEPT^{0}], *dúgdètàpsin* 'he lengthens it' [*du*^{8}-*ugde*^{7}-*q*^{5}-*d/a*^{4}-*b*^{3}-*si/n*^{0} 3M.SJ^{8}-long^{7}-cause^{5}-IT/D^{4}-3N.O^{3}-exist/fully^{0}].

The last two consonantal morphemes – animacy classifying *d* and causative *q* – nearly always follow a P7 morpheme, and their position-class identification requires special consideration. The same pronominal **də* 'other' that gave rise to the other P4 proclitics occurs as an animacy classifier (abbreviated AC) in a tiny number of Active Conjugation verbs. This morpheme can be assigned to P4 in Modern Ket, though it exhibits distinct morphotactic behavior. First, animacy *d* is connected with the inactive agreement series rather than with P4 durative *a*. This means that it may be the sole morpheme occupying P4

in forms with 1st or 2nd person objects: *úsèn daqáùrindaŋit* 'sleep took us in (= we got sleepy)' [*da*^{8}-*qā*^{7}-*d*^{M}-*in*^{2}-*daŋ*^{1}-*t*^{0} 3N.SJ^{8}-inside^{7}-AC^{4}-PT^{2}-1PL.O^{1}-MOM.TR^{0}]. Second, verbs with P4 animacy *d* also contain a P7 morpheme identifying either the shape of the object or some secondary theme or instrument involved in the action: *daúldàraŋgiŋ* 'she washes us' [*da*^{8}-*ul*^{7}-*d/a*^{4}-*daŋ*^{1}-*kŋ*^{0} 3F.SJ^{8}-water^{7}-AC/D^{4}-1PL.O^{1}-wash^{0}], *daharàjtet* 'she breaks it (a masculine-class tree)' [*da*^{8}-*ha*^{7}-*d/a*^{4}-*(j)-tet*^{0} 3F.SJ^{8}-long.shape^{7}-AC/3M.O^{4}-(MS)-hit^{0}]. Because the object is cross-referenced by the appropriate animate-class inactive series marker, the classifier is redundant in any form where it occurs. Its expressive function derives instead from its *absence* when the same stem is used in conjunction with an inanimate-class object. Because these forms fail to use the expected P3 *b* to cross-reference their object, the absense of P4 *d* is the only signal of the inanimate-class object: *daúlàkŋ* 'she washes it' [*da*^{8}-*ul*^{7}-*a*^{4}-*kŋ*^{0} 3F.SJ^{8}-water^{7}-D^{4}-wash^{0}], *dahástèt* 'she breaks it' [*da*^{8}-*ha*^{7}-*(s)-tet*^{0} 3F.SJ^{8}-long.shape^{7}-(MS)-hit^{0}]. Stems with P4 animacy *d* are typological relics. All productive patterns of verb form creation require both a subject and an object marker whenever a verb is used transitively; nor do they contain animacy classifiers apart from the agreement morphs themselves.

The highly productive causative affix *q* could be considered a suffix on P7, since it invariably occurs after an infinitival incorporate. But this morpheme appears to derive instead from *qā* 'inside'. One verb even preserves the morpheme's original form and meaning together with the notion of causation: *āt úsèn daqáùrindit* 'I got sleepy' [*da*^{8}-*qā*^{7}-*d*^{M}-*in*^{2}-*di*^{1}-*t*^{0} IC^{8}-inside^{7}-AC^{4}-PT^{2}-1S.O^{1}-MOM.TR^{0}], the literal meaning being something like 'sleep took me inside'. This etymology also explains the inceptive meaning that causative *q* imparts to single-event stems. Compare the related causative stem *daúsènqindit* 'she put me to sleep (once)' [*da*^{8}-*usen*^{7}-*q*^{5}-*in*^{2}-*di*^{1}-*t*^{0} [3F.SJ^{8}-sleep^{7}-cause^{5}-PT^{2}-1S.O^{1}-MOM.TR^{0}]. Causative verbs are discussed more fully in §2.2.5.1 below.

Sequences of P5 adposition plus P4 proclitic may be obscured by fusional processes. P5 ablative *k* is retained unaltered before P4 *d* or *t*: *dabóktàjga* 'she takes me around' [*da*^{8}-*bo*^{6}-*k*^{5}-*t/a*^{4}-*(j)-ka*^{0} 3F.SJ^{8}-1S.O^{6}-with^{5}-AT/D^{4}-(MS)-walk^{0}], *dónbògdaʁan* 'I acquire a knife' [*do*^{7}*n*^{7}-*bo*^{6}-*k*^{5}-*d/a*^{4}-*qaŋ*^{0} knife^{7}-1S.O^{6}-ABL^{5}-IT/D^{4}-INCEPT^{0}]. P5 adessive *k* (either from original *k* or *h*) elides before any P4 proclitic: *dakōŋátàptet* 'she keeps punching him' [*da*^{8}-*kō/ŋ*^{7}-*a*^{6}-*k*^{5}-*t/a*^{4}-*b*^{3}-*tet*^{0} 3F.SJ^{8}-fist/ITER^{7}-3M.O^{6}-ADES^{5}-AT/D^{4}-INT^{3}-hit^{0}]. The combination P5 adessive *k* + P4 *d* yields *t*: *āgútàʁan* 'you.S sweat' [*ā*^{7}-*ku*^{6}-*k*^{5}-*d/a*^{4}-*qaŋ*^{0} heat^{7}-2S.SJ^{6}-ADES^{5}-IT/D^{4}-INCEPT^{0}]. These combinations can only be formally distinguished by comparing them with their Yugh cognates (Vajda 2003a:79f).

2.2.4.3. Pseudo-actant markers

Positions P8, P3, and P1 may contain affixes identical in form to certain agreement markers but which do not actually cross-reference a syntactic argument. The three "pseudo-actant markers" are P8 *da*, P1 *a*, and P3 *b*. P8 *da* builds involuntary causatives requiring absolutive-series subject marking: *daqólèjoksa* 'he turns yellow' [*da*^{8}-*qəlej*^{7}-*o*^{6}-*k*^{5}-*(s)-a*^{0} IC^{8}-yellow^{7}-3M.SJ^{6}-ABL^{5}-(MS)-state.extends^{0}]. P1 *a* derives resultatives from Active or Absolutive Conjugation transitives: *ávàrop* 'it is drank up' [*a*^{4}-*b*^{3}-*a*^{1}-*dop*^{0} D^{4}-3N.SJ^{3}-R^{1}-drink^{0}], *ílùksájàvet* 'it is broken' [*il*^{7}-*u*^{6}-*k*^{5}-*(s)-a*^{1}-*(j)-bet*^{0} break^{7}-3N.SJ^{6}-ABL^{5}-(MS)-R^{1}-make^{0}]. P3 *b* builds three types of stems, as shown in (95) and (96):

(95) Pseudo-actant P3 *b* used as a valence-changing affix

P3 *b* as instrumental applicative affix	P3 *b* as involuntary causative affix
du^{8}-*oŋ*^{6}-*k*^{5}-*d/a*^{4}-*b*^{3}-*taŋ*^{0}	*ku*^{6}-*k*^{5}-*b*^{3}-*hun*^{0}
3M.SJ^{8}-3AP.O^{6}-ABL^{5}-across/D^{4}-AL^{3}-drag^{0}	2S.SJ^{6}-down^{5}-IC^{3}-slip^{0}
dóŋdàptaŋ 'he drags them (by sled)'	*kúgbùn* 'you.S slip'

(96) P3 *b* as a marker of heightened intensity

single-action stem	iterative/cursive stem
ku^{6}-*k*^{5}-*a*^{4}-*b*^{3}-*tn*^{0}	*da*^{8}-*tō/ŋ*^{7}-*a*^{6}-*k*^{5}-*t/a-b*^{3}-*tet*^{0}
2S.SJ^{6}-ABL^{5}-D^{4}-INT^{3}-walk.MOM^{0}	3F.SJ^{8}-hand/ITER^{7}-3M.O^{6}-ADES^{5}-AT/D^{4}-INT^{3}-hit^{0}
kúyàvitn 'you.S rush out (once)'	*datōŋátàptet* 'she keeps grabbing him'

Some stems contain two pseudo-actant markers. P3 *b* remains as a fossilized element in applicative stems detransitivized by P1 resultative *a*: *kúgdàvataŋ* 'you.S have been dragged (by conveyance)' [*ku*^{6}-*k*^{5}-*d/a*^{4}-*b*^{3}-*a*^{1}-*taŋ*^{0}2S.SJ^{6}-ABL^{5}-across/D^{4}-AL^{3}-R^{1}-drag^{0}].

The uses of pseudo-actant markers discussed so far are all productive. Two unproductive stem types exhibit real ambiguity as to whether P8 *da* and P3 *b* are true agreement markers. These verbs exhibit a systematic type of non-isomorphism between syntactic and morphological transitivity. They are particularly interesting typologically because they reflect the transition between Proto-Yeniseic as a role-and-reference, or active/agentive language, and Modern Ket as a language for which the morphological expression of transitivity has become paramount.

The first group could be called "thematic applicatives." They are the only Ket verbs that allow three zero-marked syntactic arguments. In such cases, the third argument often seems to be cross-referenced by P3 *b*. This morpheme is not a true agreement affix since it obligatorily remains even in forms where the third term belongs to animate class, though speakers tend to avoid such combinations. One example appears in (97a) below. Thematic applicatives differ from the instrumental applicatives (97b), which mark their third argument with an instrumental-case affix.

(97) Two types of applicative clauses, distinguished by the case marking of the third NP

a. Clause with thematic applicative (syntactic ditransitive, morphological transitive)
bū tēt qím-dil daávàq [*da*^{8}-*a*^{4}-*b*^{3}-*aq*^{0}] (V. A. Romanenkova, p.c.)
3F husband woman-child 3F.SJ^{8}-3M.O^{4}-AL^{3}-give.MOM^{0}
'She gives her husband a daughter.'

b. Clause with instrumental applicative (syntactic and morphological transitive)
bū-ŋ āt súùl-as daálàbógdòviltaŋin [*da*^{8}-*əla*^{7}-*bo*^{6}-*k*^{5}-*d/o*^{4}-*b*^{3}-*il*^{2}-*taŋ*^{0}-*n*$^{-1}$]
3-AP 1S sled-INSTR they.dragged.me [3F.SJ^{8}-out^{7}-1S.O^{6}-ABL^{5}-across/D^{4}-AL^{3}-PT^{2}-drag^{0}-AP^{-1}]
'They dragged me outside by sled (once).'

Thematic applicatives (97a) are syntactically ditransitive (i.e., they allow two zero-marked verb-external objects), but transitive verb-internally. Instrumental applicatives (97b) are simple transitives both syntactically and morphologically.

The second group of verbs that displays non-isomorphism between syntactic and morphological transitivity also involves pseudo-actant markers. This group contains morphologically intransitive stems capable of being used with two zero-marked

arguments. Because Ket avoids allowing an inanimate-class term to dominate an animate-class term, verbs that require a sentient experiencer normally express it as the subject, with the impersonal source-role NP (when present) following as the object. In a few verbs, absolutive or inactive markers cross-reference the undergoer, while P8 *da* or P3 *b* (or both together) seem to cross-reference the causal source. Vajda (2003a:81) called stems that use this pattern "inversional verbs." The P8 or P3 morphemes cannot change to reflect an animate-class source-role argument, for which reason speakers generally avoid using animate-class nouns as the head of the second NP with such verbs:

(98) *ássäno* *ke^{7}t* *táγ-ìn-na* *dūγ* *áγövilde* [*a^{6}-k^{5}-o^{4}-b^{3}-il^{3}-de^{0}]
hunting man crane-PL-PL.GEN cry 3M.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-hear^{0}
'The hunter heard the cranes (=the cranes' cry)'

āt *ū-k* *qáà-n* *dabátòmnet* [*da^{8}-ba^{6}-t^{5}-o^{4}-b^{3}-in^{2}-et^{0}]
1S 2S-GEN word-PL IC^{8}-1S.SJ^{6}-MT^{5}-D^{4}-IC^{3}-PT^{2}-up.to.here^{0}
'I understood you (=your words).'

Inversional verbs that permit a second syntactic term are the only stems in which a non-redundant P6 marker cross-references a syntactically transitive subject. There are three inversional stem-forming patterns, all unproductive. A few verbs combine both P8 *da* and P3 *b* with absolutive (P6) marking of the experiencer subject: *dabátàvet* 'I understand' [*da^{8}-ba^{6}-t^{5}-a^{4}-b^{3}-et^{0}* IC^{8}-1S.SJ^{6}-MT^{5}-D^{4}-IC^{3}-up.to.here^{0}]. Another uses P8 *da* plus inactive (P4/P1) marking of the experiencer: *āt úsèn daqáùririt* 'I get sleepy' [*da^{8}-qā^{7}-d^{4}-di^{1}-t^{0}* IC^{8}-inside^{7}-AC^{4}-1S.O^{1}-MOM.TR^{0}]. This verb even contains the transitive base *t* in P0, suggesting that the experiencer was originally the object. The remaining dozen or so inversional verbs use P3 *b* plus absolutive subject agreement: *bátìbgit* 'I feel, sense' [*ba^{6}-t^{5}-b^{3}-git^{0}* 1S.SJ^{6}-MT^{5}-IC^{3}-sense^{0}], *báʁàvril* 'I wear it (an article of clothing)' [*ba^{6}-q^{5}-a^{4}-b^{3}-d/il^{0}* 1S.SJ^{6}-inside^{5}-D^{4}-IC^{3}-through.its/extension^{0}], *āt sáŋgày báyàvuk* 'I get hit by a spark' [*ba^{6}-k^{5}-a^{4}-b^{3}-ok^{0}* 1S.SJ^{6}-ADES^{5}-IC^{3}-move^{0}], and a few others.

Table (99) summarizes the attested uses of pseudo-actant markers in Modern Ket.

(99) Lexico-derivational patterns using pseudo-actant P8 *da*, P3 *b*, or P1 *a*

1. **Resultatives** built by adding P1 *a* and deleting any active series (P8 + P-1) marker (highly productive in both Absolutive and Active Conjugation)
2. **Intensives** built with P3 *b* (mildly productive; all belong to Absolutive Conjugation)
3. **Instrumental applicatives** with P3 *b* (mildly productive; all belong to Absolutive Conjugation)
4. **Thematic applicatives (syntactic ditransitives)** built with P3 *b* (unproductive; all except the Active Conjugation stem shown in (97) belong to Absolutive Conjugation)
5. **Involuntary causatives** with a single syntactic argument; there are two types
   a. P8 *da* plus Absolutive subject marking (highly productive)
   b. Coreferential Absolutive subject marking (P8 + P6) plus P3 *b* (uncommon)
6. **Inversional verbs** with two syntactic arguments; three subtypes, all unproductive:
   a. P8 *da* and inactive subject marking (only one stem)
   b. P8 *da* + P3 *b* and absolutive subject marking (a few stems)
   c. P3 *b* and absolutive subject marking (over 12 stems; several allow 2 zero-marked NP)

Morphologically, inversional verbs are best treated as intransitives, some of which have a limited capacity to be used transitively when an inanimate-class source-role noun is present in the verb phrase. Thematic applicatives are morphological transitives capable of functioning as syntactic ditransitives. Both groups are closed, unproductive sets, since non-isomorphism between verb-phrase syntax and verb-internal agreement is uncharacteristic of Modern Ket. Nevertheless, the agreement-marker origin of P3 *b* in all types of stems where it appears suggests that semantic roles were once the overriding factor regulating Yeniseic agreement marking.

Any P3 *b*, regardless of function, nasalizes to [m] in a verb form containing either P5 *n* or P2 *in*: *danómlì* 'she brushed snow from around it' [*da^{8}-n^{5}-o^{4}-b^{3}-il^{2}-l^{0}* 3F.SJ^{8}-around^{5}-D^{4}-3N.O^{3}-PT^{2}-brush^{0}], *ímnàʁo* 'it died' [*i^{7}-b^{3}-in^{2}-a^{1}-qo^{0}* L^{7}-3N.SJ^{3}-PT^{2}-3RS^{1}-die^{0}].

Pseudo-actant markers resemble redundant subject markers in their capacity to signal valence. But they are more fully lexical because they cannot express grammatical agreement. Pseudo-actant markers and redundant subject markers are innovations that arose after anlaut consonant clusters were lost in Proto-Yeniseic – a process that obscured much of the original, Athabaskan-like system of pre-root valence prefixes. Pseudo-actant markers, redundant subject markers – and perhaps the morpholexical system of actant conjugations itself – all appear to have developed to compensate the loss of the original valence-decrease **d-* and valence-increase **l-* prefixes (possibly homologous with the Athabaskan classifiers) as Yeniseic evolved a simpler syllable structure without complex onsets and codas (Vajda 2003a). This is the most plausible origin for the Modern Ket technique of using actant agreement strategy as a feature of stem formation.

All productive patterns of Ket finite verb form creation show a strict parallelism between syntactic and morphological transitivity. Verbs used with a single zero-marked argument cross-reference it as subject; verbs used with two zero-marked arguments cross-reference the first as the subject, the second as the direct object. The full array of productive and unproductive agreement strategies attested in Modern Ket is given below:

(100) Verb-internal agreement strategies
A. Productive strategies
1. **Active Conjugation** pattern
   a. Transitive stems mark subject person and class in P8 and animate-class subject plural in P-1; objects are marked in P4 (animate-class 3rd person), P3 (inanimate-class 3rd person), or P1 (1st or 2nd person)
   b. Stative intransitive stems that logically allow only sentient subjects cross-reference them in P4 (3rd person) or P1 (1st or 2nd person)
   c. Other intransitive stems mark animate-class subjects in P8 + P-1, highly active inanimate-class subjects in P8 only (these are rare), and less active inanimate-class subjects (the vast majority) in P3; the choice is lexically fixed for each stem. Suppletion in P7 or P0 is also not uncommon.
2. **Absolutive Conjugation** pattern
   a. Transitive stems mark subject person and class in P8 and animate-class subject plural in P-1; all direct objects are marked in P6
   b. Intransitive stems mark the person/class/number of any subject in P6
3. **Coreferential Absolutive Conjugation** pattern
   a. Transitive stems mark subject person and class in P8 and animate-class subject plural in P-1, and also mark subject person/class/number redundantly in P6; objects

are cross-referenced in P4 (animate-class 3rd person), P3 (inanimate-class 3rd person), or P1 (1st or 2nd person)

b. Intransitive stems mark subject person and class in P8 and animate-class subject plural in P-1, and also mark them redundantly in P6, using regular person/number agreement morphs for speech act participants and *bu* in conjunction with any 3rd person subject regardless of its class or number

4. **Coreferential Inactive Conjugation** pattern
   a. Animate-class subjects and highly active inanimate-class subjects are marked in P8 (for person and class) and P1 (person/class/number); animate-class subject plural is not marked in P-1; in many of these stems, any plural subject triggers suppletion or partial suppletion of the P0 base.
   b. Less active inanimate-class subjects are marked in P3 + P1; as in Active Conjugation, the position for inanimate-class subject marking is lexically fixed for each stem rather than fluid.
   c. Transitive stems are unproductive for Coreferential Inactive Conjugation; in those that do occur, the object (person/class/number) is marked in P6
5. **Possessive Conjugation** pattern
   Subject (source or experiencer role) is identified using a genitive-suffixed construction or possessive pronominal proclitic on P7, which conveys the effect produced or experienced
6. **Verbs that lack an external subject (and therefore have no agreement markers)**
   a. A root in P0 expresses more active agents such as wind/blow, current/flow, etc.
   b. A root in P7 expresses more noun-like notions such as snow, rain, etc.; inceptive verbs with incorporated noun themes also contain P4 *d*
   c. The incorporated subject involves roots in both P7 + P0 (P7 is usually a modifier)

B. Unproductive strategies

1. Transitive stems belonging to Coreferential Inactive Conjugation
2. Singular stem is Active Conjugation, plural stem is Coreferential Inactive
3. Active Conjugation verbs that use P4 *d* as an object animacy classifier and omit this marker as well as P3 *b* in the corresponding inanimate-class object forms
4. P0 d-proclitic used to cross-reference the patient role
5. Inversional verbs (morphological intransitives, syntactic transitives, where P8 *da* or P3 *b* (rarely both) marks the source of a perceptual, mental or emotional effect, usually upon a sentient being cross-referenced as the subject using either P6 or P4/1)
6. Ditransitives (thematic applicatives associated with three zero-marked terms)
7. Agreement strategies unique to single stems: about half a dozen attested, including the two stems in (71)

2.2.5. Some productive derivational categories

The interaction of P7 incorporate, P5 adposition, P4 durative marker, and P0 base together with the choice of actant conjugation and the inclusion of pseudo-actant markers in P8, P3, and P1 create a rich array of derivational patterns. The most productive lexical distinctions are those conveying causation (voluntary vs. involuntary), resultant state, inception of action, and event number (single action vs. multiple action). Causatives, inceptives, resultatives, and even infinitives represent distinct lexemes rather than inflectional forms of another stem. The most pervasive derivational categories are event

number and transitivity, with transitive and intransitive stems typically differing in some formal way (Vajda 2003a:87-90).

2.2.5.1. Causatives

Ket contains both voluntary and involuntary causatives. Involuntary causatives specify a lack of subject control over the action. Those that use P7 to name the effect produced require P8 pseudo-actant *da*: *dasúlèjboksa* 'I blush' [*da*^{8}-*sulej*^{7}-*bo*^{6}-*k*^{5}-*(s)*-*a*^{0} IC^{8}-red^{7}-1S.SJ^{6}-ABL^{5}-(MS)-state.extends^{0}], *dakúràŋboksivet* 'I become wrinkled' [*da*^{8}-*kudaŋ*^{7}-*bo*^{6}-*k*^{5}-*(s)*-*i/bet*^{0} IC^{8}-wrinkle^{7}-1S.SJ^{6}-ABL^{5}-(MS)-make^{0}]. A far smaller group of involuntary causatives – all inversional stems belonging to Absolutive Conjugation – are built with P3 pseudo-actant *b*:

(101) Involuntary causatives that etymologically involve inverse subject marking

bo^{6}-*k*^{5}-*b*^{3}-*hun*^{0}	*bo*^{6}-*k*^{5}-*b*^{3}-*qut*^{0}	*ba*^{6}-*k*^{5}-*a*^{4}-*b*^{3}-*de*^{0}
1S.SJ^{6}-ABL^{5}-IC^{3}-slip^{0}	1S.SJ^{6}-ABL^{5}-IC^{3}-S.SJ.in.place^{0}	1S.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-hear^{0}
bógbùn 'I slip'	*bógbɪʁut* 'I faint'	*báɣăvre* 'I hear'

One stem combines both techniques: *dadáŋtàvet* 'we understand' [*da*^{8}-*dəŋ*^{6}-*t*^{5}-*a*^{4}-*b*^{3}-*et*^{0} IC^{8}-1PL.SJ^{6}-MT^{5}-D^{4}-IC^{3}-up.to.here^{0}]. Other involuntary causatives with P3 *b* belong to Coreferential Absolutive Conjugation: *déjbùyava* 'he limps' [*du*^{8}-*ej*^{4}-*bu*^{6}-*k*^{5}-*a*^{4}-*b*^{3}-*a*^{0} 3M.SJ^{8}-limp^{7}-3RS^{6}-ABL^{5}-D^{4}-IC^{3}-event.extends^{0}].

Involuntary causatives built with P8 *da* are extremely productive, while P3 valence-decrease *b* is moribund outside inchoative formation. Coreferential Absolutive involuntary causatives are also uncommon. The few that exist are auto-instrumentals, with P5 literally representing a body part and P6 conveying its possessor: *dabúnsìyil* 'she winces' [*da*^{8}-*bu*^{6}-*n*^{5}-*(s)*-*hil*^{0} 3 F.SJ^{8}-3RS^{6}-head^{5}-(MS)-turn^{0}], *dabútòk* 'she shudders' [*da*^{8}-*bu*^{6}-*t*^{5}-*a*^{4}-*ok*^{0} 3F.SJ^{8}-3RS^{6}-head^{5}-D^{4}-move^{0}].

Volitional causatives are formed by postposing P5 *q* to an infinitive stem in P7. P5 *q* causitivizes both active and inactive intransitives, as well as transitives (in which case the original direct object is added onto the P7 infinitival incorporate: *dananbètqajit* 'she causes him to start baking bread' [*da*^{8}-*nan/bet*^{7}-*q*^{5}-*a*^{4}-*(j)*-*t*^{0} 3F.SJ^{8}-bread/make^{7}-cause^{5}-3M.O^{4}-(MS)-MOM.TR^{0}]. The infinitive in P7 serves as the verb's semantic head, while P0 contains one of four distinct affixes marking the stem as transitive or intransitive, as well as momentaneous (a single-action event, regardless of duration) as opposed to iterative/cursive (repeated event or a single event described as progressing in increments).

(102) Productive patterns of volitional causative formation

a. single-action transitive: P0 *-t*
   da^{8}-*toqojiŋ*^{7}-*q*^{5}-*di*^{1}-*t*^{0}
   3F.SJ^{8}-dry^{7}-cause^{5}-1S.O^{1}-MOM.TR^{0}
   datóʁòjiŋqíʁɪt 'she starts drying me off'

b. iterative/cursive transitive: P0 *-da*
   da^{8}-*toqojiŋ*^{7}-*q*^{5}-*a*^{4}-*di*^{1}-*da*^{0}
   3F.SJ^{8}-dry^{7}-cause^{5}-D^{4}-1S.O^{1}-ITER.TR^{0}
   datóʁòjiŋqáddà 'she dries/is drying me off'

c. single-action intransitive: P0 *-tn*
   da^{8}-*toqojiŋ*^{7}-*q*^{5}-*(s)*-*a*^{1}-*tn*^{0}
   3F.SJ^{8}-dry^{7}-cause^{5}-(MS)-3S.RS^{1}-MOM.INTR^{0}
   datóʁòjiŋqísàtn 'she starts drying off'

d. iterative/cursive intransitive: P0 *-dij*
   da^{8}-*toqojiŋ*^{7}-*q*^{5}-*a*^{4}-*(j)*-*a*^{1}-*dij*^{0}
   3F.SJ^{8}-dry^{7}-cause^{5}-D^{4}-(MS)-3S.RS^{1}-ITER.INTR^{0}
   datóʁòjiŋqájàrij 'she dries/is drying off'

The number of causative stems built using P5 *q* in the patterns shown in (102) is virtually open-ended.

2.2.5.2. Iteratives and semelfactives

Action verbs normally specify event number (single vs. multiple action). Werner (1997b) lists nearly a dozen ways punctual vs. iterative stem pairs differ morphologically. The factors regulating the contrastive distribution among these patterns have yet to be worked out, but they obviously involve actant conjugation membership. This section will describe only a few special types of event number specification.

In cases where the same P0 morpheme appears in both the punctual as well as iterative stem, P4 atelic-durative *t/a* combines with P3 pseudo-actant *b* to express intensity of repetition. Consider the following triplet:

(103) Nuances of repetition and intensity conveyed by P4 *t/a* + P3 *b*

da^{8}*-saq*^{7}*-a*^{4}*-tet*^{0}	*da*^{8}*-saq*^{7}*-t/a*^{4}*-b*^{3}*-tet*^{0}	*da*^{8}*-saq/ŋ*^{7}*-t/a*^{4}*-b*^{3}*-tet*^{0}
3F.SJ^{8}-step^{7}-D^{4}-hit^{0}	3F.SJ^{8}-step^{7}-AT/D^{4}-INT^{3}-hit^{0}	3F.SJ^{8}-step/ITER^{7}-AT/D^{4}-INT^{3}-hit^{0}
dasáʁàtet	*dasáqtàptet*	*dasáqŋ̀taptet* 'she stomps'
'she takes a step'	'she strides'	'she stomps'

Recall that P3 *b* can also express heightened intensity in punctual verbs: *bóyàvitn* 'I rush out' [*bo*^{6}*-k*^{5}*-a*^{4}*-b*^{3}*-tn*^{0} 3M.SJ^{6}-out^{5}-D^{4}-INT^{3}-walk.MOM^{0}]. This versatile morpheme conveys meanings ranging from involuntary causation to situation iterativity, with the nuance of intensity possibly added to either end of this range.

Among single-event verbs, a few stems specify instantaneous (true semelfactive) action. P0 *-ges* serves as a productive semelfactive affix to build compound stems denoting a single, sudden sound. These verbs have regular iterative counterparts built using P3 involuntary causative *b*, P1 resultative *a*, and P0 *-ta* 'extend'. Both stem types belong to Possessive Conjugation.

(104) Semelfactive and iterative compound verbs denoting sound

a. Semelfactive stem	b. iterative stem
d/baanej^{7}*-ges*^{0}	*d/baanej*^{7}*-b*^{3}*-a*^{1}*-ta*^{0}
its/splash^{7}-SEMEL^{0}	its/splash^{7}-IC^{3}-R^{1}-extend^{0}
báànejges 'its splash resounds/resounded'	*báànejbata* 'its splashing resounds'

Semelfactivity – defined as a single instantaneous action, an event of briefer-than-usual duration, or a sudden event that causes surprise – only occasionally provides the motivation for deriving new stems. Most single-action verbs acquire a semelfactive reading through the addition of adverbs such as *áqpès* 'suddenly'.

Intransitive verbs of motion distinguish three types of event duration. Coreferential Absolutive Conjugation plus P5 superessive *t* expresses a quick round trip (105a). A longer round trip requires Active Conjugation plus P5 adessive *k* (105b). If the subject remains for longer than a few weeks, Coreferential Inactive Conjugation is used without any adposition (105c):

(105) Durational gradations in intransitive verbs of motion

a. Round trip of a few hours or less	b. Round trip lasting days or weeks
di^{8}*-igda*^{7}*-ba*^{6}*-t*^{5}*-(s)-aq*^{0}	*di*^{8}*-igda*^{7}*-k*^{5}*-(s)-aq*^{0}
1SJ^{8}-to.riverbank^{7}-1S.RS^{6}-SU^{5}-(MS)-go.MOM^{0}	1SJ^{8}-to.riverbank^{7}-ADES^{5}-(MS)-go.MOM^{0}
dígdàbatsaq 'I go (quickly) to the river'	*dígdàksaq* 'I make a longer trip to the river'

c. Trip from which the subject does not return or returns only after several months
di^{8}*-igda*^{7}*-di*^{1}*-daq*^{0}
1SJ^{8}-to.riverbank^{7}-1S.RS^{1}-go.MOM^{0}
dígdàddaq 'I go off to the river (for the summer).'

Transitive verbs of motion use P5 labializing *k* with comitative meaning and Absolutive Conjugation regardless of the trip's duration: *dígdàoksaq* 'I take him to the river (once, any duration)' [*di*^{8}*-igda*^{7}*-o*^{6}*-k*^{5}*-(s)-aq*^{0} 1SJ^{8}-to.riverbank^{7}-3M.O^{6}-with^{5}-(MS)-go.MOM^{0}].

To summarize, most verb stems specify either a single or multiple action, while semelfactivity, durational gradations, and intensity of action motivate only a limited number of stems.

2.2.5.3. Inceptives (or inchoatives)

Ket possesses a rich derivational arsenal for expressing onset of action. Single-event causatives connote inception rather than termination of action: *dalóŋàlqimna* 'she began to examine it' [*da*^{8}*-loŋal*^{7}*-q*^{5}*-b*^{3}*-in*^{2}*-a*^{0} 3F.SJ^{8}-examine^{7}-cause^{5}-3N.O^{3}-PT^{2}-event.extends^{0}]; cf. the corresponding terminatives: *dalóŋàlúyòlbet* 'she examined it (once)' [*da*^{8}*-loŋal*^{7}*-u*^{6}*-k*^{5}*-o*^{4}*-il*^{2}*-bet*^{0} 3F.SJ^{8}-look^{7}-3N.O^{6}-ABL^{5}-D^{4}-PT^{2}-make^{0}], and *dalóŋàlbetúyòlbet* 'she examined it (repeatedly)' [*da*^{8}*-loŋal/bet*^{7}*-u*^{6}*-k*^{5}*-o*^{4}*-il*^{2}*-bet*^{0} 3F.SJ^{8}-look/make^{7}-3N.O^{6}-ABL^{5}-D^{4}-PT^{2}-ITER^{0}]. P5 causative *q* is the standard way of forming inchoative transitive stems. Intransitive inchoatives display four different configurations, depending primarily on whether P7 incorporates an infinitive, adjective, or noun stem; and secondarily upon the degree of subject agentivity. These patterns are illustrated in (106-9):

(106) Active intransitive inchoatives are built using combinations of an infinitive in P7, a P6 absolutive subject marker, P5 adessive *k*, and *a*^{4}*-qan*^{0}:

qúsbètbáyàʁan 'I begin making a tent' [*qus/bet*^{7}*-ba*^{6}*-k*^{5}*-a*^{4}*-qan*^{0} tent/make^{7}-1S.SJ^{6}-ADES^{5}-D^{4}-INCEPT^{0}]
dáqbáyàʁan 'I begin to live' [*də*^{7}*q*^{7}*-ba*^{6}*-k*^{5}*-a*^{4}*-qan*^{0} live^{7}-1S.SJ^{6}-ADES^{5}-D^{4}-INCEPT^{0}]

(107) Inchoatives expressing uncontrolled or externally induced states are built from a P7 infinitive, P6 absolutive subject marker, P5 adessive *k* (for internal states) or P5 ablative *k* (for external states), and *-b*^{3}*-saŋ*^{0}, with P3 *b* serving as an involuntary causative affix:

sátŷbáyvìsaŋ 'I become ashamed' [*satij*^{7}*-ba*^{6}*-k*^{5}*-b*^{3}*-saŋ*^{0} shame^{7}-1S.SJ^{6}-ADES^{5}-IC^{3}-INCEPT^{0}]
ə̄núgbìsaŋ 'it begins to boil' [*ə̄n*^{7}*-u*^{6}*-k*^{5}*-b*^{3}*-saŋ*^{0} boil^{7}-3N.SJ^{6}-ABL^{5}-IC^{3}-INCEPT^{0}]

(108) If P7 contains an adjective, however, then Active Conjugation combined with *a*^{4} + *qan*^{0} creates the inchoative. In the case of inanimate-class subjects, the string *a*^{4}*-b*^{3}*-qan*^{0} is often pronounced [*avan*] when P7 is monosyllabic:

qáyàvan 'it gets big' [*qa*^{7}*-a*^{4}*-b*^{3}*-qan*^{0} big^{7}- D^{4}-3N.SJ^{3}- INCEPT^{0}]
daqáyàʁan 'she gets big' [*da*^{8}*-qa*^{7}*-a*^{4}*-qan*^{0} 3F.SJ^{6}-big^{7}-D^{4}-INCEPT^{0}]

(109) The configuration *d/a*^{4}*-b*^{3}*-qan*^{0} is used to build impersonal inchoatives when P7 contains a noun instead of an adjective or infinitive. Most fall outside the actant conjugation system since there is no verb-external argument:

qónòksdávàn 'morning begins' [*qonoks*^{7}*-d/a*^{4}*-b*^{3}*-qan*^{0} morning^{7}-IT/D^{4}-IC^{3}-INCEPT^{0}]

sīldávàn 'summer begins' [*sīl*^{7}-*d/a*^{4}-*b*^{3}-*qaɲ*^{0} summer^{7}-IT/D^{4}-IC^{3}-INCEPT^{0}]
úlèstávàn 'rainy weather begins' [*ūl/ēs*^{7}-*d/a*^{4}-*b*^{3}-*qaɲ*^{0} water/sky^{7}-IT/D^{4}-IC^{3}-INCEPT^{0}]

Possessive inceptives use P7 to incorporate the possessum. P6 cross-references the possessor, followed by P5 ablative *k* for alienable possession: *qúsbógdàʁan* 'I begin to own a tent' [*qu*^{7}*s*^{7}-*bo*^{6}-*k*^{5}-*d/a*^{4}-*qaɲ*^{0} tent^{7}-1S.SJ^{6}-ABL^{5}-IT/D^{4}-INCEPT^{0}], or P5 adessive *k* for internal states: *ābátàʁan* 'I sweat (begin to have heat)' [*ā*^{7}-*ba*^{6}-*k*^{5}-*d/a*^{4}-*qaɲ*^{0} heat^{7}-1S.SJ^{6}-ADES^{5}-IT/D^{4}-INCEPT^{0}]. P3 *b* is absent in verbs that cross-reference a verb-external subject.

All of these intransitive inchoative-forming patterns are productive in Modern Ket.

2.2.6. Morphotactic features of the stem

Another typological idiosyncrasy of the Ket verb is its extensive use of position-based morphophonemic rules (exhaustively described in Vajda 2001a). These morphotactic rules, which identify the morpheme position class, shape finite verb forms in several ways.

P8 subject marker allomorphy. One important signal of position-class configuration is the phonological realization of the P8 subject markers. These morphemes are special clitics that may or may not form part of the same phonological word as the following verb string. The configurations P8-5-0, P8-3-0, P8-1-0, P8-0, as well as P8-4-0 where no consonant intervenes between the P4 vowel and P0, require the entire P8 morpheme to remain as part of the phonological verb and trigger the feminine allomorph *də-* (pronounced as [dɜ̄] immediately before P0, and as [dʌ] elsewhere). Other configurations trigger P8 feminine *da-* and cause the other P8 morphs to shed their vowel before another vowel or elide completely before a consonant. However, if the preceding word ends in a vowel, *l*, or *s*, the P8 consonant encliticizes to it rather than disappearing: *āt bū-d lúvìrúyàvet* 'I love her' [*dit*^{8}-*lubid*^{7}-*u*^{6}-*k*^{5}-*a*^{4}-*bet*^{0} 1SJ^{8}-love^{7}-3F.O^{6}-ABL^{5}-D^{4}-ITER^{0}]. If such a word is absent, then no portion of P8 appears: *ām lúvìrúyàvet* 'I love mother' [*di*^{8}-*lubid*^{7}-*u*^{6}-*k*^{5}-*a*^{4}-*bet*^{0} 1SJ^{8}-love^{7}-3F.O^{6}-ABL^{5}-D^{4}- ITER^{0}].

Morphotactic rules of epenthesis add *bin* (< *bīn* 'self') to prevent morphemes in P3 or P1 from occupying word-initial position. P3 *b* can freely occur phonological word-initially in cases where P8 deletes: *bílèl* 'I sang it' [*dit*^{8}-*b*^{3}-*il*^{2}-*el*^{0} 1SJ^{8}-3N.O^{3}-PT^{2}-sing^{0}], but not morphological word-initially, where it is prevented from doing so by the incorporation of *bīn* 'self' in P7: *bímbàta* 'it resounds' [*bīn*^{7}-*b*^{3}-*a*^{1}-*ta*^{0} self^{7}-3N.SJ^{3}-R^{1}-extend^{0}].

Morphotactic separators are opaque structural elements that act like file dividers to disambiguate potentially homonymous strings of positionally distant morphemes placed in linear adjacency. Here are examples of the three most common separators:

(110) j-separator appears between P4 and vowel-initial P1

du^{8}-*a*^{4}-*(j)*-*a*^{1}-*tij*^{0}	*du*^{8}-*a*^{4}-*(j)*-*aŋ*^{1}-*tij*^{0}
3M.SJ^{8}-D^{4}-(MS)-3S.RS^{1}-grow^{0}	1SJ^{8}-D^{4}-(MS)-3AP.RS^{1}-grow^{0}
dájàtij 'he grows'	*dájàŋtij* 'they.AN grow'

(111) s-separator appears between P5 and vowel-initial P1

du^{8}-*o*^{6}-*k*^{5}-*(s)*-*a*^{1}-*q/a*^{0}	*du*^{8}-*o*^{6}-*k*^{5}-*(s)*-*aŋ*^{1}-*q/a*^{0}
3M.SJ^{8}-3M.O^{6}-ABL^{5}-(MS)-3S.RS^{1}-make/extend^{0}	3M.SJ^{8}-3M.O^{6}-ABL^{5}-(MS)-3AP.RS^{1}-make/extend^{0}
dóksàʁa 'he sells him off'	*dóksàŋGa* 'they sell them off'

(112) ɣ-separator appears between P8 and P4 *a* or *i* when P0 directly follows the P4 vowel

ku^{8}-*(ɣ)*-*a*^{4}-*daq*^{0}	but not:	*ku*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}
2SJ^{8}-(MS)-D^{4}-live^{0}		2SJ^{8}-D^{4}-PT^{2}-live^{0}
kúyàraq 'you.S live'		*kóldàq* 'you.S lived'

Morphotactic separators appear to be the residue of elements that were once meaningful in their own right, possibly of morphemes denoting various distinctions in aspect (cf. Vajda 2003a:72).

Morphotactic fusions and augments affect certain morphemes in P4 or P2 and help disambiguate the transitivity status or tense and mood of the given verb form. Rules of morphotactic fusion affect morphemes in certain positions but leave homonymous configurations in other positions unchanged. Other rules augment a specific morpheme whenever it appears in a particular position-class configuration. Morphotactic fusion and augments are limited to the subject/object and tense/mood agreement positions P4 and P2. There are four augments, each affecting particular morpheme combinations:

1) In the configuration P4 + P0, P4 /aŋ/ requires morphotactic /a/ (before consonant-initial P0) or /s/ (before vowel-initial P0) in transitive verbs when preceded by a single subject marker: *daáyàraŋ* 'she crumples them' [*da*^{8}-*aŋ*^{4}-*(a)*-*daŋ*^{0} 3F.SJ^{8}-3AP.O^{4}-(MS)-crumple^{0}] vs. *datáysì* 'she ladles them out' [*da*^{8}-*t*^{5}-*aŋ*^{4}-*(s)*-*i*^{0} 3F.SJ^{8}-SU^{5}-3AP.O^{4}-(MS)-ladle^{0}].

There are a few random exceptions where /s/ rather than /a/ is added before consonant-initial P0. In these cases, the P0 base probably originally began with a consonant cluster requiring a pre-base vowel augment that triggered /s/ rather than /a/: *daháràyistet* 'she breaks them (animate-class trees, for example)' [*da*^{8}-*ha*^{7}-*d/aŋ*^{4}-*(s)*-*tet*^{0} 3F.SJ^{8}-long.shape^{7}-AC/3AP.O^{4}-(MS)-hit^{0}].

2) In a few verbs with alveolar-final P7, some or all of the P4 actant markers take a /d/ prefix in both present and non-past: *éndàjsuk* 'he forgets' [*en*^{7}-*(d)a*^{4}-*(j)*-*suk*^{0} head^{7}-3M.SJ^{4}-(MS)-back^{0}], *éndìjsuk* 'she forgets' [*en*^{7}-*(d)i*^{4}-*(j)*-*suk*^{0} head^{7}-3F.SJ^{4}-(MS)-back^{0}].

3) /d/ is suffixed to P2 /il/ or /in/ before most vowel-initial P0 in imperative forms (in Southern Ket, /ld/ reduces to [r]): *ándĭ̄n* 'Set the fish net!' [*a*^{4}-*in(d)*^{2}-*un*^{0} D^{4}-IMP^{2}-set.net^{0}].

A network of morphotactic features helps disambiguate the position and functions of the morpheme shape /a/. This vowel appears in positions P6, P4, and P1 to fulfill a variety of functions. When it fills P6 as the masculine singular absolutive agreement marker, it does not labialize in the past tense: *áyìnsal* 'he spent the night' [*a*^{6}-*k*^{5}-*in*^{2}-*sal*^{0} 3M.SJ^{6}-ADES^{5}-PT^{2}-spend.the.night^{0}]. When it appears in P4 as the masculine singular inactive agreement marker, it does become labialized in the past tense: *íyòlbet* 'he spent the day' [*i*^{7}-*o*^{4}-*il*^{2}-*bet*^{0} day^{7}-3M.SJ^{4}-PT^{2}-make^{0}]. In the non-past, it normally requires a j-separator when followed by P0: *dúldàjgaŋ* 'he washes him' [*du*^{8}-*ul*^{7}-*d/a*^{4}-*(j)*-*kŋ*^{0} 3M.SJ^{8}-water^{7}-AC/3M.O^{4}-(MS)-rub^{0}]. By contrast, the homonymous P4 durative marker /a/ does not normally take a j-separator in this configuration: *dúlàkŋ* 'he washes it' [*du*^{8}-*ul*^{7}-*a*^{4}-*kŋ*^{0} 3M.SJ^{8}-water^{7}-D^{4}-rub^{0}]. Unlike the vowel /a/ in P6 or P4, P1 /a/ never becomes /o/ in past-tense forms; also, it may be preceded by the s-separator in non-past forms: *datʃsàʁo* 'she loads a gun' [*da*^{8}-*ti*^{7}-*(s)*-*a*^{1}-*qo*^{0} 3F.SJ^{8}-bowstring^{7}-(MS)-3S.RS^{1}-stretch^{0}]. Taken together, all of these features clearly identify the position and function of the vowel /a/ in all stems where it occurs.

Fossilized pre-base augments (§2.2.4.1) sometimes alter these rules. The P4 agreement markers *a* and *i* normally add *j* directly before P0, while P4 durative *a* does not. But whenever P0 begins with an augment, this rule is reversed, with P4 durative *a* triggering *j*, while P4 actant *a* or *i* do not: *kájdòp* 'you.S cover it up' [*ku*^{8}-*a*^{4}-*(j)*-*d/op*^{0} 2SJ^{8}-D^{4}-(MS)-

across.its/hole^0], *kú yà və́k* 'you.S find him' [*ku^8-(ɣ)-a^4-b/ək^0* 2SJ^8-(MS)-3M.O^4-find^0], *kéttàʁos* 'you.S lift him' [*ku^8-et^7-t^5-a^4-q/os^0* 2SJ^8-up.to.here^7-SU^5-3M.O^4-make/go.up^0]. The extremely common base *-bet* follows the regular morphotactic rules when used as an iterative affix: *dígbèsavet* 'I arrive (frequently)' [*di^8-ikbes^7-a^4-bet^0* 1SJ^8-arrive^7-D^4-ITER^0], but not in simple stems, where it preserves its original meaning of 'make'. Cf. the form *díyàvet* 'I make him' [*di^8-(ɣ)-a^4-bet^0* 1SJ^8-(MS)-3M.O^4-make^0], where the j-separator would otherwise have appeared between P4 and P0.

Finally, two morphotactic fusional processes block phonological attrition from obscuring differences in transitivity, and also prevent the P4 feminine inactive series marker */i/* from being elided.

1) In past-tense forms, P4 */i/* + P2 preterite /il/ and /in/ become [itl] and [itn] before a consonant: *dónd̪tlivet* 'she had a knife' [*do^{7}n^7-(d)i(t)^4-il^2-i/bet^0* knife^8-3F.SJ^4-PT^2-have^0], *dakástɪ̀tnam* 'she took her' [*da^8-kas^7-(d)i(t)^4-in^2-am^0* 3F.SJ^8-L^7-3F.O^4-PT^2-take^0]. Before a vowel, they are realized as [irul] and [irun]: *daírùls* 'she dressed her' [*da^8-i(d)^4-il^2-s^0* 3F.SJ^8-3F.O^4-PT^2-dress^0], *daírùntet* 'she hit her' [*da^8-i(d)^4-in^2-tet^0* 3F.SJ^8-3F.O^4-PT^2-hit^0].

2) Also in the past tense, P4 /aŋ/ + P2 /il/ or /in/ becomes /oŋol/ and /oŋol/: *daóŋòldaŋ* 'she crumpled them' [*da^8-oŋ^4-il^2-daŋ^0* 3F.SJ^8-3AP.O^4-PT^2-crumple^0].

All of these morphotactic features help disambiguate position class by neutralizing potential homonymy among affixes. Most important, this helps each stem to express in unambiguous fashion its transitivity status – an obligatory morphological category for every finite verb form.

2.2.7. Verbal modifiers

2.2.7.1. Infinitive stems

Infinitive stems are lexically distinct from the corresponding finite verb, which involves a position-class formula in addition to its lexical morphemes. The lexical morphemes in the finite verb stem also frequently differ from those in the corresponding infinitive, however, so it is not possible to generate one stem from the other. In some instances, the infinitive is identical or almost identical to the finite verb base: *i^{ʔ}l* 'to sing' (cf. P0 *-il*). In others, base and the infinitive shape exhibit a partial suppletive relationship: *kə^{ʔ}j* 'to walk around' (P0 *-ka*), *də^{ʔ}q* 'to live' (P0 *-daq*), *dī* 'to put, lay down' (P0 *-da*), *qī* 'to sell' (P0 *-qa*). In a few cases, the infinitive differs completely from any morpheme present in the finite verb: *éjɪ̀ŋ* 'going' (P0 *-den*). Many infinitives appear to derive from a combination of P7 and P0: *súlbèt* 'to make sleds' (P7 *súùl* 'sled' + P0 *-bet* 'make'), *ássə̈no* 'to hunt' (P7 *ássə̈n* 'wild animals' + P0 *-qo* 'kill'). Others add a suffix lacking in P0: *tɬjɪ̀ŋ* 'to grow' (P0 *-tij*), *bágdèŋ*, 'to find' (P0 *-bək*). A few infinitives combine the P5 adposition with P0: *nī* 'to clear away (snow) from around an object' (< P5 *n* + P0 *-i*), *qīl* 'to put on (clothing)' (< P5 *q* + P0 *-dil*).

Many infinitives are identical in form to semantically related nouns: *i^{ʔ}l* 'to sing' or 'song'; *də^{ʔ}q* 'to live' or 'life'. Others require nominalizing *-s* before they can be used as semantically distinct nouns: *súlbèt* 'to make sleds' -> *súlbèts* 'sledmaker, sledmaking'.

Infinitive stems serve as predicate complements in various modal constructions. Need is expressed using the particle *nárə̀* 'need', a recent loan from Russian. An uninflected noun (114a) or an infinitive with the translative suffix *-esaŋ* (115a) expresses what is needed, while the dative case marks who needs it. To express the purpose of an action, the translative suffix *-esaŋ* is added to nouns (114b) or infinitives (115b). This suffix also is

used on nouns and infinitives in expressions of desire built using a pronominal prefix plus the noun *qo^{ʔ}j* 'wish' (114c, 115c):

(114) modal complements with nouns

a. object of necessity	b. object of motion	c. object of desire
kájkèt-da-ŋa bógdòm nárə̀	*ūl-esaŋ dɪ́mbèsin*	*íŋgüs-esaŋ v-ʁo^{ʔ}j*
hunter-M-DAT gun need	1S hunt-TRL we.came	house-TRL 1S.POS-wish
'A hunter needs a gun.'	'We came for water.'	'I want a house.'

(115) modal complements with infinitives

a. object of necessity	b. object of motion	c. object of desire
áb-àŋa ássə̈no-esaŋ nárə̀	*āt ássə̈no-esaŋ dɪ́mbès*	*ássə̈no-esaŋ v-ʁo^{ʔ}j*
1S-DAT hunt-TRL need	1S hunt-TRL I.came	hunt-TRL 1S.POS-wish
'I need to hunt.'	'I came to hunt.'	'I want to hunt.'

The sentence in (115c) literally means 'To hunt is my wish.' Example (116) shows how the other experiencer-role persons and numbers are expressed in this construction:

(116)

a. positive	b. negative
ássə̈no-esaŋ v-ʁo^{ʔ}j	*ássə̈no-esaŋ bə́n-bà-ʁoj*
hunt-TRL 1S.POS-wish	hunt-TRL NEG-1S.POS-wish
'I want to hunt.'	'I don't want to hunt.'
ássə̈no-esaŋ uɣ-ʁo^{ʔ}j	*ássə̈no-esaŋ bə́n-gù-ʁoj*
hunt-TRL 2S.POS-wish	hunt-TRL NEG-2S.POS-wish
'You.S want to hunt.'	'You.S don't want to hunt.'
ássə̈no-esaŋ da-qo^{ʔ}j	*ássə̈no-esaŋ bə́n-dà-ʁoj*
hunt-TRL 3M.POS-wish	hunt-TRL NEG-3M.POS-wish
'He wants to hunt.'	'He doesn't want to hunt.'
ássə̈no-esaŋ ɾ-ʁo^{ʔ}j	*ássə̈no-esaŋ bə́n-d̪ì-ʁoj*
hunt-TRL 3F.POS-wish	hunt-TRL NEG-3F.POS-wish
'She wants to hunt.'	'She doesn't want to hunt.'
ássə̈no-esaŋ ə́t-nà-qo^{ʔ}j	*ássə̈no-esaŋ bə́n-dàɣ-ɢoj*
hunt-TRL 1PL-PL.POS-wish	hunt-TRL NEG-1PL.POS-wish
'We want to hunt.'	'We don't want to hunt.'
ássə̈no-esaŋ ə́k-nà-qo^{ʔ}j	*ássə̈no-esaŋ bə́n-gàɣ-ɢoj*
hunt-TRL 2PL-AP.POS-wish	hunt-TRL NEG-2PL.POS-wish
'You. PL want to hunt.'	'You. PL don't want to hunt.'
ássə̈no-esaŋ búŋ-nà-qo^{ʔ}j	*ássə̈no-esaŋ bə́n-àɣ-ɢoj*
hunt-TRL 3PL-AP.POS-wish	hunt-TRL NEG-3AP.POS-wish
'They want to hunt.'	'They don't want to hunt.'

The particle *bə̄n* negates any indicative-mood predicate, including modal verbs (117b) and predicate nominals (118a). It normally does not alter the predicate phonologically, but in

the desiderative construction shown in (116), it fuses with the possessive prefix on *qo$^{?}$j* 'wish', making the negative desiderative a distinct morphological item.

Ability to perform an action is expressed using the bare infinitive as a complement of the verb 'to know':

(117) a. positive form
āt i$^{?}$l ítpàram
1S to.sing I.know
'I know how to sing.'

b. negated form
āt i$^{?}$l bān ítpàram
1S to.sing NEG I.know
'I don't know how to sing.'

Ability can also be expressed by adding concord suffixes to the infinitive (118a), though this construction, recorded by Krejnovich (1968:26), appears to be obsolescent. Predicate nouns cannot take concord suffixes in Modern Ket (118b), though see Werner (1997b:306) for a recording of 19th-century Ket where nouns did allow predicate concord suffixes.

(118) a. infinitive with concord suffix
āt (bān) íl-dì
1S (NEG) sing-1S.PRED
'I can(not) sing.'

b. predicate noun with no concord suffix
āt (bān) ássäno ke$^{?}$t
1S (NEG) hunt man
'I am (not) a hunter.'

Any infinitive stem can serve as a gerund (deverbal noun) without undergoing any change in morphology. The forms in (115) and (116) could be regarded as gerunds. Infinitive stems in this role also combine with verbs denoting inception or cessation of action. In inceptives, the infinitive/gerund merges with the verb form as its incorporate and is not cross-referenced verb-internally (119a). With verbs meaning 'end, cease, finish', the gerund serves as the subject NP and triggers the P3 neuter-class subject marker (119b):

(119) a. inceptive verb
āt ássäno bá-yʊʁon
1S hunting 1S.SJ-began
'I began to hunt.'

b. verb of cessation
ák-nà qús-bèt bínùt[*b*(*in*^{7}-*b*^{3}-)*in*^{2}-(*a*^{1}-*q*)*ut*^{0}]
2PL-AP.GEN tent-making it.ended[self^{7}-3N.SJ^{3}-PT^{2}-R^{1}-end^{0}]
'We finished making the tent' ('Our tentmaking ended')

As can be seen from (119b), an infinitive stem used as a gerund can be co-indexed verb-internally as a neuter-class argument. Gerunds also may take nominal case endings:

(120) *āt na-qús-bèt-di-ŋta dánìŋsivet* [*di*^{8}-*aniŋ*^{7}-*(s)-bet*^{0}]
1S 3AP.POS-tent-making-N-ADES I.think [1SJ^{8}-think^{7}-(MS)-ITER^{0}]
'I am thinking about their tentmaking (or, 'about them making tents').'

Notice also in (120) that gerunds can add a possessive proclitic to express an event participant – either the subject or object argument of the semantically corresponding finite verb. In the case of a gerund that corresponds to a bivalent verb, the proclitic can be interpreted as corresponding to either the agent or the patient role. For example, *āp tàr* 'my hitting', can mean either 'my being hit by someone' or 'my hitting of someone else':

(121) *āp tàr bímbaʁùt* [*bin*^{7}-*b*^{3}-*a*^{1}-*qut*^{0}]
1S.GEN hitting it.ends [self^{7}-3N.SJ^{3}-R^{1}-end^{0}]
'I stop hitting (someone)' or 'Someone stops hitting me.'

This ambiguity results because infinitives do not formally distinguish transitivity as a derivational category, unlike finite verb stems, for which this expression is obligatory. Nor do most infinitives specify event number, another key derivational category of the finite verb stem. An infinitive/gerund such as *sáqtèt* 'to step, stepping' corresponds equally to punctual as well as iterative verbs meaning 'step'. Nor do infinitive stems distinguish causativity, resultativity, or inception as formal categories. This means there are fewer infinitives than finite verb stems. An infinitive such as *ūs* 'to warm up' corresponds to several morphologically distinct finite verb stems with the meanings 'warm up an object frequently', 'warm up an object once', 'get warmed up frequently', 'get warmed up once', 'start warming up an object', 'start getting warmed up', and 'be warmed up'.

De-infinitival nouns, created by adding the nominalizing suffix *-s*, express more tangible concepts than the corresponding bare infinitive stem or gerund: *sáldòbet* 'to smoke, smoking' vs. *sáldòbet-s* 'smoker' *èj* 'to kill, killing' vs. *èjs* 'killed person or animal'; *dáqỳ* 'to fry, fried' vs. *dáqỳs* 'something fried'. In the case of an infinitive stem that corresponds to a transitive verb, the de-infinitival noun tends to express the patient rather than the agent. For example, *bàys* (< *bày* 'to find, finding' + *s* NOM) refers to what is found rather than to the person who finds it'.

2.2.7.2. Deverbal attributive modifiers

Nominalizing *-s* is also used to convert inflected finite verb forms into attributive modifiers. These forms are the functional equivalent of participles in other languages: *sáldòabet-s ke$^{?}$t* 'person who smokes' (he.smokes-NOM person). Bare infinitive stems/gerunds can also be used as attributive modifiers: *bày ságdì* 'a boot that is found' (find + boot); *dáqỳ īs* 'roast meat'. Inflected verb forms rather than infinitives are used if there is any contextual need to specify tense: *sáldòolbet-s ke$^{?}$t* 'person who used to smoke' (he.smoked-NOM person). Inflected verb forms are also used if an object complement is present: *mámùl dóblà-s dīl* 'a nursing child' (he.drank.it-NOM milk child). If the object noun stands between the deverbal attribute and its head, *-bes* appears instead of *-s*: *dóblà-bes mámùl dīl* 'a nursing child' (he.drank.it-NOM milk child); *dóbnì-bes do$^{?}$n ket* 'person who sharpened the knife (he.sharpened.it-NOM knife person). This suffix is identical to the prosecutive case suffix, but is simply a syntactic allomorph of *-s*. Finally, a finite verb form must be used as the base for a deverbal modifier in cases where the verb's subject remains as part of the attributive phrase: *ū bínùt-s ke$^{?}$t* 'a tired person' (strength it.ended-NOM person).

Resultative verbs may take *-s* to serve as predicate nominals. Compare the finite verb form in *īs bílàq* 'The meat rotted' (*bílàq* < *bin*^{7}-*b*^{3}-*il*^{2}-*aq*^{0} [self^{7}-3N.SJ^{3}-PT^{2}-rot^{0}]) with its near synonymous predicate nominalization in *īs bílàq-s* 'The meat is (some that has gone) rotten'. Infinitive stems augmented with *-s* may likewise serve as predicate nominals with a resultative meaning: *súùl bèr-s* 'The sled is made'.

3. Syntax

Ket is a syntactically configured language with a basic constituent order of SOV and a phrase-internal ordering of modifier + head. The head noun, finite verb form, copula, or predicate nominal (when no copula is present) normally appears phrase-finally. Both NP and VP are strongly head marking, with inflections attaching almost exclusively to the head noun or verb. The subject and direct object nouns or pronouns in a verb phrase are zero-marked. Attributive modifiers are likewise uninflected except in a few special

instances. Case markers appear on the head noun but never on its modifiers. Nouns inflected with oblique case suffixes are not co-indexed verb-internally; like postpositional constructions, they serve as secondary extensions of the basic verb or noun phrase.

In typological terms, Ket exemplifies what has been called a "conglomerating" language (Vajda, in press), defined as a language rich in inflection but generally lacking in derivational affixes. Like isolating languages, which are poor in both inflectional and derivational morphology, a conglomerating language tends to rely on conversion (zero-affixation) to change one form class into another. Consequently, Ket has many syntactic homonyms of the type: *ūs* 'warm' (adjective) vs. *ūs* 'to warm up' (infinitive), *bīs* 'evening' (noun) vs. *bīs* 'in the evening' (adverb), *qótùl* 'first' (adjective) vs. *qótùl* 'in front' (adverb), etc. The paucity of derivational affixes also explains why grammatically redundant inflections such as subject affixes in the finite verb, multiple class markers in certain oblique case forms, and multiple plural suffixes in many nouns came to serve as stem-building elements (cf. Vajda 2004). Interestingly, most case suffixes and postpositions convey the same basic meanings when used to convert inflected finite verb forms into dependent clauses as they do when added to nouns or pronouns to make various phrase-internal adverbials. Such polyfunctionality of grammatical affixes is typical of Ket and perhaps of "conglomerating" languages in general.

3.1. Phrase types

3.1.1. Noun phrases

In the noun phrase, case markers attach to the head noun, which normally occupies phrase-final position. While nouns may take nearly a dozen case suffixes, as well as a large selection of postpositions, attributive modifiers generally lack inflections altogether. The plural suffix that appears on a few adjectives denoting tangible qualities (e.g., *qà-ŋ de²ŋ* 'big men') is used optionally as a distributive marker to impart a special vividness to the narration; it is not an example of true number concord within the noun phrase. Only two types of attributive modifiers regularly agree with the noun they modify. Demonstrative pronouns show class and number concord with their head noun: *tū-ɾ hánà hi²p* 'that-M little boy'; *tú-ɾë hánà hu²n* 'that-F little daughter'; *tú-në hánà sáà-n* 'those-AN.PL little squirrels'. The numeral 'one' has distinct forms for animate-class referents (*qo²k ke²t* 'one person') and inanimate-class referents (*qūs ti²s* 'one rock'). Quantity phrases require logical number marking of the noun – singular with 'one', plural with larger numbers or quantifiers: *īn de²ŋ* 'two people', *òn de²ŋ* 'many people', *bíldè de²ŋ* 'all the people', etc. Partitive phrases containing mass nouns require no grammatical connector: *òn ūl* 'much water', *qūs ti²n áàl* 'one kettle of soup', *dōŋ táskan sa²j* 'three cups of tea'.

Given the prevalence of postpositions and the complete absence of native prepositions, all Yeniseic morphology with the exception of the finite verb is strongly suffixing. Pronominal possessive clitics are the only morphological category outside the verb that attach on the left: *da-hánà hu²n* 'his little daughter'. But these morphemes are special clitics rather than true prefixes and may attach instead to the right edge of the preceding word, depending on the logical emphasis within the sentence: *bú-rà hánà hu²n* 'his (focussed or new topic) little daughter'.

3.1.2. Finite verb phrase formation

While Ket noun morphology makes extensive use of inflectional suffixes, the finite verb appears to express most of its syntactic categories through the use of grammatical

prefixes. However, it is not really accurate to claim that Ket verbs are prefixing, since the position-class formula itself serves as a stem formant. Verb stems and their agreement affixes are not separable into discrete lexical and grammatical portions. Nearly every finite verb form contains affix positions marking the person, class and number of the syntactic subject and, in the case of transitive verbs, the direct object as well. The position of these verb-internal markers varies greatly but none of the variations has syntactic ramifications. The noun phrases expressing the cross-referenced term or terms bear no case suffix; these zero-marked subject and object nouns or pronouns are conventionally said to be in the absolutive case. Subjects and direct object NPs that correlate with background information are normally dropped, but the verb-internal markers that cross-reference them never change for purposes of referent tracking. No verbs are trivalent morphologically. Some stems contain an involuntary causative affix or an applicative affix that seems to cross-reference an inanimate-class noun, but this affix cannot change to agree with an animate-class term and is therefore not a true agreement marker.

A monovalent verb clause may consist entirely of an intransitive verb form with incorporated subject: *tíjvèj* 'the north wind blows' [*tij⁷-(s)-bēj⁰* upriver⁷-(MS)-wind.blows⁰]. More often it contains a subject NP followed by an intransitive verb form:

(122) *dīl* *dútàʁot* [*du⁸-t⁷-a⁴-qut⁰*]
child he.sleeps [3M.SJ⁸-SU⁵-D⁴-be.positioned⁰]'
'The child is sleeping.'

Multivalent verb clauses contain a transitive verb form that can be preceded by a subject and direct object noun phrase:

(123) *kájkèt* *qàj* *dúγàjej* [*du⁸-(γ)-a⁴-(j)-ej⁰*]
hunter elk he.kills.him [3M.SJ⁸-(MS)-3M.O⁴-(MS)-kill⁰]'
'The hunter kills an elk.'

In terms of its lexical morphology, each verb stem is either strictly transitive or intransitive, so that Ket is a language with an obligatory distinction in transitivity marking. Vajda (2003a:87-90) discusses a few categories of Ket verbs that superficially appear to use a single stem to express transitive and intransitive meaning. Overall, transitivity is one of the verb system's most important lexical distinctions. Transitive stems normally cross-reference both the subject and the object verb-internally. Most seeming exceptions are due to phonological attrition of some sort or to the presence of the zero inanimate-class absolutive series marker: *daínàtet* 'she pokes me with a needle' [*da⁸-i²n⁷-Ø⁶-k⁵-a⁴-tet⁰* 3F.SJ⁸-needle⁷-3N.O⁶-ADES⁵-D⁴-hit⁰]. Others can be explained by the role in object cross-referencing played by unproductive morphemes such as P0 transverse *d* (§2.2.4.1) or P4 animacy-classifying *d* (§2.2.4.2).

A few verbs are transitive syntactically, yet contain no object agreement affix of any kind. One such stem is the transitive verb *us⁷ + ej⁰* 'kill, slaughter', which freely combines with an object noun phrase but never cross-references it verb-internally:

(124) *kájkèt* *qàj* *dússèj* [*du⁸-us⁷-(s)-ej⁰*]
hunter elk he.kills.him [3M.SJ⁸-spear⁷-(MS)-kill⁰]'
'The hunter kills/slaughters an elk.'

Other morphological transitives are ditransitive syntactically, with a third zero-marked noun phrase expressing a theme or instrument role:

(125) *qīm tēt qímdɨl daóvìjaq* [*da*^{8}-*o*^{4}-*b*^{3}-*ij*^{2}-*aq*^{0}] (V.A. Romanenkova, p.c.)
wife husband woman.child she.furnished.him [3F.SJ^{8}-3M.O^{4}-AL^{3}-PT^{2}-give^{0}]
'She gave her husband a baby girl.'

P3 *b* in such stems is an applicative affix rather than a true agreement affix, since the recipient is coindexed as the direct object. No Ket verb cross-references more than two grammatical terms with true agreement affixes.

Transitive verb phrases generally obey a strict animacy hierarchy, with subjects being of equal or higher sentience and activeness than their direct object. Subject NPs normally precede objects, instruments, or other less active terms. Consequently, inanimate-class arguments normally do not serve as the subject of transitive verbs, occasional exceptions being metaphorical descriptions of the type 'the arrow took (=killed) him' *qām bū dakásònam* [arrow him it.took.him]. There are also a few inverse-marked verbs, in which the subject is an animate-class undergoer and the role of stimulus is signaled verb-internally by the obligatory presence of an involuntary causative marker (P3 *b* or P8 *da*, depending on the verb):

(126) *āt bíldĕ báɣövilde* [*ba*^{6}-*k*^{5}-*o*^{4}-*b*^{3}-*il*^{2}-*de*^{0}]
1S everything I.heard [1S.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-hear^{0}]
'I heard everything'

Since they cannot change to agree with an animate-class object, morphemes such as P3 *b* in (126) should be regarded as lexical inverse markers rather than as agreement markers. They are similar in function to the so-called "fourth person" or "obviative" marking found in many Native American languages, except that they are obligatory in certain stems and never present in others. If a noun expressing the source role appears with an inverse verb, it normally follows the subject noun, the canonical position for objects rather than subjects. Also, the lack of verb-internal agreement with an animate-class syntactic object, when one is present, demonstrates that involuntary causatives are morphologically intransitive:

(127) *bū bíldĕ de*$^{?}$*ŋ áɣövilde* [*a*^{6}-*k*^{5}-*o*^{4}-*b*^{3}-*il*^{2}-*de*^{0}]
3M all people he.heard [3M.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-hear^{0}]
'He heard everyone.'

A finite verb may govern other types of complements besides its zero-marked subject and direct objects, though no other terms are coindexed verb-internally. These include nouns denoting instruments or themes in the case of applicative verbs, or source roles in the case of certain involuntary causatives. Oblique case-marked noun phrases never trigger verb-internal agreement even when their presence in the verb phrase is syntactically obligatory. One example is the instrumental-case nouns normally used with transitive verbs of the type 'poke with an object', 'transport using a means of conveyance', etc.:

(128) *ām dílgàt súûl-as daóŋdàptaŋ* [*da*^{8}-*oŋ*^{6}-*k*^{5}-*d*/*a*^{4}-*b*^{3}-*taŋ*^{0}]
'mother kids sled-INSTR she.takes.them [3F.SJ^{8}-3AP.O^{6}-ADES^{5}-across/D^{4}-AL^{3}-drag^{0}]
'The mother takes her kids by sled.'

A number of verbs require the presence of a noun marked with some oblique case. Most verbs of speaking express the addressee role as a dative-marked complement that is not co-indexed verb-internally:

(129) *áv-àŋa tángĭ* [*t*^{5}-*a*^{4}-*in*^{2}-*ki*^{0}]
1S-DAT tell.IMP [SU^{5}-D^{4}-IMP^{2}-tell^{0}]
'Tell me!'

bū déŋ-nà-ŋa dólarun [*du*^{8}-*o*^{4}-*il*^{2}-*a*^{1}-*dun*^{0}]
1M people-AP-DAT he.shouted [3M.SJ^{8}-D^{4}-PT^{2}-3S.RS^{1}-shout.MOM^{0}]
'He shouted to the people.'

Verbs denoting 'talking or thinking about' require adessive complements:

(130) *báàm hósĕdam-di-ŋta áskɜ̄t datóvìngi* [*da*^{8}-*t*^{5}-*o*^{4}-*b*^{3}-*in*^{2}-*ki*^{0}]
old.woman Hosedam-F-ADES story she.told.it [3F.SJ^{8}-SU^{5}-D^{4}-3N.O^{3}-PT^{2}-tell^{0}]
'The old woman told a story about Hosedam (a witch).'

ām daánìŋsivet [*da*^{8}-*an*/*iŋ*^{7}-*(s)-bet*^{0}] *dáʃìŋ díl-dà-ŋta*
mother she.thinks [3F.SJ^{8}-think/ITER^{7}-(MS)-make^{0}] sick child-M-ADES
'The mother is thinking about the sick child.'

Finally, certain verbs require special constructions as complements. The morphologically intransitive verb 'be acquainted with someone' must express its object in the form of a phrase headed by *qòŋ* 'image':

(131) *bū-ŋ híɣ-dà qòŋ ítàŋlam* [*it*^{7}-*aŋ*^{4}-*il*^{2}-*am*^{0}] *qōr dūno* [*du*^{8}-*in*^{2}-*qo*^{0}]
3-AP man-M.GEN image 3AP.SJ.knew[sense^{7}-3AP.SJ^{4}-PT^{2}-take^{0}] who.M he.died [3M.SJ^{8}-PT^{2}-die^{0}]
'They knew the man who died.'

The presence of case-marked noun phrases or postpositional constructions is dictated by the syntactic valence of the verbs that govern them. But the oblique complements themselves are never cross-referenced verb-internally.

3.2. Sentence types

3.2.1. Simple sentences

The predicates of simple sentences in Ket consist of a finite verb phrase or a predicate nominal construction.

3.2.1.1 Simple sentences with finite verb forms

Each finite verb form in Ket is capable of functioning as a simple sentence on its own, since it normally contains subject and object affixes. The actual presence of verb-external noun phrases expressing the syntactic roles of subject and direct object is more a matter of narrative focus (§3.3).

In addition to the obligatory oblique case-marked complements discussed in §3.1.2, the verb phrase can be optionally extended by a wide variety of temporal or spatial adjuncts. These may be either true adverbs or adverbials created from noun phrases augmented with oblique case suffixes or postpositions:

(132) *ís-qö̀ keˀt dílìŋ-di-ŋta sés-kà tséstà* [*du*^{8}-*ses*^{7}-*a*^{4}-*td*^{0}]
fish-kill man canoe-N-ADES river-LOC he.sits [3F.SJ^8-place^7-D^4-event.extends^0]
'The fisherman sits in a canoe on the river.'

tīp lám-t hítà-ya dútàʁot [*du*^{8}-*t*^{5}-*a*^{4}-*qut*^{0}]
dog table-N.GEN below-LOC he.lies [3M.SJ^8-SU^5-D^4-S.SJ.occupies.position^0]
'The dog is lying under the table.'

To summarize, the most common type of simple sentence in Ket contains a finite verb form as its core. This form is polypersonal and obligatorily cross-references up to two grammatical terms (the subject and direct object), depending upon the lexical stem in question. Other words may or may not be present in the verb phrase. Even the subject and object noun phrases can be freely omitted for reasons involving narrative focus. Noun phrases marked in oblique cases are not cross-referenced verb-internally.

3.2.1.2. Simple sentences with predicate nominal constructions

Equative sentences containing a predicate nominal normally use a zero copula to express present or past tense. In such cases, coordination of the predicate nominal with the subject may require a concord suffix. If the predicate consists of a noun, a stem nominalized by *-s*, or a personal pronoun in the absolutive case, no concord suffix is added:

(133) a. noun predicate
tū-r qà qàj
that-M big elk
'That is a big elk.'

b. nominalized predicate
tū-r qàj qà-s
that-M elk big-NOM
'That elk is a big one.'

c. absolutive-case pronoun
kí-nè bū-ŋ
this-AP 3-AP
'It's them.'

All other parts of speech capable of appearing as predicate nominals – adjectives, cardinal numerals, adverbs, infinitives, postpositional constructions, or nouns in an oblique case other than genitive – add one of the following concord suffixes to express agreement with the sentence subject: 1S *-di*, 2S *-ku*, 3M *-du*, 3F *-da*, 3N *-am*, 1PL *-daŋ*, 2PL *-kaŋ*, 3AP *-aŋ*:

(134) *tū-r tīp sél-dù*
that-M dog bad-3M.PRED (adjective)
'That dog is/was bad'

kí-rè huˀn áqtä-da
this-F daughter good-3F.PRED (adjective)
'This daughter is/was good.'

ū qá-γù
2S at.home-2S.PRED (adverb)
'You are/were at home.'

ə̄kŋ̀ dóŋ-kàŋ
2PL three-2PL.PRED (cardinal numeral)
'There are/were three of you.'

bū bísèŋ-du
3M where-3M.PRED (interrogative)
'Where is he?'

bū qásèŋ-da
3F there-3F.PRED (adverb)
'She is there.'

ū ās íl-gù
2S FUT sing-2S.PRED (infinitive)
'You will be able to sing.'

ə̄kŋ̀ íl-gəŋ
2PL sing-2PL.PRED (infinitive)
'You can sing.'

The neuter-class suffix *-am* is used if there is no subject NP: *sóðŋ áqtä-m* 'It's good there.'

No concord suffix is used in predicates containing the modal particle *nárà* 'need', the copulas *úsàŋ* 'am/is/are present' or *óvìlda* 'was, were', or the negative copulas *bə́nsàŋ* 'am/is/are not present' or *bə́nsàŋ óvìlda* 'was/were not'. The plural forms *óvìldan* or *bə́nsàŋ óvìldan* appear in connection with an animate-plural subject.

Some predicate possessives are marked in a special way. Nouns in the genitive case add *-s* (*-sin* for plural subjects). Possessive pronouns add *-bij* (< *biˀ* 'thing') when coordinated with an inanimate-class or null subject, or *-ij* with animate-class subjects:

(135) *qiˀt qál-dà-s*
bow grandson-M.GEN-NOM
'The bow is the grandson's'

doˀn áb-bìj
knife 1S.GEN-N.PRED
'The knife is mine.'

tōk úk-bìj
axe 2S.GEN-N.PRED
'The axe is yours.'

tīp híb-dà-s
dog son-M.GEN-NOM
'The dog is the son's'

kírè qàj áb-ìj
this.F elk 1S.GEN-AN.PRED
'This elk is mine.'

tū-r sèl úk-ìj
that-M deer 2S.GEN-AN.PRED
'The deer is yours.'

Even where grammatically permissable, concord suffixes can be omitted when the subject rather than the predicate is in focus:

(136) Focus on predicate
bū áb-àŋta-du
3M 1S-ADES-3F.PRED
'He is/was at my place.'

ə́tǹ qús-kà-γaŋ
1PL tent-LOC-1PL.PRED
'We are/were in the tent.'

Focus on subject
bū áb-àŋta
3M 1S-ADES (bare case form)
'*He* is/was at my place.'

ə́tǹ qús-kà
1PL tent-LOC (bare case form)
'*We* are/were in the tent.'

For more on focus marking, see §3.3.

3.2.2. Complex sentences

3.2.2.1. Coordination

There are almost no native morphological devices to coordinate parallel items or parallel sentences. The coordinating conjunction *haj* 'and, also' can be inserted between items in a series, as well as between parallel sentences. Traditionally, parallel sentences in Ket tended to be coordinated asyndetically. Most coordinating conjunctions used by contemporary speakers are recent loans from Russian: *i* 'and', *a* 'and, but', *nɔ* 'but', *ili* 'or'.

3.2.2.2. Subordination

Ket possesses three formal means of subordinating one event to another. These techniques are basically synonymous, though they may contrast pragmatically. The first is simply to juxtapose two finite verb clauses asyndetically, so that the connotation of subordination as opposed to coordination is purely contextual:

(137) *ām dalóvèravet* [*da*^{8}-*lobet*^{7}-*a*^{4}-*bet*^{0}] *dìlgàt dánìstan* [*du*^{8}-*an*^{7}-(*s*)-*ta*^{0}-*n*$^{-1}$]
mother she.works [3F.SJ^8-work^7-D^4-ITER^0] kids they.play [3AN.SJ^8-mind^7-(MS)-extend^0-AP^{-1}]
'Mother works; the kids play.'

The second involves using a subordinating conjunction to create complex sentences. Ket has a full range of subordinating conjunctions, all of which appear to be of native Yeniseic provenance: *áskà* 'when', *áksdɪŋɪ* 'why', *éttà ~ éttàqora* 'like, as', *úntèn ~ túntèn* 'which is why', *bílà* 'how (in what way)', *bílūn* 'how (to what degree)', *ánūn* 'how much (quantity)', *bísèŋ* '(place) where', *bíltān ~ bílès* '(to) where', *bílīl* 'from where', etc.:

(138)
áskà dalóvèravet [*da*^{8}-*lobet*^{7}-*a*^{4}-*bet*^{0}] *dílgàt dánìstan* [*du*^{8}-*an*^{7}-(*s*)-*ta*^{0}-*n*$^{-1}$]
when she.works [3F.SJ^{8}-work^{7}-D^{4}-ITER^{0}] kids they.play [3AN.SJ^{8}-mind^{7}-(MS)-extend^{0}-AP^{-1}]
'When she works, the kids play.'

táŋgì [*t*^{5}-*a*^{4}-*in*^{2}-*ki*^{0}] *dá-ŋa áksdɪŋɪ ū kúɣŏn* [*ku*^{6}-*k*^{5}-*o*^{4}-(*in*^{2}-*t*)*n*^{0}]
tell.IMP [SU^{5}-D^{4}-IMP^{2}-tell^{0}] 3M-DAT why 2S you.S.left [2S.SJ^{6}-ABL^{5}-D^{4}-PT^{2}-go^{0}]
'Tell him why you left.'

kān súlèm-am éttàqora sūl
sunrise red-N.PRED like blood
'The sunrise is as red as blood.'

de^{7}*ŋ ítàŋlam* [*it*^{7}-*aŋ*^{4}-*il*^{2}-*am*^{0}] *bísèŋ qōn dúɣĭn* [*du*^{8}-(*ɣ*)-*a*^{4}-*daq*^{0}-*n*$^{-1}$]
people they.know [sense^{7}-3AP.SJ^{4}-PT^{2}-take^{0}] where bear.PL they.live[3AN.SJ^{8}-(MS)-D^{4}-live^{0}-AP^{-1}]
'People know where bears live.'

The same conjunctions are used when the main clause contains a connector element:

(139)
bílā datóvìngi [*da*^{8}-*t*^{5}-*o*^{4}-*b*^{3}-*in*^{2}-*ki*^{0}] *to*^{7}*n dbílīvet* [*du*^{8}-*b*^{3}-*il*^{2}-*bet*^{0}]
how she.told.it [3F.SJ^{8}-SU^{5}-D^{4}-3N.O^{3}-PT^{2}-tell^{0}] so I.did.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-make^{0}]
'I did it how she said (to do it).'

túnìŋa káŋàtn [*kaŋ*^{6}-*k*^{5}-*a*^{4}-*tn*^{0}] *bílīl āt dímbès* [*di*^{8}-*ik*^{7}-*in*^{2}-*bes*^{0}]
to.there you.PL.go [2PL.SJ^{6}-ADES^{5}-D^{4}-go^{0}] from.where 1S I.came [1S.SJ^{8}-here^{7}-PT^{2}-come^{0}]
'You are going where I came from.'

If/whether clauses contain the interrogative enclitic *u* 'whether' or *bānd-u* 'whether or not':

(140)
bú-rì-ŋa tívlɪ [*di*^{8}-*t*^{5}-*b*^{3}-*il*^{2}-*t*^{0}] *qīt-u daátòloŋ* [*da*^{8}-^{6}-*k*^{5}-*o*^{4}-*il*^{2}-*oŋ*^{0}]
3-F-DAT I.asked[1SJ^{8}-SU^{5}-AL^{3}-PT^{2}-ask^{0}] wolf-if she.saw.him[3F.SJ^{8}-3M.O^{6}-ADES^{5}-D^{4}-PT^{2}-see^{0}]
'I asked her if she saw the wolf.'

bān ítparam [*it*^{7}-*ba*^{6}-*di*^{1}-*am*^{0}] *bānd-u díksìves* [*du*^{8}-*ik*^{7}-(*s*)-*bes*^{0}]
NEG I.know [sense^{7}-1S.SJ^{6}-1S.RS^{1}-take^{0}] not-if he.comes [3M.SJ^{8}-here^{7}-(MS)-come^{0}]
'I don't know whether or not he will come.'

The third subordination technique involves adding a case suffix (several examples of which appeared during the discussion of case usage in §2.1.1.2.4) or a postposition as a means of backgrounding one of the clauses in discourse:

(141)
ām dalóvèravet[*da*^{8}-*lobet*^{7}-*a*^{7}-*bet*^{0}] *dúgdè dílgàt dánìstan* [*du*^{8}-*an*^{7}-(*s*)-*ta*^{0}-*n*$^{-1}$]
mother she.works [3F.SJ^{8}-work^{7}-D^{4}-ITER^{0}] during kids they.play[3AN.SJ^{8}-mind^{7}-(MS)-extend^{0}-AP^{-1}]
'While she works, the kids play.'

Similar examples appeared in (69) above. Recall that postpositions used as clausal subordinators are not preceded by a genitive case morpheme except that *dúgdè* 'during' retains possessive *d* as a fossilized augment. Other clausal postpositions include: *kíyà* 'if, when (consecutive action)', *qáyà* 'if, when (concurrent action), while', *qárĭya* 'after', *kúpkà* 'before', *dóyòt* 'because', *báŋgà* '(located) where', *báŋdɪŋa* 'to where', *báŋdɪŋal* 'from where', *ásqà* 'in the same manner as'. Clausal postpositions can attach to predicates containing copula verbs or predicate nominals, as well as finite verb forms:

(142)
bēj-d bánsàŋ qáyà ús-àm
wind-GEN not.present while warm-N.PRED
'While there is no wind it is warm.'

átn hánà-raŋ dúgdè dólɪn [*di*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}-*n*$^{-1}$] *jélòk-di-ŋta*
1PL small-1PL.PRED during we.lived [1SJ^{8}-D^{4}-PT^{2}-live^{0}-AP^{-1}] Yelogui-F.ADES
'When we were small, we lived on the Yelogui River.'

bū hájàtes[*du*^{8}-*ha*^{7}-*a*^{4}-(*j*)-*a*^{1}-*tes*^{0}] *kíyà dīl qónòksájdoavet* [*du*^{8}-*qonoksajdo*^{7}-*a*^{4}-*bet*^{0}]
3M he.gets.up [3M.SJ^{8}-straight^{7}-D^{4}-(MS)-3S.RS^{1}-rise^{0}] after child he.eats.breakfast
'After he gets up, the child eats breakfast.' [3M.SJ^{8}-breakfast^{7}-D^{4}-ITER^{0}]

ū bān kúyătn [*ku*^{6}-*k*^{5}-*a*^{4}-*tn*^{0}] *dóyòt āt bīn bóyătn* [*bo*^{6}-*k*^{5}-*a*^{4}-*tn*^{0}]
2S NEG you.S.go [2S.SJ^{6}-ADES^{5}-D^{4}-go^{0}] because 1S self I.go [1S.SJ^{6}-ADES^{5}-D^{4}-go^{0}]
'Because you aren't going, I'll go myself.'

qímā dáyàraq[*də*^{8}-(*ɣ*)-*a*^{4}-*daq*^{0}] *báŋdɪŋal túnūl āt dímbès* [*di*^{8}-*ik*^{7}-*in*^{2}-*bes*^{0}]
grandma she.lives[3F.SJ^{8}-(MS)-D^{4}-live^{0}] from.where from.there 1S I.came [1SJ^{8}-here^{7}-PT^{2}-come^{0}]
'I came from (the place) where grandma lives.'

bū to^{7}*n dóldàq*[*du*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}] *bíldē de*^{7}*ŋ dólɪn* [*du*^{8}-*o*^{4}-*il*^{2}-*daq*^{0}-*n*$^{-1}$] *ásqà*
3M so he.lived[3M.SJ^{8}-D^{4}-PT^{2}-live^{0}] all people they.lived [3M.SJ^{8}-D^{4}-PT^{2}-live^{0}-AP^{-1}] like
'He lived like everyone (else) lived.'

Aside from the presence of a case suffix or postposition, there is no difference in the verb form itself to mark whether it belongs to the subordinate or the main clause. Ket has no true converbs or serial verb constructions of any kind. For extensive examples of all three types of complex sentences in Ket, see Werner (1997b:320-74).

3.3. Functional sentence perspective

Ket sentences are generally divided into a subject-topic (the old information) followed by a predicate reporting some sort of new information about that topic. The linkage of the predicate with the pragmatic notion of comment means that the language's basic syntactic SOV word order generally does not vary for pragmatic reasons.

Narrative focus (special emphasis on a particular syntactic element) tends to be expressed by the choice between otherwise synonymous lexical or morphological constructions. Certain word types serve as focus-marking devices, while others convey background information. Incorporating an object into the finite verb tends to defocus it (143a), while the use of the interrogative particle *aj* (143c) expresses special object focus. A few verbs require a special subject focus particle, *an* (143d):

(143) a. Defocussed patient role (intransitive verb with incorporated patient role)
daákùssibet 'What is she doing?' [*da*^{8}-*akus*^{7}-*(s)-bet*^{0} 3F.SJ^{8}-what^{7}-(MS)-do^{0}]

b. Focus-neutral question (regular object NP and simple transitive verb)
ákùs dábbèt 'What is she making?' [*də*^{8}-*b*^{3}-*bet*^{0} 3F.SJ^{8}-3N.O^{3}-make^{0}]

c. Object focus (expressed by the special interrogative pronoun *aj* 'what')
aj dábbèt 'Just *what is it* that she's making?' [*də*^{8}-*b*^{3}-*bet*^{0} 3F.SJ^{8}-3N.O^{3}-make^{0}]

d. Subject focus (expressed by the special interrogative particle *an* 'what')
an kúnà 'Just *what* happened to you?' [*ku*^{8}-*in*^{2}-*a*^{0} 2SJ^{8}-PT^{2}-active.event^{0}]

Another example of contrastive focus marking involves transitive verbs that allow a reflexive reading. Ket has a type of transitive verb capable of expressing object focus (144a). These stems can even be used reflexively, in which case they contrast pragmatically with intransitive stems used to highlight the event as a whole rather than its participants. The latter type of verb (144b) has either an agentless reading or may likewise be interpreted as having reflexive meaning:

(144) Examples of verbs capable of expressing reflexive meaning
a. Bivalent verb or object-focus reflexive
da^{8}-*sin*^{7}-*u*^{6}-*k*^{5}-*(s)-bet*^{0}
3F.SJ^{8}-dirt^{7}-3F.O^{6}-ABL^{5}-make^{0}
dasínùksivet 'she makes her (or herself) dirty' (object in focus)

b. Agentless passive or action-focus reflexive
da^{8}-*sin*^{7}-*bu*^{6}-*k*^{5}-*(s)-bet*^{0}
3F.SJ^{8}-dirt^{7}-3RS^{6}-ABL^{5}-make^{0}
dasínbùksivet 'she gets dirty' (causal participant not in focus)

One set of verbs that regularly make this formal distinction includes the transitive and intransitive causatives built using the P5 adposition *q* (§2.2.5.1):

(145) a. transitive form expressing object focus
di^{8}-*us*^{7}-*q*^{5}-*a*^{4}-*di*^{1}-*da*^{0}
1SJ^{8}-dry^{7}-cause^{5}-D^{4}-1S.O^{1}-ITER.TR^{0}
dúsqáddà 'I warm myself up (often)'

b. intransitive form that emphasizes the event's effect rather than its participants
di^{8}-*us*^{7}-*q*^{5}-*a*^{4}-*di*^{1}-*dij*^{0}
1SJ^{8}-dry^{7}-cause^{5}-D^{4}-1S.O^{1}-ITER.INTR^{0}
dúsqáddij 'I get warmed up (often)'

Examples (144) and (145) demonstrate that reflexivity is not a primary verb-internal category in Ket, but rather a contextual feature that can be optionally highlighted for purposes of focus marking. The same is true of verb-external reflexive pronouns, which can be included to mark subject focus but are not obligatory (cf. §2.1.2).

Example (145) also illustrates one way that transitive and intransitive stems may differ morphologically in Ket. The transitive form in (145a) has the P0 morpheme shape *-da*, while the intransitive in (145b) has *-dij*.

A third example of how morphology is used in focus marking involves predicate nominals. Predicate concord suffixes tend to be used in conjunction with predicate focus, and can be omitted when the subject is focussed. This can clearly seen by comparing two lines from the sample text in §5:

(146) *érŭla* *ánùn-tu-ru* (line 10)
erula mind-ADJ-M.PRED
'Erula was *smart* (not dumb).'

(147) *érŭla* *ánùn-tu* *óvìlde* (line 35)
erula mind-ADJ was
'*Erula* (unlike his brother Tuta) was smart.'

In (147) the past-tense copula *óvìlde* appears instead of a predicate concord suffix.

The omission of a pronoun serves to background the given referent, while the explicit inclusion of the pronoun brings it into narrative focus. This pattern of referent tracking is clearly illustrated throughout the text in §5, where glosses for the 3rd person singular animate personal pronoun *bū* as 'he' vs. 'she' or as the subject rather than the object reflects both the language's SOV word order and its practice of dropping defocussed topic pronouns. Intonational emphasis also help mark focussed constituents.

3.4. Particles

Because only present vs. past tense and imperative vs. indicative mood are conveyed verb-internally, grammatical particles express most other tense and modal categories. The desiderative particle *qān* expresses imperative meaning when added to non-volitional predicates and can be used with any grammatical person: *qān ávătij* 'Let it grow'. When used with the past tense, *qān* expresses a more categorical meaning: *qān éngùnsuk* 'Don't you forget!'. The irrealis particle *sim* marks hypothetical situations and appears in both clauses of if/then sentences to express the conditional mood:

(148) *ēs* *sim* *táj-àm* *qáyà* *átn̄* *sim* *díntàliyin* [*di*^{8}-*in*^{2}-*təəliŋ*^{0}-*in*$^{-1}$]
weather COND cold-N.PRED while 1PL COND we.froze [1SJ^{8}-PT^{2}-freeze^{0}-AP^{-1}]
'If the weather had been cold at that time, then we would have frozen.'

The prohibitive particle *átn̄* (often reduced to *at*) negates imperative forms (*átn̄ kásnàm* 'Don't take it'). It also negates the indicative forms of non-volitional verbs used with a prohibitive or judgemental nuance (*átn̄ kúgbìnun* 'Don't slip', or 'You shouldn't have slipped'). The particle *bān* negates all other indicative verb forms: (*bān kúgbìnun* 'You.S didn't slip.'); it also negates predicate nominals and other parts of speech: *bān áqtă* 'not good', *bān kísĕŋ* 'not here', *bān ke?t* 'not a person').

Particles play a similar role in the expression of tense and aspect distinctions. The particle *sin* 'once, one day' denotes the indeterminate past. The habitual particles *ba* 'habitual past', *an* 'habitual present', and *as* 'habitual future' distinguish single from multiple action in stems that do not mark event number: cf. *ū káʁàsla* 'you.S chopped wood/were chopping wood' vs. *ū ba káʁàsla* 'you.S used to chop wood regularly'. With stems that lexically convey single actions, these particles convey a vivid example of a regularly occurring event: cf. *bū èr dakájnàm* 'she caught a sable (once), and *sés-kà èr ba dakájnàm* 'At the river she would normally catch a sable' [river-LOC sable HABITUAL.PAST she.took.him]. Preposed to non-past indicative forms, the particles *an* 'habitual present' and *as* 'habitual future' also serve to disambiguate tense, since the verb form itself only distinguishes between past and non-past tense: cf. *an dánìsta* 'I customarily play' vs. *as dánìsta* 'I'll usually be playing'. The same applies in the case of two other particles: *qam* 'immediate future' (*qām díksìbes* 'I'll come right away'), *kim* 'indeterminably distant future' (*kim dímbès* 'I'll come one of these days'). With past tense verbs, *qam* expresses an action that has just occurred (*qām daímbès* 'She just arrived').

(149) Summary of temporal nuances added by preposed particles

	past	present	future
habitual action:	*ba*	*an*	*as*
distant from present:	*sin*	-	*kim*
close to present:	*qam*	-	*qam*

The particle *bat* 'as soon as' can be used in conjunction with any tense to denote the immediate relevance of one action's effect on the occurrence of another:

(150) *ĩik* *bat* *bílùs* [*b(in*^{7}*-b)*^{3}*-il*^{2}*-us*^{0}] *dáàn óvlătij* [*o*^{4}*-b*^{3}*-il*^{2}*-a*^{1}*-tij*^{0}]
snow as.soon.as it.melted [self^{7}-3N.SJ^{3}-PT^{2}-warm^{0}] grass it.grew [D^{4}-3N.SJ^{3}-PT^{2}-3S.RS^{1}-grow^{0}]
'As soon as the snow melted, grass grew.'

Particles are also used for various discourse functions. The homonymous particle *bat* 'really, in truth' (< *ba*^{7}*t* 'truth') emphasizes that an action really took place: *bū bat dímbès* 'He really did come'. The combination *bat bən* 'not even' expresses the speaker's surprise that an action did not take place: *bū bat bən dabúŋlùʁo* 'She didn't even look'. The mirative particle *bān*, distinguised from the homonymous negative particle *bən* only by intonational emphasis, portrays a narrated event as noteworthy and unexpected:

(151) *sa*^{7}*q* *bān* *sóòŋ* *dáyàraq* [*da*^{8}*-(y)-a*^{4}*-daq*^{0}]
squirrel MIRATIVE here she.lives [3F.SJ^{8}-(MS)-D^{4}-live^{0}]
'It turns out that a squirrel lives there.'

Although there are no true topic-marking particles in Ket, the postposed particle *ínà* can be used to mark a new narration, not unlike English "once upon a time" or "there once was" (for examples, cf. lines 1 and 3 of the folktale given in §5).

3.5. Interjections

Like all languages, Ket uses a variety of interjections, exclamations, and response phrases. Some express pure emotion, such as *iná:*, a rough equivalent of English 'Ouch!' Others are used to get the listener to do something the speaker wants: *ót* 'Come here!', *ma*^{7} 'Here!' (said when handing an object to the listener), *ó yà* 'Hand it over!' (said when the

speaker the listener to give something). 'Yes' is *e*^{7}, and 'no' is *bān*. Traditionally, Ket lacked set expressions of greeting, farewell, or thanking. Recent Russian influence has led to the development of phrases such as *áqtă qónòks* 'Good morning' (a calque based on Russian *dóbroje útro*), *áskă dóytùyin* 'Goodbye' (literally, 'when we.see.us'), and *páčìbo* 'Thanks' (< Russian *spasíbo*).

4. Lexicon

As isolated bands of hunter-gatherer-fishers, the Ket developed a vocabulary uniquely suited to their taiga and riverine environment. Many nouns refer to special features of the local northern ecology: *hálìs* 'a small raised mound in the tundra', *sólgùp* 'a point of land jutting out into a small river', or the phrasal compound *átĕtliŋ ōks* 'a lone tree of one species growing in an otherwise pure stand of another species'. Many words express details of the forest economy: *íraq* 'spring camp', *ítăŋ* 'distance between two encampments' (< *i* 'day' + *tàŋ* 'drag'), *ímtèt* 'to harvest pine nuts' (< *īm* 'pine nuts' + *tàr* 'hit'), *ĩit* 'swarms of bloodsucking insects (an unfortunate feature of taiga life during the brief summer)', *hájl* 'spring thaw' (time of rapid melting caused by the first warm winds in early spring), *lílgèj* 'the crunch of snow under moving sled runners', *qi*^{7}*j* 'large piece of birchbark used to cover the summer tent', etc. Many words and phrases express particular aspects of Ket spiritual culture: *sénìŋ* 'shaman', *hās* 'shaman's drum', *hádbùl* 'stick used to beat a shaman's drum (literally 'drum's leg)', *dáŋòls* 'male ancestor spirit (and the figurine used to symbolize it)', *állĕl* 'female guardian spirit (and the doll used to symbolize it)', *úlvĕj* 'the primary soul from among the seven souls though to inhabit each person'. Fire was conceived as a feminine-class animate being, giving rise to such phrases as *bo*^{7}*k dāp* 'fire burns' (literally, 'fire eats'). The Ket employed a wealth of specialized terms during their "Bear Ceremony," an event featuring the ritual slaughter and consumption of a bear assumed to be a reincarnated a human relative. (The last such ceremony was held in the early 1970s.) For example, *xúktăŋ* denotes 'bear eyes', while *déstăŋ* refers to the eyes of other animals or people. A rich inventory of spatial adverbs expresses specific types of location or motion with regard to rivers or lakes and forested land: *ígdà* 'from the forest to the riverbank', *átà* 'from water to shore', *áyă* 'from shore to forest', *étà* 'movement on foot upriver along the ice', etc. These adverbs can be incorporated into verbs of motion. Some adjective stems reflect distinctions involving shape and animacy: *súkŋ̀* 'fat, wide in circumference (said of a tree)', *bōl* 'fat, rotund (person or animal)', and *bósĭ* 'fat, thick (object)'; *ka*^{7}*t* 'old, elderly (animals, people)', *qà* 'old, grown up (said of children, young adults)', and *sīn* 'old, decrepit' (said of people); 'ancient' (said of trees)'; *kítĕj* 'young (animals, people)' and *ki*^{7} 'new (said of objects or plants)'. Some nouns describing natural phenomena are more elaborately classificatory than is typical for most other Eurasian languages: *be*^{7}*s* 'falling snow', *tik* 'layer of fallen snow on the ground', *tóqpùl* 'layer of fallen snow on branches'; also, *húùt* 'animal's tail', *hi*^{7}*s* 'bird's tail', *hóràp* 'fish's tail'. Conversely, certain kinship terms are surprisingly generic with regard to gender (*bísĕp* 'brother, sister', *qīp* 'uncle, aunt', *qàl* 'grandchild, niece, nephew'), especially given that Ket marriages traditionally were patrilocal and arranged between two exogamous phratries (*hóʁŏtpul*): Qentan (*qéntàn de*^{7}*ŋ* 'Ski-pole ring Clan') and Bogdeng (*bógdɪreŋ* 'Fire Clan').

Ket contains numerous Russian loans, some of which are old enough to have become assimilated to Yeniseic phonology: *ho*^{7}*p* 'parish priest' (< Russ. *pop*), *kōn* 'horse' (< Russ. *kon'*). There are also Selkup loans in Ket, such as *la*^{7}*q* 'Selkup', a word that derives from the Selkup word for 'friend'. This symbolizes the close relations between the Ket and

Selkup, who often exchanged marriage partners. There are fewer loans from Nenets or Evenki, the traditional forest adversaries of the Ket. Southern Yeniseic languages, which became extinct before Russian influence became massive, contain numerous loans from South Siberian Turkic: Kott/Assan *boru* 'wolf', Kott *atax* 'felt tent', Kott *šera* 'beer', Arin *tura* 'dwelling', Kott *kališ* 'sword', etc. Conversely, some pan-Yeniseic words, such as 'stone' (Ket *ti^{7}s*, Yugh *či^{7}s*, Kott *šiːš*, Arin *kes*), may be the source of early loans into Turkic (cf. proto-Turkic **taš* 'stone'). Other Yeniseic words may derive from prehistoric Indo-European intrusions into Inner Asia (Yugh *ku^{7}s* 'horse', Ket *qólàp* 'half'). Others may be ancient loans from some unknown Uralic language (*tōj* 'spring of water', *ùs* 'birch tree').

Aside from the effects of language contact, Ket vocabulary shows no clear lexical affinities with other Eurasian families. Basic words lack obvious cognates in other Asian languages. This includes words for body parts: *īl* 'arm', *làŋ ~ láŋàt* 'hand', *a^{7}t* 'bone', *būl* 'leg, foot', *ke^{7}s* 'wing', *dēs* 'eye', *ìt* 'tooth', *ólɪn* 'nose', *to^{7}q* 'finger or toe', *i^{7}n* 'finger or toe nail', *sīŋ* 'liver', *ti^{7}* 'head', *táyà* 'chest', *ūl* 'navel'; kinship: *qim* 'wife', *tēt* 'husband', *èn* 'son-in-law', *hīɣ* 'man', *qàl* 'grandchild'; tools: *sùk* 'cradle hook', *ti^{7}n* 'kettle', *do^{7}n* 'knife', *sùl* 'holding hook', *ūs* 'bear spear', *qi^{7}t* 'bow (for arrows)', *tōk* 'axe'; and natural phenomena: *a^{7}q* 'trees', *tùχ* 'snake', *túlɪn* 'lizard', *sèl* 'reindeer', *kùn* 'wolverine', *i^{7}* 'sun', *ēs* 'sky', *ūl* 'water'. The inability of linguists to demonstrate a genetic connection between Yeniseic and other Old World families using core vocabulary underscores the status of Ket as landlocked northern Asia's only language isolate.

The most extensive compilation of Ket vocabulary can be found in Heinrich Werner's three-volume comparative dictionary (Werner 2003a). This monumental work contains personal names and toponyms, in addition to common nouns and words from other parts of speech. It also includes cognates from the extinct Yeniseic languages.

5. Text with interlinear glosses and translation[2]

īn bísnùmin
'Two brothers'

1. *īn* *bísnùmin* *ínà* *ám-às* [*ámmàs*] *dólɪn* [*du^{8}-o^{4}-il^{2}-(daq^{0})-in^{-1}]
   two brother.PL PART mother-INSTR they.lived [3AN.SJ^{8}-D^{4}-PT^{2}-live^{0}-AP^{-1}]
   'Two brothers lived with their mother.'

2. *déjsàŋgolejin* [*du^{8}-ejs^{7}-aŋ^{6}-k^{5}-o^{4}-il^{2}-ef^{0}-in^{-1}] *érŭla* *haj* *túta*
   they.called.them [3AN.SJ^{8}-up^{7}-3AP.O^{6}-ADES^{5}-D^{4}-PT^{2}-call^{0}-AP^{-1}] erula and tuta
   'People called them Erula and Tuta.'

3. *sīn* *ínà* *ām* *áràɣolaran* [*ad^{7}-i^{6}-k^{5}-o^{4}-il^{2}-a^{1}-den^{0}*]
   once PART mother she.fell.ill [sick^{7}-3F.SJ^{6}-ADES^{5}-D^{4}-PT^{2}-R^{1}-go^{0}]

   haj *dāno* [*də^{8}-in^{2}-qo^{0}*]
   and she.died [3F.SJ^{8}-PT^{2}-die^{0}]
   'One day the mother fell ill and died.'

[2] The Yugh version of this story, titled "Erulya and Tuta" appeared in Werner (1997b:267). I thank Heinrich Werner for allowing me to translate, gloss, and publish this Southern Ket rendition, which he originally recorded from U. P. Kotusova in Kellog in 1989.

4. *bísnùmin* *bájgìtnáŋtònoq* [*báj/gìt/n^{7}-aŋ^{6}-t^{5}-o^{4}-in^{2}-oq^{0}*]
   brother.PL orphans.they.became [orphan/child/PL^{7}-3AP.SJ^{6}-SU^{5}-D^{4}-PT^{2}-become^{0}]
   'The brothers became orphans.'

5. *dótàm-báàm* *íyŏvilde* [*i^{6}-k^{5}-o^{4}-b^{3}-il^{2}-de^{0}*] *bísnùmin*
   dotam-old.woman she.heard [3F.SJ^{6}-ADES^{5}-D^{4}-IC^{3}-PT^{2}-hear^{0}] brother.PL

   bájgìtnaŋtonoq [*bəj/gìt/n^{7}-aŋ^{6}-t^{5}-o^{4}-in^{2}-oq^{0}*]
   orphans.they.became [orphan/child/PL^{7}-3AP.SJ^{6}-SU^{5}-D^{4}-PT^{2}-become^{0}]
   'Old Dotam Woman (a forest witch) heard that the brothers had become orphans.'

6. *bū* *daímbès* [*da^{8}-ik^{7}-in^{2}-bes^{0}*] *haj* *dílgàt*
   3F.SJ came [3F.SJ^{8}-here^{7}-PT^{2}-come.MOM^{0}] and children

   dabúyòŋnam [*da^{8}-bu^{6}-k^{5}-oŋ^{4}-in^{2}-am^{0}*] *bín-dà* *tə̄-ŋ* *íŋgùs-di-ŋa*
   she.led.them [3F.SJ^{8}-3RS^{6}-ABL^{5}-3AP.O^{4}-PT^{2}-take^{0}] self-F.GEN stone-PL house-N-DAT
   'She came and led the children away to her own stone house.'

7. *túsèŋ bū* *bū-ŋ* *daílɪŋqoŋona* [*da^{8}-ilɪŋ^{7}-q^{5}-oŋ^{4}-in^{2}-a^{0}*] *na-ílɪŋ-esaŋ*
   there 3F.SJ 3-AP.O she.fed.them [3F.SJ^{8}-food^{7}-CAUS^{5}-3AP.O^{4}-PT^{2}-TR.MOM^{0}]3AP.POS-food-TRL
   'There she started fattening them up to make them into a meal for herself.'

8. *bū* *bū-ŋ* *kít-tù* *ís-às* *daílɪŋqoŋona* [*da^{8}-ilɪŋ^{7}-q^{5}-oŋ^{4}-in^{2}-a^{0}*]
   3F.SJ 3-AP.O fat-ADJ meat-INSTR she.fed.them [3F.SJ^{8}-food^{7}-CAUS^{5}-3AP.O^{4}-PT^{2}-TR.MOM^{0}]
   'She fed them with fatty meat.'

9. *álà* *bū* *bū-ŋ* *bən* *daúlàŋáŋtòblej* [*da^{8}-ulaŋ^{7}-aŋ^{6}-t^{5}-o^{4}-b^{3}-il^{2}-ef^{0}*]
   out 3F.SJ 3-AP.O NEG she.let.them [3F.SJ^{8}-loose^{7}-3AP.O^{6}-SU^{5}-D^{4}-AL^{3}-PT^{2}-let.ITER^{0}]
   'She would not let them go outside.'

10. *érŭla* *ánùn-tu-ru* *bū* *òn* *īs* *bən* *dbīl* [*du^{8}-b^{3}-il^{2}-a^{0}*]
    erula mind-ADJ-M.PRED 3M.SJ much meat NEG he.ate.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-eat^{0}]
    'Erula was smart and didn't eat much of the meat.'

11. *a* *túta-da-ŋa* *ánùn bánsàŋ* *bū* *ísqàl-s* *óvìlde*
    but Tuta-M-DAT mind not.be.PRES 3M.SJ greedy-NOM was

    haj *bíldè* *ba* *dbīl* [*du^{8}-b^{3}-il^{2}-a^{0}*]
    and everything customarily he.ate.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-eat^{0}]
    'But Tuta was stupid. He was greedy and would always eat it all up.'

12. *túta* *bíldè* *ba* *dbīl* [*du^{8}-b^{3}-il^{2}-a^{0}*]
    tuta everything customarily he.ate.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-eat^{0}]

    haj *be^{7}k* *dbólòʁon* [*du^{8}-bol^{7}-o^{4}-qon^{0}*]
    and always he.got.fat [3M.SJ^{8}-fat^{7}-D^{4}-become^{0}]
    'Tuta would always eat everything and kept getting fatter.'

13. *érŭla dón-d lástòpka dúvĭngək* [*du*^{8}-*b*^{3}-*in*^{2}-*bək*^{0}]
erula knife-N.GEN piece he.found.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-find^{0}]
'Erula found a piece of a knife.'

14. *bū ténà dúgdĭjaqimna* [*du*^{8}-*ugdija*^{7}-*q*^{5}-*b*^{3}-*in*^{2}-*a*^{0}] *dón-às*
he wall he.dug.under.it [3M.SJ^{8}-long.state^{7}-CAUS^{5}-3N.O^{3}-PT^{2}-TR.MOM^{0}] knife-INSTR

álà dúɣàq[*du*^{8}-(ɣ)-*a*^{4}-*aq*^{0}]-*esaŋ*
out he.goes-TRL [3M.SJ^{8}-(MS)-D^{4}-go^{0}]
'He dug under the wall with the knife in order to get out.'

15. *ka*^{7}*ŋ dbílĭvet* [*du*^{8}-*b*^{3}-*il*^{2}-*bet*^{0}] *haj álà túnès dólàq* [*du*^{8}-*o*^{4}-*il*^{2}-*aq*^{0}]
hole he.made.it [3M.SJ^{8}-3N.O^{3}-PT^{2}-make^{0}] and out then he.went [3M.SJ^{8}-D^{4}-PT^{2}-go^{0}]
'He made a hole and then went outside.'

16. *a tútà ból-dù álà bān dótòláràq* [*du*^{8}-*ət*^{7}-*o*^{4}-*il*^{2}-*a*^{1}-*daq*^{0}]
but tuta fat-M.PRED out NEG he.crawled [3M.SJ^{8}-up.to.there^{7}-D^{4}-PT^{2}-3S.RS^{1}-shove^{0}]
'But Tuta (was) fat and couldn't crawl out.'

17. *érŭla úskà rqáŭjaq* [*du*^{8}-*qā*^{7}-*ij*^{2}-*aq*^{0}]
erula back he.entered [3M.SJ^{8}-inside.dwelling^{7}-PT^{2}-go^{0}]
'Erula went back inside (the house)'

túta lámtà-ŋ-as thárŏla [*du*^{8}-*ha*^{7}-*dlo*^{4}-*il*^{2}-*a*^{0}]
tuta piece-PL-INSTR he.broke.him [3M.SJ^{8}-lengthwise^{7}-AC/D^{4}-PT^{2}-TR.ITER^{0}]
(and) broke Tuta up into pieces (by applying perpendicular force).'

18. *qárĭya bíldè álà ttáŋGòmna* [*du*^{8}-*taŋ*^{7}-*q*^{5}-*o*^{4}-*b*^{3}-*in*^{2}-*a*^{0}]
then everything out he.dragged.it [3M.SJ^{8}-drag^{7}-CAUS^{5}-D^{4}-3N.O^{3}-PT^{2}-TR.ITER^{0}]
'Then he dragged everything (=all the pieces) out (of the house).'

19. *ál-gà érŭla lámtà-ŋ qús-tù-ŋa dóvìlda* [*du*^{8}-*o*^{4}-*b*^{3}-*il*^{2}-*da*^{0}]
out-LOC erula piece-PL one-N-DAT he.lay.those [3M.SJ^{8}-D^{4}-3N.O^{3}-PT^{2}-lay.ITER^{0}]
'Outside Erula put the pieces back together'

haj túta détŏla [*du*^{8}-*eet*^{7}-*o*^{4}-*il*^{2}-*a*^{0}]
tuta and he.came.to.life [3M.SJ^{8}-alive^{7}-D^{4}-PT^{2}-event.extends^{0}]
'and Tuta came (back) to life.'

20. *bū ítòlam* [*it*^{7}-*o*^{4}-*il*^{2}-*am*^{0}]
3M.SJ he.knew.it [sense^{7}-3M.SJ^{4}-PT^{2}-take^{0}]

túta haj bík-sà sēn déèta [*du*^{8}-*eet*^{7}-*a*^{4}-*a*^{0}]
tuta and other-time once he.comes.alive [3M.SJ^{8}-alive^{7}-D^{4}-event.extends^{0}]
'He knew Tuta would come back to life once again.'

21. *bū-ŋ árèŋ-di-ŋa óŋŏn* [*oŋ*^{6}-*k*^{5}-*o*^{4}-(*in*^{2}-*t*)*n*^{0}]
3-AP.SJ forest-N-DAT they.went [3AP.SJ^{6}-ABL^{5}-D^{4}-PT^{2}-go^{0}]
'They went into the forest.'

22. *dótàm-báàm úskà dahálĭmna* [*da*^{8}-*hal*^{7}-*q*^{5}-*b*^{3}-*in*^{2}-*a*^{0}]
dotam-old.woman back she.turned.it [IC^{8}-turn^{7}-CAUS^{5}-3N.O^{3}-PT^{2}-TRANS^{0}]
'Old Dotam Woman returned.'

23. *dabúŋsòʁo* [*da*^{8}-*bu*^{7}-*ŋ*^{5}-(*s*)-*qo*^{0}] *dílgàt bánsàŋ*
she.looks [3F.SJ^{8}-3RS^{6}-eye?^{5}-(MS)-make.extend^{0}] children not.present
'She looked (literally, 'looks'[3]) but the children weren't there.'

24. *iraqágdèqoŋona* [*da*^{8}-*qagde*^{7}-*q*^{5}-*oŋ*^{4}-*in*^{2}-*a*^{0}]
she.chased.them [3F.SJ^{8}-pursue^{7}-CAUS^{5}-3AP.O^{4}-PT^{2}-TR.MOM^{0}]
'She chased after them.'

25. *a díl-gàt qōta haj qōta óŋŏn* [*oŋ*^{6}-*k*^{5}-*o*^{4}-(*in*^{2}-*t*)*n*^{0}]
but child-PL farther and farther they.went [3AP.SJ^{6}-ABL^{5}-D^{4}-PT^{2}-go^{0}]
'But the children went farther and farther.'

26. *érŭla ló-ŋ-àr-eŋ óvìlde bū dāqt déjtòlot* [*du*^{8}-*ej*^{7}-*tl*/*o*^{4}-*il*^{2}-*ol*^{0}] *éttà sèl*
erula extend-PL-bone-PL was 3M.SJ fast he.ran [3M.SJ^{8}-up^{7}-AT/D^{4}-PT^{2}-run^{0}] like reindeer
'Erula was skinny and ran fast like a reindeer.'

27. *a túta hōl óvìlde bū érŭl-daŋa bérhə̄qta itsáqtòviltet* [*du*^{8}-*saq*^{7}-*tl*/*o*^{4}-*b*^{3}-*il*^{2}-*tet*^{0}]
but tuta fat was 3M.SJ erula-M.ADES barely he.strode [3M.SJ^{8}-step^{7}-AT/D^{4}-IN^{3}-PT^{2}-hit^{0}]
'But Tuta was fat and was barely keeping pace with Erula.'

28. *túta-da ū bínGòt* [*b*^{3}-*in*^{2}-*qut*^{0}]
tuta-M.GEN strength it.ended [3N.SJ^{3}-PT^{2}-end^{0}]
'Tuta's strength gave out.'

29. *bū dígdòʁon* [*du*^{8}-*igda*^{7}-*o*^{4}-*qon*^{0}]
3M.SJ he.fell.behind [3M.SJ^{8}-left.here^{7}-D^{4}-became^{0}]
'He fell behind.'

30. *dótàm-báàm bū daátnìvel* [*da*^{8}-*a*^{6}-*t*^{5}-*in*^{2}-*bil*^{0}]
dotam-old.woman 3M.O she.overtook.him [3F.SJ^{8}-3M.O^{6}-SU^{5}-PT^{2}-get.near^{0}]

haj daóldòq [*da*^{8}-*o*^{4}-*il*^{2}-*doq*^{0}]
and she.ate.him [3F.SJ^{8}-3M.O^{4}-PT^{2}-eat^{0}]
'Old Dotam Woman overtook him and ate him up.'

31. *dótàm-báàm bū daqágdèqona* [*da*^{8}-*qagde*^{7}-*q*^{5}-*o*^{4}-*in*^{2}-*a*^{0}]
dotam-old.woman 3M.O she.chased.him [3F.SJ^{8}-pursue^{7}-CAUS^{5}-3M.O^{4}-PT^{2}-TR.MOM^{0}]
'She chased after him.'

[3] Ket uses present-tense forms in past-tense narration to add an impression of vividness.

32. *érŭla bìl óyŏn* [o^{6}-k^{5}-o^{4}-(in^{2}-t)n^{0}]
erula far he.went [3M.SJ^{6}-ABL^{5}-D^{4}-PT^{2}-go^{0}]
'Erula had (already) gone far away.'

33. *no érŭla-da-ŋal dótàm-báàm dāqt daéjtòlot* [da^{8}-ej^{7}-t/o^{4}-il^{2}-ot^{0}]
but erula-M-ABL dotam-old.woman fast she.ran [3F.SJ^{8}-up^{7}-AT/D^{4}-PT^{2}-run^{0}]
'But Old Dotam Woman ran faster than Erula.'

34. *bū érŭla sēn daátsìvel* [da^{8}-a^{6}-t^{5}-(s)-bil^{0}]
3F.SJ erula in.a.moment she.overtakes.him [3F.SJ^{8}-3M.O^{6}-SU^{5}-(MS)-get.near^{0}]
'She was about to catch up with him.'

35. *érŭla ánùn-tu óvìlde*
erula mind-ADJ was
'(But) Erula was smart.'

36. *bū únŭj-di-ŋa hánàŋ dóvìlda* [du^{8}-o^{4}-b^{3}-il^{2}-da^{0}]
3M.SJ container-N-ADES sand he.put.it [3M.SJ^{8}-D^{4}-3N.O^{3}-PT^{2}-put.ITER^{0}]

haj úgdè sés-tàŋa irkónnùt [du^{8}-k^{5}-o^{4}-in^{2}-qut^{0}]
and long larch-M.ADES he.climbed [3M.SJ^{8}-ABL^{5}-D^{4}-PT^{2}-rise^{0}]
'He put (many scoops of) sand in a (birchbark) container and climbed a tall larch tree.'

37. *dótàm-báàm daimbès* [da^{8}-ik^{7}-in^{2}-bes^{0}]
dotam-old.woman she.came [3F.SJ^{8}-here^{7}-PT^{2}-come^{0}]
'Old Dotam Woman arrived.'

38. *érŭla bárà bam-á ū āt ígbàtnivel* [ku^{8}-ba^{6}-t^{5}-in^{2}-bil^{0}]
erula he.said old.woman-VOC 2S.SJ 1S.O you.caught.me[2SJ^{8}-1S.O^{6}-SU^{5}-PT^{2}-get.near^{0}]

haj his túrè kúddòq [ku^{8}-di^{1}-doq^{0}]
and anyway you.eat.me [2SJ^{8}-1S.O^{1}-eat^{0}]
'Erula said, "Old woman, you have caught me and will eat me anyway".'

39. *ha úskà tálgùtn* [t^{5}-a^{4}-il^{2}-ku^{1}-tn^{0}] *haj ū-k dès bénà íntò* [in^{2}-to^{0}]
right back lie-IMP[SU^{5}-D^{4}-IMP^{2}-2S.SJ^{1}-lie^{0}] and 2S-POS eyes wide put-IMP[IMP^{2}-put.MOM^{0}]
'Lie right down on your back and open your eyes wide.'

40. *árès-aŋ-as bénà qósàlget* [qos^{7}-a^{4}-il^{2}-bet^{0}]
wooden.spoke-PL-INSTR wide take-IMP [take^{7}-D^{4}-IMP^{2}-ITER^{0}]

āt qān áqtā igbátòŋ [ku^{8}-ba^{6}-t^{5}-(a^{4})-$oŋ^{0}$]
1S.O let well you.see.me [2SJ^{8}-1S.O^{6}-SU^{5}-D^{4}-see^{0}]
'Stretch your eyes wide using wooden spokes (to prop open each eyelid) to see me better.'

41. *ólàn-d qúk-sèn árès-aŋ-as haj bénà qósàlget* [qos^{7}-a^{4}-il^{2}-bet^{0}]
nose-N.GEN hole-PL spoke-PL-INSTR and wide take-IMP [raise^{7}-D^{4}-IMP^{2}-ITER^{0}]

āt qān áqtā igbátàbget [ku^{8}-ba^{6}-t^{5}-a^{4}-b^{3}-git^{0}]
1S.O let well you.smell.me [2SJ^{8}-1S.O^{6}-SU^{5}-D^{4}-IC^{3}-smell^{0}]
'Stretch the nostrils wide using wooden spokes so you can smell me better.'

42. *ū-k qō haj bénà óks-às kásnèm* [kas^{7}-in^{2}-am^{0}]
2S-POS mouth and wide pole-INSTR take.it-IMP [hand^{7}-D^{4}-IMP^{2}-raise.it^{0}]

ū-k qō áqtā qān távòt [t^{5}-a^{4}-b^{3}-qut^{0}]
2S-POS mouth well let it.lies.open [SU^{5}-D^{4}-3N.SJ^{3}-lie.open^{0}]
'Stretch your mouth wide open with a pole so it stays that way.'

43. *āt tós-ìl hítā ū-k qó-dì-ŋa bíndè déttùʁos* [di^{8}-et^{7}-di^{1}-qos^{0}]
1S.SJ above-ABL down 2S-POS mouth-N-DAT self I.jump[1SJ^{8}-to.there^{7}-1S.RS^{1}-raise^{0}]
'I'll jump from up here down into your mouth (all) by myself.'

44. *dótàm-báàm áqtàítòvʁon* [$aqta^{7}$-i^{6}-t^{5}-o^{4}-b^{3}-qon^{0}]
dotam-old.woman she.rejoiced [good^{7}-3F.SJ^{6}-SU^{5}-D^{4}-IC^{3}-began^{0}]
'Old Dotam Woman rejoiced.'

45. *bū ha úskà datólātn* [da^{8}-t^{5}-o^{4}-il^{2}-a^{1}-tn^{0}]
3F.SJ right.away back she.lay.down [3F.SJ^{8}-SU^{5}-D^{4}-PT^{2}-3S.RS^{1}-lie^{0}]
'She lay right down on her back and did everything Erula said.'

46. *érŭla hánàŋ dátàqqimna* [du^{8}-$ataŋ^{7}$-q^{5}-b^{3}-in^{2}-a^{0}] *ít-dés-ŧŋa*
erula sand he.poured.it[3M.SJ^{8}-pour^{7}-CAUS^{5}-3N.O^{3}-PT^{2}-TR.MOM^{0}] 3F.POS-eyes-N.ADES
'Erula poured sand into her eyes.'

47. *bū ttíŋgòmdaq* [du^{8}-$tiŋ^{7}$-k^{5}-o^{4}-b^{3}-in^{2}-daq^{0}]
3M.SJ he.stopped.those.up [3M.SJ^{8}-plug^{7}-ADES^{5}-D^{4}-3N.O^{3}-PT^{2}-shove^{0}]

ít-dès d-ólàn-d qúk-sèn haj ít-qò
3F.POS-eyes 3F.POS-nose-N.GEN hole-PL and 3F.POS-mouth
'He stopped up her eyes, nostrils, and mouth with sand.'

48. *dótàm-báàm útpàŋítònoq* [$utpaŋ^{7}$-t^{6}-t^{5}-o^{4}-in^{2}-oq^{0}]
dotam-old.woman she.became.blind [blind^{7}-3F.SJ^{6}-SU^{5}-D^{4}-PT^{2}-become^{0}]
'Old Dotam Woman was blinded.'

49. *érŭla óks-tà-ŋal hítā dínàto* [du^{8}-in^{2}-a^{1}-to^{0}]
erula tree-M-ABL downward he.climbed [3M.SJ^{8}-PT^{2}-3S.RS^{1}-put^{0}]

bū tís-às dívèj [du^{8}-t^{4}-q^{7}-ej^{0}]
3F.O stone-INSTR he.killed.her [3M.SJ^{8}-3F.O^{4}-PT^{2}-kill^{0}]
'Erula climbed down from the tree (and) killed her with a stone.'

50. *bū qók-kèt dávàyovon* [$də^{7}q^{7}$-a^{6}-k^{5}-o^{4}-qon^{0}]
3M.SJ one.AN-person he.began.living [live^{7}-3M.SJ^{6}-ADES^{5}-D^{4}-began^{0}]
'(Then) he began to live on his own.'

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