

A DESCRIPTIVE GRAMMAR OF KET
(YENISEI-OSTYAK)

PART 1: Introduction, Phonology, Morphology

Dem Andenken meines Vaters

Heribert Georg
29.04.1940 – 10.06.2005

Gewidmet.

A Descriptive Grammar of Ket (Yenisei-Ostyak)

PART 1

Introduction, Phonology, Morphology



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University of Bonn



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A DESCRIPTIVE GRAMMAR OF KET (YENISEI-OSTYAK)

PART 1: Introduction, Phonology, Morphology

By Stefan Georg

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1 Introduction

Uebrigens ist das Ostjakische eine arme und leicht zu erlernende Sprache...¹

This book took a rather - some people who knew that it was in the making over the past years would say unduly - long time to write. Saying that it was begun in one century and finished in another one may be regarded as a cheap witticism, but I overstrained so many persons' patience in the extreme in coping with this compilation for so long that this meaningless calendar accident may indeed be mentioned as a symbolic - and thus not entirely meaningless - circumstance.

I owe my first contact with the Ket language to Heinrich Werner, who is without the shadow of a doubt the best connoisseur of Ket, Yugh, and virtually anything Yeniseic in two centuries. The author of a truly impressive number of works, among them a full-scale grammar of Ket, which is still the best. No reader of this book should fail to consult it.

The Ket language has still many features to offer, which are at best marginally understood, and, doubtlessly, professional linguists will be able to produce a theoretically more interesting and adequate description of Ket even on the basis of the data presented in this book, than I have been able to.

Back in late 1998, Heinrich Werner introduced me to the splendid person and exceptionally gifted language informant, Zoja Vasil'evna Maksunova, born in Pakulikha, with whom I spent innumerable hours recording and analyzing the first stretches of spoken Ket I was exposed to.

With the invaluable help of Frederik Kortlandt and George van Driem, the year 1999 marked the beginning of a project, sponsored by the *Nederlandse Organisatie voor Wetenschappelijk Onderzoek*, which gave me the unique opportunity to conduct on-site fieldwork on the shores of the Yenisei and also, not least, to enjoy the wonderfully inspiring working conditions of the *Afdeling Vergelijkende Taalwetenschappen* of the venerable *Rijksuniversiteit* in Leiden.

I was allotted three years for the task, and now that I write the last words of this preface, more than seven years have passed since that moment. I have no choice but to offer my sincere apologies to the host of people I had kept waiting for so long.

Some of the people to whom I owe more than the average amount of gratitude have already been mentioned. I do it again: Heinrich Werner (Bonn), Edward Vajda (Bellingham/Washington), Zoja Vasil'evna Maksunova (Baklanikha/Tomsk), Elizaveta Kotorova (Tomsk) for her indefatigable energy and providing ideal working conditions both in here *laboratorium* and her home in Tomsk, Frederik Kortlandt, George van Driem, Uwe Bläsing, Petri Kallio (all Leiden), Uwe Seefloth (Bonn), Ol'ga Andreevna Osipova, Ekaterina Klopotova, Svetlana Stepanova, Elena Krjukova, Aleksandra Kim (all Tomsk), Ursula Marmé (Bonn).

¹ M.A. Castrén in a letter to A.J. Sjögren, 22. February (old style) 1847, cf. Castrén 1858, 286 ("Ostjakisch" = Yenisei-Ostyak = Ket).

A particular bouquet of thanks is due to Alexander Vovin (Honolulu), who painstakingly read several drafts of this grammar and offered so many observations, corrections and general advice that I will forever remain in his debt - thanks, Sasha, and sorry for sometimes being so stubborn...

Another person whom I have to single out is Natalija Michajlovna Grišina (Novosibirsk), a seasoned fieldworker, the world's foremost specialist in the field of Ket syntax and the only Ketologist who can claim to be a student of both Andrej P. Dul'zon and of E. A. Krejnovich, who introduced our tiny expedition of 2001 to the village of Kellog on the river Eloguj. Without her invaluable help even thinking of working in this out-of-the-way place would have been absolutely impossible. Her great expertise in the field, her life-long devotion to Yeniseic studies, her truly stunning (*active*!) command of the Ket language and her enthusiasm and unstinting energy made this field trip an unforgettable experience.

During the process of writing this grammar, three field-trips have been undertaken by the author, in 1999, 2000, and 2001, to settlements on the Lower Yenisei, where the language still can be heard spoken (the *Central* and *Southern Ket* varieties, respectively, no field-trip to villages with *Northern Ket* speaking people having been possible for me). The data gathered on these expeditions constitute the basis of the analysis, but, naturally, the impressive body of Ket scholarship was also intensively used, both as a source of inspiration and enlightenment on intricate structures of the language, and also as a source of actual examples.

The actual analysis of Ket linguistic phenomena is also indebted greatly to its predecessors, among whom A.P. Dul'zon, E.A. Krejnovič, the pioneers of 20th century Ketology, but, above all, H. Werner have to be singled out.

During the last years, E. Vajda of Western Washington University was able to unveil many secrets of Ket synchronic grammar, especially in the domains of phonology, and, the greatest secret of them all - verbal morphology. I view his analysis of Ket verbal morphology as the most important breakthrough in Ketology to-date and my description of it is heavily indebted to his achievements. My sincere thanks go to Edward Vajda for his profound help, his willingness to share his ideas (and his unpublished writings) with me and, not a mean feat, to provide me with more than just a few hard-to-find items of Yeniseiological literature. His ability to track down the most arcane items of literature, in Russia and around the world, documented in his magisterial book "Yeniseic peoples and Languages" (Vajda 2001) is nothing short of breathtaking, and I am also happy to point out that my understanding of, i.a., the Ket verb owes a great deal to Edward Vajda.

2 The Kets and their language

2.1 Avant-propos: The name of the language

Linguists and specialists on Siberia are generally familiar with the name *Ket*, which designates a small ethnic group on the Yenisei and their language (in Russian *КЕТЫ, кетский язык*). Most observers will also know that this language was "formerly" called *Yenisei-Ostyak* (Jenissej-Ostjakisch). There is nothing wrong with this, but some confusion exists surrounding these names, and they deserve a short excursus.

The origin of the term *Ostyak* has not been elucidated with final certainty. Since the XVIth century A.D. it has been used for a variety of ethnic groups in Western and Central Siberia, most consistently for the Finno-Ugric group which is nowadays officially referred to as *Khanty* (*Chanty*), whose language forms together with *Vogul* (or *Man'si*) the *Ob'-Ugric* subbranch of the *Ugric* (together with Hungarian) branch of the Finno-Ugric family of languages.

The first attestation of this name² is found in a letter written by Czar Ivan IV. ("The Terrible"), dated August 6, 1572. This mention is, of course, ethnographically vague and we learn from it only that "Ostyaks" were at that time neighbours of (Finno-Ugric) Cheremis (later known as Mari) and (Turkic) Bashkirs. The military events mentioned in this source (a "native" uprising) took place to the West of the Ural Mountains, in the vicinity of the Kama River. Other sources from the 16th century mention "Ostyaks" already to the East of the Urals, as neighbours of the Voguls (some sources use this name for groups which are clearly Voguls/Man'si, too). With the stabilization of Russian power in the Transuralian region, the name gets increasingly confined to the ethnic group which is generally known as the "Ostyaks proper", i.e. the Ob'-Ugric Khanty. However, as Russian explorations continue to advance to the East, several other indigenous groups are repeatedly referred to as "Ostyaks" - obviously based on rather loose similarities of outward appearance and material culture -, most notably the "Ostyak Samoyeds", for which since the 1930s the self-designation *Sel'kups* is generally used, and, finally, the "Yenisei Ostyaks". "Ostyaks" on the left bank of the river Yenisei, who cannot have been Ob'-Ugric Khanty, begin to be mentioned in Russian archival sources in the first decade of the XVIIth century A.D. The traveller and botanist D.G. Messerschmidt, who is the first person to report Yeniseic words in print, met "Ostyaks" (i.e. Kets) on the shores of the *Bakhta* River on June 9, 1723.

As for the etymology of this name, several hypotheses have been proposed. Though not entirely without problems, the explanation first put forward by Julius Klaproth may be quite close to the truth: according to him, *ās-jax* may be regarded as the plural of Khanty (i.e. "Ostyak proper") *ās-xo* "person (*xo*) from the river Ob' (*ās*). The alternative theory (due to Fischer, "Sibirische Geschichte", 1768, and often repeated thereafter) holds that the name is of Turkic origin and belongs to the xenonym used by the (Turkic) Kazaks for the (Turkic) Bashkirs, *istäk/ištäk*. The

² A thorough and rich discussion of the origin and variegated usage of this name is found in Van Gennep (KSz 3, 13-32): *Origine et fortune du nom de peuple "Ostiak"*.

main problem with this is the fact that the Turkic term is without any convincing inner-Turkic etymology, and thus best regarded as, in turn, of Ob'-Ugric/Khanty origin³.

Ever since Messerschmidt, most notably in the mid-19th century works of Matthias Alexander (Matias Aleksanteri) Castrén, Kets (and Yughs) have consistently been referred to as Yenisei-Ostyaks; only in the 20th century, Bogoraz, Dolgich and Donner began to introduce the name *Ket* (< *keʔd* "person, human being") into the scholarly literature. Soviet ethnic and linguistic policy from the 1930s onward demanded the usage of ethnonyms based on self-designations rather than "traditional" names, some of which were and are regarded as derogatory, so ever since the publication of the collective volume *Jazyki i pis'mennost' narodov Severa III* ("Languages and Literature of the Peoples of the North", Leningrad 1934) *Ket* is the official name of this ethnic group and its language (always including the *Yugh* ethnos and its language, which is most often called "*Sym Ket*", s.b.).

A note on *Ketó*, used in the earlier literature⁴, and heavily criticized by, i.a. Bouda (1957): This is indeed the vocative form (cf. 4.1.1.3.12) of *keʔd* "human being, Mensch", as correctly observed by Bouda, and, thus, athetized by him not without reason. However, when speaking Russian, this term *is* used by speakers of the language to the present day ("*Ja po nacional'nosti Keto*")⁵.

Complying with current scholarly practice, which is in general use now for more than 60 years, we will continue to speak of *Kets* and the *Ket* language. However, because of the fact that, contrary to what linguists and anthropologists may think to be "correct", speakers still use the term "Ostyak" to refer to themselves and their language, this name surfaces in the title of this grammar. We will also use it in glosses, when we will have to translate the native term *òstik* and its inflected forms, thus:

(1)

ūk òstikan-bes k[u]ʰ-asqanʷ-saʔ
 you Ostyak-PROS 2-speak-R
 Do you speak (Yenisei)-Ostyak?

An apparently older, well-attested, though nowadays less used self-designation of the Kets (and also used by the Yughs) is

kónasked, PL *kónaden* (Yugh *kónasked*, PL *kónden*).

Its literal translation is "bright/light-coloured (*kəʔn*) person (*keʔd*, PL *deʔn*)". The common Ket exonym for the Russians is sometimes said to contain the same etymon: *kíns*, PL *kísn* (< **kínsin*), but it seems difficult to reconcile the aberrant

³ Though I remain to be fully convinced, I have to mention Steinitz 1963, who advances some important reasons against the Ob'-Ugric and in favour of the Turkic theory, which are difficult to brush away, without, however, solving the Inner-Turkic parts of the problem.

⁴ Mostly in the works of Findeisen.

⁵ It is also the regular designation found in Soviet passports, which mentioned the "nationality" (= officially acknowledged ethnic group) of an individual as the infamous "point five (*pjatyj punkt*)" until recently.

vocalism with that of *kəʔn*, let alone the unlikeliness of an autonym and the exonym for the most dominant ethnic group in Ket territories both basically meaning "light-coloured people". It seems, thus, safer to view "evil spirit", an independently attested meaning of *kíns*, as the origin of this ethnonym.

Other neighbouring groups of the Kets and Yughs are/were known to them by the following names (given together with the respective designations for Kets/Yughs in their languages):

	Ket/Yugh (Y) names for the:	Their names for Kets/Yughs (Y):
Yugh	<i>jùk, jūk</i> (K → Y)	<i>tírked</i> , PL <i>tírdeŋ</i> (Y → K)
Sel'kup	<i>laʔk</i>	<i>konak, qāñiq, kungop</i> (Y)
Nenets	<i>dó(j)kid</i> , PL <i>dó(j)deŋ; kóleŋ</i>	<i>jěns'a- xabi</i>
Enets	<i>ʔ⁶</i>	<i>(?) bág(g)o</i>
Khanty	<i>láŋa(j)</i>	- no name has been found -
Ewenki	<i>hómban, hómkan; tísdeŋ</i>	<i>d'andri, d'ukul, d'ukun(dri), n'umn'akan</i>

Some explanations:

jùk, jūk

The Ket designation for the Yughs; from the Yugh autonym *d'ùk*.

laʔk

The Ket name for the Sel'kups (a.k.a. Ostyak-Samoyeds) < Sel'kup *l'aqqa* (Lit. Sel'k. ЛЯҢА) "friend". Kets and Sel'kups have been living in close contact (including mutual exogamy) for generations.

dó(j)kid, PL *dó(j)deŋ*

The Ket name for the Nenets (a.k.a. Yurak-Samoyeds). No etymology known for the first syllable (the second syllable is obviously = *keʔd*, pl. *deʔŋ* "human").

kóleŋ

(PL); Less commonly used Ket name for the Nenets, from Sel'kup *qálik*, obviously with a Ket pluralizer *-ŋ*.

láŋa(j)

The Ket name for the Khanty (or "Ostyak proper"). This name is also used by the Sel'kups, and may be from this language - where it could be etymologically connected with the noun *laŋa* "ide (fish)".

⁶ It is not entirely clear to the present writer, whether the (early) Kets differentiated between the Nenets and the Enets, so chances are that the name *dó(j)kid* was used for the Enets (= Yenisei-Samoyed) as well; Alekseenko (1967, 6) expresses the same opinion..

hómban, hómkan

The Ket name for the (Tungus) Ewenki. The Yugh equivalent is *fómban*, allowing a "Yenisei-Ostyakic" reconstruct **phəmbə*, which also occurs in Sel'kup (*pompan*); the direction of borrowing is not clear.

tísden

(PL); less commonly used Ket name for the Ewenki. Literally "stone people" < *tíʔs* "stone" + *deʔŋ*, because (some groups of) Ewenks live on the *Podkamennaja* ("Stony") *Tunguska*.

tírked, PL tírden

Yugh name for the Kets, lit. "people from down the river", Yugh *tír* "downriver", cf. Ket *tĩ, tíka* "downriver (directional adverb)". This name is part of a naming pattern, which is also represented by Ket *útaked*, PL *útaden*, Yugh (PL) *úddeŋ* "people from up the river", cf. Ket *úta* "upriver".

qāñiq

The Sel'kup name for the Kets (sometimes given as *konak/konəŋ* or the like in the literature). No convincing etymology is known, the assonance of Sel'kup *qanjik* "shore, bank" seems to invite a comparison, but it remains insecure (the root vowel in this appellative is consistently short). According to Alekseenko (1967, 6), this name may reflect a Ket clan name *Qoniq*.

kungop

Sel'kup designation of the Yughs (only historically attested); Werner's speculation (2002, 451; < Ket. *kəʔn* (s.a.) + sel'k. *qup* "human, person") seems to be a possible explanation.

jēnsá- χābi

The Nenets designation of the Kets (Lit.: *ЕНЗЯ' хаби*'). *χābi* is the Nenets name for the Khanty (Ostyaks), the (probably) original meaning of which is "slave, serf, subject"; it is generally used for all (indigenous) neighbours of the Nenets, usually with a clarifying element preposed (*syja' χābi* = Man'si/Vogul, *tasu' χābi* = Sel'kup⁷); here, this element is the Nenets name for the river Yenisei⁸. Thus, this Nenets exonym provides an exact parallel to "Yenisei-Ostyak". Since Russian contact with the Nenets predates that with most other aboriginal Siberian ethnic groups (save the Ob'-Ugrians and Siberian Tatars), this may well be also, by way of loan translation, the actual origin of this name.

⁷ Cf. the river name *Taz*, the main habitat of the Sel'kups.

⁸ Actually, this Nenets name is in all probability the origin of Russian *Yenisey*, hence of all designations of this river in other European languages. Together with Enets *d'edoši'* and Nganasan *d'entəd'io* it can go back to Proto-Samoyedic **JentəsV*, which, in turn, *could* be an early loan from Tungusic **jəndəsi* < **jənə*, cf. Ewenki *jənd(r)əgi* "big river" (Anikin 1997, 207).

bág(g)o

Possible Enets name for the Ket. It is clear that the Enets use(d) this name for the Khanty/Ostyaks. Since Kets were often mixed up with these Ob'-Ugrians by their neighbours, this designation *may* (have) include(d) the Kets as well. Etymologically, it is identical with Enets *bágo* "pit", thus Ostyaks are "pit-dwellers" for the Enets, which squares well with historically attested dwelling-habits of the Kets, too⁹.

d'andri

Ewenki (Sym dialect) designation of Western neighbours (Sel'kup, Khanty, Ket), etymologically obscure; it may be a rendering of Ket *de'η* "people".

d'ukul, d'ukun(dri)

Ewenki name for the Elogui Kets. Though this name is folk-etymologically equated with Ewenki *d'ukun* "otter", it is rather an adaptation of the self-designation of the Yughs (later transferred to the Kets).

n'umn'akan

Also *n'uηn'aki*, Ewenki designation of the Kets, probably identical with Ewenki *n'uηn'aki* "goose".

A Khanty/Ostyak designation for the Kets/Yughs has not been found by the present author. The similarity of the (modern) ethnonym *Ket* and the river name *Ket'* (a right tributary of the *Ob'*, where Yeniseic tribes are attested historically, today part of Sel'kup territory) is in all probability fortuitous, as is the vague similarity with the name of the *Kotts* (see below).

Sources, which refer to the *Yughs* as "*Sym-Kets*" routinely use the designation *Imbat-Kets* for what we and others call simply *Kets*. This name appears very early in Russian sources, and it is mostly taken for granted that it was originally a tribal name/autonym of at least some Ket groups, especially of those on the river Elogui, the etymology of which remains, however, obscure. It may, on the other hand, simply be another river name, since some maps (cf. Alekseenko 1967, 4) show two small rivulets by the name of *Verkhnij* ("upper") and *Nizhnij* ("lower") *Imbat*, respectively¹⁰. The small town of *Verkhneimbatsk(oe)* is situated at the confluence of the former with the Yenisei (directly opposite that of the Elogui). It remains unclear, however, whether these rather insignificant rivers may have been named secondarily after the settlement (which, then, owes its name to the ethnonym *Imbat*), or whether the actual course of naming-events took the opposite direction. A river-name *Imbat*, on the other hand, seems to be conspicuously absent from earlier sources.

⁹ Cf. Ket *báηηus* "semi-subterraneous dwelling"; the superficial resemblance of this compound (< *ba'η* "earth" + *qu's* "tent") with the Enets word is certainly fortuitous (Enets < Proto-Samoyedic **wληkə* < Proto-Uralic **woηkə/a*, cf. Finnish *onka-lo*).

¹⁰ Ket and non-Ket residents of Verkhneimbatsk confirmed this in conversation with the author.

2.2 The Yeniseic family of languages

Ket is a member of the *Yeniseic* language family, consisting of *Ket*, *Yugh* (which has for a long time been viewed and described as a Ket dialect, *Sym-Ket*), *Kott*, *Arin*, *Assan*, and *Pumpokol*. All Yeniseic languages save Ket are now definitely extinct, and, apart from well-described Yugh and reasonably well-attested Kott, fragmentary word-lists constitute our whole knowledge about them¹¹. In the following sections, the most important data on the location, time of extinction, and available data are given for the extinct members of the family. It must be mentioned that the documented history of Yeniseic *may* actually be much older. Though at present (and very probably for good) lacking a decisive and final proof, the theory that (atleast one of the languages of the) *Xiongnu* confederation, which ruled the Central Asian steppes and Northern China in the centuries around the turn of the Christian Era, might have been Yeniseic (or, to use a more conservative formulation: did contain some Yeniseic elements) continues to be discussed in the field. The most substantial contributions to this field are those by Ligeti (1950), Pulleyblank (1962) and recently Vovin (2000, 2002). We might also mention our own idea that the well-known Turkic/Mongolic religious term *tengri* ("sky, God") may have a Yeniseic etymology (Georg 2001).

2.2.1 Yugh

Since Castrén's times, the Yugh language was mostly, and sometimes continues to be, referred to as the *Sym* dialect of Ket (*symiskij dialekt ketskogo jazyka*), after the river *Sym*, where its last speakers lived. Throughout the 20th century, it was the southernmost language of the Yeniseic family. Apart from (Imbat-) Ket, the object of this grammar, Yugh is the best known of all Yeniseic languages; already the first coherent treatment of any Yeniseic language, Castrén 1858, was, though principally pan-dialectal, heavily based on data from Yugh. The question, whether Yugh should be regarded as a sister language of Ket, or as a mere dialect of it, is of little theoretical importance. Suffice it to say that both languages/variants are closer to each other within the family, than either is to any of the other extinct languages, that their genetic relationship is obvious in every subsystem, but that the last living speakers reported mutual unintelligibility with (Imbat) Ket, and that their differences, again in all subsystems, certainly warrant a separate treatment. Yugh data will thus not be discussed in this grammar. While the earlier literature (especially Dul'zon 1968) treated both variants/languages *promiscue*, an in-depth study of Yugh in its own right is Werner 1997c.

The name *Yugh* is unexplained (Ket *jùk/jūk*, Yugh *d'uk*); it should be mentioned, though, that initial /j-/ is not normally found in native Yeniseic words.

¹¹As I write the last lines of this volume, I receive Werner 2005, a definite statement of *all* remnants of Yeniseic languages of the XVIIIth century, with full descriptions of all available data, exhaustive glossaries and some new discoveries and corrections to earlier treatments.

2.2.2 Kott

The first and last linguist, who worked on the Kott language with native informants was M.A. Castrén, who found a small settlement on the river Kan' (East of Krasnoyarsk), which was already at that time home to only five Kott individuals, who may have been the last speakers of this language.

Kott was also spoken, in the XVIIth century A.D., along the river Biryusa (a right tributary of the Yenisei), and, possibly, on the Abakan (in Khakassia), the Mrass and the Kondoma (the latter two are tributaries of the river Tom' which in turn flows to the Ob' in the West); Kott may thus be a substratum language for the Turkic language Shor, which is spoken in this region. Toponymic evidence (hydronyms containing the element *-šet/-čēt*, cf. Kott *šet* "river") indicates that Kott settlements extended in the East into the Western parts of the *Irkutskaya Oblast'* and in the West until the river Tom'.

The *Kyshtym* language, for which Strahlenberg 1730 records 30 words, was a variant of Kott, probably its southernmost variant.

The self-designation of the Kotts has been recorded as *Kottuen*¹². This name may, however, be originally a foreign exonym, cf. Buryat *xoton* "settlement", Written Mongolian *qota(n)* "id., city", a term used by Mongolic tribes for non-nomadizing neighbours¹³. It is also recorded as the autonym of the Assan (s.b.), whereas the Arin called the Kott "Assan".

Apart from Ket and Yugh, Kott is the only Yeniseic language for which any information beyond mere word-lists is available. Kott words have been recorded by 18th century travellers Messerschmidt, Miller and Fischer (s.b.), and have been noted in the comparative dictionaries published by Pallas (1786) and Klaproth (1823).

M.A. Castrén compiled a full description of Kott phonology and morphology, as well as a fairly extensive vocabulary, which constitute the main corpus of available Kott data. On the basis of these data, Werner published two monographs on Kott (1990, 1997a), which summarize all known linguistic facts about the language¹⁴. Both Castrén's data and those found in 18th century sources show internal differences which indicate the existence of two Kott dialects; though some of the observable variants may be due to imperfect transcription only, Werner (1997a, 6f.) treats them as "Kott A" and "Kott B", respectively¹⁵.

However, no continuous texts and hardly any complete sentences in the Kott language have ever been recorded.

2.2.3 Assan

The status of Assan as an independent Yeniseic language is not entirely clear. The linguistic differences between Kott and data said to represent the "Assan" language

¹² There seems to be no linguistic reason, which justifies the geminate <tt> in this name.

¹³ Even if this speculation be wrong, it deserves to be mentioned that the superficial resemblance of *Ket* and *Kott* is only fortuitous.

¹⁴ Werner 1990 contains a full Russian-Kott glossary.

¹⁵ A note for users of Castrén 1858: Castrén is not consistent about this, but it seems that he marked "Kott B" forms by an asterisk.

(only from the 18th century) are indeed mostly slight, so that at least a "Kott-Assan" subgroup of Yeniseic can be postulated.

Assan was spoken along the rivers Ona (a.k.a. Biryusa) and Usolka, to the North of the Kan' (i.e. in the immediate Northern vicinity of Kott). Available data are sparse, they are found in the materials of Fischer (24 words) and Miller (298 words). Georgi reports 10-12 Assan families on the Usolka in the mid-18th century, whereas Gmelin found, in the 1730s, only three individuals fluent in Assan (Werner 1997c, 7).

2.2.4 Arin

Arin was spoken on both sides of the Yenisei (but mostly on its left shore) from Krasnoyarsk in the South to Enisejsk in the North. Toponymy suggests (hydronyms in *-set/-sat*, cf. Arin *sat* "river") that, in pre-contact times, Arin may have been present as far West as the river Ob'. It died out in the 18th century, but some lexical data are preserved in the materials of Strahlenberg, Miller and Fischer (also incorporated in Klaproth's and Pallas' compilations), altogether ca. 400 lexical items. The autonym of the Arin was probably *Ar*, or *Ara*, which, in turn, is also found in Khanty/Ostyak folklore sources (*ar-jāx* "Ar people") as the designation of some otherwise unidentified Eastern neighbour population of theirs in the territories, which are characterized by Arin hydronyms.

All available Arin data from earlier sources have been collected and analyzed by Toporov (1968), to which a sizable list of words (including a few finite verbs) found by Chelims kij in a Moscow archive (Chelims kij 1986) has to be added.

2.2.5 Pumpokol

"Pumpokol" is originally a geographic name, i.e. that of a town and a (former) district on the upper course of the river Ket (Northwest of Krasnoyarsk)¹⁶. In the 18th century, the population of this district was mixed (the crucial fact being that there were also Yughs on the river Ket, who later moved eastward). The available data labelled "Pumpokol" are only few (appx. 65 words), and some items have been identified as Yugh, rather than "Pumpokol" (cf. Verner 1979, Werner 2005). However, the remaining data seem to justify the existence of a Yeniseic language in this region, which was not identical with Yugh or any other known member of the family.

2.2.6 Yeniseic as a language family

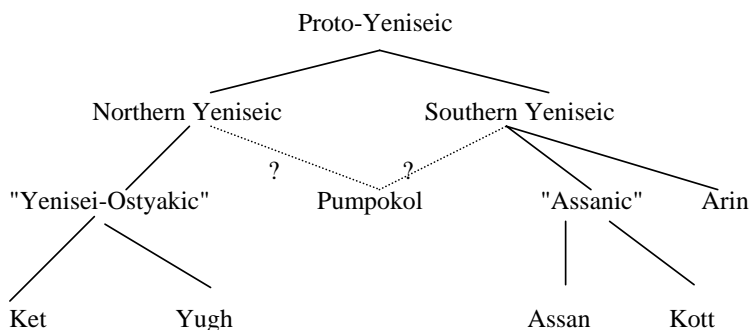
The genetic unity and the external delimitations of the Yeniseic family have never been in doubt. Comparative issues will only marginally be touched upon in this grammar; however, the following short list of some words (commonly believed to

¹⁶ Its etymology is given by Anikin (1997, 497) as < Khanty (= Ostyak proper) **pum-poxol* "grassy village".

belong to "basic vocabulary") may give a superficial impression of the unity of Yeniseic as a language family¹⁷.

	Ket	Yugh	Kott	Arin	Assan	Pumpokol
black	<i>t≥m</i>	<i>t≥me</i>	<i>thuma</i>	<i>t'uma</i>	<i>tuma</i>	<i>tuma</i>
snow	<i>tñk</i>	<i>tñk</i>	<i>thik</i>	<i>te:/t'e</i>	<i>tik</i>	<i>tyg</i>
squirrel	<i>saç</i>	<i>saçX</i>	<i>,aga</i>	<i>sava</i>	<i>,aga</i>	<i>tak</i>
	<i>q</i>					
pike	<i>qùd</i>	<i>xùd</i>	<i>huja</i>	<i>quj</i>	<i>huja</i>	<i>kod'u</i>
water	<i>≥l</i>	<i>≥r</i>	<i>ul</i>	<i>kul</i>	<i>ul</i>	<i>ul</i>
not	<i>bén</i>	<i>bén</i>	<i>mon</i>	<i>bon</i>	<i>mon/bon</i>	<i>bejsem</i>
eye	<i>dâs</i>	<i>dâs</i>	<i>tie~</i>	<i>tie~</i>	<i>te,/ti</i>	<i>dat</i>
wolf	<i>qòt</i>	<i>xòt</i>		<i>qut/ku:t</i>		<i>xotu</i>
human	<i>keç</i>	<i>keçd</i>	<i>il-it</i>	<i>k'it/qit</i>	<i>hit/hyt</i>	<i>kit</i>
	<i>d</i>					
sun	<i>ñ</i>	<i>ñ</i>	<i>ega</i>	<i>ega/eja</i>	<i>öga/ega</i>	<i>hixem</i>

The internal classification of Yeniseic is still provisional, though the particular closeness of Ket and Yugh on the one hand, and that of Kott and Assan on the other hand, are clear enough. Arin seems to be closer to the Kott-Assan ("Southern") group, whereas Pumpokol has been assigned to both; a tentative classification can thus be given as:



2.2.7. External genetic relationships of Yeniseic

None.

Of course, throughout the history of Yeniseic studies, scholars have compared Ket and its relatives with a great number of Eurasian and at times even North American languages, sometimes merely in terms of typology, but very often also in order to show these languages to be genetically related. Repeatedly, Chinese/Sino-Tibetan, North Caucasian languages, Basque, Burushaski, and even Athabaskan (or then "Na-

¹⁷Ket and Yugh words are given in the transcription used in this grammar; the notation of the other Yeniseic languages follows that of the respective sources, without any attempt at a phonological analysis.

Dene", sometimes including, sometimes excluding Haida) have been claimed as relatives of Yeniseic. Less often, Sumerian, Indo-European, Kartvelian, so-called "Nostratic", and other Old World language families have been compared with Yeniseic. None of these attempts can at present be viewed as successful (many of them are seriously misguided and palpably wrong) and therefore Yeniseic (and now effectively Ket) is to be regarded as a language isolate with no known relatives among living and dead languages and language families of the world.

2.3 The Kets and their language

2.3.1 The homeland of the Kets

Ket is still spoken in a number of settlements on or near the lower reaches of the Yenisei between *Sym*¹⁸ in the South and *Maduyka* in the North (see the table in 2.3.4, which enumerates all villages/towns with Ket inhabitants, and the map in 2.3.3).

The present-day Ket villages are mostly situated directly on the shore of the river Yenisei or one of its tributaries. Houses are wooden log cabins without running water. Usually, diesel-generators provide electricity for most of the day. No village in the region is connected to any kind of road-system, the only means of long-range transport being the Yenisei with its long-distance passenger ships plying between Krasnoyarsk and Dudinka, and (somewhat) regular helicopter services bringing provisions and medical aid. Most villages are not connected to overland telephone lines.

The Ket region is mostly covered by *taiga* (dense forest), which gradually gives way to the North Siberian *tundra* in the North (*Kellog* is in a zone which is usually described as *lesotundra* "forest-tundra"). The climate is extremely continental, with short, hot and mosquito-infested summers (30°C+ in July) and long, dark and cold winters (- 50°C are common in January).

2.3.2 Ket dialects

Currently three major dialects are recognized in Ket proper, which are referred to by their relative geographical distribution: Southern, Central, and Northern Ket (many earlier works, however, treat the Yugh language as a Ket dialect and consequently speak about *Sym-Ket* = Yugh and *Imbat-Ket* = Ket proper).

2.3.2.1 Southern Ket

This is the most vital Ket dialect, spoken in the villages *Sym*, *Zotino*, *Vorogovo*, *Bor*, *Sulomai*¹⁹, *Sumarokovo*, *Bakhta*, *Kellog*, *Verkhneimbatsk*, and *Kangatovo*.

¹⁸ Despite this name, only *Imbat Ket* is spoken in this settlement, "*Sym Ket*" (= Yugh) is completely extinct.

¹⁹ The *Sulomai* dialect was intensively studied by E.A. Krejnovich; the author learned in 2001 that this settlement on the Podkamennaya Tunguska was recently, obviously due to the heavy floods which struck the area in that year, abandoned and its inhabitants moved to Podkamennaya Tunguska (a village by the same name, located at the estuary of this river).

The overall number of ethnic Kets (which, of course, does not necessarily coincide with the number of fluent speakers of the language) in these settlements is appx. 500. Southern Ket forms the basis of the newly introduced orthography and written language, now used sporadically in Ket schools, including settlements where other dialects are spoken.

The author visited the Southern Ket settlements Kellog and Verkhneimbatsk in 2001. Kellog is one of the few places, where a spontaneous conversation in Ket may occasionally be overheard in the streets (reportedly, Maduyka in the North is another such place).

2.3.2.2 Central Ket

Central Ket is spoken in the settlements *Surgutikha*, *Vereshchagino*, and *Baklanikha* (theoretically by app. 140 ethnic Kets). Formerly, the now abandoned settlement of *Pakulikha* was its main centre, whence it is mostly referred to as the Pakulikha dialect (*pakulikhinskij govor*) in the specialist literature. Everyday use of Ket is much less vigorous in the Central Ket area than in the South.

Central Ket differs from Southern Ket chiefly in some phonological details. Thus, i.a., CK preserves intervocalic /d/ as [d], whereas SK uses a flap [ɾ] in these positions.

The author of this grammar conducted informant-work in the Central Ket settlements of Baklanikha and Vereshchagino in 1999 and 2000.

2.3.2.3 Northern Ket

Ket speakers have reached the settlements where Northern Ket is spoken only in post-contact times. The Northern Ket settlements are *Kostino*, *Staryj Turukhansk*, *Turukhansk*, *Goroshikha*, *Svetlogorsk*, *Maduyka*, and *Kureyka*, where Ket is used by theoretically approximately 170 ethnic Kets .

Maduyka shares with Kellog in the south the distinction of being one of two settlements with more than 60% ethnic Kets; reportedly, the use of Ket is still relatively vigorous there.

Most Ket speakers in Maduyka are descendants of Southern Ket speakers, but other varieties seem to be historically present as well.

Given the fact that the Northern settlements had not been reached by Ket speakers by contact time, the difficulties with a proper definition of Northern Ket dialect features may be largely due to the fact that the Northern varieties are mixed dialects, or, in other words, the result of endohybridization, which arose through intensive contact between southern and central Ket speakers in a colonisation context (for a thorough argumentation that this is the case cf. Denning 1984, who demonstrates that especially Northern Ket phonology clearly shows a mixed character).

In the meantime, a new settlement, *Novyj Sulomaj* was founded in the vicinity of the old village (Andrej Nefedov, p.c.).

Because of these difficulties, and because the author did not have the opportunity to work with Northern Ket speakers, data from this dialect will play no central role in this grammar.

2.3.3 Map of the Ket area

Ket settlements (x = author's fieldwork)

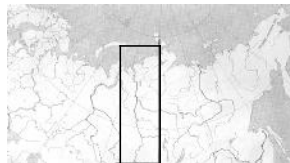
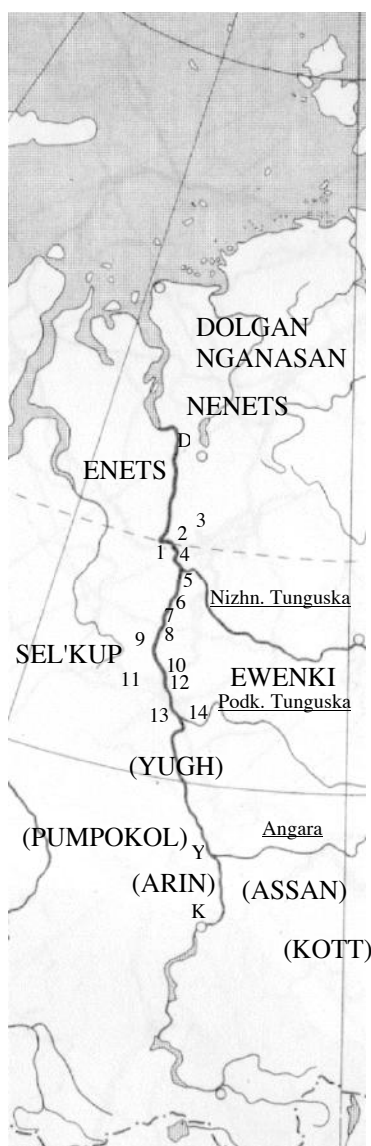
Other settlements and cities

Rivers

LANGUAGES (approximate locations only)

(EXTINCT YENISEIC LANGUAGES)

- 1 *Kureyka*
- 2 *Maduyka*
- 3 *Svetlogorsk*
- 4 *Goroshikha*
- 5 *Turukhansk*
- 6 *Kostino*
- 7 *Baklanikha* x
- 8 *Vereshchagino* x
- 9 *Surgutikha*
- 10 *Verkhneimbatsk* x
- 11 *Kellog* x
- 12 *Bakhta*
- 13 *Sumarokovo*
- 14 *Sulomai*
- K *Krasnoyarsk*
- Y *Yeniseysk*
- D *Dudinka*



2.3.4 Sociolinguistic situation

Ket is a severely endangered language²⁰. For the 19th century, the development of the Ket nationality presents itself as follows²¹:

	1836/39	1859	1897
"Yenisei-Ostyaks" of Upper and Lower Imbatsk and the Podk. Tunguska	740	911	888
"YO" of the Symsko-Kasov-Tribe	164	161	94
total	904	1072	982

The "Yenisei Ostyaks" of the Symsko-Kasov-Tribe were speakers of the *Yugh* language (*Sym-Ket*); later Soviet censuses did not differentiate these from Ket speakers. The decline of Yugh is obvious, and by the time of the late 1980s the last speakers of this language had died in Vorogovo and Yartsevo.

During the Soviet era, the following census data became available:

	1926	1959	1970	1979	1989
Kets (general)	1428	1017	1182	1122	1084
native speakers	?	?	?	885	589
lg. retention %				78.9 %	54.3 %

On the whole, the number of individuals claiming Ket ethnicity for themselves seems to be remarkably stable, but the language retention rate is decreasing rapidly. This observation is considerably strengthened by the wealth of data we find in the work of V.P. Krivonogov²², who visited every single settlement where Kets still live between 1991 and 1995 and managed to assemble a great amount of fine-tuned sociolinguistic data. According to Krivonogov, Ket was spoken in the following villages and settlements (from N to S)²³:

	population	number of Kets	% of Kets
Kureyka	600	8	1.3
Maduyka	86	53	61.6
Svetlogorsk	2000	16	0.8
Goroshikha	212	58	27.4
Turukhansk	8400	23	0.3
Star. Turukhansk	330	3	0.9
Kostino	85	10	11.8
Baklanikha	84	23	27.4

²⁰ The following sociolinguistic overview is based on, and largely repeats, Georg 2002, which itself is heavily indebted to the meticulous statistics found in Krivonogov 1998.

²¹ These data are adapted from Patkanow 1909.

²² Krivonogov 1998.

²³ The difference between the number of Kets given in the most recent census reports and the overall number of Kets found in the region by Krivonogov is, of course, accounted for by the fact that a certain number of Kets now live in Siberian cities like Krasnoyarsk, or in places as far afield as Moscow or St. Petersburg.

Vereshchagino	216	25	11.6
Surgutikha	299	91	30.4
Kangatovo	58	21	36.2
Verkhneimbatsk	820	25	3.0
Kellog	405	247	61.0
Bakhta	283	44	15.5
Sumarokovo	93	16	17.2
Sulomai	243	154	63.4
Bor	4500	15	0.3
Vorogovo	1300	17	1.3
Zotino	800	5	0.6
Sym	135	10	7.4

Regarding the internal dialectal division of Ket, all settlements south of (and including) *Kangatovo* are home to Southern Ket, in *Baklanikha*, *Vereshchagino* and *Surgutikha* Central Ket is spoken, and north of this is the territory of Northern Ket²⁴.

Only in three of these settlements Ket speakers form the majority, which in no case exceeds two thirds of the population: *Maduyka* with its small number of inhabitants and the two villages with the greatest percentage of Kets, *Kellog* and *Sulomai*, which are situated in quite inaccessible regions on tributaries of the Yenisei. It seems highly likely that this remoteness itself is a decisive factor for the ethnic composition of these settlements (*Maduyka*, too, is on a right tributary of the Yenisei); the villages right on the bank of the Yenisei, which is a major water-road between the densely populated south around Krasnoyarsk and the Far North with the industrial city of Noril'sk, always attracted more Russian and other non-local settlers than places, which are rarely served by regular transportation means and offer little economic prospects.

All in all, only 454 ethnic Kets live in settlements where this nationality forms the majority. In addition to the decreasing language retention rate (48.3 % in 1989), the future prospects of Ket as a living language looks even less promising when we take into account Krivonogov's data on language *proficiency*. Of all ethnic Kets in the Yenisei regions, the following ratios (in %) are found regarding their ability to use Ket and other languages in all situations of daily life:

lg. spoken	fluently	with difficulties	with great diffic.	passively	not at all
Ket	21.9	7.6	12.5	23.1	34.9
Russian	95.8	2.8	1.2	0.1	0.1
Sel'kup	2.0	1.3	1.1	3.3	92.3
Ewenki	0.8	0.4	0.1	2.0	96.7

The figure of 21.9 % *full speakers* (not more than 190 persons) is already alarmingly low, but, as might be expected, if we have a closer look at the

²⁴ The dialectal differences between these variants are quite sharp and may at times stand in the way of mutual comprehension. Northern Ket is the least studied Ket variety, most extant data pertain to Southern Ket.

percentage of speakers in various age groups, it becomes clear that Ket may be fairly alive among persons over the age of forty, while for individuals under thirty years of age the Ket language is certainly no longer a means of daily communication.

Language abilities by age groups (Ket only):

age group	full speakers	with difficulties	not at all
70+	92.9	7.1	0
60-69	88.1	11.9	0
50-59	58.2	27.3	14.5
40-49	55.3	36.2	8.5
30-39	36.4	54.5	9.1
20-29	14.0	59.8	26.2
10-19	1.3	54.7	44
0-9	1.3	29.6	69.1

In 2003, V.P. Krivonogov published a similar table with figures obtained ten years after his first survey (Krivonogov 2003, 77)²⁵, which shows that the decline of the Ket language is accelerating and unstoppable (data from 2001):

age group	fluent	with diff.	with much diff.	passively	not at all
70+	88.2	5.9	-	-	5.9
60-69	51.6	6.5	16.1	19.3	6.5
50-59	46.1	7.7	15.4	20.5	10.3
40-49	31.0	9.5	19.1	20.6	19.8
30-39	13.6	9.9	15.4	34.6	26.5
20-29	2.2	1.5	19.4	32.9	44.0
10-19	-	0.4	7.2	15.8	76.6
0-9	-	-	0.7	3.5	95.8

One word of caution might be added, lest the percentage of persons who speak Ket "with difficulties" is viewed with too much optimism. All too often, at least in the places that the present writer was able to visit in 1999, 2000, and 2001 (Baklanikha, Verohchagino, and Kellog), this label has to be tacitly translated into "with considerable difficulties". It is very hard to find fluent speakers, and it is even harder to overhear a spontaneous Ket conversation between people under forty. Even some elderly persons which classify themselves as native speakers, who have not begun to use Russian before entering primary school (some of whom have served as language consultants in their youth and keep lively memories of Ketologists like A. P. Dul'zon working with them in the 1950s) may now at best be classified as semi-speakers, whose Ket speech is patched with long stretches of

²⁵ This book was obtained shortly before the final redaction of this grammar, and only this table is reproduced here (the other data still reflecting the data of Krivonogov 1998, collected in 1991-1993). Krivonogov 2003 is, however, full of additional demographic and glossographic statistics, which generally underline the tendency shown here.

Russian. Krivonogov offers some further interesting statistics, which show that it is mostly the older generation which still uses Ket spontaneously, or which can expect to be addressed in Ket these days.

Asked, which language they use most in their daily lives, Ket speakers gave the following answers (in %):

	Ket	Russian	both
70+	50	28.6	21.4
60-69	45.2	38.1	16.7
50-59	5.5	70.9	23.6
40-49	6.4	78.7	14.9
30-39	2.3	83.3	14.4
20-29	1.1	86.6	12.3
10-19	0	97.3	2.7
0-9	0	97.8	2.2

The most dramatic caesura is obviously that between the age cohorts of the 50-59 years old (born between 1930 and 1940) and older persons. While some of the latter have been exposed to elementary schooling in Ket in their youth, the next cohort had to grow up in the turmoil of World War II, when fathers fought on the front and a great number of deported persons (mainly Volga Germans and Balts) were resettled in villages of the North (where they and their descendants still live) with whom Russian was the only possible means of communication.

And on the question with whom and when Ket is spoken, and when other languages are used, Krivonogov obtained the following figures (in % of those who speak Ket):

language spoken:	Ket	Russian (a. o. lg.)	both
with parents	30.3	23.1	23.1
with spouse	14.8	14.5	14.5
with siblings	10.4	12.5	12.5
with children	9	16.5	16.5
when working	3.2	19.9	19.9

Ket, thus, is increasingly losing its social functions. It is mainly used by the elderly, or by (adult) children communicating with their parents. From Krivonogov's data we also learn that no single monolingual Ket speaker exists²⁶ (and that a minuscule ratio of 2.8 and 1.2 % admit to speak Russian only "with (great) difficulties"); the prospects of keeping Ket alive for more than the lifespan of the present middle generation thus seem to be very low.

The most threatened of all Ket varieties still spoken is certainly the Central Ket dialect, especially its subvariety that is known in the literature as the dialect of *Pakulikha*. While it was chosen as the basis for the short-lived written language of the 1930s, it is now spoken only by very few individuals, and used on a daily basis

²⁶ The 0.1 %, who do not speak Russian, have Sel'kup as a second language.

by almost none of them. Though this dialect is now spoken in Baklanikha and Vereshchagino, on the banks of the Yenisei, it was formerly the main language of the settlement of *Pakulikha*, which was situated on the left tributary of the Yenisei of the same name, until this village was officially dissolved by Soviet authorities in the early 1960s as one of the numerous Siberian villages "without perspective". The transfer of Pakulikha's population to their present homes is felt, by those who still remember, as the major caesura of their lives. Shortly after their resettlement, in the early 1970s, they were forced to abandon their traditional activity of reindeer breeding. After the dissolution of the Soviet Union, most adults lost any opportunity to work and stayed unemployed ever since. Pensions are paid erratically only. Fishing, hunting and gathering wild berries and mushrooms are thus the only means left to insure survival. Needless to say, these circumstances do not encourage younger people to stay in their villages, and most of them plan to move to one of the Siberian cities, or even further away. Among those who stay, the omnipresent abuse of alcohol takes its toll, too, and, I have to say, in a very visible way.

Languages are, first and foremost, problem-solving devices. For most Ket speakers, situations where only the use of Ket will allow them to solve real-life communicative problems will be extremely rare in their daily lives. However intensively linguists and local teachers strive to save the Ket language from oblivion, the one indispensable prerequisite for maintaining a native language and passing it on to the next generation is the *need* to use it. When in each communicative situation a potential, but restricted, Ket speaker will be confronted with, a different language, Russian, will be available, a language which is known by all members of the community, while only the elderly remain full speakers of Ket, little can be done to prevent the ultimate end of the use - and finally the knowledge - of Ket, and, with it, of the Yeniseic language family.

2.3.5 Ket traditional culture

The best overall description of the Kets from an anthropological point of view remains Alekseenko (1967); still important, but difficult to access outside of Russia, is Dolgich (1934). In English, Donner 1933 is a useful treatment with many illustrations ; Vajda (2001, IX-XIX) offers a concise overview.

The most important economic activity of the Kets was hunting wild game, such as ermines, foxes, sables or elks. Most important was the hunt on squirrels (*sa'q*). Furs were mostly sold or, after contact time, used to pay the Siberian state-tax (*yasak*). Occasionally, bears were hunted, and a successful kill was celebrated in one of the famous bear-festivals, the last of which ever held may have been the one attended and described by Alekseenko in 1971 (Alekseenko 1985, cf. also Krejnovič 1969).

Traditionally, bows and arrows were used, but fire-arms have been in common use by Ket hunters for well over three centuries. Using various kinds of traps was also an important part of Ket hunting activities. Hunting was mainly a winter activity, with the exception of the hunt on ducks, which were shot in large quantities during the warm season. The short Siberian summer was largely devoted to fishing, using various kinds of nets and sophisticated fish-weirs.

Some Ket groups, notably those living in the northern parts of the Ket territory in the closer vicinity of Northern Samoyedic groups, practiced reindeer-breeding.

Reindeer husbandry is generally believed to have been introduced into Ket culture due to contact with the Enets and/or Nenets. Herds were generally much smaller than those kept by Samoyeds in the Northern tundra.

Since the 1960s, Soviet economic planning decisions removed most reindeer from all but the northernmost Ket settlements.

At the end of the 20th century, after the end of the Soviet Union, most Kets remain without any regular earnings. As members of a "Nationality of the North" they receive a small state pension (which is sometimes, at least partially, paid in the form of pure alcohol for direct consumption). Retirement pensions are paid at irregular intervals at best, and the state-run institutions, which used to buy furs from Ket hunters on a regular basis have mostly been closed.

As a consequence, the economic activities of most Kets in places like Baklanikha or Kellog are focused on the direct acquisition of food. Hunting is still an important activity (although long times of close season have to be observed, which are, despite the remoteness of the area, effectively reinforced by local authorities).

Fishing may be more important now than it ever was, with the rivers supplying a considerable share of the population's protein supplies these days. Fish is mostly eaten fresh, but the practice of salting and drying it as a winter-supply (i.e. making *Yukola*, Ket *ítu*, widespread in native Siberia) is still found.

One of the few sources for cash is the selling of fresh fish (mostly sturgeon) and caviar to passengers of ships passing through Ket territory on their way between Krasnoyarsk and Dudinka.

In some Ket villages, a few cows are kept for milk and meat. Traditionally, the Kets do not practice agriculture of any kind, though vegetable-gardens are now relatively common. Flour, which has to be bought, is nevertheless an important staple, with Ket households normally baking white bread every few days. While collecting wild berries, cedar nuts and mushrooms is mentioned in the ethnographic literature as only a secondary activity, it recently gained importance, both for winter supplies and for generating cash.

Pre-contact Ket life may be described as semi-nomadic, with a regular change of habitat in various seasons of the year. In winter, Kets moved deep into the forest to fixed hunting grounds. There, they dwelled in semi-subterraneous dugout-like huts (*báŋŋus*); the hot summer months were spent on the river banks, usually in conical birch-bark tents (*quʔs*), where the main activities were fishing and the preparation of dried winter provisions. For water-transport, canoe-like log boats were used, as well as the typically Ket houseboat (*ásel*, russ. dial. *ilimka*), which could hold a family; these were particularly useful for getting away from the clouds of mosquitoes, which infest especially the river shores during the hottest parts of the year. All these types of dwellings have been in use for the better part of the 20th century, and they have been observed and photographed by anthropologists. Today, however, all Ket families live in Russian-style wooden houses (*izba*), and the once regular moving-cycles are a thing of the past, albeit still remembered by members of the older generations.

The Ket family is patrilinear and patrilocal. In earlier times, strict rules of exogamy between two moieties were observed. These groups were known by the names of

Qéntan and *Bókdideŋ*²⁷. The latter are traditionally associated with the rivers Podkamennaya Tunguska and Bakhta (or, more generally, with the East), and the former with the West (chiefly the Elogui region). However, in historical times both groups generally lived together in the same settlements, with only the rules of exogamy and several social taboos (burials, e.g., had to be handled by members of the opposite moiety) differentiating between them.

Kets are, nominally at least, members of the Russian Orthodox Church, though this fact does not seem to influence their lives in any observable way. In recent years, aggressive mission activities conducted by what seems to be a fundamentalist protestant group led to several conversions, including elderly people, in Kellog.

Few traces of pre-Christian religious activities and beliefs play any role in present-day Ket life. The main personalities (human and superhuman) of Ket mythology, as depicted in folkloristic traditions and texts, are:

Álba

A mythical personality, sometimes described as the first human or the first shaman, creator of the Yenisei and the Ket habitat; he was transformed into a range of rocks on the right bank of the Yenisei.

Àllal

Protecting spirit of a household (female); venerated in the form of a small wooden image with clothes, sometimes used for divination purposes (it is thrown in the air to answer questions by the way it comes to lie on the ground).

Bàlna

A legendary (possibly historical) hero, fought against the Ewenki, viewed as endowed with supernatural powers, venerated as the ancestor of the *Bal'din* family in Kellog.

bīt

(appellative noun, "loon, diver, russ. *gagara*"), the Ket holy bird, helping spirit of shamans. Cf. the Ewenki exonym for the Kets, *n'umn'akan*, which may refer to this bird (cf. *supra*).

Dàk

A legendary bird (a female eagle) with iron claws, symbol of the upper world, able to cover the sun.

Dòq/Dòk

A legendary shaman of the *Qéntan* moiety (on the Elogui), who met with *Tómam* and *Hósedam* (q.v.). *Dók-da qo't* "Dòk's way" is the Ket name for the Milky Way.

²⁷ The latter term is etymologically quite transparent (< *bok-di de'ŋ* "fire-people"); *qéntan*, however, remains opaque.

Dótam

A female evil spirit dwelling in the forest, wife of *Dótet*.

Dótet

A male evil spirit dwelling in the forest, husband of *Dótam*, often said to be the son of *Hósedam*.

Ēs

The chief positive deity of the Ket pantheon, husband of *Hósedam*, personification of the sky/heaven (as an appellative, *ēs* stands for "sky, heaven", also "nature, taiga"; often given as the translation equivalent of the Christian God).

Hólej

Protective spirit of a clan; *hólej ba'η* is the name of places (in the forest) where these spirits are worshipped, often with wooden images.

Hósedam

The chief evil deity of the Ket pantheon. Wife of *Ēs*, but expelled by him (some legends name *Dòk* as her husband); dominates the North (hence her byname *Ti(ki)lam* "mother of the North"), may eat humans.

Kásked

A mythological figure; unclear whether human or superhuman; a kind of "trickster".

Kòlbasam

A female evil deity/spirit; lives among people and tries to deceive or kill them.

Qájkus

Lord of the animal world, described as male or female ("mother of squirrels")

Tómam

A female deity/spirit (benevolent), dominates the South, feeds on birds, which migrate to the South.

All living beings are believed to be endowed with a soul, humans possess seven distinct souls, the names of which are *átbej*, *āb*, *bóηol*, *ij*, *kóntoqil*, *qónij*, *úlbej*; they remain etymologically mostly obscure.

The communication between humans and supernatural beings is handled by shamans (*sénan*).

Shamanistic practices have been repeatedly described in the ethnographic literature at great length (cf. Anučin 1914, whose accounts have, however, been repeatedly criticized as not always fully accurate; here, too, Alekseenko 1967 remains the best source). Though shamans are an important feature of Ket traditional religious practice, as it is/was the case with many other indigenous ethnic groups of Northern

Asia, it is only one aspect of traditional religion, and we do not think that a term like "shamanism" should be regarded as a proper, let alone precise, cover term for the often widely diverging native religions of Siberia.

On a general note, it is worthy of mention that both the material and parts of the spiritual culture of the Kets bears often close resemblances with those of the Sel'kups. Without implying that anything, which seems cognate or strikingly similar here has to be regarded as "the same", and without jumping to conclusions on origins or possible directions of diffusion or influence, it seems fair to state that both ethnic groups and their cultures still merit being studied in context.

It was still possible in 2001 - but increasingly difficult - to record traditional stories or descriptions of religious and/or traditional rituals and customs from elderly Ket speakers. Folkloristic Ket texts contain reminiscences of what may have been a prehistoric northward migration across a mighty mountain range (possibly the Sayan), and of wars between Kets and Ewenks as well as Samoyedic peoples.

2.4 The areal setting of Ket and Yeniseic

The Kets are not the only small nationality occupying their habitat. Many Ket settlements are also home to a sizable number of *Sel'kups* (who relatively often remain vigorous speakers of their emblematic language). Sel'kup is a Samoyedic (Uralic) language, the epicentre of which is the system of the Taz river, in the North West of the Ket region.

Kets and Sel'kups are tied by a long common history of mutual exogamy; consequently, interethnic relations between Kets and Sel'kups have always been friendly and cooperative (cf. the Ket name for the Sel'kups, 2.1), a sizable number of ethnic Sel'kups speak Ket fluently, some additionally to Sel'kup and Russian, some as their only non-Russian language.

In some settlements, *Ewenks*²⁸ are present (to the East of the Yenisei, the *Evenkijskij Natsional'nyj Okrug*, capital *Tura*, is situated). Ewenki, the major language of the Tungusic language family, is still vigorously used in other regions of Siberia, whereas on the Yenisei most ethnic Ewenks have but a faint memory of this language. Traditionally, Ket-Ewenk relations are said to have been mostly hostile. The same holds for Ket-Nenets relations; Nenets is another (Northern) Samoyedic language, still vigorously used in three territories of the Russian North on both sides of the Ural mountain range (the *Nenetskiy Avtonomny Okrug*, capital *Nar'yan-Mar* on the cis-Uralic *Pechora* river; the *Yamalo-Nenetskiy Avtonomny Okrug*, capital *Salekhard* on the *Ob'*, and the *Taimyrskiy [Dolgano-Nenetskiy] Avtonomny Okrug*, capital *Dudinka* on the Yenisei). Today, there are few regular contacts between Ket and Nenets speakers. Another, moribund, Samoyedic language of the region, *Enets*, is now spoken nowhere near a settlement with Ket speakers; however, the Enets language shows some rather intriguing signs of former

²⁸ In non-Russian works, this ethnic group and its language are most often called *Evenki*. However, the first consonant found in this name is clearly [w], Western renderings with <v> being transliterations from Russian (which has no [w]).

language contact with a language which must have been Yeniseic, most probably Ket²⁹.

Other nationalities present in the Ket villages include of course the Russian and Ukrainian majorities and a sizable number of individuals belonging to ethnic groups deported to Siberia during World War II, including Volga Germans, Estonians, Latvians, Lithuanians, Kuban Greeks, and other peoples of the former Soviet Union; some individuals still use the emblematic languages of their nationalities.

2.5 History of the investigation of Ket/Yeniseic³⁰

The first Russian explorers reached the Yenisei relatively shortly after the cossack leader Yermak's successful campaigns against the Turkic Khanate *Sibir'* in the 1580s, the event, which is traditionally taken as the beginning of the Russian expansion across the Ural mountain range, and which eventually led to the establishment of "Siberia" as an integral part of the Russian Empire. The first Russians reached the region of the Yenisei and its left affluents as early as the first decade of the 17th century. They were "tax-collectors" who extended the fur-tax system (*yasak*) long before established to the West of the Urals to the *terra nova* in the East. Semi-permanent settlements, later fortresses (*ostrogs*), were set up for this purpose, some of which remained stable and developed into full-scale cities. *Mangazeya* on the river Taz - in Sel'kup territory - was one of these early encampments, now abandoned, which imposed the fur-tax regime on the natives of the region already in 1601. Parts of the Ket and Yeniseian population were doubtlessly in the range of this system from its very beginning (in 1607, an outpost from Mangazeya was established at a place called *Inbak*), and the Pumpokol tribe officially accepted the *yasak*³¹. The city of Tomsk, to the West of the Yeniseian territory, was founded in 1604, in 1619 Yeniseisk (in *Yugh* and *Pumpokol* territory), and in 1628 Krasnoyarsk and Kansk (the former in Arin, the latter in Assan and Kott territory) followed suit. In order to establish their right on the *yasak*, Russians had to break the power of the Turkic Yenisei Kirghiz, until then the political overlords of the upper reaches of the Yenisei (and *yasak*-collectors themselves). No collections of Ket or Yeniseian linguistic data were undertaken in these early days, but some ethnographical observations, and of course clan, place and personal names, can be found in historical documents surviving from this time (for details cf. Dolgich 1960).

²⁹ It has, e.g., borrowed Yeniseic/Ket personal pronouns.

³⁰ This chapter is but a concise overview of scholars and their works pertaining to Ket and Yeniseian studies. In most cases, a few sentences have to suffice to characterize the contributions of the most important personalities in the field. A more detailed account can be found in Vajda 2001, 1-17. This outstanding book contains a remarkably complete bibliography of virtually everything written and published on Yeniseian linguistics and ethnography before the 21st century, and no student of Ket can afford to ever be without it. Readers demanding more information about the works of scholars mentioned in this chapter should open the relevant pages of Vajda's book and will find all of them enumerated, summarized and competently characterized, down to the tiniest newspaper article.

³¹ Much to the disappointment of Tungus groups, then politically quite dominant in the region, who continued to fight against the Russians for quite some time.

Yeniseic peoples have been described in the early travel literature, beginning in the 17th century (cf. Vajda 2001, 1, for a concise account). However, linguistic data begin to be recorded only a good one hundred years after "contact time".

The first lexical data from Yeniseic languages (Arin and Kott) to appear in print seem to be those found in the work of the Swedish officer Strahlenberg (*1676, cf. Strahlenberg 1730). Strahlenberg spent some 13 years in Russia as a prisoner of war after the defeat of the Swedes at Poltava in the Great Nordic War in 1709. His work was very influential in the 18th century and enjoyed some reputation as a first attempt to classify some of the native languages of Siberia. Strahlenberg's exact itinerary in the country remains, however, unknown, and it is unclear whether he collected all linguistic data found in his book himself. In fact, it is known that he was a part-time travel companion of the botanist D.G. Messerschmidt, who travelled in Siberia between 1720 and 1727. It was the latter, who is distinguished as being the first scholar to record *Ket* language data in the field. According to his diary, he reached the estuary of the river Bakhta on the 9th of June 1723. He managed to record several names of wild birds and a few numerals from the language of the "Ostyaks" he encountered there, i.e. Kets. On the following day, on the estuary of the rivulet "Eed-šes" (lit. "sable river", modern Ket *èd sēs*), he recorded a longer specimen.

In the following, we reproduce the list of Ket words (alphabetized, without the numerals) found in Messerschmidt's diary, confronted with the same words (if any) as given in Castrén's materials (1858, see below) and our modern notation of Ket words, which may show the relative stability of the basic features of Ket phonology during the last 280 years, as well as both Messerschmidt's and Castrén's ways of putting Ket to writing:

Messerschmidt	M.'s translation ³²	Castrén	21 st c.	translation
<i>aiyjoh</i>	vulpes alba, weißer Fuchs oder Peeß [peseç]	---	<i>àjkon</i>	polar fox
<i>álleshattud</i>	noctua non aurita minor, saxatilis	---	---	owl
<i>báh</i>	tringa limosa recurvirostra minor	---	<i>baa</i>	a.k.o. redshank
<i>balwétig</i>	grando, Hagel	<i>balbedeng</i>	<i>bálbed</i>	hail
<i>báng</i>	terra, die Erde	<i>baŋ</i>	<i>baʔŋ</i>	earth, ground
<i>beégh</i>	Wind	<i>bei</i>	<i>bēj</i>	wind
<i>beéth</i>	nix, Schnee	---	<i>bèd</i>	snow
<i>bhéess</i>	lepus, Hase	---	<i>bēs</i>	hare
<i>bógda</i>	sclopetum, ein Rohr oder Flinte	<i>bogdoğam,</i> <i>bogdağaŋ</i>	<i>bókdóm</i>	gun, rifle
<i>boóck</i>	Feuer	<i>bok</i>	<i>boʔk</i>	fire
<i>cháng</i>	falco, subuteo maior	---	<i>qàŋ</i>	falcon
<i>chau</i>	glacies, Eis	<i>xú, xou,</i> <i>k'ú, xúŋel</i>	<i>qō</i>	ice
<i>cheip</i>	luna, der Mond	<i>xip, xíp,</i> <i>k'íp, k'ip</i>	<i>qīb</i>	moon
<i>chógh</i>	stella, Sterne	<i>xoax, k'oag'</i>	<i>qoʔ</i>	star

³² Some lengthy descriptions given by Messerschmidt have been abbreviated.

<i>choigh</i>	ursus, Bär	<i>xôï, k'oi</i>	<i>qòj</i>	bear
<i>chong</i>	dies, der Tag	<i>xôη</i>	<i>qõη</i>	day
<i>chónn</i>	pinus sativa, Pynbaum, Russ. kedr		<i>qo'ʔn (?)</i> ³³	(M.: Siber. cedar)
<i>chuth</i>	lupus, Wolf	<i>xyt, k'yti</i>	<i>qĩt</i>	wolf
<i>chuûge</i>	flumen, ein Fluß oder Strom	<i>xuk</i>	<i>qũk</i>	river
<i>cóttingei</i>	tinnunculus capite rufo, cinereus, ein Sperber	---	---	sparrow-hawk
<i>deé</i>	oceanus, das Meer	<i>deä</i>	<i>deʔ</i>	sea
<i>dénga</i>	argentum, Silber	<i>tèja, taja</i>	<i>təʔη</i>	silver
<i>dólick</i>	salix, eine Weide		<i>dólkit</i>	willow tree
<i>dschöl</i>	rangifer, Rentier	<i>seär, seäʔ,</i> <i>süʔ</i>	<i>səl</i>	reindeer
<i>dschyh</i>	nox, die Nacht	<i>sî</i>	<i>sĩ</i>	night
<i>dsólot</i>	aurum, Gold	---	<i>sóltus</i> ³⁴	gold
<i>duhm</i>	turdus (...), Drossel	<i>dum</i>	<i>dũm</i>	thrush
<i>dýkut</i>	candela, ein Licht	---	<i>dĩkkut</i>	candle
<i>dyd</i>	urogallus	<i>dĩt, dīt</i>	<i>dīt</i>	capercaillie
<i>cégh</i>	ovum, ein Ei	<i>eη, êη</i>	<i>eʔj</i>	egg
<i>hóschech</i>	turdi genus, Drossel	---	<i>hósej</i>	a.k.o. thrush
<i>hujahyy</i>	bubo, eine Horneule	<i>fyci, hyci</i>	<i>hiʔj</i>	eagle owl
<i>kchogn</i>	vulpes, Fuchs	<i>k'ágan,</i> <i>k'èagan</i>	<i>kəən</i>	fox
<i>kógind</i>	acurania	---	---	snipe (bird)
<i>kóop</i>	burunduk Russ. (...)	<i>kop, kuop</i>	<i>koʔb</i>	chipmunk
<i>kóte</i>	hiems, der Winter	<i>kête, kēti,</i> <i>kýti</i>	<i>kəət</i>	winter
<i>kuhn</i>	gulo, Vielfraß	<i>kũ'on</i>	<i>kũn</i>	wolverine
<i>kuhsch</i>	equus, Pferd	<i>kus</i>	<i>kuʔs</i>	horse
<i>kulépp</i>	mustela alba seu erminius	<i>kulap,</i> <i>kuläp, kuläp</i>	<i>kúleb</i>	ermine
<i>kuy</i>	liber seu cortex betulac, Birkenrinde	<i>xý, k'êi,</i> <i>k'yci</i>	<i>qiʔj</i>	birch bark
<i>lámm</i>	asser, ein Brett	<i>lam, łam,</i> <i>łiem</i>	<i>laʔm</i>	board
<i>lythes</i>	diabolus, satanas	<i>lytis, lýc</i>	<i>litis</i>	devil
<i>nánn</i>	panis, Brot	<i>nen, nan</i>	<i>naʔn</i>	bread
<i>oëck</i>	fulgur ex tonitru, Gewitter	<i>êkη, èkη</i>	<i>ēk, ékη</i>	thunderstorm
<i>oëd</i>	cebella, Zobel	<i>cääd, cädi,</i> <i>cäti</i>	<i>èd</i>	sable
<i>oësh</i>	Gott, item coelum	<i>ês</i>	<i>ēs</i>	God, heaven
<i>óschke</i>	lignum, Holz	<i>uks, uoks</i>	<i>ōks</i>	wood
<i>scháck</i>	sciurus, Eichhörnchen	<i>sak', sak'</i>	<i>saʔq</i>	squirrel
<i>schösch</i>	fluviolus, ein kleiner Fluß	<i>ses, sês</i>	<i>sēs</i>	river, brook

³³ This equation is not entirely secure; the modern Ket word designates the "twig of a coniferous tree"; Messerschmidt may well have received this answer producing such a twig and - being a botanist! - he could have mistaken his informants for professional colleagues and recorded the word as the name of the tree.

³⁴ < russ. *zoloto*

<i>sujewah,</i> <i>ssugewáh</i>	turdi canori genus (...)	---	---	a.k.o. thrush
<i>syle</i>	aestas, der Sommer	<i>sîra, sîi</i>	<i>sîl</i>	summer
<i>thuus</i>	lapis, ein Stein	<i>tyès, tyès</i>	<i>tî's</i>	stone
<i>tofje</i>	aurichalcum, Messing	<i>t'égam</i>	--- ³⁵	brass
		<i>baker</i>		
<i>tschaldóhsch</i>	fistula seu tubulus fumisugus, eine Tobakspfeife	<i>sar, sal, sał</i>	<i>sáldo-s</i>	pipe
<i>tuh</i>	argilla, Ton	<i>tu'o</i>	<i>tu'</i>	clay
<i>tuleh</i>	cuprum, Kupfer	<i>tułä</i>	<i>tül</i>	copper
<i>typ</i>	canis, Hund	<i>tip, tîp, tîp</i>	<i>tîb</i>	dog
<i>uhl</i>	Wasser	<i>ur, uł, uoł</i>	<i>ül</i>	water
<i>uhlette</i>	pluvia, Regen	<i>ures</i>	<i>úłita</i>	rain ³⁶
<i>umel</i>	stannum, Zinn	<i>úmola,</i> <i>umłä</i>	<i>úmla</i>	tin
<i>weshk vel</i> <i>wýshk</i>	fluviolus, item rivus, ein seichter Fluß, Bach etc.	---	---	brook ³⁷
<i>ýdumath</i>	codex, liber, ein Buch	---	---	book ³⁸
<i>yg</i>	ferrum, Eisen	<i>ê</i>	<i>ē</i>	iron
<i>yi</i>	sol, die Sonne	<i>î</i>	<i>ī</i>	sun

Other travellers who crossed Ket and Yeniseian territory in the 18th century, and who brought home lexical data include G.F. Müller (trav. 1733-1743), J.G. Gmelin (id.), and J.E. Fischer (trav. 1739-1747). Some of these data were republished in the famous compilations of P.S. Pallas (1786) and J. Klaproth (1823).

The next scholar to visit speakers of Yeniseian languages was, a whole century later, the Finnish linguist Mathias Alexander Castrén. On a quest to find and explore the eastern relatives of the Finns, he spent, between 1846 and 1848, several months in Yeniseian territory, where he was the first investigator to systematically collect linguistic data from Ket, Yugh and Kott, with the aim to understand and describe the *structure* of these languages³⁹. After his untimely death in 1853, Anton Schiefner edited his numerous works posthumously. Apart from his full-scale grammar of Yenisei-Ostyak (Yugh and Ket) and Kott (which has a glossary, but no texts, Castrén 1858), his diaries and letters (published as Castrén 1856) contain

³⁵ Castrén's term translates literally as "white copper" (*baker* < Tk.); Messerschmidt's entry seems to consist of the adjective 'white' only, here. Not entirely clear.

³⁶ This is actually a finite verb form: *ul'-(l)-ta* "it is raining".

³⁷ An unidentified word, with a very "un-yeniseic" outward appearance.

³⁸ There is no direct equivalent in Castrén's material, and no exact cognate in modern Ket, but it seems clear enough that Messerschmidt's word is derived from the root *√idiŋ* "to write" (orig. "to decorate" or the like).

³⁹ Castrén soon gave up on his initial idea that Yeniseian languages had anything to do with Finnish (Finno-Ugric, Uralic, "Ural-Altai") and turned back to his main objective. In doing so, he founded almost single-handedly the discipline of comparative Samoyedology, and became the first scholar to write a grammar of a living Mongolic language (Buryat), a living Tungusic language (North-Baikal Ewenki), and one of the first persons to describe a living Siberian Turkic language (Tuvan and Tofa). For his Yeniseian work, it seems likely that at least some of his materials have been collected by his travel companion Bergstadi.

numerous pieces of information of great value for Yeniseian linguistics and ethnography.

Again, Yeniseian studies remained orphaned for several decades, until the Finno-Ugricist Kai Donner visited the Yenisei region in 1912. At this time, he collected mainly ethnographical data, but later he returned to Yeniseian studies and worked for a while with an informant (I.F. Dibikov) in Helsinki during the summer of 1928. The results of these activities are collected in his *Ethnological Notes* (Donner 1933), which contain valuable observations on the life of the Ket and Yugh. His linguistic materials (mostly lexical) were published posthumously (Donner 1955-1958). They retain their value, but Donner's command of Ket was - as he admitted himself - rather limited, and the reader of his works on Ket should without fail consult Karl Bouda's immensely learned commentaries on and corrections to them (Bouda 1958).

Another travelling ethnographer visiting the Kets in the 1920s was Hans Findeisen, who collected a wealth of anthropological material *in situ*. He was only marginally interested in collecting language data, let alone in linguistics, but he did write down some texts, which still remain largely unpublished (with the exception of a short specimen which made it into Donner 1958). Findeisen may well have been the last non-Soviet scholar to visit Ket settlements before the dissolution of the USSR in and the subsequent lift of travel restrictions in Siberia in the 1990s.

Among pre-WWII Soviet scholars Nestor Konstantinovich Karger stands out as the only linguist doing serious work on Ket. His works are few in number, but comprise the first grammatical sketch of Ket after Castrén (Karger 1934a) and the first - and for almost 60 years only - school primer in the Ket language (in the Central Ket dialect, Karger 1934b). The alphabet designed for this purpose was developed by him, and it was also he, who published the first continuous Ket text ever to appear in print (Karger 1927). Karger fell victim to the horrors of (probably) the year 1937 and its purges, and the Ket literacy program was discontinued until Heinrich Werner initiated a new one in 1989⁴⁰.

The opening pages of Aleksandr Solzhenicyn's "*Archipelag GULAG*" mention Karger and his fate:

У Каргера замели архив енисейских остяков, запретили изобретенную им письменность и букварь - и остался народец без письменности.

It was not before 1955 that the systematic investigation of Ket and Yugh started again. This year marks the first expedition of A.P. Dul'zon, based in Tomsk, to the peoples of the Yenisei. Dul'zon was an outstanding scholar who, from then on, managed to publish a truly impressive chain of works on all aspects of Ket and Yugh linguistics, ethnography, history and prehistory, as well as their relations with extinct Yeniseian peoples and their languages and contacts with non-Yeniseian groups⁴¹. Apart from his own work, the most important of which is his comprehensive grammar of Ket (and, *promiscue*, also of Yugh, Dul'zon 1968), he

⁴⁰ In 2000, the present author was able to meet some elderly speakers of Central Ket in Vereshchagino, who remembered having received native-language instruction in their schooldays in the 1930s with Karger's book.

⁴¹ The enumeration of his Yeniseiological publications occupies pp. 95-112 of Vajda 2001.

was also a charismatic teacher⁴². Many of his students, who had been introduced to Yeniseian linguistics and, above all, field-work, continue their scholarly activities to this day, making the *Pedagogical University of Tomsk* and its *Department* (previously *Laboratory for Siberian Indigenous Languages*, now headed by Andrej Fil'čenko) the chief centre of Ket and Yeniseian studies of the contemporary world. Most Soviet and Russian scholars working on these languages are in one way or another connected with the Tomsk school (an offshoot of which is now based in nearby Novosibirsk, N. M. Grišina, S.S. Butorin). For a concise overview of the Tomsk school and its most active members (some of which are now continuing their work outside of Russia) cf. Vajda 2001, 11-12, and the numerous bibliographical articles in the main part of that book⁴³. The *Laboratory* still houses a wealth of handwritten and taped data collections from Ket, Yugh and other, non-Yeniseian, languages of Central Siberia, which are now gradually being made accessible to the wider scholarly world with the support of the *Max-Planck-Institut für Evolutionäre Anthropologie* in Leipzig under the direction of Bernard Comrie. Though a direct student of Dul'zon's, Heinrich Werner⁴⁴ is certainly to be regarded as a truly independent scholar. His publications touch on every aspect of Yeniseian; among other things, he detected the tonal systems of Ket and Yugh, developed the new Ket orthography, and produced full-scale grammars of Ket (1997c), Yugh (1997b), and Kott (1997a). His *opus maximum* is certainly the three-volume *Vergleichendes Wörterbuch* (Werner 2002), which constitutes a true thesaurus of all Yeniseian lexical data ever collected. For a fuller acknowledgement of Werner's unique contribution to Yeniseian studies, cf. Vajda/Anderson 2003 and the bibliography in Vajda 2001, 297-319 (Verner) and 325-330 (Werner). Some works of Werner's, which appeared after 1999 are listed in the bibliography of this grammar.

Another very influential Russian Ketologist, working entirely on his own and not associated with the Tomsk school, was E.A. Krejnovič in Leningrad. Already a renowned expert on two other "Palaeoasiatic" languages, Nivkh and Yukaghir, he turned to Ket in the 1960s. His book-length study of the structure of the Ket verb (Krejnovič 1968) solved many riddles of this enigmatic part of speech and retains its great value to this day.

Other contributors from Russia include S.A. and G.S. Starostin, who are mainly interested in the pursuit of external genetic relationships of Yeniseian (S.A. Starostin 1982, 1995). The present writer remains extremely skeptical towards these attempts, but the painstaking work of G.S. Starostin on the Ket verb, which steers free of the "Sino-Caucasian" hypothesis, should be singled out as a very valuable contribution to Ket linguistics.

Outside of Russia, Yeniseian studies have found another home in the USA, where especially Edward Vajda of Western Washington University specializes in

⁴² And a true "linguist" in the older sense of this English word. When I asked V.V. Dorožkin (see below), who had worked as a Ket informant with Dul'zon decades ago, how well Dul'zon spoke Ket, I received the answer "*Kak keto*" ("Like a Ket").

⁴³ It is probably safe to say that the majority of Ketological works mentioned in this bibliography have been produced by *Tomiči* ("Tomskians"). For the time after 1955, this is clearly the case.

⁴⁴ Genrich Kasparovič Verner in Russian publications of his.

Yeniseian since the 1990s. His works on the Ket verb opened up entirely new paths of research, and the present grammar is heavily indebted to many insights brought forward by him. Some of his observations (the templatic nature of the system of Ket position classes, the reduction of morphological slots found in the Ket verb to 10, the four conjugation classes, the intricate system of morphotactic rules, to name but a few) are major breakthroughs. Though I - quite naturally - do not agree with every detail of his analysis (which is most easily accessible in Vajda 2004), I see no possibility to fall back behind his seminal paper (Vajda 2001), which constitutes, in my view, a watershed, after which nothing (or, say, few things) can ever be the same in Ket linguistics.

2.5.1 Author's fieldwork

In the years 1999, 2000, and 2001, the author of this grammar visited several villages, where Central and Southern Ket are still spoken by some members of the community. In the late summer of 1999, he spent several weeks in Baklanikha on the Yenisei, in August 2000 in Baklanikha and Vereshchagino (together with Ekaterina Klopotova and Svetlana Stepanova, then doctoral students at Tomsk Pedagogical University⁴⁵), which is located ca. 30 km south of Baklanikha, and in 2001, on a joint expedition with linguists from Tomsk and Novosibirsk (Elizaveta Kotorova, Natal'ja Grišina, Andrej Kazancev) the focus was shifted to the Southern Ket variant and its centre, Kellog on the Elogui.

The main informants and suppliers of oral Ket data during the author's fieldwork were:

- Zoja Vasil'evna Maksunova
Baklanikha, born in Pakulikha (*1950), Central Ket, Ket teacher, communal worker, and trained Ketologist
- Viktor Vasil'evič Dorožkin
Baklanikha, Central Ket, born in Pakulikha (*1956)
- Pavel' Michajlovič Dibikov
Vereshchagino, Central Ket, born in Pakulikha (*1927)
- Matrena Jakovlevna Chozova
Vereshchagino, Central Ket, born in the taiga, locally widely known as *Tyotyta-Myotyta*, exceptionally good speaker (*1924)
- Tatjana F. Eršova (*née* Bal'dina)
Kellog, birth date unknown, ca. 1940
- Ul'jana Kotusova
Kellog, born in the taiga, ca. 1930
- Valentina Andreevna Romanenkova
Krasnoyarsk, born in Kellog (*1942), industrial worker, exceptionally fluent in Ket (for a photo taken by the author of this grammar, cf. the cover of Vajda 2004)

⁴⁵ Cf. Klopotova 2001.

Kogonova, Lidija Aleksandrovna

Kellog, born in Ratta (*1943), ethnic Sel'kup, fluent in Ket,
limited Sel'kup

2.6 Notational conventions and *façons de parler*

Throughout the following - non-phonological - sections of this book, the transcription used will closely reflect the phonological system outlined and described below (chapter 3). However, for practical reasons, the following conventions are introduced:

The correct morphological parsing of verbal forms will often involve the cancellation of several surface morphonological processes in the notation. Verbal forms will be given parsed according to the principles outlined in the chapters on morphology, sometimes accompanied by a representation of their surface manifestation; thus, e.g., "I am going" ($\sqrt{-tn}$) will be given as

bo/k^6-a^4-tn
1/D-T-go

in some cases accompanied by $\langle bo\gamma^6\acute{o}tn \rangle$, or, in Central Ket, $\langle bo\gamma^6\acute{u}t \rangle$, which are closer to the forms actually heard. In the parsed transcriptions, certain morphonological rules are deliberately violated, or cancelled, such as the *intervocalic voicing* and *spirantization* rule (of /k/ and /q/), while they are largely represented in the bracketed notation, which thus remains closer to that of other Ketologists, resp. of the various orthographic conventions for Ket. However, even here, phonetic *palatalization* is not given, nor is non-phonemic, predictable vowel allophony (especially if leading to [ɛ], [ɔ], [ʌ], [æ] respectively, which are normally reflected in other notational traditions of Ketology).

Examples taken from published sources are retranscribed into the notational system used throughout this book, except where noted otherwise, or where phonetic details are central to the discussion.

2.6.1 The verbal formula

The parsing of finite verb forms is justified throughout chapter 4.4 and the representation of full and/or partial paradigms is outlined in section 2.6.4.

If verbs are quoted as lexical entries, a schematic "verbal formula" is applied throughout.

This formula contains the purely "lexical" elements of the Ket verb in the linear order in which they occur in an actual form, separated by hyphens, thus starting with any P⁷ incorporate⁴⁶ (cf. 4.4.5.2), followed by any P⁵ determiner (4.4.5.4) and giving the lexical root (R, 4.4.5.1) at the rightmost edge. This string of lexical elements is then invariably followed by an indication of the *conjugation class* (I-V,

⁴⁶ "P" stands for "position", and denotes one of the numbered morphological "slots" of the Ket verb, cf. 4.4.2

with, if applicable, a subscript indication of morphologically *transitive* (_{tr}) or *intransitive* (_{itr}) verbs, cf. 4.4.3).

If present, *thematic* a^4 is given in brackets⁴⁷, as is the *preterite marker* used with this particular verb (i.e., in most cases, *il* or *in*, cf. 4.4.5.11)⁴⁸.

With verbs of conjugation classes II and III, the "series" of the P⁶ (subject and object) markers, which is not predictable, has to be indicated. This is done by bracketed (*bo*) or (*ba*). In these cases, following *determiners* are described in this grammar as "co-occupying" slot P⁶, rather than P⁵. These are given after a slash (/) in the same bracket as the P⁶ marker. More on P⁶ markers is to be found in 4.4.5.7, the justification of giving determiners as co-occupying P⁶ in these verbs is given in 4.4.5.3. Some examples:

<i>loqη I_{itr} (il)</i>	"to shiver, tremble" intransitive verb of conjugation I, no a^4 , preterite in <i>il</i>
<i>tn II_{itr} (bo/k) (a) (in)</i>	"to go" itr. verb, conj. II, <i>bo</i> -series of P ⁶ markers, determiner <i>k</i> , a^4 , preterite in <i>in</i>
<i>lubid⁷-bed II_{tr} (bo/k) (a) (il)</i>	"to love" tr. v., conj. II, P ⁷ incorporate, <i>bo</i> -series in P ⁶ , determiner <i>k</i> , a^4 , pret. in <i>in</i>
<i>ok III_{itr} (ba/t) (a) (in)</i>	"to shudder" itr. v, conj. III, <i>ba</i> -series in P ⁶ , determiner <i>t</i> , a^4 , pret. in <i>in</i>
<i>tan IV_{itr} (a) (il)</i>	"to stop, remain standing" itr. verb, conj. IV, a^4 , pret. in <i>in</i>

This formula (usually given in *italics* in this grammar) summarizes the minimum morphological information necessary to generate correct finite forms, or, for that matter, to correctly parse forms found in texts or other sources.

2.6.2 The notation of Ket words

The transcription of Ket words in this grammar is intended to be as phonemic as possible. This makes it inevitable that some Ket words and morphemes - among them frequent lexical items and important affixes - may look at times unfamiliar to readers with some acquaintance with earlier ketological literature. The most important deviations from traditional Ketology (and, *mutatis mutandis*, from Ket orthography, as well) are the following:

⁴⁷ The status of this element as a *lexical* element vs. a purely *morphological* marker is disputed (cf. 4.4.5.8.2); though we treat it as mostly lexical in nature (it cannot be "switched on or off" by purely morphological processes; it *may*, though, as Vajda thinks, have a function describable in morphological terms), we chose this notation in order to reflect its somewhat unclear status.

⁴⁸ Of course, the preterite markers are *morphological in nature*, but the choice of the proper variant is governed by lexical factors only (at least in synchronically observable Ket and Yugh), so they need to be given in the formula, but are, here, removed from the *purely* lexical elements.

- phonetically palatalized consonants will not be marked: instead of traditional <*s*>, <*l*>, <*r*>, <*n*> only <*s*>, <*l*>, <*r*>, <*n*> will be written; the phonological justification of this is to be found in 3.1.1.

- the traditional three central vowels of Ket, <*i*>, <*ə*>, <*ʌ*> are reduced to two, <*i*> and <*ə*>; [ʌ] is analyzable as an allophone of /ə/, consequently only the latter two will be written.

- the traditional open vowels, <*e*> and <*o*> are treated as allophones of /e/ and /o/ respectively, and only the latter will surface in the transcription; the phonological justification of this and the preceding convention is also to be found in 3.1.1.

- automatic intervocalic and contact-induced voicing, as well as spirantization of consonants will not be recognized in the transcription, thus only <*k*>, <*q*> will be written (this holds also for the morphotactic separator (*k*), which *only* appears intervocalically, and thus phonetically *only* as [ɣ], but is to be analyzed as underlying /k/).

- final devoicing will not be recognized in the transcription; this is perhaps one of the more radical deviations from the Ketological tradition, giving familiar and frequent elements a somewhat unfamiliar appearance:

<i>keʔd</i>	instead of	<i>keʔt</i>	"human"
<i>aʔd</i>	instead of	<i>aʔt</i>	"bone"
<i>bəd</i>	instead of	<i>bət</i>	"to make" ⁴⁹
<i>āb</i>	instead of	<i>āp</i>	"my"

2.6.3 Interlinear glosses

Throughout this grammar, sentence examples are accompanied by a free translation and a morph-by-morph gloss, which is designed to facilitate the understanding of Ket data⁵⁰.

⁴⁹ Actually, this notation is a compromise, made necessary by a somewhat conflicting behaviour of this root's final consonant: instances like *d[i]ʔ-albedʔ-aʔ-bed*, phonetically [da·lʔberaβet], "I cook fish soup", where rhotacism is observed, clearly speak in favour of /-d/; however, if the root occurs in R position and is followed by PL, the realization is [t], obviously warranting a phonemic transcription as /t/. Our transcription departs from the rhotacistic behaviour, and assumes that the realisation as [t] in the context mentioned is due to a tendency to leave the root "gestalt" intact in this position, regardless whether a PL suffix follows. This may also indicate that the *verbal* subject plural affix (formally identical with the nominal plural) may be a relatively late addition to the system.

⁵⁰ I take it that a good majority of the readers of this grammar, especially practitioners of language typology, will find them useful and informative, and their extensive use should not raise any objections. However, readers of journals like the renowned Central Asiatic Journal might, as the present writer, be surprised to find statements of some reviewers of grammatical works, who repeatedly express a certain degree of *dédain* about this practice. Sometimes (e.g. CAJ 50/2006, 2, 212) the use of interlinear glosses is even flatly condemned as driven by non-scholarly motives. I confess that I am not beginning to understand this and I do not think that, especially for a language like Ket, copious glossing needs any justification. On the contrary, the nature of the Ket verb, and the nature of the *debate* on the Ket verb, make this instrument rather indispensable, and I would like to ask potential reviewers of this grammar to concentrate on some of its more evident weaknesses

Most abbreviations used here will be self-explanatory for linguists (they are resolved in section 2.6.5). Here, we only give some explanations of less commonly used glosses or of conventions adopted here, which we feel to be dictated by the peculiarities of Ket grammar⁵¹:

- for all morphemes denoting grammatical *person* (in subject or object function; these are morphemes found in position classes⁵² P⁸, P⁶, P⁴, P³, and P¹), only *numbers* (1 = 1st person, 2 = 2nd person, 3 = 3rd person) will serve as glosses, if number is expressed only overtly in position PL (at the end of the morpheme chain). Person morphemes, which are unique for singular and plural, will be glossed as such (1SG, 3PL, etc.) *Gender/class* is only differentiated in 3rd person morphemes and will be glossed with lower case *m* (for *masculine*) and *f* (for *feminine*). Thus, particular glosses for person-differentiating morphemes may look like, e.g. <2> = 2nd person (e.g. in P⁸, with number differentiated only by the presence or absence of an overt plural marker in position PL), <1SG> = 1st person singular (e.g. in P⁶, where number is inherently expressed by the person marker chosen), <3SGf> = 3rd person feminine (in several positions, with 3rd person markers routinely - but not always - differentiated for gender/class).
- the differentiation of the "ba-" and "bo-" series in P⁶ person morphemes is not echoed in the interlinear glosses.
- semantically rich lexical morphemes will be glossed with an English translation equivalent. This holds for (most) P⁷ incorporates and for "roots proper" in position R. However, in some cases - dealt with in greater detail in section 4.4.5.1.2 - the semantic content of the R morpheme is considerably "bleached". Even though some of these morphemes are "on their way to affixhood" and, in some cases, they can be tentatively assigned a "grammatical" function, these morphemes will mechanically be glossed as <R>.
- P⁵ *determiners* will, in view of their functional vagueness, be invariably glossed as <D>. This also holds for determiners, which "co-occupy" P⁶.
- the "thematic" vowel *a/o* in P⁴ is glossed as <Th>.
- *preterite labialization* is nowhere reflected in the interlinear glosses.
- the morpheme *b* in P³ (cf. 4.4.5.9.1) will be glossed as <3n> if it is a (3rd person neuter) *actant* morpheme. When it functions as a *non-actant* morpheme, the gloss is simply ⁵³.

- I will be glad to learn about them and from their exposure - and to refrain from bewailing the "space-consuming" practice of interlinear glossings. After all, it is not their space I am consuming.

⁵¹ The following section presupposes the knowledge of some grammatical terms introduced later in this grammar, particularly in the chapter on verbal morphology, which should be consulted first.

⁵² Cf. 4.4.2

⁵³ The author of this grammar is aware that these conventions might be regarded as omitting some information, which a typologist is likely to expect to find in the interlinear glosses. However, while it is hoped that this grammar will be useful for typologists, the nature of Ket grammar determines, in my view, a less explicit glossing (and also one which is cautious in committing the analysis to too precise descriptions of the functional content of at least some morphemes) than may be viewed desirable. Vajda 2004 uses a different approach with more clearly functional labels, some of which the present author feels unable

- P² *il* and *in* are invariably glossed as <Pst> ("past"), although they also surface in imperatives without any temporal functions.
- Phonological material inserted into a chain of morphemes by *morphotactic rules* only (cf. 4.4.4), will be glossed by a bracketed vowel/consonant (e.g. <(i)> in the case of anaptyctic phonemes and by <(Sep)> in the case of *morphotactic separators*.
- In nouns, inherently singular forms are not glossed for number, and, while overt plural morphemes will be glossed as <PL>, inherently plural forms (which indicate plurality by suppletivism, or tone/vowel change) will be glossed as <GLOSS\PL> (e.g. stone\PL), to indicate the non-linear morphological exponence of plurality.

2.6.4 Verb paradigms

Very often in this grammar, verbal *paradigms* will be cited. Sometimes it will be sufficient to give only one or two isolated verb forms to illustrate a certain grammar point, but in many cases it seemed appropriate to give a partial or full paradigm to provide the reader with as much information as possible, the more so, since many Ket verbs display minor or major irregularities in one or several individual forms.

A full paradigm will contain the "verbal formula", an English gloss, the roster of person-differentiating forms with present tense forms on the left and past tense forms on the right (the past tense column may be omitted or, for that matter, unattested or impossible). Where attested, this will be followed by the imperative singular and plural. "MRs" stands for *morphotactic rules*. Here, all morphotactic rules operative in the paradigm shown are labelled by the number conventionally adopted in this grammar. MRs have not been specifically linked to the individual forms they operate on, but these are usually easily identified.

Often, the paradigm will be followed by a - sometimes lengthy - commentary, which seeks to explain (or at least to describe) any such disturbance found in the paradigm at hand, relevant to the grammar point being made or not. Ample use of cross-referencing should help readers find their way through the intricacies of the Ket verb. Cf. the following fairly typical example of an intransitive paradigm:

<i>tn II (bo/k) (a) (in)</i> [the "verbal formula", cf. 2.6.1]	"to go" [the English gloss]
present tense 1SG <i>bo/k⁶-a⁴-tn</i> <boγut> [a broad transcription] ⁵⁴ 2SG <i>ku/k⁶-a⁴-tn</i> 3SGm <i>o/k⁶-a⁴-tn</i> 3SGf <i>u/k⁶-a⁴-tn</i> 1PL <i>dəŋ/[k]⁶-a⁴-tn</i> 2PL <i>kəŋ/[k]⁶-a⁴-tn</i>	past tense <i>bo/k⁶-o⁴-[i]n²-[t]n</i> <boγon> <i>ku/k⁶-o⁴-[i]n²-[t]n</i> <i>o/k⁶-o⁴-[i]n²-[t]n</i> <i>u/k⁶-o⁴-[i]n²-[t]n</i> <i>dəŋ/[k]⁶-o⁴-[i]n²-[t]n</i> <i>kəŋ/[k]⁶-o⁴-[i]n²-[t]n</i>

to subscribe to, as will be explained in the body of this grammar. The interlinear glosses provided here cannot replace the careful study of this language.

⁵⁴ This kind of more "pronunciation-like" rendering is given in irregular intervals, especially when forms actually heard are quite remote from the "underlying" parsed morpheme chains.

3PL	$o\eta/[k]^6-a^4-tn$ imperative singular $*ku/k^6-a^4-[i]n^2-[t]n$ ⁵⁵ <koon>	$o\eta/[k]^6-o^4-[i]n^2-[t]n$ imperative plural (n.a.) [not attested]
MRs	TR 8, TR 10 [morphotactic rules operating on one or several of the forms given] This may be followed by a - sometimes lengthy - commentary on irregularities idiosyncrasies of several forms or the whole paradigm (for this verb, cf. 4.4.3.2)	

Transitive verbs will be given accordingly, but full paradigms with *all* possible subject forms will be the exception. In most cases, one subject form will be chosen (indicated directly below the verbal formula), if then other configurations do not show any noteworthy peculiarities, and the tabulated forms will represent the various *object* persons. For examples, cf. 4.4.3.1.

Missing forms are either not attested/recorded or intentionally left out, because they do not add any important information, or show drastic irregularities, which may be viewed as too distractive at the given place of the grammar. However, given the complexities of the Ket verb and the propensity for irregularities, full paradigms showing idiosyncrasies of various kinds had to be cited even outside the sections specifically devoted to irregularities.

2.6.5 Abbreviations

BEN	benefactive
C	consonant
CK	Central Ket
COMP	comparative
D	determiner
DAT	dative
Dem	demonstrative pronoun
DER	derivator
DIM	diminutive
f	feminine
FUT	future
GEN	genitive
inch	inchoative
IND	indefinite (pronoun)
Inf	infinitive
INS	instrumental
IRR	irrealis
m	masculine
MR	morphotactic rule
n	neuter
NM	nominalizer

⁵⁵ The asterisk indicates that this imperative is, partly, *constructed*: the parsed morpheme chain is *expected* according to the grammatical rules of the language, the actually attested form, however, squares only partly with this (but defies proper parsing).

NK	Northern Ket
OPT	optative
P	position
PL	plural
POSS	possessive
PR	predicative
PROH	prohibitive
Pst	past tense
ptcl	particle
PURP	purposive
Px	possessive prefix
R	root
REL	relativizer, relative "pronoun"
RES	resultative
Sep	separator
SG	singular
SK	Southern Ket
Th	thematic vowel
V	vowel

Abbreviations of scholarly journals are those of the *Bibliographic Linguistique*.

2.6.6 A note on the sources of this grammar

Ket data for this grammar come from the author's fieldwork in 1999-2001, and from published sources.

The elicitation of full verbal paradigms was possible and fruitful with some informants, difficult or next to impossible with others, among them even good speakers of the language. The lion's share of the data collected in the field consists of elicited sentences and shorter and longer texts, including spontaneous dialogues between full and vigorous speakers. The texts, together with texts from published sources, illustrating various genres of Ket narrative and various periods of the investigation of Ket, will be published in the forthcoming second volume of this work.

Nevertheless, published descriptions, monographs and short papers, have been used for sentential examples as well. The reliance on secondary sources is especially high in the domain of verbal morphology, since the wealth of data and intricate information on rare or difficult-to-elicited forms, some of them surely obsolete in present-day Ket or at least unknown to many if not most remaining speakers, found in the works of A.P. Dul'zon, E.A. Krejnovič and, above all, Heinrich Werner, is simply impossible to reproduce during three medium-length field-trips. In many cases, it will hardly be possible at all today. Therefore, Werner 1997c and Werner 2002 are indispensable sources for detailed information on a plethora of verb forms. This grammar is heavily indebted to this superb work and admits it with profound gratitude to its author, who allowed me to work with a manuscript version of the dictionary long before its publication.

Another immensely valuable source for Ket verb forms is the recently published verb dictionary by Edward Vajda and Marina Zinn (2004). Many verb forms, which are only documented in this book, are quoted and discussed in the sections on verbal morphology in this grammar, though this is not explicitly acknowledged in every case.

3 Phonology

3.1 Tone and prosody

The description of Ket phonology begins with its system of suprasegmental oppositions, since the segmental allophony of both vowels and consonants is greatly influenced by the tonal system of the language.

In earlier treatments, the fact that Ket and other Yeniseic languages are tonal has been largely overlooked, or ignored, sometimes even denied. We owe the original discovery of Ket (and Yugh) tones to Heinrich Werner. The most recent summary of Ket prosody and tone was presented by Vajda (2001).

Below, the phonetic features of the four tonal units found on Ket monosyllables (3.1.1), then the tone-related, more accent-like disyllabic contours (3.1.2) will be dealt with, followed by a discussion of prosodic phenomena found with polysyllabic structures (3.1.3).

3.1.1 Tone on monosyllabic stems

Each Ket monosyllabic stem, when pronounced in isolation, is characterized by one of four contrastive suprasegmental entities; their relevant phonetic basis is not absolute or relative tone-height, but rather contour and phonation. Here, the Ket tonemes are referred to according to the number-label system introduced by Werner⁵⁶; however, the actual transcription will use the following conventions:

Werner's *first tone* is rendered by a *macron* on the syllabic nucleus: < \bar{v} >.

Werner's *second tone* is rendered by the IPA-symbol for *glottal stop* after the syllabic nucleus: < $vʔ$ >.

Doubling the vowel sign of the syllabic nucleus renders Werner's third tone: < vv >.

Werner's *fourth tone* is rendered by a *grave accent* on the syllabic nucleus: < \grave{v} >.

Thus,

instead of⁵⁷:

1v

2v

3v

4v

we write:

\bar{v}

$vʔ$

vv

\grave{v}

Examples:

⁵⁶ Cf. Werner 1997c.

⁵⁷ In Werner's transcription, the superscript number 2 is often accompanied by the glottal stop, similarly the superscript number 3 is often followed by a geminate vowel; our transcription avoids these redundancies.

Werner	This grammar:	
¹ am/¹a'm	ām	"mother"
¹ c/¹c·	ē	"iron"
² i?	i?	"day"
² dī?	dī?	"cap"
³ ba:m/βbaam	baam	"old woman"
³ hu:t/βhuut	huut	"tail"
⁴ aŋ	àŋ	"rope"
⁴ as'	às	"feather"

Though the phonetic basis of these suprasegmental entities is not uniform (while all tonemes are characterized by a specific contour, other features like creakiness/glottal stop and vowel length play a significant and perceptively salient role in distinguishing these units from one another), their status as suprasegmentals is enhanced by the fact that their distinctive features (including length and creakiness/glottal stop) are only relevant as long as the tone-bearing unit/lexeme remains an isolated monosyllable; upon suffixation (and, within limits, prefixation) all⁵⁸ of these features are cancelled⁵⁹, giving way to one of two *disyllabic contours*,

⁵⁸ Some deviations from this general principle are outlined in the following lengthy footnote (dealing with cases we chose not to reflect in our transcription).

⁵⁹ This is a general observation. Werner (1996, 66ff.) observes cases, where the inherent tone of one element of a compound may be perceived as intact, such as (our transcription) *dīkit* "young eagle" (< *dī* "eagle", with preservation of tone 1), *askəʔt* "fairy tale" (tone 2 preserved, possibly from *kəʔt* "child"; if pluralized, the glottal segment is, however, lost, and the expected disyllabic contour appears: *áskətaŋ*), *aŋbes* "to become hot" (tone 3 preserved from *aŋ* "hot"), or the numerous cases, where Central and Northern Ket display an "additional" vowel in fourth (and, to a lesser degree, in first) tone words (which are as a rule monosyllabic in Southern Ket). All these cases violate the rule that non-monosyllables show disyllabic contours, rather than full-fledged tone on their "basic" syllable. However, the author's fieldwork showed such cases to be rare and usually confined to overdistinct ("explaining" or "teaching") speech, and may just represent an "iconic" reintroduction of the inherent syllabic tone of a monosyllable into one or some of its compounds. On the other hand, this observation may be due to language attrition, cf. Vajda 2001, 20, who says (in the context of the proper investigation of the effect of intonation on lexical pitch) that "such a study may now be only possible with the aid of archived tape recordings of monolingual native speakers". Throughout this grammar, we will write Ket non-monosyllables as containing disyllabic ("accent-like") contours and extend this practice - for the sake of a unified description - also to lexical items cited from dictionary sources. Thus, we will give "mud" as *áltəq*, whereas users of Werner's comparative dictionary (2002) will find this word rendered as (his notation) *¹a¹təq*, or *húttus* "having a tail" vs. Werner's *³hu:ttus*; there are no doubts that Werner's rendering is a most faithful reproduction of the phonetic reality of these words in his recordings (though he repeatedly asserts that the replacement of inherent tone by disyllabic contours is, after all, the rule in the language, cf. also Werner 1996, 65ff., where several examples of this kind are given, often confirmed by cognate Yugh words). We have to leave open, whether this discrepancy is due to language change/attrition (which would require a more involved description of the "earlier" system, where independent tone would have been possible in derived disyllables), or to any kind of observational or descriptorial inaccuracy (which, in case of doubt, will most certainly be on the part of the author of these lines). With the second tone, I could at times (certainly not generally) observe that at least the glottal segment characteristic of it (?) could surface in the second syllable of a disyllabic compound (as with the term for

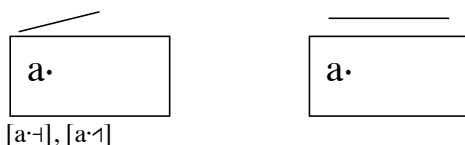
which perceptively resemble patterns of accentuation, rather than syllabic tones (cf. 3.1.2).

The domain of Ket tones is thus the *leftmost two syllables* of a word.

The articulatory features of the monosyllabic tones in Southern Ket are:

Tone 1:

Even or slightly rising, vowel-length half-long:

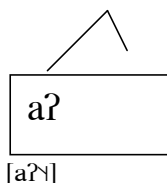


Examples:

<i>ūl</i>	[uːlː], [uːlː]	"water"
<i>ī</i>	[iː], [iː]	"sun"
<i>kāl</i>	[kuːlː], [kuːlː]	"raven"
<i>ād</i>	[aːtː], [aːtː]	"I"
<i>ēn</i>	[eːnː], [eːnː]	"now"
<i>ōb</i>	[oːpː], [oːpː]	"father"
<i>ōk</i>	[əːkː], [əːkː]	"thou"

Tone 2:

Shortly rising, then abruptly falling, accompanied by pharyngeal constriction, vowel length short⁶⁰:



<i>duʔt</i>	[duʔtʰ]	"awl"
<i>iʔn</i>	[iʔnʰ]	"needle"
<i>hiʔl</i>	[huʔlʰ]	"clear"
<i>baʔŋ</i>	[baʔŋʰ]	"place"
<i>keʔd</i>	[keʔdʰ]	"human"
<i>qoʔj</i>	[qoʔjʰ]	"a mythical boat"
<i>qoʔt</i>	[qʌʔtʰ]	"garbage"

"fairy tale" mentioned above); I am, however, unable to hear any tone 2 *contour* on this syllable. Vajda, too, observes a certain propensity of this glottal element to escape deletion in disyllables, as long as it occurs at the right fringe of the word (Vajda 2001, 14).

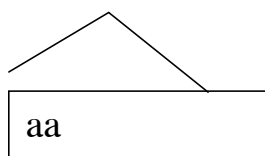
⁶⁰ For typographical reasons, the IPA tone sign used in the following examples captures only the "high-falling" part of the tone curve.

In some instances - at least in the speech of some speakers - an extra-short echo vowel occurs after the glottal closure/constriction in second-tone *open* syllables, e.g.:

<i>diʔ</i>	[diʔ ⁱ ʎ]	"eagle"
<i>duʔ</i>	[duʔ ^u ʎ]	"smoke"

Tone 3:

Rising, then falling considerably lower than in tone-2 syllables, vowel length long (or geminated)⁶¹:

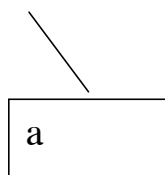


[aːʎ]⁶²

<i>uus</i>	[u:sʎʎ]	"warm"
<i>ii</i>	[i:ʎ]	"breath"
<i>sîi</i>	[sʎu:ʎ]	"year"
<i>baat</i>	[ba:tʎ]	"old man"
<i>eel</i>	[e:l ʎ]	"berry"
<i>dɔl</i>	[dɔ:l ʎ]	"a.k.o. flour made from dried fish"
<i>dool</i>	[dɔ:l ʎ]	"remains (of cloth)"

Tone 4:

Sharply falling, vowel length short:



[aʎ]

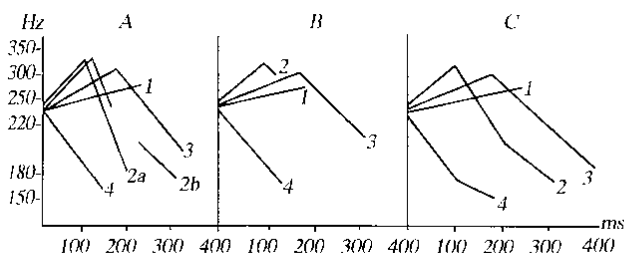
<i>kùn</i>	[kuŋ ^u ʎ]	"wolverine"
<i>bìl</i>	[bi ⁱ ʎ]	"far"

⁶¹ Vajda (2004) correctly observes that the overall tonal contour of this tone is virtually identical with that of the disyllabic "fifth" contour (cf. 3.1.2), and consequently eliminates tone 3 from the system. This is certainly justified, and further underpinned by the fact that many tone 3 monosyllables are demonstrably derived from earlier disyllabic structures (sometimes preserved as such in Yugh). In this grammar, we will keep monosyllabic tone three (written simply as a geminate vowel nucleus), because this contour is usually lost on affixation (more precisely: distributed over the two leftmost syllables of an affixed tone-three-root), and thus still shows a behaviour reminiscent of that of the other tonemes.

⁶² Again, the IPA tone notation of this contour with two different tone marks following each other is certainly not optimal, but dictated by typographical limitations.

<i>in</i>	[un ^h N]	"runner (of sledge)"
<i>àŋ</i>	[aŋ ^h N]	"rope"
<i>èm</i>	[ɛm ^h N]	"flying squirrel"
<i>dàn</i>	[dʌn ^h N]	"willow bast"
<i>òn</i>	[ɔn ^h N]	"much"

Werner studied the articulatory phonetics of the Ket tones intensively with the help of experimental methods (cf. Werner 1996, 23). For completeness' sake, Werner's diagrams which illustrate height (in Hz) and duration (in ms) of the four monosyllabic tones are reproduced here (cf. also Vajda 2000, 2):



(A = open syllables, B = closed syllables, C = "half-closed" syllables/syllables with a closing sonorant; the numbers are the numbers of the tones, 2a = 2nd tone in general, 2b = 2nd tone with hypershort echo-vowel; both variants of the 2nd tone occur in free variation). The phonemicity of these tonal units may be illustrated by the following minimal sets and pairs:

1 : 2 : 3 : 4 (\bar{v} : $v^?$: vv : \hat{v}):

<i>sūl</i> :	<i>suʔl</i> :	<i>suul</i> :	<i>sùl</i>
"blood"	"a k.o. salmon"	"sledge"	"cradle-hook"
<i>īn</i> :	<i>iʔn</i> :	<i>iin</i> :	<i>ìn</i>
"to stand"	"needle"	"to carry"	"long (time)"

1 : 2 : 3 (\bar{v} : $v^?$: vv):

<i>ūl</i> "water"	:	<i>uʔl</i> "algae"	:	<i>uul</i> "smooth"
<i>ōt</i> "we"	:	<i>ɔʔt</i> "quiver"	:	<i>əət</i> "on"
<i>qōl</i> "dandruff"	:	<i>qoʔl</i> "measles"	:	<i>qool</i> "to heal"
<i>bāt</i> "face"	:	<i>baʔt</i> "true"	:	<i>baat</i> "old man"

1 : 3 : 4 (\bar{v} : vv : \hat{v})

<i>ēs</i> "heaven"	:	<i>ces</i> "wholesome"	:	<i>ès</i> "strap"
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2 : 3 : 4 (v[?] : vv : v̂)

<i>eʔl</i> "cup"	:	<i>ecl</i> "cowberry"	:	<i>èl</i> "fish-spear"
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1 : 2 (v̄ : v[?])

<i>kāl</i> "raven"	:	<i>kīʔl</i> "deep spot in river"
<i>ēj</i> "island"	:	<i>eʔj</i> "egg"
<i>kōt</i> "winter"	:	<i>kōʔt</i> "children"

1 : 3 (v̄ : vv)

<i>ī</i> "sun"	:	<i>ii</i> "to whet"
<i>īn</i> "grained wood"	:	<i>īn</i> "bark (n.)"
<i>kūl</i> "beard"	:	<i>kuul</i> "charred wood"

1 : 4 (v̄ : v̂)

<i>īt</i> "to smell"	:	<i>ìt</i> "tooth"
<i>īs</i> "woodpecker"	:	<i>ìs</i> "to row"
<i>tūl</i> "(red) copper"	:	<i>tùl</i> "small intestine"
<i>ēt</i> "giant"	:	<i>èt</i> "alive"
<i>ēk</i> "we"	:	<i>èk</i> "louse"
<i>qōs</i> "ten"	:	<i>qòs</i> "to take"
<i>qāl</i> "from there"	:	<i>qàl</i> "grandson"

2 : 3 (v[?] : vv)

<i>hiʔl</i> "clear (weather)"	:	<i>hīl</i> "large intestine"
<i>duʔt</i> "awl"	:	<i>duut</i> "to kindle"
<i>qoʔl</i> "bay"	:	<i>qool</i> "foam"

2 : 4 (v[?] : v̂)

<i>kiʔs</i> "leg"	:	<i>kìs</i> "new"
<i>qīʔd</i> "bow"	:	<i>qìd</i> "to scratch"
<i>hōq</i> "loose hair"	:	<i>hòq</i> "rod"
<i>oʔn</i> "seven"	:	<i>òn</i> "much"
<i>aʔq</i> "wood"	:	<i>àq</i> "to leave behind"

3 : 4 (vv : v̂)

<i>dəən</i> "weir"	:	<i>də̀n</i> "bast"
<i>qooj</i> "adjacent"	:	<i>qòj</i> "bear"
<i>aaŋ</i> "hot"	:	<i>àŋ</i> "rope"

Some first- and most fourth-tone monosyllables in Central and Northern Ket show a considerable deviation from this pattern: while, in fourth-tone monosyllables, the tonal contour is falling, as in Southern Ket, the tone-bearing vowel is pronounced *long*, rather than short, and the tone-bearing syllable is invariably followed by a (toneless) vowel, the quality of which vacillates (in CK it is mostly /e/ or /ə/, NK most typically shows /i/, but in some cases the dialects behave differently; compare the articulation of *it* "tooth" in the present-day dialects:

Southern Ket:	[it̩]
Central Ket	[i:~t̩e]
Northern Ket	[i:~ti]

Whether this additional vowel in Northern and Central Ket is to be viewed as *excrecent*, i.e. a predictable epiphenomenon of the fourth tone, or *etymological*, i.e. a segment which was originally present, gave rise to the fourth tone in the first place, and was lost only in Southern Ket (and Yugh, where the syllabic nucleus of fourth-tone syllables is pharyngealized) remains to be determined. However, the fact that, in Southern Ket, the final vowel of fourth tone monosyllables triggers the lenition and spirantization processes otherwise typical for intervocalic consonants lends support to the view that these vowels are original.

This phenomenon is rarer with first-tone monosyllables, but not uncommon; here, the articulation of the syllabic nucleus is unchanged, and, as in the fourth tone, the quality of the extra vowel remains largely unpredictable, though the overwhelming majority of cases shows /e/ or /ə/, either in both dialects, or one of these in Central Ket, and /i/ in Northern Ket.

The following is a list of fourth-tone words, for which dialect variants have been recorded, followed by a (shorter) list of first-tone words showing the same phenomenon⁶³:

Fourth- tone words with an extra vowel in Central and/or Northern Ket⁶⁴:

Southern	Central	Northern	
àj	àje	àji	"sack"
àl	--	àl	"in the forest (adv.)"
àŋ	àŋa	àŋa	"rope"
às	às	àsi	"feather"
à	àkə	--	"birch-bark (lower layer)"
bèd	bède	bèdi	"to make"
bil	bil(i)	bil(i)	"far"
bək	bəkə	--	"to find"

⁶³ The mixed character of Northern Ket is, by the way, apparent from the fact that not all potential attestations conform to this rule.

⁶⁴ These vowels will be written in all examples from Central and Northern Ket; this means that any disyllabic root preceded by a tone mark will be mechanically identifiable as a non-Southern Ket example (in this grammar, however, these dialects will almost in any case be represented by Central Ket from Baklanikha). The equals-sign (<=>) operates leftward.

<i>dàm</i>	<i>dàmə</i>	=	"to bark"
<i>dàŋ</i>	<i>dàŋə</i>	=	"to crumple up"
<i>dàq</i>	<i>dàqə</i>	=	"to laugh"
<i>dèd</i>	<i>dèdə</i>	<i>dèdi</i>	"to read, to count"
<i>dis</i>	--	<i>dise</i>	"to scold"
<i>dəj</i>	<i>dəje</i>	<i>dəji</i>	"to touch"
<i>dən</i>	<i>də:ne</i>	<i>dəni</i>	"bast"
<i>èj</i>	<i>èji/èjə</i>	<i>èji</i>	"to kill"
<i>èm</i>	<i>ème</i>	=	"flying squirrel"
<i>èn</i>	<i>ène</i>	=	"younger sister's husband"
<i>èd</i>	<i>ède</i>	<i>èdi</i>	"to send"
<i>èd</i>	<i>èdə</i>	<i>èdi</i>	"sable"
<i>èd</i>	--	<i>èdi</i>	"a.k. o. plant"
<i>ès</i>	--	<i>èse</i>	"straps of snowshoe"
<i>èt</i>	<i>ète</i>	<i>ète</i>	"alive"
<i>hàj</i>	<i>hàje</i>	<i>hàji</i>	"oar (PL)"
<i>hàs</i>	<i>hàse</i>	=	"shaman's drum (PL)"
<i>hàs</i>	<i>hàs(ə)</i>	<i>hàsi</i>	"coat tail"
<i>hàt</i>	--	<i>hàte</i>	"dense (forest)"
<i>hìj</i>	<i>hìje</i>	<i>hìj/hìje</i>	"to drive in (a stick, pole)"
<i>həj</i>	<i>həje</i>	=	"belly (PL)"
<i>həq</i>	<i>həqə</i>	=	"rod"
<i>hìl</i>	--	<i>hìle</i>	"to make alive"
<i>hìs</i>	<i>hìsə</i>	<i>hìsi</i>	"oblique, crooked"
<i>in</i>	<i>ine</i>	<i>ini</i>	"nail, claw"
<i>in</i>	<i>ine</i>	<i>ine</i>	"long (time)"
<i>it</i>	<i>ite</i>	<i>iti</i>	"tooth"
<i>kàl</i>	<i>kàli/kàle</i>	=	"war"
<i>kàŋ</i>	<i>kàŋə</i>	=	"winter trail"
<i>kìj</i>	<i>kìj(ə)</i>	<i>kìji</i>	"to narrate"
<i>kìn</i>	<i>kine</i>	=	"bootleg"
<i>kìs</i>	<i>kisi</i>	=	"new"
<i>kìs</i>	<i>kis</i>	<i>kisi</i>	"hundred"
<i>kòq</i>	<i>kòqə</i>	=	"fist"
<i>kùn</i>	<i>kùnə</i>	<i>kùne</i>	"wolverine"
<i>làl</i>	<i>làle</i>	=	"to chatter"
<i>lèl</i>	--	<i>lèle</i>	"bloody water"
<i>lòd</i>	<i>lòde</i>	<i>lòdi</i>	"an edible plant"
<i>lùd</i>	--	<i>lùde</i>	"flock, herd"
<i>òn</i>	<i>òn</i>	<i>òne</i>	"much, many"
<i>qàj</i>	<i>qàjə</i>	<i>qàji</i>	"deer"
<i>qàŋ</i>	<i>qàŋə</i>	=	"vulture"
<i>qèd</i>	<i>qède</i>	--	"pole"
<i>qòj</i>	<i>qòj(ə)</i>	<i>qòji</i>	"bear"
<i>qòn</i>	<i>qònə</i>	<i>qòni</i>	"until (postp.)"
<i>qòŋ</i>	<i>qòŋ(e)</i>	=	"at daytime"
<i>qòs</i>	<i>qòse</i>	--	"to take"
<i>qùd</i>	<i>qùdə</i>	<i>qùdi</i>	"pike"

<i>qùt</i>	<i>qùte</i>	=	"to climb, ascend"
<i>q̣ɪd</i>	<i>q̣ɪdɔ</i>	<i>q̣ɪdi</i>	"to dig"
<i>sàs</i>	<i>sàs</i>	<i>sàsɪ</i>	"skin of reindeer's legs"
<i>sàs</i>	<i>sàsɔ</i>	<i>sàsɪ</i>	"rivers"
<i>sèl</i>	<i>sèle</i>	<i>sèli</i>	"reindeer"
<i>sìj</i>	<i>sìj(e)</i>	<i>sìje</i>	"to eat"
<i>sìd</i>	<i>sìd/side</i>	<i>sìdi</i>	"strap"
<i>sùj</i>	<i>sùje</i>	<i>sùji</i>	"to swim"
<i>sùl</i>	<i>sùl(ɔ)</i>	<i>sùli</i>	"cradle hook"
<i>sùs</i>	<i>sùs</i>	<i>sùsi</i>	"slow"
<i>tàŋ</i>	<i>tàŋe</i>	=	"to drag"
<i>tàd</i>	<i>tàde</i>	<i>tàde</i>	"to beat"
<i>tès</i>	--	<i>tèsɪ</i>	"felt-boot"
<i>tìd</i>	<i>tìde</i>	<i>tìdi</i>	"root"
<i>tìk</i>	<i>tìke</i>	=	"snake"
<i>tòk</i>	<i>tòke</i>	=	"axes"
<i>tòq</i>	--	<i>tòqɔ</i>	"a k. of duck"
<i>tòs</i>	<i>tòse</i>	=	"to bring up"
<i>tùl</i>	<i>tùlɔ</i>	<i>tùli</i>	"small intestine"
<i>tək</i>	<i>təkɔ</i>	=	"leather boot"
<i>ùs</i>	<i>ùs(e)</i>	=	"birch tree"
<i>ùt</i>	<i>ùte</i>	<i>ùti</i>	"mouse"
<i>ək</i>	<i>əke</i>	=	"louse"
<i>ìn</i>	<i>ine</i>	=	"runner (of sledge)"
<i>ìd</i>	<i>ide, ìdɔ</i>	<i>ìdi</i>	"spring"
<i>ìs</i>	<i>ise</i>	=	"to row"

First-tone words with an extra vowel in Central and/or Northern Ket:

SK	CK	NK	
<i>bāk</i>	<i>bāke</i>	=	"block of wood"
<i>dēs</i>	<i>dēsɪ</i>	=	"eye"
<i>dūk</i>	<i>dūke</i>	=	"sound, voice"
<i>ēj</i>	<i>ējɔ</i>	<i>ēji</i>	"tongue"
<i>ēj</i>	<i>ėje</i>	=	"island"
<i>ēt</i>	<i>ēte</i>	=	"(foreign) giant"
<i>hīk</i>	<i>hīke</i>	=	"male"
<i>hōl</i>	<i>hōle</i>	=	"fat"
<i>kāt</i>	<i>kāte</i>	--	"stringed instrument"
<i>kūl</i>	<i>kūle</i>	=	"beard"
<i>kōn</i>	<i>kōne</i>	=	"dawn"
<i>kōt</i>	<i>kōte</i>	=	"winter"
<i>qād</i>	<i>qāde</i>	<i>qāde</i>	"that one"
<i>qād</i>	<i>qāde</i>	<i>qāde</i>	"wool"
<i>qōd</i>	<i>qōde</i>	--	"which one"
<i>qōkt</i>	<i>qōktɔ</i>	=	"spoon"

<i>q̄īn</i>	<i>q̄īnc</i>	=	"current"
<i>q̄īt</i>	<i>q̄ītc</i>	=	"wolf"
<i>s̄īl</i>	<i>s̄īlc</i>	=	"summer"
<i>s̄īd</i>	<i>s̄īdc</i>	<i>s̄īdi</i>	"end (of a rope)"
<i>t̄īk</i>	<i>t̄īkə</i>	=	"swan"
<i>t̄ōŋ</i>	<i>t̄ōŋc</i>	=	"hair"
<i>ōk</i>	<i>ōkc</i>	=	"branch"

The relative frequency of the monosyllabic tones has been estimated at:⁶⁵

40 %	for 2 nd tone words,
30 %	for 1 st tone words,
20 %	for 3 rd tone words, and
10 %	for 4 th tone words.

Ket tones play a morphological role, especially in the formation of nominal plurals, where the plural form may be differentiated from the singular by a change of tone only (cf. 4.1.1.2.4.4).

The interaction of the four tonemes with segmental phonemes is discussed in 3.1.1.

3.1.2 Disyllabic contours

Disyllabic stems (more exactly: the first or leftmost two syllables of any word with two or more syllables; most disyllabic - and all polysyllabic - native words of Ket are demonstrably morphologically complex) show one of two prosodic patterns, which closely resemble a system of pitch accent. In earlier treatments of Ket, these are sometimes referred to as the fifth and sixth tone, respectively, and superscript numbers are used to indicate them, in analogy to the notation of the monosyllabic tones; in this grammar, we will use a modified diacritic-based notation:

instead of:	or:	we will write:
⁵ v-v	´v-`v	´v-v
⁶ v-v	`v-´v (´v-`v) ⁶⁶	`v-v

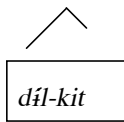
This notation allows - with a minimal use of diacritics - to identify any given disyllabic contour in any string of syllables: an acute sign on a vowel indicates that this vowel is characterized by a rising contour, followed by a low-falling contour on the next syllable ("fifth tone", acoustically close to a dynamic stress on the acuted syllable), whereas a grave accent indicates that this syllable bears a slightly rising intonation, followed immediately by a high falling contour on the next syllable ("sixth tone", acoustically close to a dynamic stress on the syllable *following* the one with the grave accent).

The only possible source of confusion in this system is the double use of the grave accent: it indicates *fourth tone* on any isolated monosyllabic stem, and the first ("unaccented") syllable in a string of syllables united by the traditional "sixth tone".

⁶⁵ Cf. Werner 1996.

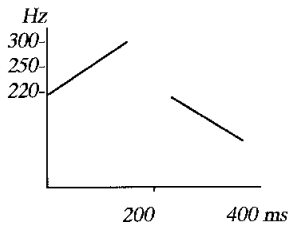
⁶⁶ As in Vajda 2000.

The first of these disyllabic contours - often referred to as the *fifth "tone"* - is characterized by a rising tone on the first syllable, followed by a shorter, falling contour on the second syllable:

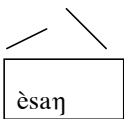


<i>hám̄ba</i>	[hʌmʌbʌʌ]	"Ewenki person, Tungus"
<i>ásel</i>	[aʌsɛʌ]	"ski"
<i>bóktis</i>	[bɔkʌtiʌsʌ]	"flintstone"

The acoustic impression is often that of a dynamic accent on the first syllable. Werner's experimental results on the 5th contour (cf. Werner 1996, 58):

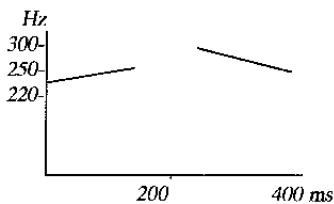


The second disyllabic contour - often called the *sixth "tone"* - shows a slightly rising contour on the first syllable, again followed by a falling one on the second, but this time the falling tone starts at a considerably *higher* point of the spectrum:



<i>èsaŋ</i>	[ɛʌsʌŋʌ]	"gods"
<i>bòntan</i>	[bʌnʌtanʌ]	"wild duck"
<i>dèstaŋ</i>	[dɛsʌtaŋʌ]	"eyes"

This often produces the acoustic impression of a dynamic accent on the second syllable. Cf. Werner's diagram (1996, 60):



Minimal pairs showing the phonemicity of these contours are:

<i>áscɛl</i>	"snowshoe"	:	<i>àsɛl</i>	"ilimka-boat"
<i>qájŋoq</i>	"fly (n.)"	:	<i>qàjŋoq</i>	"flies"
<i>qóqɓun</i>	"cuckoo"	:	<i>qòqɓun</i>	"cuckoos"
<i>dúmkit</i>	"small bird"	:	<i>dùmkit</i>	"small birds"

Whenever a monosyllabic stem receives some increment (a suffix or a lexical element forming a compound), its inherent tone is cancelled, and the resulting disyllabic word - or the leftmost two syllables of a longer word - will assume one of the two disyllabic contours. The choice of *vv* and *v̄v* is largely unpredictable, but in most instances the "fifth" contour (*v̄v*) is found on inflected nouns. The "sixth" contour is considerably rarer and mostly found in (transparent and opaque) compounds, as well as in some plural forms; disyllabic singular nouns with the "fifth" contour often, but not invariably, change this pattern to the "sixth" contour in the plural without any additional plural marker (the opposite, singular *v̄v* : plural *vv* does also occur, cf. 4.1.1.2.4.4 for examples).

3.1.3 Tone/accent in polysyllabic words

The assertion that any disyllabic Ket word features one of the two disyllabic contours starting with the first (i.e. leftmost) syllable needs some refinement by introducing the notion of *phonological word* (for which this rule holds) as opposed to the *morphological word* (for which it does not). While the morphological word poses no difficulties for definition (the nominal/verbal root and its affixes), a small group of *prefixes* - or rather clitics - (possessive prefixes with nouns, cf. 4.1.1.4, and personal agreement prefixes in verbs, cf. 4.4.4.1) show a behaviour, which places them outside the scope of the phonological word.

This analysis is called for by the following facts:

a) no Ket root may begin with a consonant cluster; however, non-syllabic personal clitics (occupying the leftmost morpheme slot P⁸, cf. 4.4.5.6) on consonant-initial verbal morpheme chains may produce such clusters, as may non-syllabic possessive

prefixes/clitics on nouns (no other instances of initial clusters being present in the language), e.g.⁶⁷

<i>k-tīb</i>	"your dog" (phonetically [k ^{ti} .p ⁱ])
<i>d[u]⁸-k⁵-a⁴-d¹-dij</i>	"I grow up" (phonetically [tkaddij])

These clusters are usually pronounced when they are not utterance-initial, i.e. when other elements precede it; otherwise, quite often the first element is dropped.

⁶⁷ For clusters in general cf. 3.4.3, for the system of possessive prefixes cf. 4.1.1.4; P⁸ (and other labels of the form P^x) denotes one of the position classes of the Ket verb, in this case the leftmost slot for personal/agreement affixes.

b) *syllabic* left-boundary clitics, however, are distinguished by two behavioural characteristics, thus:

a) they cliticize to the preceding element in the discourse chain:

(2)

túde bókdom da-hib-da-s
Dem gun Px3-son-GEN-NM
This gun is his brother's

This is prosodically realized as:⁶⁸

túde bókdom da (#) hibdas

(3)

bū da⁸-bu/[k]⁶-[i]n²-di¹-qos
she 3f-3/D-Pst-1-abduct
She abducted me

This is prosodically realized as:

bú da (#) búndiqos

b) the disyllabic contour, characterizing all non-monosyllables in Ket, begins only after these clitics:

na-bókdom "their gun" (**nábokdom*)

da⁸-t⁵-a⁴-(j)-ka "she goes around": *da (#) tájka* (**dátajka*)

c) if prefixed to monosyllables, the inherent tone of the latter is generally preserved:

(4)

na-hu⁹n
"their daughter" (**náhun*)

d) All leftmost clitics fall outside the scope of the phonological word, but P⁸ 3Sf *da* shows this behaviour much stronger than other (equally syllabic) verbal personal prefixes: while all others may, under certain morphotactic circumstances, be truncated (i.e. lose their vowel, cf. 4.4.4.2 for vowel truncation rules involving P⁸ person markers), P⁸ *da* never undergoes truncation.

⁶⁸ (#) symbolizes a prosodic boundary, which is realized as a virtual pause.

- e) Other P⁸ agreement markers, though they may be truncated and thus be "dragged" inside the realm of the phonological word, do show some signs of basically not belonging to it; thus, in the (relatively rare) case that P⁸ agreement markers occur directly before the verbal root, without any intervening element, the inherent tone of this root is generally preserved⁶⁹.
- f) Another language-internal rule which requires the notion of phonological word is what we call here *Vowel Insertion Rule 4* (VIR 4, cf. 4.4.4.3.4), operative in finite verbs, which triggers the anaptyxis of /i/ between two initial - clustering - consonants of the phonological word, i.e. after the P⁸ marker.
- g) Finally, as demonstrated by Vajda 2001, *disyllabic*, including *historically* disyllabic, P⁷ incorporates are followed by another boundary which divides the morphological word into two phonological words. The hallmark of this boundary is a virtual pause, and the prevention of the rule *Sync* (cf. 4.4.4.6), when the phonologically eligible context for it is divided by this boundary.

The prosodic behaviour of tri-, quadrisyllabic and longer morpheme chains is more complicated and has not been subject to intense scrutiny⁷⁰.

Only few fairly recurrent patterns can be mentioned here, possibly only tendencies. The default rule is that the first two syllables of the phonological word receive one of the two disyllabic contours described above, leaving any syllable further to the right as a toneless appendix; most common is the fifth contour, cf.

<i>dɪlɪbək</i>	"he pulled me"	(dɪu ⁸ -iɪ ² -dɪ ¹ -bək)
<i>dúbbəkín</i>	"they pull it"	(du ⁸ -b ³ -bək-in)
<i>bákissal</i>	"I spend the night"	(ba/k ⁶ -(i)-(s)-sal)

P⁸ 3SGf /*da*/ stands outside of the phonological word:

<i>daɪlɪbək</i>	"she pulled me"	(da ⁸ -iɪ ² -dɪ ¹ -bək)
-----------------	-----------------	--

The sixth contour is also found, though somewhat less often, e.g.:

dɪ⁸-(k)-a⁴-daq (*dɪkadaq*) "I live"

Note the complicated case of the two-argument verb "to beat":

dɪ⁸-(k)-a⁴-ted "I beat him" (*dɪkated*), fifth contour on the first two syllables,

vs.

dɪ⁸-(k)-aŋ⁴-ted "I beat you" (*dɪkáŋted*), sixth contour on the first two syllables

⁶⁹ Cf. for instance the paradigm of the verb *təəl* "to freeze": *dɪ⁸-təəl*, *ku⁸-təəl*, *du⁸-təəl*, *da⁸-təəl*; in such cases, it is justified to keep the inherent tone of the root syllable (here tone 3) in the transcription.

⁷⁰ However, Werner 1996 must be mentioned, where a great number of empirical data has been assembled. Much of the following is based on this source and its examples, difficult to obtain in the field nowadays.

There is, again, no doubt that these forms are accurately described by Werner (1996, 128), but both forms are, in terms of prosody, so close to each other (both give the impression of bearing a pitch accent on the second syllable, at least in the speech of present-day Kets) that it seems very difficult to observe this and similar subtleties in the field today, at least without the help of experimental methods.

Werner observes numerous other fine differences of accentuation in verbal and nominal paradigms, including tone/contour changes within paradigms (sometimes echoed by cognate Yugh forms, sometimes not), the apparent preservation of inherent lexical tone in root morphemes (both in P⁷ and in R)⁷¹, tone 1 on the initial syllable of some verbs (which contains only the P⁸ morpheme and no lexical material at all), all of which will not be repeated here.

If verbal morpheme chains get long enough, they may - fairly regularly - show *two* disyllabic contours following each other. This is typically the case with complex verbs, which contain a P⁷ incorporate. As mentioned above, a disyllabic incorporate is followed by a prosodic boundary (#), which divides the morphological word into two phonological ones. Consequently, if enough phonetic material follows, two disyllabic contours may be the result, cf.:

*da*⁸-*lubed*⁷-*bo/k*⁶-*a*⁴-*bed* "she loves me" (*da* (#) *lúbed* (#) *bò/k-a-bed*)

3.2 Vowels

3.2.1 Vowel phonemes

The Ket inventory of distinctive vowel phonemes consists of:

<i>i</i>	<i>í</i>	<i>u</i>
<i>e</i>	<i>ə</i>	<i>o</i>
	<i>a</i>	

The phonemicity of these segmental units can be demonstrated by minimal pairs:

<i>i</i> :	<i>í</i>				
	<i>ī</i>	"sun"	:	<i>ī̄</i>	"reindeer bull"
	<i>diʔ</i>	"eagle"	:	<i>diʔ̄</i>	"hat"
	<i>iin</i>	"to dawn"	:	<i>īin</i>	"bark (n.)"
	<i>in</i>	"nail, claw"	:	<i>īn</i>	"runner (of sledge)"

⁷¹ R = root, the (almost) rightmost element in a verbal morpheme chain, followed only by a marker of subject plural, where appropriate.

i : *u*

<i>dīk</i>	"resin"	:	<i>dūk</i>	"sound, voice"
<i>iʔl</i>	"soul"	:	<i>uʔl</i>	"algae"
<i>ii</i>	"breath"	:	<i>uu</i>	"meadow"
<i>tīk</i>	"snake"	:	<i>tùk</i>	"a k. o. fish"

i : *e*

<i>īj</i>	"ghost"	:	<i>ēj</i>	"tongue"
<i>dīʔ</i>	"log"	:	<i>dēʔ</i>	"lake"
<i>tii</i>	"boat"	:	<i>tee</i>	"pine-wood chip"
<i>it</i>	"tooth"	:	<i>èt</i>	"alive"

i : *ə*

<i>īs</i>	"fish, meat"	:	<i>əs</i>	"to land (boat)"
<i>tīʔ</i>	"bow-string"	:	<i>təʔ</i>	"salt"
<i>siis</i>	"small heap"	:	<i>səəs</i>	"plumb-bob"
<i>tīk</i>	"snake"	:	<i>tək</i>	"leather boot"

i : *o*

<i>kīn</i>	"worm"	:	<i>kōn</i>	"middle phalanx (finger)"
<i>hiʔb</i>	"brace"	:	<i>hoʔb</i>	"orthodox priest"
<i>dīil</i>	"to moult"	:	<i>dool</i>	"rest (n.)"
<i>in</i>	"long (time)"	:	<i>òn</i>	"much, many"

i : *a*

<i>īm</i>	"a.k. of nut"	:	<i>ām</i>	"mother"
<i>biʔη</i>	"things"	:	<i>baʔη</i>	"place"
<i>siin</i>	"to weigh"	:	<i>saan</i>	"guilt"
<i>tīd</i>	"root"	:	<i>tād</i>	"to beat"

i : *u*

<i>īl</i>	"arm"	:	<i>ūl</i>	"water"
<i>hiʔη</i>	"to swell"	:	<i>huʔη</i>	"ballast"
<i>hiil</i>	"intestine"	:	<i>huul</i>	"hammer"
<i>qīd</i>	"to scrape"	:	<i>qud</i>	"pike"

i : *e*

<i>īn</i>	"to raise"	:	<i>ēn</i>	"now"
<i>kīʔd</i>	"fat"	:	<i>keʔd</i>	"human"
<i>īil</i>	"aspen"	:	<i>eel</i>	"berry"
<i>īd</i>	"spring"	:	<i>èd</i>	"sable"

i : *ə*

<i>īs</i>	"woodpecker"	:	<i>əs</i>	"to land"
<i>qīʔt</i>	"bow"	:	<i>qəʔt</i>	"garbage"
<i>sīi</i>	"year"	:	<i>səə</i>	"heavy"

í : *o*

<i>tīl</i>	"navel"	:	<i>tōl</i>	"fence"
<i>qíʔj</i>	"birch bark"	:	<i>qoʔj</i>	"a mythical boat"
<i>ííl</i>	"aspen"	:	<i>ool</i>	"bottle"
<i>ìn</i>	"runner"	:	<i>òn</i>	"much"

í : *a*

<i>īl</i>	"arm"	:	<i>āl</i>	"half"
<i>tíʔt</i>	"kettle"	:	<i>taʔt</i>	"tusk"
<i>íí</i>	"container"	:	<i>aat</i>	"for (postp.)"
<i>ís</i>	"to row"	:	<i>às</i>	"feather"

u : *e*

<i>ūs</i>	"warm"	:	<i>ēs</i>	"sky, God"
<i>uʔj</i>	"cradle"	:	<i>eʔj</i>	"egg"
<i>uul</i>	"flat"	:	<i>eel</i>	"berry"
<i>ùs</i>	"birch"	:	<i>ès</i>	"snowshoe-strap"

u : *ɔ*

<i>kūlt</i>	"coal"	:	<i>kōlt</i>	"bend of river"
<i>tuʔ</i>	"salt"	:	<i>tɔʔ</i>	"dry clay"
<i>uu</i>	"meadow"	:	<i>ɔɔ</i>	"leaf"
<i>ùk</i>	"small rack"	:	<i>òk</i>	"louse"

u : *o*

<i>qū</i>	"quiet"	:	<i>qō</i>	"mouth"
<i>kuʔt</i>	"belt"	:	<i>koʔt</i>	"lower back"
<i>uul</i>	"flat"	:	<i>ool</i>	"bottle"

u : *a*

<i>ūs</i>	"big river"	:	<i>āls</i>	"half"
<i>quʔ</i>	"estuary"	:	<i>qaʔ</i>	"word"
<i>suul</i>	"sledge"	:	<i>saal</i>	"night"
<i>qùj</i>	"empty"	:	<i>qàj</i>	"clk"

e : *ɔ*

<i>ēn</i>	"now"	:	<i>ōn</i>	"to cook"
<i>keʔj</i>	"wing"	:	<i>kɔʔj</i>	"to go"
<i>eel</i>	"berry"	:	<i>ɔəl</i>	"free"

e : *o*

<i>tēl</i>	"mammoth"	:	<i>tōl</i>	"fence"
<i>keʔj</i>	"wing"	:	<i>koʔj</i>	"bell"
<i>seeŋ</i>	"here"	:	<i>sooŋ</i>	"there"
<i>èn</i>	"son-in-law"	:	<i>òn</i>	"much"

e : *a*

<i>ēj</i>	"tongue"	:	<i>āj</i>	"sack"
<i>seʔj</i>	"seat"	:	<i>saʔj</i>	"tea"
<i>ees</i>	"whole"	:	<i>aas</i>	"like (postp.)"
<i>èl</i>	"harpoon"	:	<i>àl</i>	"in the forest"

ə : *o*

<i>ēk</i>	"you-PL"	:	<i>ōk</i>	"sterlet"
<i>dəʔq</i>	"life"	:	<i>doʔq</i>	"to burn"
<i>qəəl</i>	"gall"	:	<i>qool</i>	"foam"

ə : *a*

<i>kət</i>	"winter"	:	<i>kāt</i>	"a.k.o. stringed instrument"
<i>əʔt</i>	"quiver"	:	<i>aʔt</i>	"bone"
<i>təəl</i>	"frost"	:	<i>taal</i>	"otter"

o : *a*

<i>qōj</i>	"aunt"	:	<i>qāj</i>	"almost"
<i>qoʔ</i>	"star"	:	<i>qaʔ</i>	"word"
<i>hool</i>	"a.k.o. duck"	:	<i>haal</i>	"to bend"
<i>qòη</i>	"daytime"	:	<i>qàη</i>	"vulture"

Only the oppositions *i* : *ə*, *u* : *o*, *e* : *ə*, *ə* : *a* and *ə* : *o* in the fourth tone do not seem to form minimal pairs; however, instead of assuming any neutralizations here, it is probably safe to assume that this is due to the overall rarity of tone 4.

The sounds [ɛ], [ɔ], [ʌ], and [æ] are *marginal phonemes*:

As mentioned above, most descriptions of Ket, including the young Ket orthography devised by Werner in the late 1980s recognize these phones as phonemes. Following Vajda's analysis, this grammar does not acknowledge this in its notational system, but it cannot be denied that Werner's practise has some justification.

To wit, there are after all some minimal pairs, which are differentiated by these vowels, e.g. (Werner 1996, 47; 1997c, 14f.):

[ɛ]kη	"lightning"	:	[ɛ]kη	"days" (SG <i>iʔ</i>)
q[ɔ]tka	"in front" (< qōt "front")	:	q[ɔ]tka	"way (Loc.)"
[ə]tn	"we"	:	[ʌ]tn	"frogs", SG: əʔl [ʌʔl]

Such minimal pairs are *exclusively* di- and polysyllabic words, and in *most* cases the open/closed quality of the vowel can be predicted if one knows the tone of the corresponding (uncompounded/uninflected) monosyllable (as in the examples given here)⁷².

There is one instance, where the choice of /a/ vs. /ə/ is not determined by this or any similar phonological rule, but rather by the purely morphological surrounding of the morpheme, in which it occurs. This is true of the 3rd SG f subject marker /da-/

⁷² With the notable exception, of course, of the few disyllabic words containing one of these vowels, for which no etymologically corresponding monosyllabic root is known.

([d Λ], [d ∂]), the distribution of which is discussed in 4.4.4.1. No purely phonological opposition between the two variants holds, so the notation of verb forms will observe only the opposition between /a/ and / ∂ /, which is phonemic elsewhere, and disregard, contrary to common Ketological practice, that between / ∂ / and / Λ / (the most widespread notation of the phone [Λ] in the literature), although the choice of the surface vowel is governed by (non-phonological) rules belonging to the same domain.

For the [a]: [æ] contrast, only very few, if not only one, example(s) can be given. The (tonally different) nouns *qā* "home" and *q[æ]* "big" may receive predicate suffixes (e.g. 2nd person), yielding the minimal pair:

q[á]-ku "you are at home" : *q[æ]-ku* "you are big"

Again, we may safely assume that the fronted quality of the vowel in the second example "echoes" that of the unsuffixed form. The vowel [æ], then, occurs exclusively after uvular /q/⁷³, and, since no true (same-tone) monosyllabic minimal pairs can be found, it may be provisionally viewed as (largely) predictable, though the *exact* conditions of its occurrence remain somewhat less than clear.

Lexicographical sources (especially Werner 2002) list more lexemes and word forms with [æ] (<ä>), very frequently from the Northern Ket dialect, but in most cases instances with other vowels (/a/ or /e/) have also been noted, e.g.

<i>árä</i>	"his, belonging to him"	(also found as <i>árai</i>)
<i>árs</i>	"migratory (of birds)"	(-"- <i>árs</i>)
<i>ätc⁷-n⁵-bed</i>	"to collect"	(cf. -at "id.")
<i>äba</i>	"dog's house"	(<i>ába</i> "a.k.o. board")
<i>ákät</i>	"a-shore"	(also found as <i>ákat</i>)
<i>dókäj⁷-t⁵-a</i>	"to drink"	(cf. <i>dókaj</i> "id.")
<i>säjkit</i>	"larch sapling"	(also found as <i>séjkit</i>)
<i>sät⁷-ut</i>	"to get one's share"	(-"- <i>sät⁷-ut</i>)
<i>sā</i>	"property"	(-"- <i>sā</i>)
<i>sākít</i>	"small squirrel"	(cf. <i>Yugh sákít</i>)
<i>síkät</i>	"to nag"	(also found as <i>síkat</i>)
<i>tókäj</i>	"white"	(also found as <i>tókaj</i>)
<i>úñnäj</i>	"to pour"	(-"- <i>úñnej</i>)
<i>úsäm</i>	"there is, exists"	(-"- <i>úsem</i>)

A small group of [æ]-words consists of imitative or onomatopoeic words, cf.

<i>dikäj</i>	"to make noise"
<i>lukäj</i>	"the sound of a breaking neck"
<i>qoldañäj</i>	"the sound of a falling tree"
<i>takuläj</i>	"to emit noise"

⁷³ And, what is more, apart from very few unclear examples from earlier recordings of Ket material (meticulously listed in Werner 2002), almost *exclusively* in derivatives of, and compounds with, the root *qā* [qæ] "big".

tikāj "the sound of a bow being shot"

Given these facts, the strictest application of traditional structuralist phonemic principles would of course require the recognition of more vocalic phonemes. However, our decision not to reflect this in our transcription is motivated by the attempt to steer a middle course between the aim to transcribe Ket as phonemically as possible, but at the same time not to overcomplicate typography. Consequently, we regard [ɛ], [ɔ], [ʌ] and [æ] as *marginal phonemes* of the Ket language, which are not recognized in our transcription.

Since for the mid-vowels the *open* quality is by far the most frequently encountered realization, we give a tentatively exhaustive list of di- and polysyllabic words where the *closed* quality has been noted, and for which etymologically cognate monosyllables, which would allow to "predict" this variant, seem to be lacking⁷⁴:

<i>bénel</i>	"fish-trap"
<i>bóltaq</i>	"toe" (here the /o/ vowel may actually go back to /u/ < <i>būl</i> + <i>toʔq</i> "finger, digit" ⁷⁵)
<i>bónsol</i>	"small sledge" (the second part is <i>suul</i> "sledge", the form <i>būnsul</i> is also found)
<i>bóŋdej</i>	"to hum" (onomatopoeitic)
<i>bóŋul</i>	"knot, bundle" (possibly a loan-word from an Uralic language, Khanty <i>muŋkəl</i> "id.")
<i>dóŋul</i>	"a.k.o. ladder" (here and above second-syllable - <i>u</i> may exert a raising influence on first-syllable /o/)
<i>dónde/i</i>	"dragon-fly"
<i>dókid</i>	"Nenets person" (< <i>dó</i> (?) + <i>keʔd</i> "person")
<i>ébul</i>	"barrel of a gun" (<i>būl</i> "foot, leg", and maybe <i>ē</i> "metal")
<i>e(j)iŋ</i>	"to go" (following /j/ may exert raising effect on /e/)
<i>hónal</i>	"sober"
<i>két-bed</i>	"to buy" (cf. Yugh <i>kiʔt</i> "price")
<i>kéŋej</i>	"to vomit"
<i>léŋej</i>	"to hone"
<i>óneŋ</i>	"low tide"
<i>sénaŋ</i>	"stomach"
<i>sédab</i>	"sphere, pancreas"
<i>tósa</i>	"upward"
<i>óntes</i>	"iron used for scratching"
<i>kólij</i>	"storage-room" (possibly a loan from Sel'kup)

⁷⁴ Here only occurrences of these vowels in *first* syllables will be noted. There is quite a number of words noted in the Ketological literature, where, e.g. [e] is given as the quality of the vowel /e/ in non-first syllables. Very often parallel forms are given (sometimes in the same source, sometimes in others) with /i/ instead of /e/. We may assume that these cases represent instances of phonemic /i/, cf. (data from Werner 2002, s.v.): *ákde/ákdi* "mouth", *ákdēs/ákdīs* "buttocks" etc.

⁷⁵ Edward Vajda, p.c.

A good number of examples is thus explicable by assuming loan-word status, sporadic regressive assimilations or a close etymological connection with monosyllables showing the high vowels /i/ or /u/.

The overwhelming majority of other instances are clearly derived from monosyllabic roots, which display tone 1, i.e. where the closed vowel quality - predictable in monosyllabic roots - is maintained in affixed complexes and compounds.

3.2.2 Segmental allophony

/i/

High front unrounded vowel, short with tones 2 and 4, half-long with tone 1 and long or geminated with tone 3:

[i]	<i>kiʔ</i>	[kiʔN]	"thread"
	<i>it̄</i>	[it̄N]	"tooth"
[i·]	<i>bīs</i>	[bi·s̄t̄]	"evening"
[i:]	<i>siis</i>	[si:s̄N]	"small pile"

/i/

High back unrounded vowel; variants with different length as with /i/:

[u]	<i>hiʔb</i>	[huʔp̄N]	"son"
	<i>in̄</i>	[un̄N]	"runner of sledge"
[u·]	<i>tīt</i>	[tu·t̄]	"mosquito"
[u:]	<i>siī</i>	[su:s̄N]	"year"

/u/

High back rounded vowel with the usual length-variants:

[u]	<i>huʔn</i>	[huʔn̄N]	"daughter"
	<i>kùn</i>	[kũᵑ̄N]	"wolverine"
[u·]	<i>qūk</i>	[qu·k̄]	"hole"
[u:]	<i>uu</i>	[u:s̄N]	"meadow"

/e/

Mid front unrounded vowel, usually open, with tone 1 closed and half-long:

[ɛ]	<i>eʔk</i>	[eʔkɳ]	"twenty"
	<i>èn</i>	[enɳ]	"son-in-law"
[ɛ:]	<i>eel</i>	[e:ɬɳ]	"berry"
[e·]	<i>dēs</i>	[de·sɪɬ]	"eye"

/ə/

Central mid-high, unrounded vowel with tone one; with tones 2, 3, and 4 a lowered variant occurs:

[ə·]	<i>kōt</i>	[kə·tɬ]	"winter"
[ʌ]	<i>təʔ</i>	[tʌʔɳ]	"salt"
	<i>ək</i>	[ʌɣɳ]	"louse"
[ʌ:]	<i>qəəl</i>	[qʌ:ɬɳ]	"gall"

/o/

Mid-high, back, rounded vowel, mostly open, closed and half-long with tone 1:

[o·]	<i>qō</i>	[qo·ɬ]	"ice"
[ɔ]	<i>boʔk</i>	[bɔʔkɳ]	"fire"
	<i>hòl</i>	[hɔɳ]	"outer appearance"
[ɔ:]	<i>ooj</i>	[ɔ:jɳ]	"bosom"

/a/

Low, back-central vowel with the usual tonally determined variants of quantity. A labialized variant is encountered with tone 3 in Central Ket. After the uvular stop /q/, this vowel is realised as [æ] in the lexical root /qà/ "big". This is at the same time the only Ket example where the sequence /qa/ is found with tone 4, so this tonal environment is sufficient to predict this variant:

[a]	<i>daʔl</i>	[daʔɳ]	"sinew"
	<i>kàl</i>	[kaɳ]	"war"
[a·]	<i>tāt</i>	[ta·tɬ]	"tusk"
[a:]	<i>baam</i>	[ba:mɳ]	"old woman"

[ɑ:]	<i>baat</i>	[ba:tʌ]	"old man" (Central Ket)
[æ]	<i>qà</i>	[qæʌ]	"big"

3.3 Consonants

3.3.1 Consonant phonemes

The inventory of phonemic consonants is given in the following table:

	labial	alveolar	lateral	palatal	velar	uvular	laryngeal
stop	<i>b</i>	<i>t d</i>			<i>k</i>	<i>q</i>	
fricative		<i>s</i>					<i>h</i>
continuant			<i>l</i>	<i>j</i>			
nasal	<i>m</i>	<i>n</i>			<i>ŋ</i>		

As with the vowels, earlier treatments of Ket often assign phoneme status to considerably more units. Thus, we often find /p/, /ɣ/, /R/ and palatalized variants of /s/, /t/, /d/, /n/ transcribed as phonemes in many works, and acknowledged in the official Ket orthography.

/p/ is not recognized in this grammar, though a few contexts seem to require it as a separate phoneme. In most cases, though, it is analyzable as devoiced /b/ in auslaut position or adjacent to (phonemically) voiceless consonants.

The remaining cases include instances of initial /p-/, which are found in

a) loanwords

b) onomatopoeics

c) some unclear words from earlier recordings (mostly from O. Donner's work and not found elsewhere), listed in the following table:

<i>pájbet</i>	"to solder"	(a) < russ. <i>pájat'</i>
<i>pâmət</i>	"collar-bone"	(c)
<i>parempas</i>	"a k.o. hill"	(a) < sel'k. <i>pârəmpas</i>
<i>pasát</i>	"to save"	(a) < russ. <i>spasát'</i>
<i>paxát</i>	"to till"	(a) < russ. <i>paxát'</i>
<i>pésta</i>	"polar fox"	(a) < russ. <i>peséc</i>
<i>pétnaŋ</i>	"spots, marks"	(a) < russ. <i>pjatnó</i>
<i>pétsaraŋs</i>	"coloured, variegated"	(a) < russ. <i>pestryj</i>
<i>pelaq</i>	"half"	(a) < sel'k.?
<i>pičát</i>	"seal"	(a) < russ. <i>pečát'</i>
<i>pílat</i>	"whip"	(a) < russ. <i>plet'</i>
<i>pílistet</i>	"to dance"	(a) < <i>pljasát'</i>

<i>pílpej</i>	"sound of burning wood"	(b)
<i>pollaka</i>	"part of reindeer's harness"	(c)
<i>pólonsin</i>	"to fill"	(a) < russ. (<i>na</i>)pólnit'
<i>polót</i>	"raft"	(a) < russ. <i>plot</i>
<i>pomogát</i>	"to help"	(a) < russ. <i>pomogát'</i>
<i>porqót</i>	"steamship"	(a) < russ. <i>parochód</i>
<i>posóbat</i>	"to help"	(a) < russ. <i>posóbit'</i>
<i>postóp</i>	"bottle"	? (a) < russ. <i>stópka</i>
<i>púrtoš</i>	"a.k.o. 'undead' ghost"	?
<i>pírgatcek</i>	"merchant"	? (a) < russ. <i>pródavec</i>
<i>pírgéj</i>	"to beat with club"	?
<i>pímil</i>	"Jew's harp"	? (a) < sel'k. <i>piŋkir</i> ⁷⁶
<i>pys</i> (? <i>pīs</i>)	"stopper of gun"	(c)

This list is, as far as we can tell, exhaustive, and no minimal pairs involving /p/ and /b/ exist in Ket.

Another, marginal, instance of seemingly unmotivated /p/ is found in the verb form:

<datopultet> "she (the bitch) caught it (the meat)"

Analysis: $da^8-tob^7-u/[k]^6-[i]^2-ted$

Alternatively, <datobulte> has also been recorded. The most likely explanation is that the root, in P⁷ (here intervocalic) position, was analogically remodelled according to its shape found in preconsonantal position, as e.g. in the infinitive *tob⁷-ted* [tóptet]. Similar cases are found, sporadically, with final -d [-t] in -bed, which in some secondarily prevocalic contexts, especially when followed only by the verbal pluralizer -Vn, is sometimes articulated voicelessly.

Yet another possible reason for the acknowledgement of /p/ as a phoneme is the occurrence of *phonetic* [p] in geminate form in less than a handful of words, viz.:

[*'op:as/*] "stepfather"
 [*'híp: as/*] "stepson"

Both are compounds with an (obsolete) lexical root, which may be reconstructed as *-has (possibly earlier *-fas, *-pas), cf. 4.1.2.3.3.2.3. Obviously, these compounds were formed in a fairly early stage of the language (very probably as early as Proto-Northern-Yeniseic), where the consonantal onset of this word could cause the gemination of final /b/ (of *ōb* "father", and *hīb* "son"), which in absolute auslaut position was already devoiced to [p].

The resulting voiceless geminate stop cannot be written as <-bb->, since this geminate exists independently. We chose to render it as <-bh->, to be read as [p:], in order to avoid the notation of a marginal /p/-phoneme with highly restrictive distribution, thus:

⁷⁶ The similarity with the Sel'kup word is, of course, vague at best.

óbhas
hɨ́bhas

The velar and uvular fricative sounds [ɣ] and [ɕ] are always analyzable as intervocalic variants of /k/ and /q/ respectively⁷⁷.

Perhaps the most striking difference between the phonemic system acknowledged here and the one(s) found in earlier treatments of Ket, including Ket orthography, is the fact that we see no stringent reason to accept phonological oppositions between palatalized and non-palatalized coronals. A cogent argumentation against the phonemic status of [sʲ], [tʲ], [dʲ], [lʲ] and [nʲ] is found in Vajda 2000. According to him, most earlier students of Ket, whose native language was Russian with its systematic opposition of palatalization, tended to mishear these sounds as palatalized, since the acoustic impression of these "post-apico-alveolar or even lamino-alveolar" sounds "could be described as a mild slurring or lisping, [which] resembles palatalization, especially when these sounds are accompanied by a sharp rise or fall of tone on the following vowel" (Vajda 2000, 5f.).

We follow this analysis here, the more so, since a close inspection of the wealth of data in Werner 2002 shows that for a great number of words given with, e.g. /s/ <s>, concurring variants with <s> are also given, and incontrovertible minimal pairs involving palatalization seem to be missing. For all coronal consonants, "palatalized" variants form the overwhelming majority of examples, and the "non-palatalized" variants stand out as marked exceptions. This leaves us with a situation, where "plain" and "slurred"⁷⁸ articulations of, say, /s/ are at best free variants. However, some lexemes are consistently given with "plain" coronals only in the literature, and informant work revealed that speakers insist on "non-slurred", or, for that matter, "plain" or "non-palatalized" articulation in a number of words. To account at least for the majority of these cases, it is not possible to give clear-cut and exceptionless rules for the occurrence of these phones, but several strong tendencies may be singled out, which seem to *favour* them. The phonotactic position, in which "plain" coronals are found most often is absolute anlaut (in inlaut and, almost without exception, in auslaut only the "palatalized" qualities are heard). Here, the position before a front vowel (/i/, /e/), phonetically quite understandably, strongly *disfavour*s "plain" consonants (all examples of <s> before one of these vowels in Werner 2002 are given with "palatalized" alternatives; no informant insisted on "plain" articulation here in our field-work). For positions before non-front vowels, the situation is less clear, but the vowel /a/, accompanied by the *third tone* seems to favour a plain articulation, at least of /s/, strongly; thus, the nouns

⁷⁷ The occurrence of cases like *hɨ́k* [hi-ɣ-i] "son" and numerous others, where [ɣ] occurs word-finally is not to be denied, though. However, the overwhelming majority of these words shows an "additional" final vowel in Northern Ket, which can be safely assumed to have been present in an earlier stage of Southern Ket as well. Thus, at least historical intervocalicity accounts for these cases, and the acknowledgement of the fricatives as separate phonemes seems unnecessary, the more so, since no minimal pairs with [k] and [q] can be found.

⁷⁸ For want of a better solution, we will write the "slurred" variants, wherever necessary, with the IPA-convention for palatalized consonants, i.e. as [sʲ], [nʲ] etc.

saal "night"
saan "guilt"

and their derivatives are constantly pronounced without any palatal or "slurred" quality of the initial consonant. Furthermore, the number of nouns with "plain" /s/ before /a/ includes a rather large number of clear loan-words, such as:

sákiĵ "various" < russ. *vsjakij*⁷⁹
sàmbal "samovar" < russ. *samovar*
sáŋan "spark" < sel'k. *səŋqän*
sàs "hour" < russ. *čas*

Not all incontrovertible occurrences of plain [s] are accounted for by these tendencies, but the remaining number is small. One quite frequent noun, for which all informants consistently refused to accept a "slurred" pronunciation, is

sa'q "squirrel"

Minimal pairs illustrating the phonemic status of the Ket consonants are :

	<i>b</i>	<i>d</i>	<i>t</i>	<i>k</i>	<i>q</i>	<i>h</i>	<i>s</i>	<i>l</i>	<i>j</i>	<i>m</i>	<i>n</i>	<i>ŋ</i>
<i>b</i>	x	1	2	1	6	6	5	7	7	7	12	12
<i>d</i>	1	x	4	1	6	6	4	10	13	7	10	15
<i>t</i>	2	4	x	5	5	5	4	5	7	14	10	9
<i>k</i>	1	1	5	x	5	5	5	7	7	7	10	12
<i>q</i>	6	6	5	5	x	5	5	5	16	11	11	11
<i>h</i>	6	6	5	5	5	x	5	17	₈₀	₈₁	18	₈₂
<i>s</i>	5	4	4	5	5	5	x	11	7	14	18	11
<i>l</i>	7	10	10	7	5	17	7	x	7	7	10	9
<i>j</i>	7	13	7	7	16	-	7	7	x	7	8	19
<i>m</i>	7	7	14	7	11	-	7	7	7	x	9	9
<i>n</i>	12	10	10	10	11	18	18	10	8	9	x	9
<i>ŋ</i>	12	15	9	12	11	11	11	11	19	9	9	x

⁷⁹ The clearly *palatalized* nature of the Russian source seems to contradict this, but it may also be taken as evidence that Ket "palatalization" is very different from that found in Russian.

⁸⁰ No contrasting pairs with /h/ and /j/ can be found, since /j/ is almost exclusively confined to syllable-final positions, whereas /h/ occurs mostly syllable-initially. There is, however, no reason to regard both as realizations of a single phoneme.

⁸¹ Initial /m/ is rare in Ket, and mostly confined to loanwords.

⁸² Initial /ŋ/ does not occur in Ket.

(Numbers at the intersection of consonants refer to the number of "minimal sets" listed below):

(1)		
<i>baʔŋ</i>		"earth, place"
<i>daʔŋ</i>		"taste"
<i>kaʔŋ</i>		"hole"
(2)		
<i>bōŋ</i>		"dead"
<i>tōŋ</i>		"to see"
<i>dōŋ</i>		"brain"
<i>lōŋ</i>		"dexterous"
(3)		
<i>báǰbul</i>		"kidney"
<i>qáǰbul</i>		"elk's leg"
(4)		
<i>díʔ</i>		"eagle"
<i>tíʔ</i>		"bowstring"
<i>síʔ</i>		"tanned reindeer skin"
(5)		
<i>tū</i>		"this"
<i>kū</i>		"soot"
<i>qū</i>		"quiet"
<i>hū</i>		"heart"
<i>sū</i>		"hazel grouse"
<i>ū</i>		"he"
<i>lū</i>		"chip of wood"
(6)		
<i>boʔq</i>		"fish-trap"
<i>qoʔq</i>		"driftwood"
<i>hoʔq</i>		"excrement"
<i>doʔq</i>		"to burn"
(7)		
<i>ād</i>		"I"
<i>āj</i>		"bellows"
<i>āk</i>		"musk deer"
<i>āl</i>		"soup"
<i>āb</i>		"my"
<i>ām</i>		"mother"
<i>ās</i>		"on, with"
<i>āt</i>		"after, for"

(8)	
<i>ūj</i>	"to rock (a cradle)"
<i>ūl</i>	"water"
<i>ūn</i>	"to set fishing nets"
<i>ūs</i>	"warm"
(9)	
<i>īη</i>	"presence"
<i>īn</i>	"to stand"
<i>īm</i>	"nuts"
<i>īl</i>	"breath"
<i>īt</i>	"smell"
(10)	
<i>qād</i>	"wool"
<i>qān</i>	"if"
<i>qāt</i>	"fringe"
<i>qāl</i>	"from there"
<i>qāk</i>	"five"
(11)	
<i>lōη</i>	"dexterous"
<i>lōq</i>	"thin (of liquid)"
<i>lōs</i>	"vulva"
<i>lōm</i>	"float (n.)"
<i>lōn</i>	"lip"
(12)	
<i>ūη</i>	"to sit down"
<i>ūb</i>	"whereabouts of an animal"
<i>ūk</i>	"you"
<i>ūn</i>	"to crawl"
(13)	
<i>qaʔj</i>	"cliff"
<i>qaʔd</i>	"coat"
(14)	
<i>ēt</i>	"foreign giant (myth.)"
<i>ēm</i>	"plains"
<i>ēs</i>	"heaven, God"
(15)	
<i>taaη</i>	"is not, does not exist"
<i>taad</i>	"plumb-bob"

(16)		
<i>ójtij</i>	"to loosen"	
<i>óqtij</i>	"to smear"	
(17)		
<i>həə</i>	"to turn, twist, plait"	
<i>ləə</i>	"hoar-frost on trees"	
(18)		
<i>hī</i>	"a.k.o. berry"	
<i>nī</i>	"to dive"	
<i>sī</i>	"night"	
(19)		
<i>hiʔj</i>	"eagle owl"	
<i>hiʔŋ</i>	"tumour"	

3.3.2 Segmental allophony

Generally, one of two adjacent consonants with differing voicing qualities undergoes voicing assimilation; the normal direction of such assimilations is regressive ($C_{1[-voice]} + C_{2[+voice]} \rightarrow C_1C_{2[+voice]}$); exceptions to be noted are the velar nasal /ŋ/, which voices /k/ and /q/ progressively, and /s/, which devoices /d/ in both directions, examples are given under the individual consonants below.

/b/

Voiced bilabial stop; in absolute auslaut and adjacent to inherently voiceless consonants devoiced; the very rare combination of /b/ with /h/ (cf. 3.3.1) triggers the surface realization [p:]; in intervocalic position, a bilabial voiced fricative (in the speech of some speakers a labiodental fricative is also encountered, doubtlessly under Russian influence). In immediate adjacency to /n/, /b/ is often totally assimilated to yield /m/; this process plays a marked role in verbal morphology, where it affects many instances of the neuter actant marker b^3 (cf. 4.4.5.9).

[b]	<i>bīs</i>	[bi·sʰi]	"evening"
[β]~[v]	<i>ábaŋa</i>	[aʰβaŋa]~[aʰvaŋa]	"I (DAT)"
[p]	<i>hiʔb</i>	[huʔpʰ]	"son"
	<i>óqbes</i>	[ʰʌqpesʰ]	"suddenly"
	<i>d[i]ʰ⁸-ki⁷-b³-ted</i>	[ʰtki·ptet]	"I drive it"
[p:]	<i>óbhas</i>	[ʰop:asʰ]	"stepfather"
[m]	<i>déskobnis</i>	[ʰdeskomnis]	"I went upriver"

/d/

Voiced dento-palatal stop; in intervocalic (including historically intervocalic) position retained as such in Central Ket, whereas in Southern and Northern Ket the normal articulation is an apical flap; devoiced in the vicinity of /s/ and in auslaut position (SK and NK show the flap articulation also in secondary auslaut); the situation is further complicated by a "gestalt"-preserving behaviour of (some) verbal roots ending in /d/: their final consonant lenites in intervocalic position (most typically in position P⁷), but it usually does not in position R, even when followed by a (vowel-initial) Plural affix (PL); in these cases, the word-final (devoiced) realisation is maintained even where it seems phonotactically not justified (and we write d):

[d]	<i>duʔ</i>	[duʔʎ]	"smoke"
[r]	<i>túde</i> <i>d[u]ʰ-albedʷ-o/kʰ-aʰ-bed</i>	SK/NK [ʔure], CK [ʔude] [daɫberoyaβet]	"that" "he cheats him"
[t]	<i>keʔd</i> <i>duʰ-bʰ-bed-in</i> <i>sés-diŋa</i>	[keʔʔʎ] [ʔdubbetin] [sestiŋa]	"person" "they make it" "in the river"

/t/

Voiceless dento-palatal stop in all positions:

[t]	<i>tíʔs</i>	[tuʔsʎ]	"stone"
	<i>kítej</i>	[kitej]	"young"
	<i>it</i>	[itʎ]	"tooth"

The differentiation of /d/ and /t/ in absolute auslaut position is thus difficult and only possible, when suffixed forms are available⁸³:

<i>keʔd</i>	INS <i>kéd-as</i>	[ʔerasʎ]
<i>it</i>	INS <i>ít-as</i>	[ʔitasʎ]

/k/

Voiceless velar stop; in intervocalic (including historically intervocalic) position⁸⁴ spirantized to a voiced velar fricative, which in allegro speech tends to a very weak

⁸³ As a rule, we write the dental stop in auslaut position as <d> when we know from suffixed forms (with lenition/rhotacization) that it instantiates the phoneme /d/; in many cases (as, e.g., with indeclinables like particles, postpositions etc.), we have no such clue; then, /t/ is written throughout, thus reflecting the actual phonetic realization. It should be borne in mind, though, that some instances of phonemic /d/ may be hiding here as well. This is, of course, mostly (if not only) relevant for historical studies of Ket and Yeniseic.

articulation, sometimes leaving only a slight approximant between adjacent vowels; before inherently voiced consonants, a voiced variant is found:

[k]	<i>kūl</i>	[ku·l̪-]	"beard"
	<i>sūk</i>	[su·k-]	"corner"
[g]	<i>úkde</i>	['ugde]	"long"
	<i>íkbes</i>	['igbes̪]	"to come"
	<i>kəjka</i>	['kəjga]	"head"
[ɣ]	<i>híkat</i>	['hiɣat]	"jaw"
	<i>bāk</i>	[ba·ɣ-]	"block" (CK <i>bāke</i>)

A few cases, in which /k/ consistently surfaces as an unspirantized stop between vowels deserve mention; most of them seem to be explicable in one way or another:

<i>ákus</i>	"what"	(cf. the frequent variant <i>áks</i> , from which [k] may have been restituted)
<i>kúkej</i>	"to splash down"	(onomatopoetic)
<i>lákej</i>	"to crack open (a nut)"	(onomatopoetic)
<i>íket</i>	"to feel bad"	(?)
<i>ókoŋo</i>	"by heart"	(?, only NK)
<i>túkanej</i>	"hiccup"	(probably onomatop., cf. Yugh <i>túkej</i> "to knock")
<i>túkola</i>	"a.k.o. bird"	(?)
<i>qáka</i>	"five times"	(< <i>qāk</i> "five" + <i>-ha</i> (< *- <i>pa</i>), i.e. originally a cluster)

Most notably, the declensional paradigm of the 2nd Person Singular pronoun shows an alternation between spirantized and phonetically retained /k/ in intervocalic position, cf. e.g.:

DAT	<i>úkaŋa</i> [uk'aŋa]
INS	<i>úkas</i> ['uɣas̪]

A possible explanation may be the fact that, in all pronominal and nominal paradigms, the basic case forms Dative, Benefactive, Ablative, and Adessive are formed on the basis of the Genitive (whereas Prosecutive, Comitative, and Abessive are not); since the genitive form of the personal pronouns is idiosyncratic (here: *ūk*), the stop articulation was artificially (re-)introduced to maintain maximum transparency of the paradigm.

⁸⁴ This spirantization rule (and the intervocalic spirantization of /b/ and /q/, see below) occurs only within the boundaries of the *phonological word*. Thus, some syllabic prefixes/clitics (like P⁸ 3SGf *da-*) never induce spirantization. "Historically intervocalic" positions include the auslaut of tone 4 words, cf. 3.1.1.

/q/

Voiceless uvular stop: in intervocalic (including historically intervocalic) position, spirantized to a voiced uvular fricative; this variant may also be found immediately before a voiced consonant, but a simple voicing assimilation (without spirantization) occurs as well:

[q]	<i>qīb</i>	[qi·pɪ]	"grandfather"
	<i>saʔq</i>	[saʔqɿ]	"squirrel"
[ʁ]	<i>hóqos</i>	[hɔʁɔsɿ]	"deep"
	<i>àqdo</i>	[aʁ'dɔ]	"mark on a tree"
[ɠ]	<i>bāŋquk</i>	[baŋguk]	"cave in the ground"

/h/

Voiceless laryngeal fricative:

[h]	<i>hū</i>	[hu-ɪ]	"heart"
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/s/

Voiceless apico-alveolar fricative; mostly accompanied by "slurring", which acoustically resembles palatalization; in Central Ket oscillating between alveolar and post-alveolar articulation; immediately after /n/, this consonant is very often pronounced as a palato-alveolar affricate (and the /n/ itself is sometimes lost); the resulting phone [tʃ] occurs quite rarely in the system, but it achieves a considerable token-frequency, because it is usually heard in the predicative negation:

[s]	<i>saal</i>	[sa:l]	"night"
[sʲ] ~ [ʃ]	<i>sésta</i>	[sʲesʲta]	"to sit", CK [ʃeʃta]
	<i>sɔɔs</i>	[sʲʌ:sʲʌ]	"heavy", CK [ʃʌ:ʃʌ]
[tʃ]	<i>bə́nsin</i>	[ˈbəntʃin]~[ˈbətʃin]	"is not"

/j/

Voiced palatal continuant, devoiced in the auslaut of tone 2 and 4 monosyllables:

[j]	<i>qāj</i>	[qa·jɪ]	"although"
	<i>àjeŋ</i>	[aʲeŋ]	"sacks"
[j]	<i>taʔj</i>	[taʲjɿ]	"cold"
	<i>àj</i>	[aʲɿ]	"sack"

/l/

Voiced lateral continuant, mostly with the pseudo-palatalization described above; a devoiced (and sometimes lengthened) variant occurs in the auslaut of tone 2 and tone 4 monosyllables; in postconsonantal auslaut position of disyllables, /l/ syllabifies and bears the second part of a disyllabic tonal contour (5 or 6, cf. 3.1.2):

[l̥]~[l]	<i>lōq</i>	[l̥ə·qɪ] ~ [lə·qɪ]	"fur"
	<i>kílat</i>	[kí·l̥at]	"hip"
[l̥]~[l:]	<i>beʔl</i>	[bɛʔ̥l̥ɳ] ~ [bɛʔ̥l̥ɳ]	"breath"
	<i>sèl</i>	[s̥ɛ̃l̥ɳ]	"reindeer"
[l]	<i>qítl</i>	[qutɬl̥ɳ]	"mark on a tree"

/m/

Voiced bilabial nasal; like /l/, it devoices in the auslaut of tone 2 and 4 words:

[m]	<i>mámul</i>	[mamu̥l̥]	"breast"
	<i>àmaŋ</i>	[a'maŋ]	"parents"
[m̥]	<i>maʔm</i>	[maʔm̥ɳ]	"breast"
	<i>èm</i>	[ɛm̥ɳ]	"flying squirrel"

/n/

Voiced apico-alveolar nasal, often with pseudo-palatalization; as with /l/, a voiceless (and sometimes lengthened) variant is found in the auslaut of tone 2 and 4 monosyllables. Like other nasals (save /m/, which is not found in this position), /n/ syllabifies in postconsonantal auslaut position:

[n̥] ~ [n]	<i>nī</i>	[n̥i·ɪ]~[ni·ɪ]	"to dive"
	<i>ánoks</i>	[ʼanoks̥]	"tomorrow"
[n̥:]~[n̥]	<i>doʔn</i>	[dɔʔ̥n̥ɳ]	"knife"
	<i>kùn</i>	[kun̥l̥ɳ]	"wolverine"
[n]	<i>kún-n</i>	[kunɬn̥ɳ]	"wolverines"

/ŋ/

Voiced velar nasal, devoicing and syllabification as with /n/:

[ŋ]	<i>táŋaj</i>	[tʰaŋaj]	"to pull"
	<i>kēŋ</i>	[ke·ŋɪ]	"wing"

[ŋ]	<i>tiʔŋ</i>	[tiʔŋːŋ]	"hoar-frost"
	<i>qòŋ</i>	[qòŋŋ]	"during the day"
[ŋ]	<i>lókŋ</i>	[lʰokːŋŋ]	"to shiver"

3.4 Phonotactics

3.4.1 Syllable structure

Every Ket syllable has one of the following structures:

V

<i>ī</i>	"name"
<i>ís=sał</i>	"fish-soup" (morphemically <i>ís-ał</i>)

VC

<i>āl</i>	"half"
<i>ál=ka</i>	"black duck"

VCC

<i>ōks</i>	"tree, wood"
<i>óks=łamt</i>	"piece of wood"

CV

<i>qō</i>	"ten"
<i>qó=de</i>	"which"
<i>ís=qo</i>	"to fish"

CVC

<i>saal</i>	"night"
<i>sál=tə</i>	"small chip of wood"
<i>bá=kis=sał</i>	"I spend the night"

CVCC

<i>kōqt</i>	"neck"
<i>kóqt-diŋał</i>	"from within"

Syllable-initial consonant clusters are generally avoided; however, they do occur when prefixes come into play.

Ket knows two kinds of prefixes or prefix-like clitics: with nouns (including the semi-nominal inflection of conjugation-V-verbs) possessive (pro-)clitics occur; the prefix system is discussed in 4.1.1.4; the non-syllabic possessive markers are:

<i>b-</i>	1SG
<i>k-</i>	2SG

d- 3SG/PL (f/n)

Technically, all grammatical morphemes occurring in the verb complex (with the exception of subject plural) are prefixes, since they occur to the left of the lexical root: however, initial clusters can only be formed by personal markers (position P⁸, cf. 4.4.5.6). Of these, only *dí*, *ku*, and *du* can be reduced to one consonant (for *morphotactic* rules producing these shapes, cf. 4.4.4); however, it is only in overdistant speech - and not with all speakers - that a cluster is audible in these circumstances (and consequently the notation in earlier descriptions of Ket varies)⁸⁵. Only a few examples of complex syllabic onsets resulting from these processes are shown below:

CCV

<i>b-tō</i> [pto-t]	"my mortar"
<i>k-díʔ</i> [kduʔt]	"your cap"

CCVC

<i>b-tēd</i> [pte-t]	"my husband"
<i>k-dīl</i> [kdu-l]	"your child"

CCVCC

<i>b-kōqt</i> [pkə-qt]	"my neck"
------------------------	-----------

3.4.2 Distribution of phonemes

The vowels occur freely in all positions of mono- and disyllabic roots, and with all tones (illustrations of this may be found among the rich lexical material presented in previous sections of this phonology chapter).

Most consonants occur in all positions with the allophonic variations described above.

	anlaut	inlaut	auslaut
<i>b</i>	<i>būl</i> "foot"	<i>ábara</i> "I-Dat."	<i>ōb</i> "father"
<i>d</i>	<i>dēs</i> "eye"	<i>ádeŋ</i> "forest"	<i>keʔd</i> "human"
<i>t</i>	<i>tīb</i> "dog"	<i>qóte</i> "forward"	<i>ìt</i> "tooth"
<i>k</i>	<i>kōq</i> "soot"	<i>bókul</i> "brandy"	<i>boʔk</i> "fire"

⁸⁵ The general picture is that these prefixes/clitics are rarely, if ever, audible when the cluster-initial word occurs at the beginning of an utterance; usually it will be preceded by another word, in which case the prefix will be found cliticized to this preceding item.

<i>q</i>	<i>qīt</i> "wolf"	<i>súqaq</i> "rust"	<i>aʔq</i> "wood" ⁸⁶
<i>h</i>	<i>huʔn</i> "daughter"	-	-
<i>s</i>	<i>sēŋ</i> "liver"	<i>qàseŋ</i> "there"	<i>tíʔs</i> "stone"
<i>l</i>	<i>lōkŋ</i> "to shiver"	<i>búlol</i> "sock"	<i>tēl</i> "mammoth"
<i>j</i>	⁻⁸⁷	<i>béjas</i> "wind"	<i>qàj</i> "elk"
<i>m</i>	<i>mámaj</i> "udder" ⁸⁸	<i>qómat</i> "few"	<i>ām</i> "mother"
<i>n</i>	<i>naʔn</i> "bread" ⁸⁹	<i>ánoks</i> "tomorrow"	<i>oʔn</i> "seven"
<i>ŋ</i>	-	<i>kéŋassel</i> "bird"	<i>deʔŋ</i> "people"

In grammatical morphemes, only /b/, /k/, /d/, /n/, /l/, /ŋ/, /s/, /q/⁹⁰ occur.

3.4.3 Consonant clusters

Initial consonant clusters may occur only under the circumstances described in 3.1.3; but generally, Ket avoids initial clusters even under these conditions; while they do occur, most speakers will avoid a cluster resulting from possessive clitics by using a genitive construction instead, and clusters resulting from the interaction of P⁸ personal markers with morphotactic rules (4.4.4) by deleting the P⁸ marker from the surface of the utterance.

In syllable-final position, consonant clusters are rare; however, the productive nominalizing suffix -s produces clusters with root-final consonants:

<i>b</i>	<i>ádeŋ-dub-s</i>	"bone atrophy"	< "bone" + "he-eats-it" + nominalizer
<i>d</i>	<i>bīd-s</i>	"solid, hard"	In SC phonetically [burs ^h -], with rhotacism taken over from intervocalic contexts
<i>t</i>	<i>ēt-s</i>	"alive"	/t/ because of PL <i>étŋ</i>
<i>k</i>	<i>bīk-s</i>	"foreign"	
<i>q</i>	<i>lōq-s</i>	"thin (liquid)"	
<i>l</i>	<i>èl-s</i>	"spacious"	

⁸⁶ Uvular /q/ is unattested in auslaut position after high vowels (/i, i, u/). In other positions, such combinations are exceptionally rare, and virtually only found as the result of an assimilation, e.g. in compounds like *íqqaj* "male elk" (< *iʔk* "male" + *qàj* "elk"), or *íqat* "sun-beam" (< *ī* "sun" + *qoʔt* "way"). The mythological name *Uqvol* "a legendary shaman" is of obscure origin and may be foreign (/v/!).

⁸⁷ Werner 2002 notes *one* non-borrowed example for Ket, *jétqos* "to jump"; however, this is best viewed as a phonetic variant of *étqos/étqus*, glossed as "to fly up".

⁸⁸ From *maʔm* "breast" + *áj* "sack, container", all *m*-initial words are loans or nursery words.

⁸⁹ All *n*-initial words are loans or nursery words. This one may be a loan from Man'si (certainly not from Persian, as often claimed), an imitative nursery root ("nyam-nyam"), or indeed both.

⁹⁰ /q/ is only found as the causative marker -q-, on which cf. 4.4.5.2.6.4

<i>j</i>	<i>tīj-s</i>	"scooping"
<i>m</i>	<i>díkim-s</i>	"flexible"
<i>n</i>	<i>èn-s</i>	"cool"
<i>η</i>	<i>bōη-s</i>	"dead"

A few roots⁹¹ end in a cluster with -C₁s:

<i>ōks</i>	"tree, wood"
<i>āks</i>	"what" (variant of <i>ākus</i> ⁹²)
<i>bódoqs</i>	"a load; provisions" ⁹³
<i>dáηols</i>	"a.k.o. idol"

Other final clusters are produced by adding the plural suffixes *-n* or *-η* to a consonant-final noun. Plural suffixes are usually accompanied by a "binding" vowel between root and suffix (cf. 4.1.1.2.4.1), but some nouns ending in /m/, /l/, /η/, or /t/ are pluralized with the consonantal suffix alone, cf.⁹⁴:

<i>qām</i>	"arrow" --> PL <i>qám-n</i>
<i>úlol</i>	"leech" --> PL <i>úlol-η</i>
<i>qīt</i>	"wolf" --> PL <i>qót-n</i>

Nouns ending in *-s* are quite commonly found with a vowelless plural suffix:

<i>beʔs</i>	"hare" --> PL <i>bés-n</i>
<i>ádes</i>	"nail" --> PL <i>ádes-n</i>
<i>íkus</i>	"bull" --> PL <i>íkus-n</i>
etc.	

A few roots do end in different clusters, e.g.:

<i>báηl</i>	"wood lying on the ground"
<i>báln</i>	"a.k.o. tree (alder buckthorn?)"
<i>qátl</i>	"hearth"
<i>íηolt</i>	"fur"
<i>énsokη</i>	"to forget"
<i>ēkη</i>	"thunder"
<i>átl</i>	"mat"
<i>qōnt</i>	"ant"
<i>qókη</i>	"pine-forest"
<i>lókη</i>	"to shiver"

⁹¹ These may, of course, be historically complex, thus "roots" only in a strictly synchronic sense.

⁹² However, the short form must be quite old and stabilized, since the retention of phonetic [k] in the longer variant can only be understood as a remodelling after the former.

⁹³ In all probability derived by *-s* from a non-attested adjectival root.

⁹⁴ In these plural forms, the final nasal is syllabic, resulting in the "fifth syllabic contour", cf. 3.1.2. Quite often, such plural forms are recorded *with* a binding vowel as well.

<i>sókŋ</i>	"to push"
<i>qótl</i>	"towel"

All these final clusters consist of at least one continuant; however, a very small group of Ket nouns ends in a two-stop-cluster, the second element of which is always /t/:

<i>tākt</i>	"a.k.o. salmon"
<i>qīkt</i>	"spoon"
<i>kōqt</i>	"inner part"
<i>kēqt</i>	"neck"
<i>qōpt</i>	"castrated reindeer bull"

When a continuant is involved, adding the nominalizer -s may produce a final CCC-cluster:

<i>lókŋ-s</i>	"a shivering one"
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The very productive noun-compounding technique of Ket produces many different word-medial consonant clusters. In fact, most combinatorily possible combinations do occur in reality, and they will not be illustrated in full here. Instead, we will discuss below the - few - cases of medial clusters consisting of three consonants and some of the more recurrent processes by which (certain) medial clusters are avoided.

Three consonants in a row are rare in Ket. They may arise, when two nouns are compounded, the first of which ends in a (CC) cluster. In all observable cases the second (medial) consonant of such a cluster is a continuant, almost always a nasal. Examples:

<i>étnbes</i>	"according to us, as far as we know" < <i>étn</i> "we" + <i>-bes</i> "PROS"
<i>ádesnted</i>	"to join together with nails" < <i>ádes</i> "nail" + <i>-n</i> "PL" + <i>-ted</i> "to beat"
<i>bálnkit</i>	"a small bird-cherry tree" < <i>báln</i> "bird cherry tree" + <i>-kit</i> "DIM"
<i>bésnno</i>	"to hunt hares" < <i>bēs</i> "hare" + <i>-n</i> "PL" + <i>qoo</i> "to hunt, kill"
<i>hítnted</i>	"to make a.k.o. pot" < <i>hítnt</i> "a.k.o. pot" + <i>bèd</i> "to make"
<i>súntaq</i>	"middle finger" < <i>sútn</i> "middle" + <i>tʰʷq</i> "finger"

On the whole, these cases are rare; even rarer are three-way clusters with medial /s/:

<i>óksbul</i>	"crutch" < <i>ōks</i> "wood" + <i>būl</i> "leg"
---------------	---

and other forms of and compounds with *ōks*.

When two nouns are conjoined in a nominal compound, several processes of partial and total assimilation may be triggered, which mostly involve the uvular /q/ and the laryngeal /h/⁹⁵:

⁹⁵ -C₁ to be read as: final consonant of the first lexical element of a compound; C₂- to be read as: initial consonant of the second lexical element of a compound.

- $-C_1 + C_2-$ may result in $-C_1C_1-$:

$l + q \rightarrow ll$
béllim "prostitute" < *beʔl* "immoral" + *qīm* "woman"

$n + h \rightarrow nn$
bónnis "duck's tail" < *bəʔn* "duck" + *hīs* "tail"

$n + q \rightarrow nn$
kónnuk "earth of fox" < *kəʔn* "fox" + *qūk* "hole"

$\eta + q \rightarrow \eta\eta$
báηηuk "rodents' burrow" < *baʔη* "earth" + *qūk* "hole"

$s + q \rightarrow ss$
dóssuk "flies (of trousers)" < *dəs* "urine" + *qūk* "hole"

- $-C_1 + C_2-$ may also result in $-C_2C_2-$:

$k + q \rightarrow qq$
áqqot "rainbow" < *aʔk* "lightning" + *qoʔt* "way"

- C_2- /h/ is often lost (without resulting gemination):

$d + h \rightarrow d$
édan "a net for catching sable" < *əd* "sable" + *həʔη* "net"

$j + h \rightarrow j$
ájēη "a k. o. net" < *àj* "sack" + *həʔη* "fishing net"

$s + h \rightarrow h$
bésol "the shape of a hare" < *beʔs* + *həl* "appearance"⁹⁶

- C_2- /q/ is often lost (without resulting gemination); this is particular often the case in compounds with *qíʔj* "birch-bark", e.g.:

<i>élatij</i>	"a piece of birch bark on the door"	<i>éla</i>	"door" + <i>qíʔj</i>
<i>bókij</i>	"tinder"	<i>boʔk</i>	"fire" + <i>qíʔj</i>
<i>qútij</i>	"nappy made from birch-bark"	<i>qūt</i>	"outer layer" + <i>qíʔj</i>

The frequent verbal root *-qo* "to kill, to hunt" occurs mostly with an object incorporate in P^7 position; the initial consonant of the verb root is almost invariably assimilated to the final consonant of the incorporate:

⁹⁶ And most other compounds with *həl* "appearance, gestalt"

	"to hunt ..."	< _ + -qo
<i>ássano</i>	"animals" ⁹⁷	<i>ássen</i> , SG <i>ássel</i>
<i>bésnno</i>	"hares"	<i>bésn</i> , SG <i>beʔs</i>
<i>bónno</i>	"ducks"	<i>bəʔn</i> , SG <i>bəʔn</i>
<i>dékηηo</i>	"capercaillies"	<i>dékη</i> , SG <i>dīt</i>
<i>édnno</i>	"sables"	<i>édn</i> , SG <i>èd</i> ⁹⁸
<i>ísqo</i>	"fish"	<i>īs</i> , SG <i>īs</i>
<i>kásnno</i>	"burbots"	<i>kásn</i> , SG <i>kēs</i>
<i>kónno</i>	"chipmunks"	<i>koon</i> , SG <i>koʔb</i>
<i>kúlanno</i>	"ermine"	<i>kúlan</i> , SG <i>kúleb</i>
<i>kəqínno</i>	"foxes"	<i>kəqin</i> , SG <i>kəqin</i>
<i>óksinno</i>	"sterlets"	<i>óksin</i> , SG <i>ók</i>
<i>qáqo</i>	"white fish"	<i>qāq</i> , SG <i>qāq</i>
<i>qínno</i>	"elks"	<i>qīn</i> , SG <i>qàj</i>
<i>qónno</i>	"bears"	<i>qōn</i> , SG <i>qòj</i>
<i>qúkηηo</i>	"pikes"	<i>qúkη</i> , SG <i>qùd</i>
<i>qóttno</i>	"wolves"	<i>qóttn</i> , SG <i>qīt</i>
<i>sánno</i>	"squirrels"	<i>saan</i> , SG <i>saʔq</i>
<i>sénno</i>	"reindeer"	<i>seʔn</i> , SG <i>sèl</i>
<i>tákηηo</i>	"otters"	<i>tákη</i> , SG <i>taal</i>
<i>témínno</i>	"geese"	<i>témín</i> , SG <i>tēm</i>
<i>tóttno</i>	"taimen (fish, genus <i>hucho</i>)"	<i>tótn</i> , SG <i>toʔt</i>
<i>tónno</i>	"perches"	<i>təon</i> , SG <i>təʔ</i>
and:		
<i>déηηo</i>	"to kill people, to murder"	<i>deʔη</i> , SG <i>keʔd</i>

According to Werner's etymological analysis (2002, *passim*), numerous compounds denoting female human beings contain *qīm* "woman" as their second element, the initial consonant of which is very often lost; however, the fact that many - though not all - of these compounds show the vowel /a/ (sometimes /e/ or /ə/), rather than /i/ in the last syllable, an alternative analysis departing from *ām* "mother" seems preferable; examples include:

<i>dójam</i>	"Nenets woman"	<i>dókid</i> "male Nenets"
<i>énnam</i>	"daughter-in-law" ⁹⁹	<i>èn</i> "son-in-law"
<i>ésqannəm</i>	"Czarina"	<i>ésqan</i> "Czar"
<i>kónasem</i>	"Ket woman"	<i>kónas</i> "light in colour"
<i>kíjam</i>	"female ruler"	<i>kīj</i> "ruler, chief"
<i>kísnam</i>	"Russian woman"	<i>kísan</i> "Russian"
<i>sénam</i>	"female shaman"	<i>sénaη</i> "shaman"
<i>úlləm</i>	"nix, water nymph"	<i>ūl</i> "water"

⁹⁷ Hence: "to hunt in general".

⁹⁸ But cf. the parallel *édqo-s* "hunter of sables", without assimilation.

⁹⁹ Admittedly, the semantics of "mother" seems a bit forced here, as also in *hítam* "niece".

A regular assimilatory process involves /b/ before nasals, where it yields /m/¹⁰⁰:

$d[i]^8 - a^4 - b^3 - i$ "I whet it", Pret.: $d[i]^8 - o^4 - b^3 - [i]n^2 - i$ "I whetted it"
 <dáví> <dómní>

A three-consonant cluster was obviously avoided by elision in:

bókdóm "rifle" < *boʔk* "fire" + -d- "Gen." + *qām* "arrow"

However, some of the clusters, which are avoided by these processes, may as well occur in other compounds, cf. i.a.:

kónqo "Venus" < *kɔʔn* "bright" + *qoʔ* "star"
báŋqaj "elevated place" < *baʔŋ* "earth" + *qaʔj* "hill"

Consonant epenthesis:

In (rare) cases where a compound would produce a vowel sequence, or a sequence *VhV*, /k/ (phonetically always [ɣ]) may be inserted between the two vowels¹⁰¹:

ákul "sledge hammer" < *ā* "hot" + *huul* "hammer"
ékin "ladle" < *ē* "metal" + *hiʔn* "spoon"
kíkoks "spindle" < *kiʔ* "thread" + *ōks* "wood"
qákij "glutton" < *qà* "big" + *hĭj* "belly"
tákis "salted fish" < *tɔʔ* "salt" + *īs* "fish"

Other processes of consonant epenthesis occur in the domain of *morphotactic* rules, and will be dealt with in several subsections of 4.4.4.

¹⁰⁰ This process causes quite often P³ /b/ to surface as /m/, cf. 4.4.5.9.

¹⁰¹ An alternative analysis of this [ɣ], viz. as an allophone of /h/ in intervocalic position, as favoured by Werner (1997c, 29), is equally possible for the cases which involve this consonant. However, cases like *kíkoks*, where no /ha/ comes into play, favour the epenthesis-analysis.

4 Morphology

4.1 Nouns and adjectives

4.1.1 Substantive nouns

Ket nouns are characterized by the categories of *class* (which is morphologically covert in nominatives), *number*, *case*, and *possession*; these will be discussed in this order below.

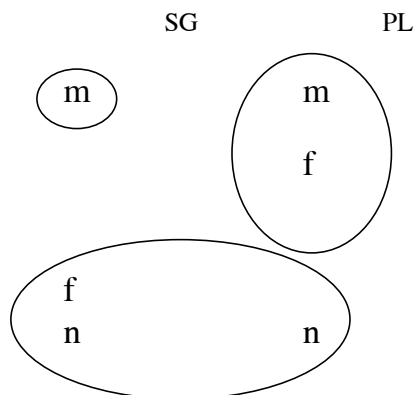
4.1.1.1 Class

Every Ket noun is a member of one of three noun classes, which may be generally referred to as *masculine*, *feminine*, and *neuter*, respectively (*m*, *f*, and *n*). Class membership is morphologically uncharacterized in nominative forms, but relevant for the choice of case suffixes and verbal agreement.

The masculine and feminine noun classes are behaviourally opposed to the neuter class, forming the opposition *animate* vs. *inanimate*.

4.1.1.1.1 Morphological characteristics of noun classes

While both *animate* classes (*m* and *f*) differ in their morphological behaviour only in the singular, and form a single class in the plural, the *neuter* class behaves like the *feminine* in the singular, and stands out as an individual class in the plural (by showing the same suffixes in the *plural* as the feminine *singular*). The differential feature involves different case suffixes, or, more precisely, different *genitive suffixes*, which surface in the genitive itself and those case forms (dative, benefactive, ablative, adessive), which are formed by adding suffixes to the right of the genitive marker. The different paradigms will be given in full in the section on *Case* (4.1.1.3); here, the general scheme of class-sensitive case marking will be given only, with those entities, which behave morphologically alike, circled:



I.e., *m* and *f* nouns receive the same suffixes in the plural (as "animates"), but different ones in the singular, where *f* and *n* go together, as with *n* plural. Class membership is morphologically covert in nominative forms of nouns:

<i>tík</i>	"snake" (masculine, <i>m</i>)
<i>beʔs</i>	"hare" (feminine, <i>f</i>)
<i>doʔn</i>	"knife" (neuter, <i>n</i>)

The inherent class of nouns is only revealed in the genitive (and genitive-based) cases, cf.:

Nom. SG	<i>tík</i> (m) "snake"	<i>beʔs</i> (f) "hare"	<i>doʔn</i> (n) "knife"
Gen. SG	<i>tík-da</i>	<i>bés-di</i>	<i>dón-di</i>
Gen. PL ¹⁰²	<i>tík-in-na</i>	<i>bés-n-na</i>	<i>dón-aŋ-dī</i>

Another discernible difference between the two (macro-) classes animate and inanimate is the fact that only *inanimate* nouns may occur in the *locative* case (4.1.1.3.7), and only *animate* nouns form a *vocative* (4.1.1.3.12)¹⁰³.

4.1.1.1.2 Semantic characteristics of noun classes

The semantic basis and numerous aspects of the Ket (and Yeniseic) class system are discussed in great detail in Werner (1994). Here, only a general outline and non-exhaustive lists will be given.

The nomenclature adopted here is based on the fact that the basis of class *m* is formed by nouns denoting male human beings, that of *f* by nouns denoting female human beings, and that of *n* by nouns referring to inanimate things. With nouns for human beings, thus, no unexpected class membership can be observed. However, both *animate* classes contain names for lifeless things as well, furthermore names for animals and plants are generally found in one of the two animate classes, but whether they belong to class *m* or *f* is determined idiosyncratically, or, in other words, by taxonomic parameters germane to Ket culture (or to that of Proto-Yeniseic), which are not always reconstructible by modern scholarship.

¹⁰² Plural forms show, before the case suffix, a *plural* suffix, discussed in 4.1.1.2.4.1. Ket possesses a sizable number of plural formations (suffixal and non-suffixal); in the case of suffixal plurals the choice of *-n* or *-ŋ* is partly determined by class membership, but partly overridden by phonetic constraints.

¹⁰³ The observations of Toporov and Civ'jan (1968) that, in Pakulikha and Surgutikha (Central Ket), a symmetrical four-fold class system may exist, which could be determinable on the basis of a) the case suffix chosen, and b) the specific form of the numeral "one", which accompanies a given noun, with:

inanimate	<i>qūs</i> "1" + "fem."	Genitive <i>-dīŋta</i>
inanimate, masculine (!)	<i>qūs</i> "1" + "masc."	Genitive <i>-daŋta</i>
animate, masculine	<i>qoʔk</i> "1" + "masc."	Genitive <i>-daŋta</i>
animate, feminine	<i>qoʔk</i> "1" + "fem."	Genitive <i>-dīŋta</i>

could not be verified, neither by Werner (1994, 11), nor by the present author.

Some of these parameters run roughly along the lines of *cultural relevance*, or *economic importance*, with terms for animals and things, which are valued higher, or are viewed as having more cultural or societal significance than others, more often ending up in class *m*, than in class *f*. However, since etymologically cognate nouns may belong to different classes even in closely related Ket and Yugh, no attempt will be made here to explain each single class-assignment. It will be safe to assume that class-membership of nouns denoting non-human entities is the result of complicated diachronic processes, involving *both* the culture-internal value-system of the Kets and their ancestors (which may also have undergone changes, now irrecoverable for us), *and* more trivial factors, like analogy according to phonetic shape, and so on. The following lists are indebted to, and partly repeat, the collections of H. Werner (1994, 1997c). Werner calculates the ratio of nouns belonging to one of the two animate classes at ca. 10% of all nouns.

4.1.1.1.2.1 Nouns of class *m* not denoting male humans

- mammals of class *m*:

<i>qàj</i>	"elk"
<i>qòj</i>	"bear"
<i>tēl</i>	"mammoth"
<i>sēl</i>	"reindeer"
<i>qīt</i>	"wolf"
<i>laʔt</i>	"beaver"
<i>èd</i>	"sable"
<i>taal</i>	"otter"
<i>kúleb</i>	"ermine"
<i>kīt</i>	"mink"
<i>tīb</i>	"dog"
<i>kùn</i>	"wolverine"

When compared to the list of names for mammals belonging to class *f* below, it is probably safe to say that animals found here are generally bigger, economically more important, and sometimes more feared than *f* animals.

- birds of class *m*:

<i>díʔ</i>	"eagle"
<i>qàn</i>	"vulture"
<i>hīʔj</i>	"owl"
<i>tēm</i>	"goose"
<i>tīk</i>	"swan"
<i>tāk</i>	"crane"
<i>bīt</i>	"eider duck"
<i>dīt</i>	"capercaillie"
<i>qūb</i>	"blackcock"
<i>bəʔn</i>	"duck"

həʔl "scaup duck"

and many more.

Here, too, the criteria of size and importance (as food birds, in some cases) may by and large be the relevant factors for inclusion in class *m*.

4.1.1.1.2.2 Nouns of class *f* not denoting female humans

- mammals of class *f*:

<i>kuʔs</i>	"bovine"
<i>kəən</i>	"fox"
<i>bəʔs</i>	"hare"
<i>saʔq</i>	"squirrel"
<i>koʔb</i>	"chipmunk"
<i>üt</i>	"mouse"
<i>úja</i>	"mole"

- birds of class *f*:

<i>kāl</i>	"raven"
<i>qóqbun</i>	"cuckoo"
<i>qólet</i>	"crow"
<i>dūm</i>	"small bird (generic)"
<i>tōkt</i>	"white wagtail"
<i>baa</i>	"a.k. of stint or plover"
<i>qáleŋ</i>	"seagull"

4.1.1.2 Number

Ket nouns distinguish two numbers, singular and plural. While no overt morphology marks singular number, the plural is characterized by a variety of techniques, the most frequently encountered of which is suffixation, though plurals formed by other means are not at all rare.

4.1.1.2.1 Singular and singulative

The singular is morphologically always uncharacterized. With mass nouns, however, compounding may form singulatives, on which cf. 4.1.2.3.

4.1.1.2.2 Plural

Nominal plurals in Ket may be formed in different ways; most commonly the plural is characterized by an overt plural suffix (4.1.1.2.4.1), but it may also be indicated by a change of the root vowel (4.1.1.2.4.3), a change in tone (4.1.1.2.4.4), or a combination of the latter two techniques (4.1.1.2.4.5). Moreover, entirely suppletive plural forms do exist as well (4.1.1.2.4.7).

4.1.1.2.3 Traces of natural dual, or paral

There is no dual in Ket, but at least in the case of a few naturally paired objects, two different plural forms exist, one of which denotes a natural pair:

<i>dēs</i>	"eye"	:	<i>dēs</i>	"a pair of eyes"	:	<i>déstəŋ</i>	"many eyes"
<i>bánna</i>	"sleeve"	:	<i>bánna-n</i>	"pair of sl."	:	<i>bánna-n-iŋ</i>	"many sleeves"
<i>ólta</i>	"testicle"	:	<i>ólta-ŋ</i>	"a pair of t."	:	<i>ólta-kin</i>	"scrotum"
<i>ókde</i>	"ear"	:	<i>ókde-n</i>	"a pair of ears"	:	<i>ókde-n-iŋ</i>	"many ears"

This remains a rare pattern, though; generally, in the absence of explicit numerals or adverbs of quantity, the singular form of nouns denoting natural pairs denotes one instance of such a pair, rather than only *one* eye, foot, sleeve, etc. This is underlined by the fact that, in order to emphasize that only *one single* eye, sleeve etc. is being talked about, Ket uses a strategy which is found widely in Eurasian languages, viz. to use the expression "*half eye* (etc.)"; *qóleb* "half" may be used as a modifying adjective to denote one item of a pair, or it may form a *bahuvrīhi*-like compound with its head to indicate the possessor of this item, cf.:

(5)

qóleb bāl
 half leg
 one (single) leg

(6)

bú-da qīm qólebdes òbilda
 he-GENm wife half.eyē was
 His wife had only one eye. (Dul'zon 1964a, 162)

4.1.1.2.4 Plural markers

Ket nouns may form plurals by a variety of means and morphological techniques. The singular nominative ("lexicon-") form of a Ket noun does not allow to infer, how its plural may be formed.

4.1.1.2.4.1 Plural characterized by suffixes

This is the most common way of forming noun plurals in Ket.

When a monosyllabic stem, which is invariably characterized by one of the four tonemes (3.1.1), receives a plural suffix¹⁰⁴, the resulting disyllabic word changes the base tone to one of the two disyllabic contours (3.1.2). Most commonly, such plural forms assume the "fifth tone", or $\acute{v}v$ contour:

SG	PL	
<i>kōn</i>	<i>kóneη</i>	"middle joint of finger"
<i>doʔn</i>	<i>dónaη</i>	"knife"
<i>ool</i>	<i>óleη</i>	"wasp's nest"
<i>àη</i>	<i>áηen</i>	"rope"

Less commonly, the "sixth tone" ($\grave{v}v$) occurs:

SG	PL	
<i>ōb</i>	<i>òbaη</i>	"father"
<i>təʔq</i>	<i>təqin</i>	"finger"
<i>dool</i>	<i>dòleη</i>	"lining"
<i>àj</i>	<i>àjeη</i>	"sack"

As the examples show, the inherent tone of the monosyllabic noun does not allow to predict the accentual pattern of the plural form.

The most frequent plural suffixes are $-(V)n$ and $-(V)\eta$. While vowel stems receive the suffix directly, most consonant stems (for exceptions see the frequent cases, where nouns in $-s$ add the plural suffix without an intervening vowel) require a combining vowel between the noun stem and either $-n$ or $-\eta$ of the suffix.

The colour of this combining vowel is unpredictable (it may be historically a part of the stem, lost in the singular nominative form). The following discussion of the various shapes of plural suffixes provides ample examples of combining vowels and their obviously haphazard distribution¹⁰⁵. The distribution of $-n$ vs. $-\eta$ cannot be defined in terms of an exceptionless rule, but the general tendency can be given as follows:

$-n$ is mostly found with animate stems, $-\eta$ with inanimate stems:

[+anim]: $-n$

SG	PL	
<i>háηa</i>	<i>háηen</i>	"female (animal), f."
<i>hómka</i>	<i>hómkan</i>	"Ewenki person, m."

¹⁰⁴ The same holds, of course, for any other suffix, derivational or inflectional.

¹⁰⁵ It should be noted that these combining vowels - most often found in the phonologically weak position after the "stress" in 5th contour words - are generally pronounced rather weakly; many instances of /e/, e.g., may thus be rather actualizations of /ə/.

<i>tēm</i>	<i>témin</i>	"goose, m."
<i>laʔk</i>	<i>láken</i>	"Sel'kup person, m."
<i>qīm</i>	<i>qímn</i>	"woman, f."

[-anim]: -η

SG PL

<i>tìd</i>	<i>tídeη</i>	"root"
<i>qoʔ</i>	<i>qoʔη</i>	"horn"
<i>dósol</i>	<i>dósoleη</i>	"bladder"

However, this general pattern is often overridden by a morphonological constraint, which requires the dissimilation of the suffixal nasal after a stem-final nasal; stem-final *-n*, regardless of class, requires Plural *-η*, whereas other nasal consonants (*-η*, *-m*), again regardless of class, require Plural *-n*. However, exceptions do exist, some of which are given below. Another discernable tendency is to use the plural marker *-n* after *-s* (in most cases without a connecting vowel).

[+anim] (m, f) nouns ending in *-n* (→ PL *-η*):

SG	PL	
<i>ájkon</i>	<i>ájkon-iη</i>	"polar fox"
<i>báln</i>	<i>báln-eη</i>	"bird cherry tree"
<i>bótn</i>	<i>bótn-aη</i>	"a.k.o. fish, russ. <i>lenok</i> "
<i>bístin</i>	<i>bístin-aη</i>	"wasp, bee"
<i>dösen</i>	<i>döscn-aη</i>	"skinflint"
<i>lūn</i>	<i>lūn-aη</i>	"grayling"
<i>qān</i>	<i>qān-aη</i>	"ruler, emperor, Khan"
<i>úlen</i>	<i>úlen-eη</i>	"pochard"
<i>túln</i>	<i>túln-eη</i>	"lizard"

There is a tendency to treat stems in *-l* in a similar way:

SG	PL	
<i>álal</i>	<i>álal-iη</i>	"rear board of <i>Ilimka</i> , f."
<i>állal</i>	<i>állal-iη</i>	"idol, f."
<i>bájbul</i>	<i>bájbul-aη</i>	"kidney, f."
<i>bátl</i>	<i>bátl-aη</i>	"a.k.o. bird, f."
<i>biil</i>	<i>bíl-eη</i>	"martin, f."
<i>boʔl</i>	<i>ból-aη</i>	"rack for drying fish, m."
<i>dóηul</i>	<i>dóηul-aη</i>	"ladder, m."
<i>suʔl</i>	<i>súl-eη</i>	"Siberian salmon, m."
<i>tótal</i>	<i>tótal-aη</i>	"whitefish, m."
<i>tīl</i>	<i>tīl-aη</i>	"navel, f."
<i>úlol</i>	<i>úlol-iη</i>	"leech, f."

[-anim] (n.) nouns ending in another nasal (-m, -η), (→ PL -n):

SG	PL	
<i>ájεη</i>	<i>ájεη-en</i>	"a.k.o. fishing net"
<i>ájιη</i>	<i>ájιη-in</i>	"roof of <i>Ilimka</i> -boat"
<i>àη</i>	<i>άη-en</i>	"rope"
<i>baʔη</i>	<i>bάη-en</i>	"place"
<i>bésam</i>	<i>bésam-en</i>	"hare-fur"
<i>ékaη</i>	<i>ékaη-en</i>	"iron chain"
<i>həʔη</i>	<i>hόη-en</i>	"fishing net"
<i>híʔη</i>	<i>hίη-en</i>	"ulcer"
<i>kàη</i>	<i>kάη-en</i>	"winter-trail"
<i>kaʔη</i>	<i>kάη-en</i>	"hole"
<i>kúlem</i>	<i>kúlem-en</i>	"cover, lid"
<i>laʔη</i>	<i>λάη-en</i>	"hand"
<i>laʔm</i>	<i>λάm-en</i>	"side, half"
<i>qām</i>	<i>qám-en</i>	"arrow"
<i>qókη</i>	<i>qókη-en</i>	"pine-wood"
<i>sēη</i>	<i>séη-an</i>	"liver"

[-anim] stems in -s (→ PL -n):

SG	PL	
<i>ábes</i>	<i>ábes-n</i>	"brace, clip"
<i>ákdes</i>	<i>ákdes-n</i>	"lower back"
<i>áles</i>	<i>áles-n</i>	"bundle"
<i>ádes</i>	<i>ádes-n</i>	"iron nail"
<i>báηas</i>	<i>bάηas-n</i>	"rapids"
<i>dóles</i>	<i>dόles-n</i>	"willow bush"
<i>dímles</i>	<i>dίmlés-n</i>	"crack, gap"
<i>hóltes</i>	<i>hόltes-n</i>	"belly"
<i>kūs</i>	<i>kús-en</i>	"lichen"
<i>qāks</i>	<i>qáks-en</i>	"wound"
<i>qólams</i>	<i>qólams-in</i>	"half"
<i>qóles</i>	<i>qóles-n</i>	"hoof"
<i>síns</i>	<i>síns-in</i>	"old rubbish"

But cf. *bíʔs*, PL *bίs-aη* "penis"
ús, PL *ús-eη* "birch"

A semantic constraint is found with some (but not all) kinship terms, which, though certainly [+anim], require the pluralizer -η:

SG	PL	
<i>ádbam</i>	<i>ádbam-aŋ</i>	"sister-in-law"
<i>ām</i>	<i>àm-aŋ</i>	"mother"
<i>ámdun</i>	<i>ámdun-eŋ</i>	"cousin"
<i>baam</i>	<i>bám-aŋ</i>	"old woman"
<i>baat</i>	<i>bát-aŋ</i>	"old man"
<i>beʔb</i>	<i>béb-əŋ</i>	"elder brother's wife; aunt"
<i>bístil</i>	<i>bístil-aŋ</i>	"brother/sister of spouse"
<i>bóles</i>	<i>bóles-aŋ</i>	"brother-in-law" ¹⁰⁶
<i>huʔn</i>	<i>hún-aŋ</i>	"daughter"
<i>híʔb</i>	<i>híb-aŋ</i>	"son"
<i>ōb</i>	<i>ōb-aŋ</i>	"father"
<i>qíbbat</i>	<i>qíbbat-aŋ</i>	"father-in-law"
<i>qíma</i>	<i>qíma-ŋ</i>	"grandmother"
<i>qíman</i>	<i>qíman-aŋ</i>	"great-grandmother"
<i>qīb</i>	<i>qīb-aŋ</i>	"grandfather"
<i>qōj</i>	<i>qōj-aŋ</i>	"aunt/uncle (younger sibling of parent)"

All the abovementioned rules and tendencies may be violated; loan words from Russian and other languages tend to form their plurals with *-ŋ*, even when denoting animates (and not ending in *-n*), e.g.:

SG	PL	
<i>bátir</i>	<i>bátir-iŋ</i>	"hero" (< mong.)
<i>bótaj</i>	<i>bótaj-aŋ</i>	"rich person" (< russ. <i>bogatyj</i>)
<i>mína</i>	<i>mína-ŋ</i>	"pig" (russ. < <i>svinja</i>)
<i>òndatir</i>	<i>òndatir-aŋ</i>	"musk-rat" (< russ. <i>ondatra</i>)
<i>òsotra</i>	<i>òsotra-ŋ</i>	"sturgeon" (< russ. <i>osetr</i>)
<i>óbsa</i>	<i>óbsa-ŋ</i>	"sheep" (< russ. <i>ovca</i>)
<i>pímil</i>	<i>pímil-aŋ</i>	"Jew's harp" (< sel'k.)

However, cases remain, for which the choice of the plural suffix cannot be explained according to any known principle, cf.:

SG	PL	
<i>dóŋaj</i>	<i>dóŋaj-aŋ</i>	"a.k.o. fish (russ. <i>omul</i>), m."
<i>ēs</i>	<i>ēs-aŋ</i>	"God, sky, m."
<i>qúmlej</i>	<i>qúmlej-aŋ</i>	"butterfly, m."
<i>quu</i>	<i>quu-ŋ</i>	"pole, m."
<i>súqa</i>	<i>súqa-ŋ</i>	"a.k.o. duck, m."
<i>bōŋ</i>	<i>bōŋ-aŋ</i>	"body, corpse, f." ¹⁰⁷

¹⁰⁶ Alongside this form, a plural *bóles-n* is also attested, showing that the phonological constraint may override the semantic one.

<i>dádij</i>	<i>dádij-aŋ</i>	"simpleton"
<i>háŋko</i>	<i>háŋko-ŋ</i>	"toadstool, f."
<i>kóla</i>	<i>kóla-ŋ</i>	"female friend" ¹⁰⁸
<i>úlbej</i>	<i>úlbej-aŋ</i>	"shadow" ¹⁰⁹
<i>ómas</i>	<i>ómas-iŋ</i>	"thorn"

4.1.1.2.4.2 Morphologically uncharacterized plural

The following nouns (typically for animals occurring in large quantities, thus semantically close to mass nouns) show no difference at all between their singular and plural forms:

SG	PL	
<i>bɔʔn</i>	<i>bɔʔn</i>	"duck"
<i>īs</i>	<i>īs</i>	"fish, meat"
<i>qɔʔn</i>	<i>qɔʔn</i>	"flea"
<i>sūj</i>	<i>sūj</i>	"mosquito"
<i>tīt</i>	<i>tīt</i>	"mosquito" ¹¹⁰

4.1.1.2.4.3 Plural characterized by vocalic "ablaut"

A change of root vowel is displayed by the following plural forms, which are all further characterized by a suffixal exponent of plurality (*-n/-ŋ*):

SG	PL	
<i>diʔ</i>	<i>daʔn</i>	"log"
<i>iʔ</i>	<i>eʔŋ</i>	"a platform for storage"
<i>iʔl</i> (also <i>īl</i>)	<i>élaŋ</i>	"breath"
<i>iʔn</i>	<i>énaŋ</i>	"needle"
<i>iʔs</i>	<i>ésaŋ</i>	"spindle, bolt"
<i>kēs</i>	<i>kásn</i>	"burbot"
<i>kiʔd</i>	<i>kédaŋ</i>	"price"
<i>laʔm</i>	<i>lémiŋ</i>	"board"
<i>qīt</i>	<i>qót-n</i>	"wolf"
<i>tēd</i>	<i>tátŋ</i>	"husband"
<i>tīb</i>	<i>taʔb</i>	"dog"

¹⁰⁷ A speculative question: is the "inanimate" plural suffix here used, because the semantics of "corpse" naturally emphasizes the "inanimate" nature of the object?

¹⁰⁸ Here an analogy with kinship terms may be at work.

¹⁰⁹ The few examples with *-j* in this table may indicate that this final consonant triggers the plural suffix *-ŋ* on a regular basis.

¹¹⁰ In CK: PL *tītŋ*

4.1.1.2.4.4 Plural characterized by tone change

The inherent tone changes in the following pluralizations:

a) monosyllabic stems:

SG	PL	
<i>ēj</i>	<i>èj</i>	"tongue"
<i>hāj</i>	<i>hāj</i>	"oar"
<i>hās</i>	<i>hàs</i>	"shaman's drum"
<i>həʔl</i>	<i>həl</i>	"air bladder"
<i>kīn</i>	<i>kìn</i>	"worm"
<i>kīl</i>	<i>kīl</i>	"raven"
<i>qaʔ</i>	<i>qaan</i>	"word"
<i>qō</i>	<i>qoʔn</i>	"mouth"
<i>sū</i>	<i>suʔn</i>	"hazel-grouse"
<i>qoʔ</i>	<i>qoon</i>	"star"
<i>təʔ</i>	<i>təən</i>	"perch"
<i>tōk</i>	<i>tòk</i>	"axe"

b) disyllabic stems:

SG	PL	
<i>áluk</i>	<i>àluk</i>	"a yoke for dogs"
<i>àtis</i>	<i>átis-n</i>	"dead tree"
<i>àttas</i>	<i>áttas-n</i>	"spear"
<i>bəntan</i>	<i>bəntan</i>	"wild duck"
<i>kúbən</i>	<i>kúbən</i>	"a.k.o. duck"
<i>kəqin</i>	<i>kəqin</i>	"fox"
<i>qəqbun</i>	<i>qəqbun</i>	"cuckoo"

4.1.1.2.4.5 Plural characterized by tone change and "ablaut"

A change of tone and root vowel is found in:

SG	PL	
<i>dīt</i>	<i>dék-η</i>	"wood-grouse"
<i>haʔj</i>	<i>hī-η</i>	"Siberian cedar"
<i>hīs</i>	<i>hàs</i>	"bird's tail"
<i>hīj</i>	<i>həj</i>	"belly"
<i>uu</i>	<i>oʔη</i>	"meadow"

4.1.1.2.4.6 Contractive plural formation

Many Ket nouns ending in a stop consonant¹¹¹ form their plural by adding one of the productive plural suffixes after dropping this final consonant¹¹². Usually, the preceding vowel is lengthened, and the new plural word thus receives tone 3 (in rarer cases also tone 1). Examples include:

- with final /-k/:

lūk PL *luuŋ* "splinter"

- with final /-b/:

dāb PL *daaŋ* "shoulder"
duʔb PL *duun* "fishing rod"
eʔb PL *ceŋ* "wooden snow-shovel"
haʔb PL *haaŋ* "hip"
hiʔb PL *hiiŋ* "device for bracing fur"
kaʔb PL *kaaŋ* "cupboard" (< russ. *škaf*)
koʔb PL *koon* "chipmunk"
kūb PL *kuun* "beak"
qīb PL *qiin* "moon, month" (< "grandfather")
qōb PL *qoon* "top of a tree"
qūb PL *quun* "black grouse"

- with final /-q/:

kòq PL *koon* "fist"
qɔʔq PL *qān* "corner"
bōq PL *boon* "glove" (cf. NK PL *bóqon*)
saʔq PL *saan* "squirrel"

- with final /-l/:

hool PL *hoon* "teal"

However, this is not entirely predictable, cf. the following examples without contraction:

¹¹¹ Most frequently, this is /b/; generally, only consonants usually subject to intervocalic lenition lead to contractive plurals

¹¹² It is certainly unwarranted to describe the lost consonant as a "singular affix", which is "replaced" by the pluralizer in plural forms. Sound change alone may and often does produce such alternations in many languages, cf. Riparian *hemp* : *hem* ("shirt", SG and PL), with *hemp* < *hemd* (> **hempt* with anaptyctic glide and subsequent cluster reduction) and *hem* < *hemden* (> **hemdn* via syncope and again subsequent cluster reduction, all regular processes).

<i>āk</i>	PL <i>ákin</i>	"musk-deer"
<i>beʔb</i>	PL <i>béβəŋ</i>	"son-in-law"
<i>tòq</i>	PL <i>tóqín</i>	"golden-eye"
<i>oʔl</i>	PL <i>óleŋ</i>	"cover"

4.1.1.2.4.7 Suppletive plural forms

Purely suppletive plural forms, where both members of the SG-PL pair belong - at least superficially - to entirely different etyma, include the following examples:

SG	PL	
<i>keʔd</i>	<i>deʔŋ</i>	"person, human being" ¹¹³
<i>ōks</i>	<i>aʔq</i>	"tree"
<i>qoʔd</i>	<i>qíneŋ</i>	"way, road"

4.1.1.2.4.8 Irregular plural forms

Apart from these patterns, still some plural forms exist, which have to be classified as altogether irregular, some of which are given and discussed below:

<i>hān</i>	PL <i>hítŋ</i>	"wart"
------------	----------------	--------

Werner (1997c, 97) thinks that this is another productive plural formation inserting the element *-t-* before the plural suffix *-n*. However, further examples are lacking. The plural form of this word may have been remodelled under the influence of more frequent plurals in *-t-n*, where the *-t-* belongs to the root.

<i>biseβ</i>	PL <i>bísnim(i)n</i>	"sibling (brother, sister)"
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In all probability a historical contraction of **bisenbeβəŋ*, cf. (attested) Yugh *bísenbeβəŋ*; the word is a compound < **bis* + **beʔb* (the latter element is independently attested in Ket with the meaning "son/brother-in-law"). Both elements receive their own plural marking.

<i>bəjba</i>	PL <i>bəjkit</i>	"orphan"
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A contracted form of **bəjba-kit-n*, where *-kit-* is identical with **kət* "child" (cf. *díłket* "children" and the Yugh forms *bəjbadíl*, PL *bəjbadílat*); the root may be a

¹¹³ This word may be historically non-suppletive: if we suppose that the plural form contains the regular plural marker *-ŋ*, we could assume a scenario like: **keʔd* → **ked-eŋ* with subsequent reduction of the first syllable (**kdeŋ*) and reduction of the initial cluster. When the original tone 2 is reintroduced from the singular, we get *deʔŋ*. It seems much more parsimonious to look for an explanation within Ket for this plural form, than to invoke the autonomy of many Athabaskan groups, viz. *Dene* or the like.

loan from Samoyedic (cf. Protosam. *j3jwa "orphan"), with an adaptation of the initial consonant to the *b*- found in many kinship terms.

qɪʔ PL *qɔʔdeŋ* "sun-ray"

The additional *-d-* of the plural form (or in turn its lack in the singular) is not explicable. A similar situation, this time with the singular showing a "superfluous" dental, is present in

qɪʔd PL *qɔʔŋ* "bow (weapon)"

The semantic distance between these latter two words is considerable, but may be reconcilable, so they both may in fact be etymologically related.

Two nouns seem to use a suffix *-j* to form their plural (Werner 1997c, 97), viz.:

seʔs PL *sēj* (also with tone-change) "larch", and

the root **ba/ɔ*, found in the compounds:

<i>dóba</i> "a.k.o. fish-weir"	PL	<i>dòbij</i>
<i>síkba</i> "a.k.o. fish-weir"	PL	<i>síkɓəj</i>

They are, however, best treated as instances of suppletivism.

4.1.1.2.4.9 Functions of the plural

Plural nouns denote the plurality of an object; as sentential subjects, they trigger plural forms of verbs¹¹⁴; unsuffixed plurals betray their inherent number by plural agreement; attributive numerals require the plural form of nouns (cf. 4.3.1):

(7)

áb-aŋta *kéŋassel*
I-ADESS bird
I have a bird

(8)

áb-aŋta *kéŋasse-n*
I-ADESS bird-PL
I have several birds

¹¹⁴ Plural agreement is only found with *animate* subjects.

(9)

qoʔk keʔd o/k⁶-o⁴-[i]n²-[t]n kɪni-ŋal
 one person 3SGm/D-Th-Pst-go here-ABL
 One person went away from here

(10)

ĩn deʔŋ oŋ/[k]⁶-o⁴-[i]n²-[t]n kɪni-ŋal
 two person\PL 3PL/D-Th-Pst-go here-ABL
 Two people went away from here

(11)

áb-ŋta doʔŋ kéŋasse-n
 I-ADESS three bird-PL
 I have three birds

4.1.1.3 Case

Ket noun cases are the following (here only the elements which clearly bear the case function are given; some case suffixes occur only together with others):

Nominative:	NOM	-∅
Genitive:	GEN	-d, -dí, -da, -na
Dative:	DAT	-ŋa
Benefactive:	BEN	-ta
Ablative:	ABL	-l
Adessive:	ADESS	-ŋta
Locative:	LOC	-ka
Prosecutive:	PROS	-bes
Instrumental:	INS	-as, -s
Abessive:	ABESS	-an, -n
Translative:	TRANS	-esaŋ
Vocative:	VOC	-ó, -ó

The case system is organized hierarchically: genitive, locative, prosecutive, instrumental, abessive, translative, and vocative are marked by suffixes that attach directly to the root. For the other cases, the genitive form (in its class-differentiating form, s.b.) serves as the base, to which the suffixes of the dative, benefactive, and adessive are added. The ablative affix, then, is added onto the dative form:

NOM	-∅
LOC	-ka
PROS	-bes
INS	-as
ABESS	-an
TRANS	-esaŋ

VOC	-ó/-ó	
GEN	-da/-di	
BEN		-da-ta, -di-ta
ADESS		-da-ηta, -di-ηta
DAT		-da-ηa, -di-ηa
ABL		-da-ηa-l, -di-ηa-l

Synchronically, the adessive is formed by adding *-ηta* to the genitive, but the unusual form of the suffix (with its initial cluster), and its function (a local case closely connected with the ablative) suggests that historically it arose from *-ta* attached to the *dative* (with subsequent vowel syncope):

*-da-ηa-ta > -da-ηta

The *a/i* alternation found in the genitive and genitive-derived cases signals the category of *class*, with

- a* characterizing *masculine* nouns in the singular, and *animate* (i.e. non-neuter) nouns in the plural, and
- i* characterizing *feminine* and *neuter* nouns in the singular, and *inanimate* nouns in the plural.

Furthermore, the genitive plural (animate) has the suffix *-na*¹¹⁵, to which, accordingly, the suffixes of the genitive-derived cases are added. This leads to the following nominal paradigms, when class differences are recognized¹¹⁶:

	masc.	fem./neuter	animate pl.	inanimate pl.
Nominative	- Ø	- Ø	- Ø	- Ø
Genitive	-da	-d(i) ¹¹⁷	-na	-d(i)
Dative	-daηa	-diηa	-naηa	-diηa
Benefactive	-data	-dita	-nata	-dita
Ablative	-daηal	-diηal	-naηal	-diηal
Adessive	-daηta	-diηta	-naηta	-diηta
Locative	-	-ka ¹¹⁸	-	-ka
Prosecutive	-bes	-bes	-bes	-bes
Instrumental	-as	-as	-as	-as
Abessive	-an	-an	-an	-an

¹¹⁵ It is probably safe to say that the nasal in this suffix is due to assimilation to the preceding plural suffix, which mostly consists of one of the two nasal consonants, *-n*, *-η*, respectively. From there, the *-n*-initial form spread analogically to plurals, which are not characterized by a nasal suffix. Genitive suffixes coincide in form with (3rd person) possessive prefixes.

¹¹⁶ Minor differences in the actual shape of case suffixes (due to assimilation, etc.) are discussed in the individual sections.

¹¹⁷ The abbreviated form *-d* (in the *f/n* SG and the inanimate PL) is frequently heard in rapid speech and quite routinely present before genitive-governed postpositions, cf. 4.1.4.4.

¹¹⁸ The distribution of the locative suffix is more restricted than this table shows: it occurs only with *neuter* nouns.

Translative	- <i>esaŋ</i>	- <i>esaŋ</i>	- <i>esaŋ</i>	- <i>esaŋ</i>
Vocative	- <i>ó</i>	- <i>ó</i>	- <i>ó</i>	-

Sample paradigms:

- masculine noun (*hík* "man"):

	SG	PL
NOM	<i>hík-Ø</i>	<i>hík-en-Ø</i> ¹¹⁹
GEN	<i>hík-da</i>	<i>hík-en-na</i>
DAT	<i>hík-daŋa</i>	<i>hík-en-naŋa</i>
BEN	<i>hík-data</i>	<i>hík-en-nata</i>
ABL	<i>hík-daŋal</i>	<i>hík-en-naŋal</i>
ADES	<i>hík-daŋta</i>	<i>hík-en-naŋta</i>
LOC	---	---
PROS	<i>hík-bes</i>	<i>hík-en-bes</i>
INS	<i>hík-as</i>	<i>hík-en-as</i>
ABES	<i>hík-an</i>	<i>hík-en-an</i>
TRANS	<i>hík-esaŋ</i>	<i>hík-en-esaŋ</i>
VOC	<i>hík-ó</i>	<i>hík-en-ó</i>

- feminine noun (*qīm* "woman"):

	SG	PL
NOM	<i>qīm-Ø</i>	<i>qīm-n-Ø</i>
GEN	<i>qīm-di</i>	<i>qīm-n-na</i>
DAT	<i>qīm-diŋa</i>	<i>qīm-n-naŋa</i>
BEN	<i>qīm-dita</i>	<i>qīm-n-nata</i>
ABL	<i>qīm-diŋal</i>	<i>qīm-n-naŋal</i>
ADES	<i>qīm-diŋta</i>	<i>qīm-n-naŋta</i>
LOC	---	---
PROS	<i>qīm-bes</i>	<i>qīm-n-bes</i>
INS	<i>qīm-as</i>	<i>qīm-n-as</i>
ABES	<i>qīm-an</i>	<i>qīm-n-an</i>
TRANS	<i>qīm-esaŋ</i>	<i>qīm-n-esaŋ</i>
VOC	<i>qīm-ó</i>	<i>qīm-n-ó</i>

- neuter (inanimate) noun (*doʔn* "knife"):

	SG	PL
NOM	<i>doʔn-Ø</i>	<i>dón-aŋ-Ø</i>
GEN	<i>dón-di</i>	<i>dón-aŋ-di</i>
DAT	<i>dón-diŋa</i>	<i>dón-aŋ-diŋa</i>

¹¹⁹ There is an alternative plural form *hoʔn*.

BEN	<i>dón-dita</i>	<i>dón-an-dita</i>
ABL	<i>dón-diŋal</i>	<i>dón-aŋ-diŋal</i>
ADES	<i>dón-diŋta</i>	<i>dón-aŋ-diŋta</i>
LOC	<i>dón-ka</i>	<i>dón-aŋ-ka</i>
PROS	<i>dón-bes</i>	<i>dón-aŋ-bes</i>
INS	<i>dón-as</i>	<i>dón-aŋ-as</i>
ABES	<i>dón-an</i>	<i>dón-aŋ-an</i>
TRANS	<i>dón-esan</i>	<i>dón-aŋ-esan</i>
VOC	---	---

4.1.1.3.1 Nominative

Many other treatments of Ket grammar refer to this morphologically unmarked member of the Ket case system as "absolutive", which is unobjectionable, but here avoided, in order to underline the non-ergative, nominative, alignment of Ket syntax.

The Ket nominative codes the sentential subject, as well as the sentential object (the patient of transitive clauses), or, in symbolic terms:

A S
 O

In sentences with two actants, A and O, A will always precede O, thus disambiguating these fundamental semantic roles by means of word order alone.

The nominative is always morphologically unmarked: -Ø.

Its functions are discussed in the following sections.

4.1.1.3.1.1 Subject

(12)

deʔŋ assé-n d[u]ʰ-cjʷ-aŋ/[k]ʰ-oʰ-[i]ʰ²-bed-in.
 person\PL animal-PL 3-kill-3PL/D-Th-Pst-make-PL
 People hunted game.

(13)

āb ōb d[u]ʰ-iŋqusʷ-(s)-i/bed.
 IGEN father 3-house-(Sep)-make
 My father builds a house.

Subject and predicate noun in the nominative:

(14)

túde keʔd āb ōb.
 this person NGEN father
 This man is my father.

4.1.1.3.1.2 Object

(15)

tīb āb hōη [du]⁸-tob⁷-u/[k]⁶-[i]²-ted
 dog NGEN hand 3-grab-3n/D-Pst-beat
 The dog bit my hand.

(16)

dīl [du]⁸-kīl⁷-d⁵-o⁴-[i]²-ted tīb
 boy 3-beat-D-Th-Pst-beat dog
 The boy beat up the dog.

(17)

bū qóbet [du]⁸-sidaq⁷-o⁴-[i]²-bed túde lóbed
 he thoroughly 3-study-Th-Pst-make this work
 He has studied this work thoroughly.

Nouns that denote periods or points of time may be used in the nominative form to function as adverbials of time:

(18)

kíne sīi bo/k⁶-a⁴-tn škóla-diηa
 this year 3SG\Th-go school-ALL
 This year he will go to school.

(19)

qónoks deʔη ássano báη-diηa oη/[k]⁶-o⁴-[i]²-[t]n
 morning person\PL hunt place-DAT 3PL/D-Th-Pst-go
 In the morning, people went hunting.

(20)

síkít ìde òt dōη/k⁶-o⁴-[i]²-[t]n híb-as és-diηa.
 last spring we 1PL/D-Th-Pst-go son-INS forest-DAT
 Last spring I went with my son into the forest.

In this function, the use of the nominative competes with that of the locative, which is also frequently used for temporal reference (cf. 4.1.1.3.7).

4.1.1.3.2 Genitive

The genitive affix is *-da* for singular nouns of class *m*, and *-d(i)* for singular nouns of classes *f* and *n*, as well as for plural inanimates (class *n*). The alternation *-di/-d* is largely unpredictable, obviously both variants may be interchanged freely (the shorter form may indicate a more intimate association of the genitive/possessor and its head/possessum, and it is routinely found before postpositions, cf. 4.1.4.4). After voiceless stem-final consonants the initial /d/ of the genitive affix is assimilated to /t/, which is not recognized in our transcription. For plural animates (*m* and *f*) the suffix is *-na*. The genitive marks an adnominal possessor, both concrete and metaphorical, including part-whole-relationships:

(21)

ám-di *d̄ɪl*
 mother-GENf child
 mother's child

(22)

q̄ɪb-da *bìscb*
 grandfather-GENm sibling
 grandfather's brother/sister

In nouns denoting humans of both sexes, the genitive affix signals sex:

(23)

āb *bìscb*
 IGEN sibling
 My brother/sister

(24)

āb *bìscb -da* *do'n*
 IGEN sibling-GENm knife
 My brother's knife

(25)

āb *bìscb -di* *do'n*
 IGEN sibling-GENf knife
 My sister's knife

The historical identity of the genitive suffixes and the possessive clitics (4.1.1.4) is underlined by the fact that both may not co-occur in a single phrase:

**ób-da da-hīb* ---> *ób-da hīb*

Genitive forms may be turned into declinable nouns by the ubiquitous nominalizer -*s/-sin* (cf. 4.1.2.1).

4.1.1.3.3 Dative

The dative suffix is *-díŋa* (*f, n*), *-daŋa* (*m*); assimilations of initial /*d*/ as with the genitive. The dative denotes:

- the recipient of an object given or a message told,
- the direction of a movement,
- a point in time, until which a process/action takes place; for this function, the point in time is often "nominalized" by the postposed noun *baʔŋ* "place", which receives the dative suffix:

(26)

qókdi deʔŋ ássano báŋ-díŋa oŋ/[k]⁶-a⁴-tn
 autumn person\PL hunting place-DATn 3PL/D-Th-go
 In autumn the people go hunting.

(27)

ísqo keʔd qàtob-díŋa d[u]⁸-ik⁷-(s)-i/bes
 fishing person shore-DATn 3-direction-(Sep)-move
 The fisherman goes to the shore.

(28)

bū da-íkus-díŋa o/k⁶-a⁴-tn
 he 3SGm-house-DATn 3SG/D-Th-go
 He goes to his house.

(29)

qónoks báŋ-díŋa d[u]⁸-o⁴-[i]²-dam-in
 morning place-DATn 3-Th-Pst-bark-PL
 They barked until the morning.

(30)

bū d-biseb -daŋa īs da⁸-taŋ⁷-u/k⁶-o⁴-[i]²-bcd
 she 3SG-brother-DATm fish 3f-drag-3f/D-Th-Pst-make
 She brought fish to her brother.

(31)

bū áb-aŋa d[u]⁸-ik⁷-in²-ɛj sēl qà
 he I-DAT 3-say-Pst-R bad word
 He insulted me.

4.1.1.3.4 Benefactive

The benefactive suffix is *-dita* (*f* and *n*), *-data* (*m*), *-nata* (PL), with the usual assimilations (see genitive).

It denotes the typically animate or human beneficiary of an action:

(32)

qīm də⁸-b³-bed íleŋ īs dʔlked-nata
 woman 3f-3n-make food fish children-BENpl
 The woman prepares food for the children.

(33)

ánoks ād [di]⁸-hado⁷-ba/k⁶-a⁴-qan íkus qó-data
 tomorrow I 1-build-1/D-Th-begin house uncle-BENm
 Tomorrow I'm going to build a house for (my) uncle.

With nouns denoting inanimate things, its function may be described as designative:

(34)

kíde eʔl úl-dita
 this pitcher water-BENn
 This pitcher is for water.

The benefactive is also used to express an object, *about* which a story is told, a song is sung and the like, or a person or object, which is thought of:

(35)

bū áb-aŋa d[u]⁸-iden⁷-o⁴-[i]l²-bed bín-du-da dʔq-dita
 he 1-DAT 3-write-Th-Pst-make self-3m-GENm life-BENn
 He wrote to me about his life.

(36)

ɔt di⁸-bil-in ɔt-na ɛŋqoŋ-dita
 we 1-sing-PL we-GENpl village-BENn
 We are singing about our village.

(37)

bū da-qím-dita d[u]⁸-an⁷-(s)-i/bed
 he 3SGm-wife-BENf 3-think-(Sep)-make
 He thinks of his wife.

In these functions, the benefactive case may be replaced by the adessive case:

(38)

bū da-qím-diŋta d[u]⁸-an⁷-(s)-i/bed
 he 3SGm-wife-ADESSf 3-think-(Sep)-make
 He thinks of his wife.

4.1.1.3.5 Ablative

The ablative suffix is *-diŋal* (*f, n*), *-daŋal* (*m*), *-naŋal* (*pl*); assimilations as with the genitive. It denotes the spatial source, or temporal starting point of an action.

(39)

ād d[i]⁸-ik⁷-(s)-i/bes híssij-diŋal
 I 1-direction-(Sep)-move forest-ABLn
 I am coming from the forest

(40)

qóndel-diŋal bū-ŋ d[u]-[ik]⁷-in²-bes-in pakulixa-diŋa
 Q.-ABLn he-PL 3-direction-Pst-move-PL P.-DATn
 They came from Qondel to Pakulixa.

(41)

qónoks-diŋal ūs údbej u/k⁶-o⁴-[i]n²-[t]n
 morning-ABL warm south.wind 3f-Th-Pst-go
 A warm south wind has been blowing since the morning.

(42)

ób-daŋal bŭ-ŋ [du]⁸-sidaq-o⁴-[i]l²-da-n
 father-ABLm he-PL 3-learn-Th-Pst-R-PL
 They learned (it) from father.

Other uses of the ablative are to denote the material an object is made from, or, quite frequently, the basis of a comparison:

(43)

íl-daŋal deʔŋ dǎlti-n du⁸-b³-beq-in¹²⁰
 aspen-ABLm person\PL boat-PL 3-3n-make-PL
 The people make boats from aspen wood.

(44)

kíde íkus qá-la qáde íkus-diŋal
 this house big-COMP that house-ABLn
 This house is bigger than that house.

4.1.1.3.6 Adessive

The adessive suffix, *-diŋta* (m), *-daŋta* (f, n), *-naŋta* (pl) is subject to the same assimilations as the genitive.

It denotes the location, where an action or process takes place, or an object is located. It is used with both animate and inanimate nouns, but with the latter, the locative (cf. 4.1.1.3.7) is more frequent to denote this function. Unlike the other local cases, it is not *normally* used to denote location or extension in time (for which the locative is preferred), but exceptions may be found:

(45)

āđ òbǐlda híssij-diŋta d[i]⁸-at[a]⁷-u/k⁶-o⁴-[i]l-bed bólba-n
 I was forest-ADESSn 1-gather-3n/D-Th-Pst-make mushroom-PL
 I was in the forest, gathering mushrooms.

(46)

qódes bú-da bǐseb-daŋta d[u]⁸-in²-[q]o kōn
 yesterday he-GENm brother-ADESSm 3-Pst-die horse
 Yesterday a horse died at his brother's place.

¹²⁰ Phonetically [dúbbetin].

(47)

āđ poká kiséŋ qà íkus-díŋta d[i]⁸-ses⁷-ta dǎlkat-naŋta
 I meanwhile here big house-ADESSn 1-sit-R child\PL-ADESSpl
 Meanwhile, I was sitting here in the big house, with the boys.

The adessive may also denote the possessor in "have"-constructions; this usage may in fact be a structural copy from Russian:

(48)

bíseb-daŋta sèl ón-aŋ
 brother-ADESSm reindeer\PL many-PL
 Brother has many reindeer.

(49)

túde kús-díŋta mámul kít-tu-(k)am
 this cow-ADESSn milk fat-DER-PRn
 This cow has fat milk.

Generally, the adessive is not used for temporal reference, though some examples exist:

(50)

āđ d[i]-o⁴-[i]l-daŋ kiséŋ qo⁷k qíb-díŋta
 I 1-Th-Pst-live here one month-ADESSn
 I lived here for a month.

4.1.1.3.7 Locative

The locative suffix is *-ka*. This case form is restricted to nouns with inanimate referents, and denotes the location, at which an item is located or a process is taking place; unlike the adessive, it is generally used to convey location in time as well.

(51)

ássel lés-ka d[u]⁸-u/k⁶-a⁴-daŋ
 animal forest-LOC 3-3f/D-Th-live
 The wild animal lives in the forest.

(52)

kíde sés-ka úseŋ īs
 here river-LOC exist fish
 There are fish in this river.

With semantically suitable nouns, the locative may encode instruments:

(53)

bɔ̃ŋ-ka tɔ̃n d[u]⁸-əŋ/[k]⁶-(s)-ej
 net-LOC perch\PL 3-3PL/D-(Sep)-catch
 He catches perch in/with the net.

The temporal function is not only found with nouns, but also with finite verbs:

(54)

qúŋ-ka d[u]⁸-[ik]⁷-in²-bes-in-ka taʔb
 tent\PL-LOC 3-direction-Pst-move-PL-LOC dog\PL
[du]⁸-duk⁷-əŋ/k⁶-o⁴-qon
 3-bark-3PL/D-Th-begin\Pst
 When they approached the tents, the dogs began to bark.

4.1.1.3.8 Prosecutive

The prosecutive case suffix is *-bes*. It denotes objects, *through which*, or *along which* an action/process is proceeding. Among its more metaphorical uses is that to denote languages spoken, usually with the plural of nouns for an ethnic group:

(55)

bū-ŋ qót-bes oŋ/k⁶-o⁴-[i]n²-[t]n
 he-PL way-PROS 3PL/D-Th-Pst-go
 They went along the way.

(56)

bū lés-bes o/k⁶-a⁴-tn
 he forest-PROS 3SG/D-Th-go
 He is walking through the forest.

(57)

ɔ̃t òstik-an-bes d[i]⁸-asqan⁷-sa-n
 we Ostyak-PL-PROS 1-speak-R-PL
 We speak Ket.

The prosecutive suffix may also be attached to a finite verb form, to produce a kind of converb of simultaneity:

(58)

bū da⁸-lobed⁷-o⁴-[i]l²-bed da⁸-ses⁷-ta-bes
 she 3f-work-Th-Pst-make 3f-sit-R-PROS
 She worked sitting.

4.1.1.3.9 Instrumental

The instrumental suffix is *-as*. After vowel stems, sometimes an (anaptyctic) /k/ ([ɣ]) may be heard (but it is equally common to reduce the suffix to its consonant: *kɔ̃jka-s* "with the head"). It may be used with animate nouns, in which case its function is that of a *comitative*; its more clearly *instrumental* functions are, as might be expected, found mostly with inanimate nouns:

(59)

ād bīn-di-b dēs-as [di]⁸-t⁵-o⁴-[i]l²-uŋ
 I self-1-GEN eye-INS 1-D-Th-Pst-see
 I saw it with my own eyes.

(60)

dīlkat na-qīma-(k)as lēs-diŋa oŋ/[k]⁶-o⁴-[i]n²-[t]n
 child\PL pl-grandmother-INS forest-ADESS 3PL/D-Th-Pst-go
 The children are walking together with their grandmother.

(61)

dīlkat āslen-eŋ-as oŋ/[k]⁶-o⁴-[i]n²-[t]n
 child\PL boat-PL-INS 3PL/D-Th-Pst-go
 The children are going by boat.

One of the more peculiar uses of the instrumental is to denote the agent of a semantically passive verb:

(62)

kīde doʔn bin⁷-b³-a¹-bed ób-as
 this knife self-3n-RES-make father-INS
 This knife has been made by father.

4.1.1.3.10 Abessive

The abessive suffix is *-an* (no variants). With some nouns ending in consonants, the addition of the abessive suffix geminates the final consonant, cf.:

<i>ūl</i> "water"	:	<i>ūl-lan</i>	"without water"
<i>qīm</i> "woman"	:	<i>qīm-(m)an</i>	"without (a) woman"

Historically, this is due to the fact that this suffix originally contained an initial consonant (Proto-Yen. **p*-, cf. Yugh *-fan/-pan*, Kott. *-fun/-phun*). However, this gemination does not always occur (it is lacking altogether with some nouns, and occurs sporadically only with others). After vowel stems, as with the instrumental, an anaptyctic /*k*/ ([*ɣ*]) is sometimes observed.

Functionally, this case is the opposite of the instrumental, both in the former's comitative and more narrowly instrumental functions:

(63)

dáikát ám-an d[u]-o⁴-[i]l²-dín
 child\PL mother-ABESS 3-Th-Pst-live\PL
 The children lived without (their) mother.

(64)

ássano keʔd bókdom-an ákus du⁸-b³-bed?
 hunting person gun-ABESS what 3-3n-make
 What is the hunter doing without (his) gun?

Unlike the instrumental, the abessive may also be used adnominally, cf.:

(65)

qím-(m)an keʔd
 woman-ABESS man
 a man without (a) woman/wife, a bachelor

(66)

**qím-as keʔd*
 woman-INS man
 *a man with (a) woman/wife, a married man

This adjective-like behaviour of the abessive extends to its ability to be nominalized with the suffix *-s/-sin* (4.1.2.1) and to accept predicative suffixes (4.4.9.3).

4.1.1.3.11 Translative

This case form occupies a somewhat marginal position in the case system of Ket: its suffix *-esaŋ* occurs relatively rarely on content nouns, where it indicates an object as the "goal" of a verbal action (with verbs of procuring, producing, becoming, transforming and the like). On the other hand, it is quite frequent with verbal infinitives where it serves to form subordinate clauses with purposive

meaning ("in order to V"), or the complement of verbs of wishing, wanting etc. It may also encode the "role" of a human being:

(67)

dəŋ/k⁶-o⁴-[t]n bóŋba-n-esaŋ
 1PL/D-Th-go mushroom-PL-TRANS
 We go for mushrooms.

(68)

úl-esaŋ bo/k⁶-o⁴-[i]n²-[t]n
 water-TRANS 3SG/D-Th-Pst-go
 He went for water.

(69)

da⁸-sijaq nán-esaŋ
 3SGf-ask bread-TRANS
 She asks for bread.

(70)

bú-da qà bìseb sídakát-s-esaŋ [du]⁸-si⁷-(k)-a/t⁶-o⁴-[i]n²-oq
 he-GEN big brother st.-N-TRANS 3-become-(k)-3SG/D-Th-Pst-R
 His elder brother has already become a student.

(71)

qòj kéd-esaŋ da-qoʔj
 bear person-TRANS 3SG-wish
 The bear wants to become a human.

(72)

bú da⁸-t⁵-o⁴-[i]l²-a¹-bak ílcŋ-esaŋ
 she 3SGf-D-Th-Pst-3-want eat-TRANS
 She wanted to eat.

(73)

dóktor-esaŋ da⁸-lobed⁷-a⁴-bed
 doctor-TRANS 3SGf-work-Th-make
 She works as a doctor.

On *ésaŋ* as a (pseudo-) postposition cf. 4.1.4.4.18

4.1.1.3.12 Vocative

Only animate nouns have a vocative; feminine nouns use *-á/-ǵ*, masculine nouns use *-ó*. Some treatments of Ket grammar describe the difference between the two variants of the feminine vocative as one of relative distance, with *-á* being used as a proximal vocative, and *-ǵ* as a distal form. However, this differentiation could not be verified by this author among present-day Ket speakers¹²¹.

All vocative suffixes disrupt the prosodic structure of the paradigm by attracting a strong (dynamic) accent:

hib-ó hey, son!
hun-á hey, daughter!

Functionally, it is used to call, or get the attention from, a person or animal:

(74)

sel-ó, *ákus-diŋta* *ku⁸-den?*
 reindeer-VOC what-ADESSn 2-weep
 Reindeer, why are you weeping?

(75)

beb-ǵ, *b-ób-da* *qóqŋ* *ík⁷-in²-et*
 aunt-VOC 1-father-GENm harness bring-Pst-R
 Aunt, bring me my father's harness!

4.1.1.3.13 Floating case

A peculiarity of the four noun cases, which are formed on the basis of the genitive (dative, benefactive, ablative, adessive) is the fact that their suffixes may occur without a noun or pronoun they are attached to.

These "headless" occurrences of the case suffixes are restricted to instances of anaphora, where a 3rd person pronoun may be restituted as the head of the case marker, which is, however, deleted from the surface. In all cases, this deleted pronoun refers to an entity/person mentioned earlier in the discourse context. Retrievability of the deleted head noun is further enhanced by the fact that these case suffixes differentiate class and number:

(76)

suul *Ø-díta* *d[u]⁸-b³-il²-i/bed,* *ásle-ŋ* *Ø-díta* *bōn* *d[u]⁸-b³-il²-i/bed*
 sledge Ø-BENf 3-3n-Pst-make ski-PL Ø-BENf NEG 3-3n-Pst-make
 He made a sledge for her, he didn't make skis for her.

¹²¹ However, Vajda (p.c.) informs me that some of his informants accepted the distinction, though it had an "archaic ring" for them.

(77)

baat Ø-*náta* *túde* *d[u]ʃ⁸-kaʃ⁷-bo/[k]ʃ⁶-qɔs*
 old.man Ø-BENpl this 3-take-3SG/D-R
 The old man takes it for them.

(78)

ōks, əɔn Ø-*dáŋta* *ón-aŋ*
 tree branch Ø-ADESSm many-PL
 The tree has many branches (lit.: The tree, branches on it are many).

(79)

ótŋ Ø-*dáŋa* *dəŋ/k⁶-á⁴-tn*
 we Ø-DATf 1PL/D-Th-go
 We are going to her.

4.1.1.3.14 Predicative use of case forms

Some case forms (most typically the locative, but also the adessive and the abessive) may be used as a predicate, in which case predicative suffixes (4.4.9.3) are added.

(80)

íkus-ka-du
 house-LOC-PR3m
 He is in the house.

(81)

íkus-ka-da
 house-LOC-PR3f
 She is in the house.

(82)

ād ób-daŋta-di
 I father-ADESS-PR1SG
 I am with father.

(83)

ūk qím-an-ku
 you wife-ABESS-PR2SG
 You are a bachelor (= without a wife).

4.1.1.4 Possession

Possession may be marked by means of a set of *prefixes* (or rather [pro-] clitics, the only such affixes outside of the verbal paradigm), directly attached to the possessed noun.

The possessive clitics are:

	SG	PL
1	<i>b-</i>	<i>na-</i>
2	<i>k-</i>	<i>na-</i>
3m	<i>da-</i>	<i>na-</i>
3f	<i>d-</i>	<i>na-</i>
3n	<i>d-</i>	<i>d-</i>

The appropriate contexts trigger voice assimilation, cf.

<i>d-hiʔb</i>	[thuʔp]	"her son"
<i>b-hiʔb</i>	[phuʔp]	"my son"

Possessive clitics stand outside the scope of the phonological word, with the consequence that they, if syllabic, cliticize to the preceding discourse element, do not participate in the formation of a disyllabic contour (which, for non-monosyllables, then begins only after the possessive prefix) and do not form one together with a monosyllabic base. The inherent tone of a monosyllabic noun is more often than not clearly preserved, even with a prefixed syllabic possessive marker.

The possessive clitics are ostensibly derived from the genitive (possessive) forms of the respective personal pronouns (cf. 4.2.1; the genitive of the 3rd SG personal pronoun of class *f* alternates between the forms *-d* and *-di*; some authors have given *-di* as an alternative surface form for the 3f possessive prefix. This, however, could not be verified in the data underlying this grammar). They owe their independent existence to proclisis and reanalysis; in possessive syntagms, it is possible to describe the genitive affix (*-da* etc.) as a *linker* connecting an attributive possessor and a head; this linker cliticizes:

- a) to the preceding possessor noun or pronoun:

(84)

bú-da doʔn
 he-GENm knife
 His knife

(85)

b̄iseb-da doʔn
 sibling-GENm knife
 Brother's knife

or

b) to the following possessum, *if* an overt expression of a possessor is absent:

(86)

da-doʔn
 3SGm-knife
 His knife

The proclitic nature of the possessive prefixes is further stressed by the fact that they are the only prefixed morphemes found outside of the verbal system of the language and by their tonal behaviour: they do not - when syllabic - produce a disyllabic contour together with the head noun, but the inherent tone of the latter remains intact. In short, they fall outside the scope of the *phonological word*.

There is no difference in Ket between alienable and inalienable possession.

Forms with possessive clitics can be used interchangeably with the full genitive constructions; generally, the possessive clitics are used relatively rarely. However, with kinship terms they are fairly common, e.g.

possessive	genitive construction	
<i>b-ōb</i>	<i>āb ōb</i>	"my father"
<i>da-huʔn</i>	<i>búda huʔn</i>	"his daughter"
<i>na-híʔb</i>	<i>búŋna híʔb</i>	"their son"

For inanimate possessa the prefix strategy is not very common, but it may occasionally occur and is generally accepted. More often, in these cases the genitive strategy is used. Though, as in some of the examples given above, the occurrence of a possessive prefix may produce an initial consonant cluster, this is more often than not avoided by using the genitive strategy. Thus, to say "my, your gun" one will always say *āb bókdom*, *ūk bókdom*, instead of (***b-bókdom* > **bókdom*, which would not signal the category of possession in a discernable way, or **kbókdom*, which would contain a non-permissible initial cluster).

If the possessor is at the same time the sentential subject, the use of the possessive clitics is possible; more general, however, is the use of the genitive of the emphatic/reflexive pronoun *bīn* (cf. 4.2.7).

4.1.2 Derivation and compounding of substantive nouns

Suffixal derivation is untypical for Ket. However, a small number of derivative morphemes may be distinguished, the most important of which is the frequent

nominalizer *-s*, which turns many parts of speech, which may be used attributively, into substantive nouns (4.1.2.1). There are only a few other morphological elements, which may be described as derivators.

The dominating noun-forming technique of Ket is *compounding*. In fact, since the overwhelming majority of polysyllabic nouns seem to consist of at least two discernable lexical elements, it is probably safe to assume that in fact *all* such nouns are in fact historically compounds, although some of them may no longer be sufficiently transparent.

Most compound nouns consist of a *determining* and a *determined* ("head") element, always found in that linear order (i.e. they are "*tatpuruṣa*"-compounds, to use a term from the Indo-Europeanist tradition). These may further be subdivided into compounds whose are separated by a - petrified - genitive marker (4.1.2.3.2) and those lacking such a linker (4.1.2.3.1). The presence or absence of this marker may be indicative of the relative age of the formation, or of the compound's "degree of coherence", with genitive-linked compounds being possibly "younger" or "less coherent" than those of the other group. A few instances, where the same lexical elements occur in compounds with and without this linker, may be further indications for the correctness of this assumption.

Another differentiating behaviour of compounds is found in the domain of plural formation, where some compounds routinely pluralize *both* elements (which may be indicative of a lower degree of coherence) while others pluralize only one element, usually the head (4.1.2.3.1.1, 4.1.2.3.2.1).

In the following paragraphs, we will illustrate, apart from the points mentioned above, nominal compounds in terms of the parts-of-speech which may occur as determining elements in Ket *tatpuruṣas*, "heavy" determiners and heads, i.e. ones consisting of more than one element (4.1.2.3.4), and a few frequent determiners, which show a certain degree of paradigmaticity, which makes them resemble "prefixes" (the *sexus*-differentiating nouns, 4.1.2.3.3.1).

A special discussion is required by a moderately extensive set of very frequent compound heads, which have sometimes been described as "suffixes" in the Ketological literature. More recently, the notion of "semisuffixes" has been introduced into the discussion, indicating that these elements remain - on the one hand - identifiable with independently occurring content nouns of the language, but - on the other hand - have sometimes undergone some surface-changing erosive processes, which may in some instances even obscure their origin. However, since the origin of these elements is generally - if not always for speakers of the language, but certainly for the linguist - clearly determinable as content nouns, we describe "semi-suffixation" as just another instance of noun composition (4.1.2.3.3.2).

Ket thus presents itself as a language, where the grammaticalization of content nouns to true deriving affixes has so far - with very few exceptions - reached a stage where the lexical origin of some affix-like elements is mostly still clear. A special group of these "semisuffixes" - diminutive and singulative forming elements - has to be singled out, which may be regarded as closest to "true" suffixes.

4.1.2.1 The Nominalizer -s

The suffix -s, PL -*sin* is the most frequent nominalizing device found in Ket. In some treatments of Ket grammar, the affix -s/-*sin* is regarded as either a formative of adjectives, or a predicative suffix (alongside with those discussed in 4.4.9.3). However, it is rather straightforwardly analyzable as a productive tool for forming nouns from words belonging to other parts of speech. Thus, it may form nouns from:

a) adjectival roots

This is the default usage of -s:

<i>ēt</i>	"sharp"	<i>ēt-s</i>	"something sharp, a sharp one"
<i>kəʔn</i>	"bright"	<i>kəʔn-s</i>	"something bright, a bright one"

The very frequent occurrence of -s with adjectival roots gave rise to its misinterpretation as a formative of adjectives¹²². Properties and use of adjectives are discussed in 4.1.3.

b) inflected nouns and pronouns

Often, (pro)nouns in the Genitive or Abessive occur with this -s :

<i>ām</i>	"mother"		
Gen. <i>ám-di</i>	→	<i>ám-dí-s</i>	"mother's; which belongs to mother"
<i>ū(k)</i>	"you"		
Gen. <i>ūk</i>	→	<i>úk-is</i>	"yours; which belongs to you" ¹²³
<i>ánun</i>	"reason, sense"		
Abess. <i>ánun-an</i>	→	<i>ánun-an-s</i>	"s.o. without r., crazy person"
<i>qīm</i>	"wife"		
Abess. <i>qím-an</i>	→	<i>qím-an-s</i>	"s.o. without a wife, bachelor"

(87)

<i>túdc</i>	<i>bókdóm</i>	<i>úk-is?</i>
this gun	you.GEN-NM	
Is this gun yours?		

¹²² One reason for this is certainly the fact that language consultants routinely give the suffixed form when asked, in Russian, to give the semantic equivalent of an adjective; they will invariably answer with the nominalized form, since the "root" form can only be used attributively, and will consequently only be given in response to an appropriate stimulus. Thus, Werner (2002) lists all adjectives in their "citation form", i.e. with -s.

¹²³ The vowel /ɨ/ functions only as a connective device; here as elsewhere, its quality seems not to be predictable.

(88)

túde bókdóm bú-da-s
 this gun he-GENm-NM
 This gun is his.

(89)

túde quʔs bú-η-na-s
 this tent he-PL-GENpl-NM
 This tent is theirs.

(90)

túde hīk qīm-an-s
 this man wife-ABESS-NM
 This man is a bachelor

A nominalized locative form is:

kūb "front end"
 → LOC *kúb-ka*
 → *kúb-ka-s* "the one at the front end, the first"

c) a combination of adjective and noun

The further "nominalization" of a complex, which is already a full noun in its own right, conveys the notion of *possessing* the expressed entity as an attribute, i.e., in traditional terms, it forms a kind of *bahuvrīhi*-compound¹²⁴, cf.:

hoʔl "short", *būl* "leg"
 → *hól-aη búl-aη* "short legs"
 → *hólaηbulaη-s* "s.o./sth. with short legs"

qà "big", *kiʔt* "price"
 → *qákit-s* "sth, which is expensive"

c) the negative particle *bān*

bān "not" → *bān-s* "sth., which is not, does not exist"

d) verbal roots

Nominalized verbal roots show a semantic behaviour, which resembles the "ergative" pattern of alignment. With intransitive (one-argument) verbs, the resulting noun is interpreted as S (the single argument of the verb, or the subject),

¹²⁴ Cf. Werner 1998, 59 for more examples.

whereas with transitive verbs, it is most readily interpreted as its patient; if, however, the transitive verb contains a P⁷ incorporate coding its patient, again the subject-interpretation holds; while with transitive verbs the temporal reading of the resulting noun is usually past (whence such forms may be referred to as "past participles"), nouns derived from intransitive verb roots are ambiguous in respect to time-reference:

- intransitive verb roots

kī "to fly away" → *kī-s* "flying away, (a bird) which is flying away/has flown away"

dəʔq "to live" → *dəq-s* "someone who is/was alive"

- transitive verb roots

bèd "to do, make" → *bèd-s* "something which is done, made"

hàdo "to cut" → *hàdo-s* "something cut, hewn"

- transitive verb roots with patient incorporate

is⁷-qo "to fish, lit. to kill fish (*īs*)" → *ísqo-s* "fisherman, sb. who kills fish"

ídiŋ⁷-bed "to write (*ídiŋ* "script")" → *ídiŋbed-s* "a literate person, sb. who makes letters"

Cf., on the contrary, a complex transitive verb, where the incorporated element does not represent the patient, and, consequently, the derived noun represents the patient:

íl⁷-bed "to break (into small pieces, *íl* "small", i.e. "to make small")"

→ *ílbed-s* "sth. broken, which has been broken into pieces"

e) finite verb forms

Finite verb forms are rarely nominalized, but it does happen; the following two examples are, however, highly lexicalized, and it is probably safe to say that this technique is not as productive in contemporary Ket as it possibly used to be:

ókot-s "wanderer" ← *o/k⁶-á⁴-t[n]* "he is walking" + -s

ádeŋdub-s "bone-eater" (a disease) ← *ád-eŋ* "bone-PL" + *du⁸-b³-[a]* "he eats it" + -s

4.1.2.2 -ŋ

Some lexical items may contain this, no longer productive, derivator, which is historically identical with the pluralizer -Vŋ. Examples include:

áleŋ "trousers" (? < **al-* "half")
tíʔŋ "hoar-frost" (< *tīk* "snow")

4.1.2.3 Compounding

Compounding is by far the most productive word-forming technique in Ket. Compounds may be formed by direct juxtaposition of a head and a modifying element ("contact compounds", 4.1.2.3.1), or a linking element, identical with the genitive case suffix, may intervene between the two (4.1.2.3.2).

4.1.2.3.1 Contact compounds

"Contact compounds" are compounds which are formed by direct juxtaposition of two (or more) elements, i.e. without the use of a linker (i.e. the genitive morpheme, 4.1.1.3.2).

Ket nominal compounds usually consist of two elements, the first of which may be referred to as the *determiner* and the second one as the (semantic) "*head*". Most common is the compounding of a head with a determiner, which is itself a noun¹²⁵:

<i>ísal</i>	"fish soup"	← <i>īs</i> "fish" + <i>āl</i> "soup"
<i>kúbkul</i>	"moustache"	← <i>kūb</i> "front end" + <i>kūl</i> "beard"
<i>sélbul</i>	"reindeer's leg"	← <i>sèl</i> "reindeer" + <i>būl</i> "leg"
<i>mámul</i>	"milk"	← <i>maʔm</i> "breast" + <i>ūl</i> "water"

The determining noun may be a plural form:

kónil "sound of a squirrel" ← *koon* "squirrel-PL" + *iʔl* "song"

However, adjectival and verbal roots may also function as determiners in nominal compounds:

<i>kíboŋ</i>	"body, corpse"	← <i>kiʔ</i> "new" + <i>bōŋ</i> "dead person"
<i>qíked</i>	"merchant"	← <i>qī</i> "to sell" + <i>keʔd</i> "human"
<i>táŋsel</i>	"leading reindeer"	← <i>tàŋ</i> "to pull" + <i>sèl</i> "reindeer"

¹²⁵ Second (head-) elements of compounds often show signs of phonetic attrition, which mostly affects vocalism. The latter shows a variegated picture and is generally not predictable; the most commonly found of these changes (which may also occur in other cases, where a content morpheme ends up as the last element in a morphological chain, i.e. in verbal roots) are: *e* > *a*, *e* > *i*, *i* > *a*, *o* > *a*, *o* > *u*, *i* > *i*, *i* > *a*, *o* > *u*, *a* > *i*

4.1.2.3.1.1 Plural forms of contact compounds

Contact compounds display varying degrees of cohesiveness. All of them constitute phonological words, as evidenced by their prosodic structure, and case suffixes may only be added to the head constituent. However, pluralization strategies divide compounds into one group, which is apparently more coherent (possibly older, certainly more lexicalized), and another group, members of which may be regarded as less coherent, less lexicalized, and possibly younger. The first group (a) allows the plural suffix only to be added at the right margin (i.e. on the head)¹²⁶, whereas compounds of the second group (b) add plural suffixes to both constituents; however, other characteristics of the compound (i.e. prosody) remain intact:

a)

bátkub "promontory" (*bāt* "forehead" + *kūb* "end"), PL *bátkuun*
búltaq "toe" (*būl* "foot" + *təʔq* "finger"), PL *búltaq-in*
dónun "sheath of knife" (*doʔn* "knife" + *uʔn* "sheath"), PL *dónun-aŋ*
təkoltaq "ring finger" (*təkol* "ring"¹²⁷ + *təʔq* "finger"), PL *təkoltaq-in*

b)

ínkuk "eye of a needle" (*iʔn* "needle", *qūk* "hole"), PL *én-aŋ-quk-sin*
qímdıl "girl" (*qīm* "female", *dıl* "child"), PL *qím-n-dıl-kat*
qójbam "she-bear" (*qòj* "bear", *baam* "grandmother"), PL *qón-bam-aŋ*

This pattern is quite common, when the determining element is an adjectival root, since, in noun phrases, (some) adjectives agree with their heads in number (cf. 4.1.1.3.2):

qáked "old person" (*qà* "big" + *keʔd* "human"), PL *qéŋ-den*

4.1.2.3.2 Genitive-linked compounds

The second type of Ket nominal compounds is characterized by the presence of /d/ (which may assimilate to /t/) between both parts. This is most readily identifiable with the formant of the genitive (cf. 4.1.1.3.2). However, it has to be regarded as a *petrified* genitive formant, since in the (comparatively few) cases, in which the determining element of the compound is formally pluralized together with the head, it remains intact, rather than being replaced by a "true" plural genitive marker (s.b.). This type of compounds is less commonly found than contact compounds:

<i>baʔŋ</i> "earth"	+	<i>iʔl</i> "spirit"	→	<i>báŋ-d-il</i>	"earth spirit"
<i>békin</i> "hand"	+	<i>təqol</i> "ring"	→	<i>békin-t-təqol</i>	"bracelet"
<i>bəʔn</i> "duck"	+	<i>hīs</i> "tail"	→	<i>bón-d-is</i>	"duck-tail"
<i>daan</i> "grass"	+	<i>ūl</i> "handle"	→	<i>dán-d-ul</i>	"blade of grass" ¹²⁸

¹²⁶ Porotova 1990, 59, found this pattern with the vast majority (83%) of nominal compounds investigated by her.

¹²⁷ This noun is itself originally a compound involving "finger" : ← *təʔq* + *oʔl* "cover".

<i>dēs</i> "eye"	+	<i>seʔj</i> "pit"	→	<i>dēs-t-sej</i>	"eye-socket"
<i>qaʔj</i> "hill"	+	<i>hāt</i> "peak"	→	<i>qáj-t-at</i>	"summit"
<i>kóqta</i> "neck"	+	<i>siid</i> "strap"	→	<i>kóqta-d-siid</i>	"necklace"
<i>tii</i> "boat"	+	<i>koʔd</i> "back"	→	<i>tí-d-kod</i>	"stern"

The actual form of the genitive linker (*/d/* or */t/*) usually conforms to its phonetic surrounding (i.e. voiced in the neighbourhood of voiced consonants, voiceless in appropriate assimilatory contexts), but (unpredictable) exceptions do occur (see the preceding table).

4.1.2.3.2.1 Plural forms of genitive-linked compounds

Genitive-linked compounds generally form their plurals by pluralizing the head only, cf.:

SG		PL
<i>békin-t-təqol</i>	"bracelet"	<i>békin-t-təqol-aŋ</i>
<i>kúb-d-ol</i>	"muzzle"	<i>kúb-d-ol-aŋ</i>
<i>dēs-t-əd</i>	"eyebrow"	<i>dēs-t-əd-əŋ</i>
<i>qát-d-ol</i>	"lining (of coat)"	<i>qát-d-ol-eŋ</i>

However, a few exceptions exist, where both parts are pluralized; here, the "genitive linker" remains intact, rather than being replaced by the plural genitive marker, as is the case in non-compound word groups. Many compounds of this type actually show both types of pluralization (i.e. pleonastic and head-only):

<i>dēs</i>	+	<i>seʔj</i>	→	<i>dēs-t-sej</i>	PL: <i>dēs-t-seŋniŋ</i>
"eye"		"cavity"		"eye-socket"	or: <i>dēs-aŋ-d-seŋniŋ</i>
<i>dēs</i>	+	<i>íŋolt</i>	→	<i>dēs-t-iŋolt</i>	PL: <i>dēs-t-iŋolt-aŋ</i>
"eye"		"skin"		"eye-lid"	or: <i>dēs-aŋ-t-iŋolt-aŋ</i>
<i>kiʔs</i>	+	<i>àŋ</i>	→	<i>kís-d-aŋ</i>	PL: <i>kís-eŋ-d-aŋ</i>
"leg"		"rope"		"suspender"	
<i>qóbəd</i>	+	<i>aʔd</i>	→	<i>qóbəd-d-ad</i>	PL: <i>qóbəd-eŋ-d-ad-eŋ</i>
"back"		"bone"		"spine"	
<i>sēs</i>	+	<i>qōb</i>	→	<i>sés-t-qob</i>	PL: <i>sás-t-qoon</i>
"river"		"peak"		"spring, well"	

In a few cases, a genitive-linked compound may form its plural by pluralizing the head *or* by disintegrating the compound into its components and pluralizing both separately (this time the determining element receives a *plural genitive* marker);

¹²⁸ There is an exactly homonymous compound, formed with the head *ūl* "water": *dándul* "a decoction from boiled grass".

however, the resulting attributive complex remains *semantically* a compound (i.e. its meaning is not predictable from its elements), cf.:

əʔl "frog" + ool "cover" → ól-d-ol "shell, clam"
 PL: ól-d-ol-aŋ
 or: ótn-na ól-aŋ

Some compounds may be formed with or without a genitive linker, with no apparent difference in meaning:

dēs	+	ūl	→	dēs-ul	"tear"
"eye"		"water"	or:	dēs-t-ul	
doʔn	+	ūl	→	dón-ul	"handle of knife"
"knife"		"handle"	or:	dón-d-ul	
tīb	+	hòl	→	tíbol	"snout"
"dog"		"face"	or:	tíb-d-ol	

4.1.2.3.3 Frequent parts of compounds, or "semi-affixes"

4.1.2.3.3.1 Frequent determiners ("semi-prefixes")

A few lexical elements (originally nouns) occur frequently as determiners in attributive compounds and modify the meaning of the head in a mechanical and predictable way, thus giving the impression of "prefix"-like elements on their way to full grammaticalization. Most notably, two nouns (íʔk "male" and háŋ(ka) "female") serve to differentiate natural gender with names for living beings¹²⁹:

		male...	female...
dīt	"wood-grouse"	íkdit	háŋdit
beʔs	"hare"	íkbes	háŋbes
bəʔn	"duck"	íkəən	-
dīl	"child"	íkdił	_ ¹³⁰
kəən	"fox"	íkkəən	-
kōn	"horse"	íkkon	háŋkon
kuʔs	"bovine"	íkkus	_ ¹³¹
tíʔb	"dog"	íktib	háŋtib
qàj	"moose"	íqqaj	háŋqaj
qòj	"bear"	íqqoj	háŋqoj
qīt	"wolf"	íqqit	háŋqit

Interestingly, háŋa-s "female-NM" has been lexicalized to mean "female reindeer".

¹²⁹ The list gives only actually attested forms, though some lacking female formations may be possible, too.

¹³⁰ For "girl" the compound qímdīl is regularly used (qīm "woman").

¹³¹ Like in Russian (*korova*), English (*cow*), or German (*Kuh*), the female gender is taken as the default representative of the species.

Some, but not all, feminine compounds form their plural by pluralizing *both* constituents (s.a.), viz¹³² .:

<i>háŋdít</i> ,	PL	<i>háŋ-en-dekŋ</i>
<i>háŋqaj</i> ,	PL	<i>háŋ-en-qiin</i>
<i>háŋqoj</i> ,	PL	<i>háŋ-en-qon</i>

4.1.2.3.3.2 Frequent heads in compounds ("semi-suffixes")

The number of "semi-suffixes" is considerably higher. These are clearly heads of compounds, i.e. identifiable with independent nouns of the language, though sometimes this relationship may be at least partially obscured by a certain degree of phonetic attrition (and also by semantic bleaching, which may lead to new lexical items only remotely connected with the original semantics of the "head").

4.1.2.3.3.2.1 -aj "container"

< àj "sack", PL àjçŋ

In almost all cases the resulting compound denotes a container for the item represented by the determiner. One exception, where the determiner indicates the *material* of the container, is:

bīt "loon" → *bítaj* "sack made from the skin of the loon"

Regular examples:

<i>dàq</i>	"eagle (myth.)"	<i>dáqaj</i>	"eagle's nest"
<i>dās</i>	"urine"	<i>dósaj</i>	"bladder"
<i>doʔŋ</i>	"pus"	<i>dóŋaj</i>	"furuncle"
<i>dórob</i>	"shot (for gun)"	<i>dórobaj</i>	"pouch for shot"
<i>kīd</i>	"fat"	<i>kīdaj</i>	"sack for fat"
<i>maʔm</i>	"breast"	<i>mámaj</i>	"udder"
<i>naʔn</i>	"bread"	<i>nánaj</i>	"sack for bread"
<i>īs</i>	"fish"	<i>ísaj</i>	"sack for fish"
<i>óltan</i>	"testicle"	<i>óltan-d-aj</i> ¹³³	"scrotum"
<i>qámn</i>	"arrows"	<i>qámnaj</i>	"quiver"
<i>qólan</i>	"ashes"	<i>qólnaj</i>	"a.k.o. hot-water bottle"
<i>saʔl</i>	"tobacco"	<i>sálaj</i>	"pouch for tobacco"
<i>saʔq</i>	"squirrel"	<i>sáqaj</i>	"squirrel's nest"
<i>ūl</i>	"water"	<i>úlaj</i>	"blister"

¹³² Maksunova 2001, 97, gives the plural of *háŋkon* as *háŋ-en-kon* for her native Central Ket.

¹³³ This compound contains a genitive-linker, s.a..

4.1.2.3.3.2.2 *-(al/el)-kit* diminutive

? < *keʔd* "human"

It is not entirely clear, how this element acquired the force of a diminutive, and thus the etymology may not necessarily be correct. Plural forms of these compounds do not use the regular plural of *keʔd* (*deʔη*); they are rather pluralized with *-Vn* or the head element is replaced by **kət*, which is independently attested with the meaning "children (of one mother)". The final dental does not rhotacize, whence it is - despite the putative connection with *keʔd* - written here with */t/*.

This "semisuffix", where it is clearly understandable as diminutive, has acquired a fairly advanced degree of grammaticalization. It is sometimes preceded by the element *-al/-el-*, the origin of which is unclear, though this may be an earlier marker of diminutives in its own right.

There are also cases, in which the determining element is etymologically obscure, and the compound remains lexically isolated, if at least partially transparent.

Examples (simple diminutives are glossed by "DIM")¹³⁴:

<i>ássel</i>	"animal"	<i>ásselkit</i> ¹³⁵	DIM ¹³⁶
<i>baat</i>	"old man, bear"	<i>bátelkit</i>	DIM
<i>beʔl</i>	"dissolute"	<i>bélkit</i>	"dissolute man, womanizer"
<i>beʔs</i>	"hare"	<i>béskit</i>	DIM
<i>*bil-</i>	"?"	<i>bílkit</i>	"ide"
<i>bəʔn</i>	"duck"	<i>bónkit</i>	DIM
<i>bótn</i>	"a k.o. salmon"	<i>bótelkit</i>	DIM
<i>*dəl-</i>	"?"	<i>dólkit</i>	"willow tree"
<i>dīn</i>	"spruce"	<i>dínkit</i> ¹³⁷	DIM
<i>əd</i>	"sable"	<i>édkit</i>	DIM
<i>háŋ</i>	"female"	<i>háŋelkit</i>	"fem. dog-DIM"
<i>hòqol</i>	"teal"	<i>hóqolkit</i>	DIM
<i>huʔn</i>	"daughter"	<i>húnkit</i>	DIM
<i>*həl-</i>	"?"	<i>hólkit</i>	"very small fish"
<i>kùn</i>	"wolverine"	<i>kúnkit</i>	DIM
<i>*kəəŋ</i>	"fox" ¹³⁸	<i>kónkit</i>	DIM
<i>lūn</i>	"grayling"	<i>lúnkit</i>	DIM

¹³⁴ Contrary to Werner (1998, 54), we keep apart clear cases, where the "head" straightforwardly denotes human beings (cf. *dókid*, PL *dójdeŋ* "Nenets", *óskid*, PL *ósdeŋ* "s.o. who rows a boat", etc.). The list does, however, contain a few instances of this kind, where at least the formal connection with *keʔd* is broken.

¹³⁵ PL in SK *ásselkit-n*, in CK *asse-n-kət*.

¹³⁶ With names for animals, the DIM reading always includes a "young" individual of the respective species.

¹³⁷ PL *dínkit-n*, but also *dín-kət*.

¹³⁸ Not attested in Ket, cf. Yugh *kóxín* "fox"; the Yugh diminutive form (otherwise identical with the Ket one), pluralizes as *kóxín-kat*.

<i>ōk</i>	"sterlet"	<i>ókalkit</i>	DIM
<i>qàj</i>	"moose"	<i>qájalkit</i>	DIM
<i>qà</i>	"vulture"	<i>qáηkit</i>	DIM
<i>qāq</i>	"dace"	<i>qáqalkit</i>	DIM
<i>qud</i>	"pike"	<i>qudalkit</i>	DIM
<i>saʔl</i>	"crucian "	<i>sáلكit</i>	DIM
<i>sèl</i>	"reindeer"	<i>séلكit</i>	DIM
<i>suʔl</i>	"Sib. white salmon"	<i>súلكit</i>	DIM
<i>*sān-</i>	"rowan" ¹³⁹	<i>sónkit</i> ¹⁴⁰	DIM
<i>tótal</i>	"whitefish"	<i>tótalkit</i>	DIM
<i>əʔl</i>	"frog"	<i>ólkit</i>	DIM

4.1.2.3.3.2.3 *-has* "step-"

< *pas

This element is found with some kinship terms, where it conveys the notion of non-consanguineal relationship. It geminates the final consonant of its determiner, which leads, in the cases of "father" and "son" (since devoicing preceded assimilation/gemination here), to the otherwise non-existent *phonetic* articulation of a geminate [p:]. We will, however, simply write <-bh-> to signal this (cf. 3.4.3)):

<i>ām</i>	"mother"	<i>ámmas</i>	"stepmother"
<i>híʔb</i>	"son"	<i>híbhas</i>	"stepson"
<i>huʔn</i>	"daughter"	<i>húnnas</i>	"stepdaughter"
<i>ōb</i>	"father"	<i>óbhas</i>	"stepfather"

4.1.2.3.3.2.4 *-ad* "bone"

< aʔd "bone".

This is found in names for "bony" body-parts:

<i>kiʔl</i>	"thigh"	<i>kílad</i>	"hip, thigh"
<i>*kok-</i>	"shin" (?)	<i>kókad</i>	"shin-bone"
<i>kəʔl</i>	"bent, crooked"	<i>kólad</i>	"throat"
<i>*laʔη</i>	"hand"	<i>láηad</i>	"hand"
<i>*qol</i> ¹⁴¹	"side"	<i>qóled</i>	"check"

¹³⁹ As in *sónoks* "rowan-tree".

¹⁴⁰ The PL form of this compound is *sónaq*, i.e. the PL head is the regular PL form of *ōks* "tree", itself a frequent head in compounds.

¹⁴¹ Cf. *qóleb* "half, side"

*qəʔb	"back" (?)	qóbed	"back-bone"
uul	"flat"	úlad	"rib"

4.1.2.3.3.2.5 -dis "small round object"

< dēs "eye"

This is often used metaphorically for small round objects, drops of liquid, etc. For nouns denoting uncountables, it may be described as a singulative suffix:

áηel	"small chip"	áηeldis	"grain of dust"
*bal	"hail" (?)	báldis	"grain of hail"
daan	"grass"	dándis	"blade of grass" (!)
hónaη	"sand"	hónaηdis	"grain of sand"
*oη	"caviar"	óηdis	"(single) fish-egg"
sūl	"blood"	súldis	"drop of blood"
tōη	"hair"	tóηdis	"single hair"
ūl	"water"	úldis	"drop (any liquid)"
únaη	"fishing-net"	únaηdis	"mesh"

4.1.2.3.3.2.6 -es/-as "sky, weather"

< ēs "God, sky"

This element is found in several names for weather phenomena:

beʔd	"snow"	bédes	"snowy weather"
bēj	"wind"	béjes	"windy weather"
kōt	"winter"	kótes	"winter weather"
sīl	"summer"	síles	"summer weather"
taʔj	"frost"	tájés	"cold weather"
ūl	"water"	úles	"rainy weather"
ūs	"warm"	úses	"warm weather"
ìd	"spring"	ídes	"spring weather"

4.1.2.3.3.2.7 -lamt "piece"

< lám(a) "piece"

aʔq	"tree-PL"	áqlamt	"piece of wood"
náʔn	"bread"	nánlamt	"piece of bread"
ōks	"tree"	ókslamt	"wooden pin"

<i>qō</i>	"ice"	<i>qóklamt</i> ¹⁴²	"small ice-floe"
<i>qíʔj</i>	"birch-bark"	<i>qíʔlamt</i>	"piece of birch-bark"
<i>súʔjŋ</i>	"fabric"	<i>súʔjŋlamt</i>	"rag"
<i>sūl</i>	"blood"	<i>súllamt</i>	"lump of blood"
<i>təʔŋ</i>	"stone-PL"	<i>təʔlamtə</i>	"pebbles"

4.1.2.3.3.2.8 -oks "wooden object"

< *ōks* "tree"

This element is very frequently found in names for wooden objects, both natural and artificial. Its plural form is, as with the *nomen simplex*, always -*aʔq*, e.g.:

<i>*dédaŋ</i>	?	<i>dédaŋoks</i>	"a.k.o. trap"
<i>duud</i>	"to light, kindle"	<i>dúdoks</i>	"torch"
<i>*dəl</i>	?	<i>dəłoks</i>	"willow tree"
<i>qíʔt</i>	"bow"	<i>qíʔtoks</i>	"wood for bow"
<i>saq-ted</i>	"to step"	<i>sáqtedoks</i>	"threshold"
<i>-scsiŋ</i>	"to prop up"	<i>sésiŋoks</i>	"a.k.o. beam"
<i>seʔs</i>	"larch"	<i>sésoks</i>	"id."
<i>-tíŋ</i>	"to turn (?)"	<i>tíŋoks</i>	"part of a sledge"
<i>tíʔn</i>	"kettle"	<i>tíʔnoks</i>	"pole for kettles"

4.1.2.3.3.2.9 -ol "cover"

< *ool* "cover, container":

<i>baʔŋ</i>	"earth"	<i>báŋol</i>	"pit, grave"
<i>dōs</i>	"urine"	<i>dósol</i>	"bladder"
<i>təəl</i>	"to freeze"	<i>təłol</i>	"snow-pit"
<i>təʔŋ</i>	"stone-PL"	<i>təʔŋol</i>	"crop (of birds)"
<i>būl</i>	"foot"	<i>búlol</i>	"sock"
<i>təʔq</i>	"finger"	<i>təʔqol</i>	"ring"

4.1.2.3.3.2.10 -qus "dwelling place"

< *quʔs* "tent, dwelling place":

<i>báʔŋ</i>	"earth"	<i>báŋŋus</i>	"dugout-dwelling"
<i>bāk</i>	"beam"	<i>báqqus</i>	"a.k.o. box"
<i>daan</i>	"grass"	<i>dánus</i>	"grass-tent"

¹⁴² This is obviously a rather old compound. The final /k/, now lacking in the word for "ice", is also found in the verb *qokʔ-do* "to break ice".

$\bar{e}s$	"God, sky"	$\acute{e}squs$	"church"
* $\acute{i}n-$	"?"	$\acute{i}nnus$	"summer-hut"
* $\acute{i}\eta-$	"?" ¹⁴³	$\acute{i}\etaqus$	"house"
* qon - ¹⁴⁴	"silver fir"	$q\acute{o}nnus$	"winter tent"
to^n	"simple"	$t\acute{o}nnus$	"simple tent"
$q\bar{i}\eta$	"birch-bark\PL"	$q\acute{i}\etaqus$	"birch-bark tent"

4.1.2.3.4 Complex nominal compounds

Determining elements in nominal compounds may be complex. Thus, adjectival compounds consisting of several elements (cf. 4.1.3.5.3) may attach to a nominal head to form an adjective-noun compound. Such heavy complexes are on the fringe between attributive syntagms and true compounds. Prosodically, they behave like compounds, e.g.:

$ho^?l$ "long" + $huut$ "tail" + $t\bar{i}b$ "dog" → $h\acute{o}lhuttib$ "a dog with a long tail"

The one-word-status of such complex compounds is evidenced by the fact that they may accept a possessive prefix (cf. 4.1.1.4):

$na-h\acute{o}lhuttib$
our-long.tailed.dog (Werner 1998, 58)

If we symbolize the scope of the various determining elements in this formation by brackets, we arrive at a layered structure:

$na-((hol-hut)-tib)$

4.1.3 Adjectives

In distributional terms, *adjectives* in Ket may be defined as the class of non-verbal¹⁴⁵ words, which may be used *attributively* to *modify* a *noun*.

This means that the class of *nouns* proper contains only items, which may *not* be used to modify other nouns; so, for example, it is ungrammatical in Ket to use a *noun* as a modifier of another noun¹⁴⁶:

¹⁴³ Werner (2002, 372) thinks the determiner in this compound represents a nominal root meaning "light, sun-light", but the basis for this assumption remains unclear.

¹⁴⁴ Attested is $q\acute{o}noks$, "silver fir".

¹⁴⁵ This is an important disclaimer, since *finite verbs* may also directly modify a noun. However, in these cases the head noun is modified by a *predication*, rather than a *quality*, and we will discuss this technique in the section on *relative clauses* in Vol. II. Another group of *verbal* words, which may modify a noun directly are *infinitives* (i.e., in many cases, morphologically uncharacterized verb roots), to be discussed in 4.4.8.1.

¹⁴⁶ The sufficient definition of a *noun* can, in this context, be kept simple: a noun is any word, which may directly (i.e. without any intervening *nominalization strategy*) accept inflectional affixes of *number*, *case*, and *possession*. Adjectives, as shown below, can only take plural affixes.

**hīk dīl* "a boy"
 *male child

However, the combination of both elements *is* possible, and the semantic result *is* "a male child, a boy": *hīkdīl*, but this is a nominal compound, which is differentiated from a mere juxtaposition of nouns by the following features:

- in a compound, the original elements lose their phonological autonomy, i.e. their monosyllabic tones are replaced by one of the two disyllabic contours (or pitch-accent types),
- often, considerable phonetic changes occur in the second (head-) part of the compound,
- the compound may be pluralized, but *generally* only the second (head-) element will take a plural affix¹⁴⁷. Nominal compounds are discussed in more detail in 4.1.2.3.

4.1.3.1 Formal characteristics of adjectives

The status of adjectives as a part-of-speech between nouns and verbs may be described as follows: while adjectives do share with verbs (finite verb forms and infinitives) the ability to modify nouns, they do not show any morphological feature, which might lead to the assumption that they may form a subset of this word-class (most importantly, adjectives, like nouns, accept only *suffixal* morphology¹⁴⁸); they share with nouns the ability to be pluralized (with *nominal* plural suffixes); a uniquely adjectival suffix is the marker of the comparative degree, *-la*; any further accretion of nominal morphology by adjectives requires, however, that they be *nominalized*, by the universal nominalizing suffix *-s* (plural *-sin*), cf. 4.1.2.1. Only adjectives, not nouns¹⁴⁹, may take predicative concord suffixes (cf. 4.4.9.3).

While, as shown above, nouns cannot be used attributively, this function is the normal use for a morphologically unexpanded adjective stem:

(91)

bū áqta keʔd
 he good person
 He is a good person.

¹⁴⁷ A few compounds, possibly a group of diachronically younger formations, require plural affixes on *both* constituents, but the other criteria of compound-hood (prosodic unity and lexicalized status) hold for them, too.

¹⁴⁸ The only prefixes found on nouns are the possessive affixes, cf. 4.1.1.4, which do not appear on adjectives.

¹⁴⁹ More precisely: nouns in the nominative; adessive, locative and abessive cases may take these suffixes.

Nouns may be used predicatively without a copula (or better the null-copula, in the present tense, cf. 4.4.9.1):

(92)

bū keʔd
 he human
 He is a human being.

Adjectives may not be used in this way; in order to be usable in this function, they require prior nominalization with the suffix -s¹⁵⁰:

(93)

**bū áqta*
 he good
 *He is good.

(94)

bū áqta-s
 he good-NM
 He is good (more exactly: he is a good one).

The same constraint holds for adjectival predications set in the past tense by the past copula *òbilda* (4.4.9.1):

Noun:

(95)

Iván sàldat òbilda.
 Ivan soldier was
 Ivan was a soldier.

Adjective:

(96)

**Iván áqta òbilda.*
 I. good was
 *Ivan was good.

Nominalized adjective:

¹⁵⁰ Or the addition of a *predicative affix*, cf. 4.4.9.3.

(97)

Iván áqta-s òbilda.
 I. good-NM was
 Ivan was (a) good (one).

A nominalized adjective may be used as sentential subject, object, or predicate (with zero-copula):

(98)

súlem-sin baʔη d[u]ʰ-kalebelʷ-u/kʰ-beg-d-in
 red-NM\PL country 3-protect-3f/D-make-PL
 The Red Army protects the country.

(99)

hóna-sin bōn náda qósqat
 small-NM\PL NEG must scare
 One should not scare the small ones.

(100)

éηηun bílda túnbes tíηkíl-sin
 house\PL all such high-NM\PL
 The houses are all so high.

Nominalized adjectives may be inflected like nouns; they retain their inherent noun class reference, which becomes obvious in oblique cases (cf. 4.1.1.1.1):

Adjectival root/attributive adjective:	<i>kiʔ</i>	"new"
Nominalized adjective:	<i>kì-s</i>	"new (one)"
Case-inflected nominalized adjective:	DAT (m) :	<i>kís-tāηa</i>
	DAT (f) :	<i>kís-tíηa</i>

(101)

hónen-s-da qīm dótet-daηa sūk u/kʰ-oʰ-[i]n²-[t]n
 small-NM-GENm wife D.-DATm back 3SGf/D-Th-Pst-go
 The wife of the small one (the youngest son) went back to Dotet.

4.1.3.2 Attributive use of adjectives

This is the normal use of adjectives, which always precede their head noun (and may be concatenated to attribute more than one property at a time):

(102)

sēl īs
bad food

(103)

təɔl ūl
cold water

It has been claimed that adjectives may likewise follow their head, with the further requirement that they, in this case, take the suffix -s:

(104)

kùn tūm-s ād dī⁸-q⁵-ej
wolverine black-NM I 1-D-kill
I killed the black wolverine.

However, given the nominalizing function of -s, it is better to follow Werner (1997c, 356) here, who views cases like this as appositions adding contrastive focus to the adjective: "the wolverine, the black one, I killed it".

Some adjectives agree with their head noun in number¹⁵¹, but not in case:

(105)

qà ássel : *qēŋ ásse-n*
big animal : big\PL animal-PL

(106)

úkde ōks : *úkde-ŋ aʔq*
long stick : long-PL stick\PL

(107)

təɔl úl-as : **təl-as úl-as*
cold water-INS
"with cold water"

(108)

qà kólet-díŋa : **qá-díŋa kólet-díŋa*
big town-DATn
to the big city

¹⁵¹ Agreement is not obligatory, though. Vajda (2004, 80) claims that it is altogether optional, and furthermore confined to a small group of adjectives denoting "tangible physical properties".

However, some adjectives never show any morphological sign of pluralization; to this group belong, i.a.:

<i>hóna</i>	"small"
<i>bīk</i>	"foreign"
<i>sēl</i>	"bad"
<i>áqta</i>	"good"

4.1.3.3 Predicative use of adjectives

No adjective may be used predicatively without either

- prior nominalization (4.1.2.1), or
- a predicative suffix.

The paradigm of predicative suffixes (which may be added, apart from adjectives, also to numerals, pronouns, and verbal infinitives) is given in 4.4.9.3.

With third person predicates, the predicative suffixes *-du*, *-da*, *-am* seem to be quite freely interchangeable with the nominalized adjective (with zero copula), cf.:

(109)

túde tīb sēl-du
 this dog bad-PR3SG
 That dog is (being) bad.

(110)

túde tīb sēl-s
 this dog bad-NM
 That dog is (a) bad (one).

These techniques indeed appear to be interchangeable, but there is a general tendency to use predicative suffixes for less time-stable, transitory, qualities, whereas the nominalization strategy is more often used when a more time-stable, immutable quality of the given referent is reported. However, if correct, this differentiation is not available in predications referring to the past, since the past copula *òbilda* invariably requires the nominalization strategy:

(111)

kíde keʹd bīlda éηqon-dit áqta-du.
 this person whole village-BEN good-PR3SG
 This person is greatly liked by the whole village.

(112)

**kíde keʔd bǎlda éηqoη-dit áqta-du òbǎlda*
 this person whole village-BEN good-PR3SG was
 *This person was liked by the whole village.

(113)

kíde keʔd bǎlda éηqoη-dit áqta-s òbǎlda
 this person whole village-BEN good-NM was
 This person was greatly liked by the whole village.

4.1.3.4 Comparison

Ket lacks an unambiguous affix for the comparative degree. The suffix *-la*, which is often claimed to have this function, serves rather as an emphasizing device, which may, according to context, also convey the notion that the quality expressed by the adjective holds only to a certain degree:

úkde "long" : *úkde-la* "longer, quite long, rather long, 'long-ish'"

The suffix *-la* may not be used with adjectives formed with the derivator *-tu-(s)*, which is expected, given the relational character of these formations (cf. 4.1.3.5.1). Other means of reinforcing the semantic content of adjectives are the adverbs of degree *qàddəq*, *áliη*, both meaning "very", *hās* "still", and, very frequently, *qà* "(big >) very". In true comparison, the adjective follows, without any specific comparative affix (discounting predicative suffixes and nominalizations), after the basis of comparison, which is in the ablative case:

(114)

èd sáq-díηal qá-du
 sable squirrel-ABL big-PR3SG
 The sable is bigger than the squirrel.

To render the superlative relation, *bǎlda* "all" forms the basis of the comparison, followed by the reinforced ("comparative") adjective:

(115)

qùd bǎlda-naηal qà áqta īs
 pike all-ABLpl big good fish
 Pike is the best fish.

4.1.3.5 Derivation of adjectives

There are few suffixes, which can be described as productive adjective-forming devices. Bibikova (1971) gives a list of elements frequently found in adjectives. Some of them (-η, which is probably a petrified pluralizer) are certainly no longer productive and are thus not dealt with here. Below, we give examples for the relatively frequent suffix -tu (-s), and the more rarely found element -m.

4.1.3.5.1 -tu

This suffix is fairly frequently found in adjectives and is clearly derivative in nature. Denominal adjectives of the type *X-tu(-s)* are relational adjectives, which may be rendered as "having X, endowed with X":

<i>doʔη</i>	"pus"	→	<i>dóη-tu</i>	"suppurating"
<i>huʔs</i>	"mould"	→	<i>hús-tu</i>	"mouldy"
<i>kūl</i>	"beard"	→	<i>kúl-tu</i>	"bearded"
<i>ūl</i>	"water"	→	<i>úl-tu</i>	"wet, watery"
<i>duʔ</i>	"smoke"	→	<i>dú-tu</i>	"smoky"
<i>īs</i>	"fish"	→	<i>ís-tu</i>	"rich in fish"

The nominal base is frequently a plural form:

<i>aʔd</i> , PL <i>ádeη</i>	"bone"	→	<i>ádeη-tu</i>	"bony"
<i>qaʔj</i> , PL <i>qáηniη</i>	"mountain"	→	<i>qáηniη-tu</i>	"mountainous"
<i>in</i> , PL <i>íneη</i>	"claw"	→	<i>íneη-tu</i>	"having claws"
<i>tíʔs</i> , PL <i>təʔη</i>	"stone"	→	<i>təʔη-tu</i>	"stony"

The base may itself be complex, i.e. consist of a noun and a modifying adjective, which in turn may be pluralized; the "base" in these cases is not an independently usable noun, but rather a phrase:

<i>doʔη</i> + <i>úkla-η</i>	"three + corners"	→	<i>dóηuklaη-tu</i>	"triangular"
<i>dóqta</i> + <i>dēs</i>	"quick + eye"	→	<i>dóqtades-tu</i>	"having quick eyes"
<i>qēη</i> + <i>íte-η</i>	"big\PL + tooth\PL"	→	<i>qéηiteη-tu</i>	"having big teeth"

Singular and plural bases:

<i>kaʔη</i>	"hole"	→	<i>káη-tu</i>	"having a hole"
<i>káη-en</i>	"hole-PL"	→	<i>káη-en-tu</i>	"having many holes"

Though some adjective-noun-phrases may be used as modifiers without any derivator, they may be encountered with -tu as well:

úkde-ŋ + búla-ŋ "long.PL+ leg.PL" → *úkde-ŋ-bula-ŋ-tu* "having long legs"

4.1.3.5.2 -(V)m

This element is no longer productive; however it is/was clearly derivative, since the resulting adjectives maintain a transparent relation with underlying nouns; it may be etymologically related/identical with the impersonal predicative concord suffix *-am* (cf. 4.4.9.3):

<i>súl-em</i>	"red"	cf.:	<i>sūl</i>	"blood"
<i>hút-um</i>	"downy"	cf.: (?)	<i>huut</i>	"tail"
<i>qǝl-am</i>	"bitter"	cf.:	<i>qǝǝl</i>	"gall"
<i>ták-ím</i>	"white"	cf.: (?)	<i>tík</i>	"snow"

4.1.3.5.3 Adjectival compounds

Ket adjectives may be complex. Attributive syntagms consisting of a nominal head and modifying elements (simple adjectives, numerals, verbal infinitives modified by adverbs, postpositional phrases) may acquire the status of adjectival compounds:

<i>hoʔl</i> "short"	+ <i>huut</i> "tail"	→ <i>hólhut</i>	"short-tailed"
<i>doʔŋ</i> "three"	+ <i>síkŋ</i> "year\PL"	→ <i>dónsikŋ</i>	"three-years-old"
<i>áqta</i> "good"	+ <i>déstij</i> "shoot (inf.)"	→ <i>áqtadestij</i>	"good at shooting"
<i>qō-d</i> "ice-GEN"	+ <i>hítika</i> "under"	→ <i>qódhítika</i>	"being under the ice"

One-word-status of these allocations is underscored by their ability to accept the nominalizer *-s* (cf. 4.1.2.1) when used in predicative function, e.g.:

(116)

túde tīb hólhut-s
 this dog long-tail.NM
 This dog has a long tail, is long-tailed. (Werner 1998, 59)

4.1.4 Adverbs and postpositions

There are no morphosyntactic characteristics, which differentiate adverbs from adjectives, i.e. all adjectives, which are semantically suitable to modify verbs (or other adjectives) may be used in this function, cf.

(117)

áqta keʔd
 good person
 a good man

(118)

bū áqta [*du*]⁸-lobed⁷-a⁴-bed
 he good 3-work-Th-make
 He works well.

In the following section, we give lists of (non-adjectival) adverbs with local/spatial (4.1.4.1), and temporal (4.1.4.2) meanings, as well as adverbs of manner and degree (4.1.4.3).

4.1.4.1 Local/spatial adverbs

The basic local adverbs, indicating location relative to the position of the speaker, are derived from demonstrative roots (cf. 4.2.3):

root:

* <i>ki(n)</i>	near-deictic	<i>kìseη</i>	"here, near speaker"
* <i>tu(n)</i>	medium-range-deictic ¹⁵²	<i>tùseη</i>	"there, near addressee"
* <i>qa(n)</i>	far-deictic	<i>qàsèη</i>	"there, elsewhere"

Both non-near-deictic adverbs (as well as the demonstrative pronouns derived from the same roots), are often used interchangeably.

The second element of these obviously compounded local adverbs seems to be identical with the still existent, but more rarely used, adverb *seeη* "here", which itself has a far-deictic counterpart *sooη* "there".

(119)

ād poká *kìseη qà* *íkus-díηta* [*du*]⁸-ses⁷-ta.
 I meantime here big house-ADESSn 3-sit-R
 In the meantime I sit here in the big house.

(120)

deʔη *d[u]*⁸-o⁴-[i]²-di-n *tùseη*
 person\PL 3-Th-Pst-live-PL there
 People lived there.

¹⁵² This root is also frequently used without any reading of relative distance, i.e. as a "neutral"-deictic.

(121)

qàscɛ̃ ād òbīlda doʔɛ̃ sákɛ̃
 there I was three year\PL
 I stayed there for three years.

Apart from these forms, the basic deictic roots may be expanded by further morphological elements, most notably case suffixes, specifying motion towards (Dative), or from (Ablative) the point of reference. The element *-tan* may be suffixed to express the notion "up to this/that point". An element *-un* serves the same purpose (probably historically identical with the postposition *qōn* "id."¹⁵³):

root:	DAT	ABL	<i>-tan</i>	<i>-un</i>
* <i>kī(n)</i>	<i>kíniɲa</i>	<i>kíniɲal, kínil, kīl</i>	<i>kíntan</i>	<i>kínun</i>
* <i>tū(n)</i>	<i>túniɲa</i>	<i>túniɲal, túnil, tūl</i>	<i>túntan</i>	<i>túnun</i>
* <i>qā(n)</i>	<i>qániɲa</i>	<i>qániɲal, qániil, qāl</i>	<i>qántan</i>	<i>qánun</i>

Concrete local adverbs, denoting position/movement relative to an object, are¹⁵⁴:

* <i>hīt</i>	"down, below"
<i>īl</i>	"near, in the vicinity"
<i>kóqta</i>	"inside, inner part"
<i>kēm</i>	"away, far"
<i>oɲ(ta)</i> ¹⁵⁵	"rear, behind"
<i>qōt, qókta</i> ¹⁵⁶	"front"
<i>toʔj, (*tos-)</i>	"up, above"
<i>óla</i>	"outside"

These roots are most often found with specifying case suffixes (ablative and locative); the ablative may further be extended by the prosecutive suffix *-bes*, adding up to the meaning "passing below etc."; the adverb *kēm* "far, away" adds most formants to the ablative form and an obscure morphological element found only here, with directive function, is *-a*:

	LOC	ABL	"directive" <i>-a</i>
* <i>hīt</i>	<i>hítka</i>	<i>hítíl, (hítílbes)</i>	<i>híta</i>
<i>īl</i>	<i>ílka</i>		

¹⁵³ A form *kínqone* "here, up to this point" is given in Werner 2002, I, 427, which strengthens this assumption.

¹⁵⁴ An asterisk (*) denotes roots, which are not used without further affixation.

¹⁵⁵ *óɲta* "in the back" is attested, while other derivations presuppose a root **oɲ*. For its antonym, a root ***koq* is, however, not found, all attested derivations strating on a "stem" with the unclear element *-ta*.

¹⁵⁶ With metathesis **-tk-* > *-kt-*.

<i>koqta</i>	<i>kóqtika</i>	<i>kóqtadiḡal, kóqtadil</i>	
<i>kām</i>	<i>kómalka</i>	<i>kómāl, kómaldil, (kómālbes)</i>	
<i>oḡ(ta)</i> ¹⁵⁷		<i>óḡtil</i>	
<i>qōt, qókta</i>	<i>qóbka</i> ¹⁵⁸	<i>qótíl</i>	<i>qóta</i>
<i>toʔj, (*tos-)</i>	<i>tójka</i>	<i>tósil</i>	<i>tósa</i>
<i>ólá</i> ¹⁵⁹	<i>ólka</i>	<i>ólal, óleḡal, óldil</i>	

(122)

qókta [du]⁸-ses⁷-ta ḡb, *óḡta* ām
 in.front 3-sit-R father in.back mother
 Father was sitting in the front, mother in the back.

(123)

áska bū *tósil* *híta* [du]⁸-baḡ⁷-o⁴-[i]⁷-ad *bín-da-d*
 when he from.up down 3-fall-Th-Pst-R self-GENm-3SG
būl d[u]⁸-il⁷-o⁴-[i]ⁿ²-bed
 leg 3-break-Th-Pst-make
 When he fell down from up there, he broke his leg.

(124)

ī *tósa* da⁸-es⁷-a⁴-qut *qáḡnaḡ-dil*
 sun up 3f-rise-Th-R mountain\PL-ABL
 The sun is rising behind the mountains.

(125)

kínij *ólka* be^{j7}-a⁴-b³-qan
 today outside wind-Th-3n-begin
 Today it is windy outside

(126)

ād bo/k⁶-a⁴-tn *ólá* *sáldo-csaḡ*
 I 1SG-Th-go outside smoke-TRANS
 I go outside to have a smoke.

The local adverb *kām* accepts the "comparative" suffix *-la*: *kómala* "a bit further away".

The roots **oḡ* and **qot* may be compounded with the far-deictic adverb *qàseḡ*:

¹⁵⁷ *óḡta* "in the back" is attested, while other derivations presuppose a root **oḡ*. For its antonym, a root ***koq* is, however, not found, all attested derivations strating of a "stem" with the unclear element *-ta*.

¹⁵⁸ Again, treating this form as a derivative of the indicated root is problematical. Though its meaning fits perfectly, it may rather be derived from the noun *qōb* "peak".

¹⁵⁹ The final *-a* of this adverb may be historically the "directive" *-a* mentioned above.

óηqaseη "there in the back"

qótqaseη "there in front"

A further possibility to form compound local adverbs is by preposing the adjective root *bil* "far, remote" to some semantically suitable adverbs, cf.:

bílhita "far down, below"

bíltoj "far up, above"

(127)

èd bíttoj d[u]ʰ⁸-ses⁷-ta

sable far.up 3-sit-R

The sable is sitting far up there.

Ket possesses a number of (mostly) directional adverbs with very specific semantics, referring to physical features of the Kets' habitat. Though some of these may be found as independent adverbs, they are normally used as P⁷ incorporates (cf. 4.4.5.2) in complex verbs (rendering the meaning "to move in the indicated direction"). Commonly found "landscape" adverbs of this type are:

<i>àl, áltu</i>	"in the forest"
<i>álqal</i>	"from there in the forest" ¹⁶⁰
<i>áqad</i>	"from the forest to the river-bank"
<i>ásat</i>	"along the river-bank"
<i>áskaj</i>	"upriver on the ice" ¹⁶¹
<i>áta, óta</i>	"from the river-bank into the forest"
<i>áka</i>	"to/from the river-bank (i.e. away from the river)"
<i>éska</i>	"upriver"
<i>éta</i>	"upriver on the ice"
<i>íkda</i>	"from the forest or mid-river to the river-bank"
<i>tí(ka)</i>	"downriver, northwards"
<i>úta</i>	"upriver, southwards"

Cf. both functions in:

(128)

áka d[i]ʰ⁸-aq⁷-a⁴-b³-da
 away.from.river 1-put.down-Th-3n-R
 I put it down on the riverbank.

¹⁶⁰ = *àl* + **qa* + -*l* (ABL)

¹⁶¹ According to Werner (2002, I, 69) < *ēs* "up, orig. sky" + *kəʔj* "to go, wander".

(129)

d[i]⁸-aka⁷-(k)-(s)-aq
 1-away.from.river-(Sep)-(Sep)-go.away
 I go (from the river) into the forest.

Other local/spatial adverbs are:

<i>ésku</i>	"upwards"
<i>hájka</i>	"inside" (< <i>hāj</i> "belly")
<i>tétka</i>	"across"
<i>kóka</i>	"on the far side (of the river)"
<i>úska</i>	"back (dir.)"
<i>súkai</i>	"id."

4.1.4.2 Temporal adverbs

Morphologically simple temporal adverbs include:

<i>ánat</i>	"long ago, back then, once upon a time"
<i>aʔt</i>	"soon"
<i>bōt</i>	"often"
<i>ēn</i>	"now"
<i>hā</i>	"immediately"
<i>hī</i>	"still"
<i>hībēn</i>	"not yet" (< <i>hī</i> + <i>bēn</i> "not")
<i>ìn</i>	"for a long time"
<i>ínam</i>	"since long time ago"
<i>kīm</i>	"then, at that time" (in the future or past)
<i>ómba</i> ¹⁶²	"now"
<i>óna, ónna</i>	"just now, only"
<i>qām</i>	"soon, in a second"
<i>sīn</i>	"one time, once in the past"
<i>óqaj</i>	"earlier, once"

Some examples:

(130)

ánat ād d[i]⁸-kəʔ⁷-o⁴-[i]n²-aq kólet-din̄ta òn là
 formerly I 1-winter-Th-Pst-R town-ADESS many time
 Earlier, I often spent the winter in town.

¹⁶²Only found in Central and Northern Ket, obviously a loan < Sel'kup *ompä* "now, immediately".

(131)

ánat ót-naŋta òbilda qāk taʔb, ēn ót-naŋta
 formerly we-ADESS\PL was five dog\PL now we-ADESS\PL
īn taʔb
 two dog\PL
 Earlier we had five dogs, now only two are left.

(132)

dīl hīben du⁸-t⁵-a⁴-(j)-a¹-tn
 child not-yet 3-D-Th-(Sep)-3-go
 The child has not yet gone to sleep.

(133)

ād ób-aŋ-as īn d[i]⁸-o⁴-[i]l²-daq
 I father-PL-INS long.time 1-Th-Pst-live
 I lived together with my parents for a long time.

The ablative suffix is found in:

ánatdīŋal, ánatdīl "since long time ago, it has always been the case that"
tūl "from now on"¹⁶³

Some temporal adverbs contain the locative affix:

qád(i)ka, qájka "then, later"¹⁶⁴
qóletka "immediately"
qóŋkamka "early, a little bit earlier"

A unique formation with the instrumental case suffix is found with the adverb *békas* "always" (< Russian *vek* "century"), and *bókas* "immediately" (no known unaffixed form).

The adverb *śqbes* "suddenly" obviously contains the prosecutive suffix, but the root remains obscure.

Possibly complex, but so far opaque, temporal adverbs are:

ánat(t)ab "in the beginning"
ánsom "earlier, formerly", **an* + *soom* "earlier"¹⁶⁵
qústaq "always"
qústij "often, frequently"

¹⁶³ Also spatially "from here" ; other temporal adverbs derived from this deictic root are *túndan* "then, during that time" and *túndukde* "then". Similar formations using the deictic roots **ki(n)*- and **qa(n)*- seem to be lacking.

¹⁶⁴ The root (which may be historically identical with the deictic root *qā* "that over there") is also attested in *qájja*, and *qáda* "then".

¹⁶⁵ The second element is listed in Werner 2002, II, 170, but seems not to occur independently. Cf. also *ánatsom* "id."

<i>sénno</i>	"suddenly"
<i>úηtol</i>	"in the future"
<i>útas, ùtas</i>	"soon, immediately"

Phraseological temporal adverbs are, i.a.:

<i>òn là</i>	"often" (lit.: "many times")
<i>bóle bōn</i>	"no more, no longer" (<i>bóle</i> < russ. <i>bolee</i> "more")

The use of the noun *ba'η* in temporal expressions deserves special mention. Its meaning as a simple noun is exclusively local ("place, spot, locus"), but in compounds it denotes more often than not a temporal point of reference:

<i>ánatban̄ka</i>	"shortly before"
<i>ásban̄</i>	"in former times"
<i>bán̄diηa</i> , the dative form of <i>ba'η</i> "place", is mainly used as a postposition, but again only with a temporal meaning "until". Cf. also the farewell-phrase <i>úηtol bán̄diηa</i> "until next time!".	

(134)

<i>bū d[u]⁸-[ik]²-in⁷-bcs-ban̄diηa ēt</i>	<i>d[i]⁸-lobed-o⁴-[i]l²-bed-in</i>
he 3-direction-Pst-move-until we	1-work-Th-Pst-make-PL
We worked, until he came.	

Adverbs for calendrical events/points-of-time are:

<i>ánadij</i>	"the day before yesterday" (< <i>ánat</i> "former" + <i>i'</i> "day")
<i>ánat sīi</i>	"the year before last year"
<i>ánoks</i>	"tomorrow"
<i>ánoks kúnsika</i>	"the day after tomorrow" (<i>kuun-s</i> "the following one")
<i>d-ánoks</i>	"on the following day" ¹⁶⁶
<i>kínij</i>	"today" (< <i>kíne i'</i> "this day")
<i>qódes</i>	"yesterday"
<i>qódes kúnsika</i>	"the day before yesterday"
<i>úηtol sīi</i>	"in the following year" ¹⁶⁷
<i>sákat sīi</i>	"last year"

(135)

<i>qódes ād [di]⁸-sal⁷-o⁴-[i]l²-bed</i>	<i>baklánixa-diηta</i>
yesterday I 1-spend.night-Th-Pst-make B.-ADESSn	
Yesterday I spent the night in Baklanikha.	

¹⁶⁶ *d-* is the 3rd person possessive prefix (4.1.1.4), thus "on its following day".

¹⁶⁷ Also *d-úηtol sīi*.

(136)

ōt d[i]ʰ⁸-an⁷-(s)-i/bed-in, ulíta ánoks tām bān
 we 1-think-(Sep)-make-PL it.rains tomorrow or not
 We wonder, whether it will be raining tomorrow, or not.

The postposition *dúkde* "during" (4.1.4.4.17) may be compounded with nouns denoting periods of time, e.g.:

during the...

<i>bīs</i>	"evening"	<i>bísdukde</i>
<i>iʔ</i>	"day"	<i>ídukde</i>
<i>qónoks</i>	"morning"	<i>qónoksdukde</i>
<i>sīl</i>	"summer"	<i>síldukde</i>
<i>sīi</i>	"year"	<i>sídukde</i>
<i>ìd</i>	"spring"	<i>íddukde</i>
<i>qókde</i>	"autumn"	<i>qókd(d)ukde</i>
<i>kōt</i>	"winter"	<i>kótdukde</i>

(137)

sí-dukda toʔn ād d[i]ʰ⁸-aŋted⁷-o⁴-[i]l²-bed
 year-during so I 1-suffer-Th-Pst-make
 I suffered so much there during a whole year

The adverb *ēn* "now" may enter compounds with calendrical nouns:

<i>énbis</i>	"this evening"
<i>énqoŋ</i>	"today" ¹⁶⁸
<i>énsal</i>	"this night" ¹⁶⁹
<i>énsi</i>	"this night", "this year" ¹⁷⁰

The suffix *-sa* "each, every" forms distributive temporal adverbs from nouns designating certain periods of time:

"every..."

<i>bīs</i>	"evening"	<i>bís-sa</i>
<i>iʔ</i>	"day"	<i>í-sa</i>
<i>kōt</i>	"winter"	<i>kōt-sa</i>
<i>néla</i> ¹⁷¹	"week"	<i>néla-sa</i>
<i>qīb</i>	"month"	<i>qīb-sa</i>

¹⁶⁸ Cf. *qōŋ* "at daytime, during the day".

¹⁶⁹ *saal* is attested as a verbal root "to spend the night", originally certainly a noun.

¹⁷⁰ From *ēn* + *sī* "night", and *sīi* "year" respectively.

¹⁷¹ < russ. *nedel'ja*.

<i>qónoks</i>	"morning"	<i>qónoks-sa</i>
<i>súdaη</i>	"noon"	<i>súdaη-sa</i>
<i>sī</i>	"night"	<i>sí-sa</i>
<i>ìd</i>	"spring"	<i>íd-sa</i>

4.1.4.3 Adverbs of manner and degree

Apart from adjectival roots used as (manner) adverbs, Ket possesses several lexical items, which are predominantly or exclusively used in the latter function; this (incomplete) list contains also adverbs of degree, intensification and moderation:

<i>álin</i>	"very, often"
<i>ális</i>	"forcedly, violently"
<i>áηtetka</i>	"with lot of effort, hardly" ¹⁷²
<i>áduηu</i>	"very" (as adjective "strong")
<i>ádeη</i>	"very"
<i>bíkسا</i>	"differently" (cf. <i>bīk</i> "other")
<i>déltan</i>	"in vain"
<i>dóqta</i>	"quickly"
<i>hólemsa</i>	"slowly, gradually" ¹⁷³
<i>hònnina, hònna</i>	"almost, a little" ¹⁷⁴
<i>hóna bōn</i>	"almost"
<i>hóqta</i>	"hardly"
<i>óqtu</i>	"very"
<i>qáddoq</i>	"very"
<i>qóbet</i>	"thoroughly"
<i>qítiska</i>	"unexpectedly"
<i>toʔn</i>	"thus, so, like that"
<i>tónej</i>	"thus, so, like that"

(138)

bū qóbet [du]⁸-sidaq⁷-o⁴-[i]²-bed túde lóbed
 he thoroughly 3-study-Th-Pst-make this work
 He studied this task very thoroughly.

4.1.4.4 Postpositions

Postpositions are closely related to adverbs of space. Some adverbs may be directly used as postpositions, some require the presence of a case suffix, before they can be so used. Generally, a postpositional phrase (i.e. a postposition and its head)

¹⁷²The root *áηtet* is attested as a verbal root with the meaning "to torture", but doubtlessly originally a noun preserved here with the locative affix.

¹⁷³< *hoʔl* "short" + *-em* "predicative" + *-sa* (Werner 2002, I, 323).

¹⁷⁴*hóna* "small"

function as adverbs in that they modify the predicate. Most postpositions express local relations and, while the semantic force of some local postpositions may be metaphorically extended to capture temporal relations as well, others are exclusively temporal.

Formally, postpositions may be derived from (identical with, etymologically related to) concrete nouns, adjectives and, of course, adverbs.

All postpositions require their (nominal) head to be in the genitive, thus:

(((NOUN)-GEN) *postposition*)

Some postpositions arose from concrete nouns or adjectives with a (petrified) possessive prefix of the 3rd person singular neuter:

dúkda "during" < *d-úkda*
3SGn-long

A unique use of Ket postpositions is that as syntactic subordinators. Some postpositions may be directly used after *finite* verb forms (i.e. without any prior nominalization of the verb, and consequently without any linking genitive suffix), in order to form various kinds of dependent clauses.

The basic spatial postpositions are mostly found expanded by case suffixes. Here the locative denotes location without movement, the ablative movement from, the dative movement to, and the prosecutive a passing movement ("passing behind, in front of etc."). The full set of these possibilities is displayed by¹⁷⁵:

	<i>bāl</i>	"between"
LOC	<i>bāl-ka</i>	"id."
DAT	<i>bāldiŋa</i>	"id., directional"
ABL	<i>bāl-diŋal</i>	"from between"
PROSEC	<i>bāl-bes</i>	"passing through between"

In the following, we enumerate the most common postpositions found in Ket, discussing their functions and their etymological relations to other lexical items found in the language. Some treatments of Ket differentiate between "true" postpositions, and postpositional nouns, the latter being concrete nouns (usually designating some locational notion, or a body part, which is used metaphorically to indicate such a notion. The number of such postpositional nouns may be regarded as principally open, delimited only by the number of semantically suitable nouns: e.g., a noun meaning "left side" (Ket *tūl qóleb*), used with the genitive of some object noun and a local case suffix

NOUN-GEN left.side-LOC

¹⁷⁵ In the following, we list postpositions only with those case suffixes, which were actually found in either our field material or the Ketological literature (most notably Werner 1997c, Werner 2002 *passim*, and the works of Šerer, e.g. 1983). Other combinations may, however, be possible in the language.

is, of course, structurally similar to any other postpositional construction using a "true" postposition (i.e. one, which is not or only partially etymologizable, or demonstrably identical with a concrete noun). Here, only those "postpositional nouns" are given, which occur frequently in this function, and/or which show a certain degree of "functionalization" (on the scale / (concrete) noun → (abstract) postposition/).

Some postpositions occur as clause-linking subordinators. In this function, they are found after *finite* verb forms, i.e. after definitely non-nominal elements; consequently, they are/can not be linked to their preceding elements by any "nominal" technique, such as genitive marking. Functionally, such postpositions are close to *conjunctions*. However, we will refer to them as (pseudo-) postpositions here, reserving the term "conjunctions" for those function words which *precede* the subordinate clause defined by them, rather than following it.

To sum up the possibilities of grammaticalization from content nouns to conjunctions, we may enumerate the following paths at work in Ket:

content noun > postposition
 content noun > case suffix
 postposition > "pseudo-postposition (subordinator/postp. conjunction)

4.1.4.4.1 The postposition *ákit* "behind"

ákit, ákitka, ákitdiŋal, ákitbes

The root form without any case suffix is uncommon (but in Yugh *akit* is attested as an adverb "in the back"), most often *ákitka* is found.

(139)

qū-ŋ-d ákit-bes o/k⁶-o⁴-[i]n²-[t]n
 tent-PL-GENn behind-PROS 3PL-Th-Pst-go
 He passed behind the tent. (Werner 1997c, 311)

4.1.4.4.2 The postposition *bāl* "between"

bálka, bálđiŋa, bálđiŋal, bálbes

Again, the unsuffixed form is not common. Its nominal origin ("space between several objects") is underscored by the possibility to pluralize this postposition, like in:

(140)

áq-na *bál-aŋ-ka*
 tree\PL-GENpl between-PL-LOC
 between trees (lit.: "in (several) places between (several) trees")

However, this pluralization is not obligatory, as shown in the following example (Werner 2002, 100):

(141)

áq-na *bál-bes* *o/k⁶-o⁴-[i]n²-[t]n*
 tree\PL-GENpl between-PROS 3SG-Th-Pst-go
 He passed between the trees.

Its more concrete spatial meaning "between" may be metaphorically extended to the more general notion of "among":

(142)

ót-na *bál-ka* *ùseŋ sáldo-sin*
 we-GENpl between-LOC exist smoke-Npl
 There are smokers among us.

Very frequently, a variant occurs with the preposed determiner *in-* (= *in* "two"), which is of course due to the fact that the notion "between" requires two arguments: *ínbal*, *ínbalka*, *ínbalbes*, *ínbaldíŋa*, *ínbaldíŋal*:

(143)

qū-ŋ-d *ínbal-díŋal* *d[u]⁸-[ik]⁷-in²-bes*
 tent-PL-GENn between-ABLn 3-direction-Pst-move
 He came forth from between the two tents. (Werner 2002, 428)

4.1.4.4.3 The postposition *kíka* "in the middle of, among"

kíka, *kíkadiŋa*, *kíkadiŋal*

This postposition is clearly derived from the noun *kí* "middle, centre" and contains a petrified locative suffix.

(144)

qūs-d *kíka* *d[u]⁸-uj⁷-b³-in²-a*
 tent-GENn in.the.middle 3-put-3n-Pst-R
 He put it in the middle of the tent. (Werner 2002, 481)

It may also be used as a pseudo-postposition with finite verb forms to denote subordinate predicates describing simultaneous actions ("while, during") or, by metaphorical extension, temporal clauses (with a conditional nuance):

(145)

ād hīben d[i]⁸-lobed⁷-a⁴-bed kíkka, ād kóla-daŋa dī⁸-(j)-aq
 I not.yet 1-work-Th-make i.th.middle I friend-ALLm 1-(Sep)-go
 As long as I don't work, I visit (my) friend.

(146)

d[i]⁸-ka⁷-bo/[k]⁶-qos kíkka, ássano⁷-ba/k⁶-a⁴-qan
 1-take-1SG-take in.the.middle hunt-1SG-Th-begin
 When/if I buy a rifle, I (will) begin to hunt.

4.1.4.4.4 The postposition *ít(i)l* "beside"

ítl, ítil, ít(i)ldiŋa, ít(i)ldiŋal, ít(i)lka, ítilbes

Etymologically obscure, in other words: there is no noun (or other lexical item) this postposition seems to be related to or derived from; it may, thus, be called a "true" postposition.

(147)

bū d[u]⁸-ses⁷-ta āb ítl-ka
 he 3-sit-R INGEN besides-LOC
 He is sitting beside me. (Šerer 1983, 6)

4.1.4.4.5 The postposition *ólkitka* "before, in front of"

ólkitka

No other forms seem to be attestable. The postposition is obviously derived from the local adverb *óla* "outside" (cf. 4.1.4.1). The extension *-kit-* found before the locative suffix is obscure. It remains unclear, whether this is to be interpreted as a morphological marker of some kind, also present in *ákit* (4.1.4.4.1), or whether it owes its existence to an analogical formation on the model of the latter¹⁷⁶.

¹⁷⁶ We hesitatingly prefer the second solution, but this may raise the question, whether *-kit-* in *ákit* may after all be an obsolete morpheme in the first place.

(148)

íŋqus-d ólkit-ka daan á⁴-b³-a¹-tij
 house-GENn in.front-LOC grass Th-3n-RES-grow
 Grass is growing in front of the house. (Werner 1997c, 311)

4.1.4.4.6 The postposition *əət* "on, on top of"

əət, ótka, ótdiŋ, ótdiŋal, ótbes

There is also a common variant *óqat* (all case forms), but the contracted form is found quite frequently.

(149)

qímdíl da⁸-ses⁷-o⁴-[i]l²-ta séj-d óqat-ka
 girl 3f-sit-TH-Pst-R mattress-GENn on-LOC
 The girl sat on the mattress.

The prosecutive formation *ótbes* "downwards along" acquired also the meaning "because of":

(150)

áq-na ót-bes
 tree\PL-GEN\PL on-PROS
 down the trees

(151)

bú-ŋ-na ót-bes
 hc-PL-GENpl on-PROS
 because of them

4.1.4.4.7 The postposition *hít(i)ka* "under"

hít(i)ka, hítidiŋal, hítibes

This postposition is obviously derived from the local adverb **hít* "down, below" (4.1.4.1):

(152)

tīb lám-d híti-ka du⁸-t⁵-a⁴-qut
 dog table-GENn under-LOC 3-D-Th-lic
 The dog is lying under the table.

4.1.4.4.8 The postposition *íka* "in"

This postposition may, as Werner suggests (2002 I, 388), be derived from the concrete noun *hīj* "belly" (> "inner part" > "place inside"); the attrition of the initial /h/ may be understood as due to the preceding genitive affix *-d* ([t]), thus **-d-hi-* ([*-thi-*]) > *-t-i-* with ensuing reanalysis of the postposition from this context. Again, however, the difference in vocalism should not be overlooked¹⁷⁷. Rare (only CK) attestations of a variant *íjka* (with preserved *-j*) strengthen this etymology¹⁷⁸.

úl-d *íka* < *úl-d* *hīj-ka* "in the water"
water-GENn in water-GEN belly-LOC

4.1.4.4.9 The postposition *īl(ka)* "beside"

īl, ílka, ílbes

This postposition may well be (at least historically) identical with *ítíl(ka)* given above, with which it shares its meaning and much of its form. The possible relationship of both words is, possibly, underpinned by Yugh *íkl* "id.", which may represent a metathesized form (**íl-ka*). *ítíl*, then, may show a different solution of the rare cluster *-kl-*. However, the difference in vocalism should be noted (but, again, the back vowel occurs also in the Ket adverb *īl(ka)* "near").

(153)

lám-d *ílka* *du⁸-[i]n*
table-GENn beside 3-stand
He is standing beside the table.

4.1.4.4.10 The postposition *kāl* "behind, on the other side"

kāl, kálka, káldiŋa, káldiŋal, kálbes

(154)

qús-d *kál-diŋal* *d[u]⁸-o⁴-[i]l²-aq*
tent-GENn behind-ABL n 3-Th-Pst-go
He emerged from behind the tent. (Werner 2002, 407)

¹⁷⁷ We note in passing a postposition *híka* "on" given by Werner (2002 I, 318), which may or may not be related to this postposition

¹⁷⁸ Werner (2002 I, 388) gives also the meaning "on" for this postposition. However, from the few examples he gives, it seems clear that this is most probably only a case of an extensional meaning mistaken for the intensional one (intensional meaning "in, general location", together with a noun designating a geographical feature like *qájbat* "promontory" leads to misinterpretation as "on", due to a translation into a European language).

4.1.4.4.11 The postposition *útsil* "near, in the vicinity"

útsil, útsilbes

This postposition is certainly connected with the adjective *útis* "near" (*útis baʔη* "a nearby place"). It seems to contain the (petrified) ablative suffix, but shows no ablative meaning.

(155)

āb útsil-bes o/k⁶-o⁴-[i]n²-[t]n
 \NGEN near-PROS 3SG-Th-Pst-go
 He passed in my vicinity. (Werner 2002, II, 372)

4.1.4.4.12 The postposition *índi* "under"

índi, índika, índibes

(156)

ót-na éηqoη qáde qáη-na índi-ka
 we-GENpl village that hill\NPL-GENpl under-LOC
 Our village is below those hills.

4.1.4.4.13 The postposition *às, aas* "like, as, similar as"

This postposition may be related to (or identical with) the interrogative pronoun *às, áses* "what kind of" (4.2.4).

(157)

āb bésam kíde bésam-d aas dī⁸-b³-bed
 \NGEN hare.coat this hare.coat-GENn like 1-3n-make
 I make my hare-fur coat like this one. (Werner 1997c, 312)

This postposition has a frequent variant *ásqa*, which does *not* require its head to be in the genitive case (and may thus be referred to as another "pseudo-postposition", cf. the use of *ásqa* as a conjunction in Vol. II of this grammar):

(158)

bū kéηassel ásqa d[u]⁸-i²-as
 he bird like 3-Pst-dress
 He dressed like (to resemble) a bird. (Werner 1997c, 312)

4.1.4.4.14 The postposition *bīnamt* "without"

Werner (2002 I, 130) mentions *bīn* "self" as a possible root; if this is correct, the following element could be the abessive suffix *-an*; its labialization and the nature of the final *-t* remain however unclear.

(159)

$\bar{a}d$ $bo/k^6-o^4-[i]n^2-[t]n$ $dé-di\eta a$ $sákdi-d$ $bīnamt$
 I 1SG-Th-Pst-go tundra-ALLn boot-GENn without
 I went without boots into the tundra.

4.1.4.4.15 The postposition *daan* "when, while, during"

This temporal (pseudo-) postposition (*dáqan* in NK) is exclusively used with finite verb forms to link two predications. It expresses simultaneity of action with that of the main verb of the sentence. An interesting differentiation, first described by Grišina 1981, involves the temporal relationship between two predications linked by *daan*. Thus, if both verbal actions are depicted as temporally coextensive, they will both be represented by verbs in the same tense (which is usually the preterite):

(160)

$\bar{a}d$ $[di]^8-scs^7-o^4-[i]l^2-ta$ $daan$ $d\bar{w}l$ $d[u]^8-an^7-i\bar{l}^2-da$
 I 1-sit-Th-Pst-R while child 3-play-Pst-R
 While I was sitting, the child was playing. (Grišina 1981, 32)

If the verbal action of the main clause is depicted as occurring at a single point in time during the duration of the subordinate (backgrounded) verbal action, the latter will be expressed by a verb in the present tense, and the former (usually) in the preterite:

(161)

$b\bar{w}s$ \bar{i} $d[u]^8-ín^7-(s)-[q]-ut$ $daan$ $ta?j$ $b\bar{c}j$ $o/k^6-o^4-[i]n^2-[t]n$
 evening sun 3-set-(Sep)-set while cold wind 3SG-Th-Pst-go
 In the evening, at sunset, a cold wind blew. (Grišina 1981, 32)

The linear order of both predications is generally (*subordinate - main*), as in the above examples, but this may be reversed:

(162)

bū beʔk ād d[u]ʰ-eskiʃ⁷-bo/k⁶-o⁴-[i]l²-bed ād d[i]ʰ⁸-lobed-a⁴-bed daan
 he always I 3-molest-1SG-Th-Pst-make I 1-work-Th-make while
 He always disturbs me, when I'm working. (Grišina 1981, 32)

4.1.4.4.16 The postposition *dó(q)ot* "for, on behalf of"

This postposition is identical with the noun *dóqot* "(one's) share, part". However, instances with /k/ instead of /q/ are also recorded.

(163)

bū da-ām dókot d[u]ʰ-[ik]ʃ⁷-in²-bes
 he 3SGm-mother for 3-direction-Pst-move
 I came because of his mother.

4.1.4.4.17 The postposition *dúkde* "during, while, as long as"

This postposition is exclusively used for temporal relations (cf. 4.1.4.2 for its frequent occurrence in compound temporal adverbs). As a nonbound postposition it is hardly ever used otherwise than with finite verbs, i.e. as a syntactic subordinator. Etymologically it is derived from the spatial adjective *úkda* "long", with a petrified possessive prefix (3SG, cf. 4.1.1.4). Its function and use closely resemble those of *daan* (4.1.4.4.15).

(164)

ū [ku]ʰ-ses⁷-ta dúkde ād [di]ʰ⁸-saldo⁷-bed
 you 2-sit-R during I 1-smoke-make
 While you are sitting, I (will) smoke. (Grišina 1982, 143)

(165)

ād úl-esan dī⁸-[i]l²-aq dúkde déŋ-na
 I water-TRANS 1-Pst-go during person\PL-GENpl
tīb āb naʔn [du]ʰ⁸-b³-il²-[a]
 dog INGEN bread 3-3n-Pst-R
 While I fetched water, their dog ate my bread. (Grišina 1982, 143)

Together with the interrogative *bíla* "how", the postposition *dúkde* may render the notion "for the whole time in which...", obviously imitating Russian constructions with *kak* "how" or *skol'ko* "how much":

(166)

ād kīseŋ bīla dī⁸-(k)-a⁴-daq dúkde tām ána bōn du⁸-[i]n²-[q]o
 I here how 1-(Sep)-Th-live during IND who no 3-Pst-die
 As long as I lived here, nobody died. (Grišina 1982, 143)

4.1.4.4.18 The pseudo-postposition *ésaŋ*

Apart from its use as a case suffix (translative case, cf. 4.1.1.3.11), *ésaŋ* may also be found postposed to a finite verb, forming purposive subordinate clauses. However, it is most often used with a verbal infinitive (which often, but not invariably, coincides with verbal roots, cf. 4.4.8.1) to indicate purpose or as complementizer of verbs meaning "to wish" or predicatively used adjectives like "it is good/bad to" etc. We call it a *pseudo*-postposition, since it cannot - like other postpositions - occur on a noun in the genitive case, and treat it separately from (proper) *conjunctions*, since it remains a *postposed* element, unlike conjunctions, which precede the predication they subordinate.

(167)

díłkat du⁸-t⁵-a¹-baq-an ániŋ-esaŋ
 child\PL 3-D-3-want-PL play-PURP
 The children want to play.¹⁷⁹

(168)

áska ólka ī qà áqta-m tájka-esaŋ
 when outside sun big good-PRn walk-PURP
 When the sun is shining, it is good to go for a walk.

4.1.4.4.19 The postposition *qōn*, *qòn* "up to, until"

This is basically a local postposition, but it may be used for temporal relations as well:

(169)

híssij-d qōn d[u]⁸-ej⁷-t⁵-o⁴-[i]l²-[q]ut
 forest-GENn to 3-run-D-Th-Pst-R
 He ran up to the forest.

¹⁷⁹ This verb form is irregular: Conjugation IV verbs prototypically do not show plural agreement.

(170)

Bàklanixa dəʔq qòn ət d[i]ʰ-o⁴-[i]l²-din Pákulixa-dinɥa
 B. live to we 1-Th-Pst-live P.-ADESSn
 Until/before we lived in Baklanikha, we lived in Pakulikha.

(171)

in bin⁷-b³-[i]n²-a, škɥ-na íkbes qòn
 long self-3n-Pst-R you\PL-GENpl come to
 A long time passed, until you (PL) arrived.

With the prosecutive affix, it renders the notion of "following" with verbs of motion:

(172)

táb-na qón-bes o/k⁶-o⁴-[i]n²-[t]n
 dog\PL-GENpl to-PROS 3SG-Th-Pst-go
 He followed the dogs. (Werner 2002, 103)

4.1.4.4.20 The postposition *séjbes* "instead of, in place of"

This is the noun *seʔj* "seat, place" with the prosecutive affix.

(173)

bū ób-da séjbes d[u]ʰ-o⁴-[i]n²-a¹-dij
 he father-GENm instead 3-Th-Pst-3-come
 He came here instead of (his) father.

4.1.4.5 "Prepositions"

Ket is not a prepositional language; however, apart from the Russian loan *bēs* "without" (always pleonastically preceding a (pro)noun in the abessive), the element *éta* (*qō*)/*éta* (*qóda*) "like" has all properties of a preposition:

(174)

bēs kót-(t)an qīm
 without child-ABESS woman
 a woman without children (Werner 2002, 123)

(175)

bū qá-du éta qóda qòj
 he big-PR3m like like bear
 He is as big as a bear. (Werner 2002, 252)

(176)

bū túm-du éta qóda kǎl
 he black-PR3m like like raven
 He is as black as a raven. (Werner 2002, 252)

4.2 Pronouns

4.2.1 Personal pronouns

The Ket personal pronouns are:

	SG	PL ¹⁸⁰
1	<i>ād</i>	<i>ótñ</i>
2	<i>ū(k)</i>	<i>ókŋ</i>
3mf	<i>bū</i>	<i>būŋ</i>

The personal pronouns take basically the same case suffixes as substantive nouns (but no vocative, locative, or translative; the instrumental has the function of a comitative). Their declination shows the same dichotomy of case forms based on the genitive (ablative, dative, benefactive, adessive) and those attached to the nominative (base) form (prosecutive, instrumental, adessive).

The 1st and 2nd person singular show idiosyncratic genitive forms, *āb* and *ū(k)*, respectively. Though for the latter the form with /k/ is generally assumed to be the genitive form only, the present author could quite frequently observe (in Baklanikha and Kellog) that nominative occurrences contain this final consonant, too, at least in careful pronunciation¹⁸¹. This could either be a relatively young, paradigm-levelling generalization introduced comparatively recently, or, on the other hand, an archaism, which went largely unnoticed by other students of Ket. The role of the element /k/ in 2nd person verbal agreement markers (paralleled by that of /d/ in first person affixes) may speak in favour of the second assumption, which would further entail that nominative and genitive are (resp. were) not formally differentiated in second person pronouns. The presence of /k/ in the

¹⁸⁰ The 1st and 2nd plural pronouns are often heard without the nasal (pluralizing) increment: *ōt, ōk*.

¹⁸¹ In sentential examples, we will write *ū* or *ūk*, depending on what was actually heard; examples taken from printed sources will mostly display *ū*.

second person plural pronoun may further strengthen this assumption (again paralleled by the presence of /t/ in the 1st person plural pronoun¹⁸²).

This element seems also to be present in the instrumental and abessive cases (phonetically [ɣ]); however, this is also the case with the 3rd person singular pronouns, where no reasons exists to assume an etymological *-k. Traditionally, this consonant is viewed as a mere anaptyctic, hiatus-avoiding insertion, and this analysis may well be correct. A further alternative, advocated by Vajda (2004, 7), views this surface consonant as the intervocalic allophone of /h/, which thus forms an integral part of these case affixes, lost in other phonetic contexts and reflected as consonant gemination in others. In our notation we will, on the basis of the arguments mentioned above, treat this consonant as part of the root in the 2nd person pronoun, and as anaptyctic in the third person (-k-), though we tend to accept Vajda's historical explanation.

The third person singular pronouns are identical for masculine and feminine referents in the nominative (and in the three cases based on it), but they are differentiated in the genitive and genitive-based cases.

All plural pronouns obviously contain a pluralizer, which is -ŋ in the third person (probably reflecting the fact that 3rd person referents are frequently inanimate). The reason for the choice of both nasals in the pronouns for the "speech act participants", which are of course prototypically animate, is not straightforwardly clear. The "animate" plural suffix -n seems to be more natural here, so the velar nasal in the 2nd person pronoun may be simply due to assimilation; but, on the other hand, the 1st person pronoun provides a similarly plausible assimilatory context, so that it remains unclear, whether the original "animacy" distinction of the plural suffixes played any role here¹⁸³.

The following table gives the declensional paradigms of the personal pronouns:

	1SG	2SG	3SGm	3SGfn
NOM	<i>ād</i>	<i>ū(k)</i>	<i>bū</i>	<i>bū</i>
GEN	<i>āb</i>	<i>ūk</i>	<i>bú-da</i>	<i>bú-di</i>
DAT	<i>áb-aŋa</i>	<i>úk-aŋa</i>	<i>bú-daŋa</i>	<i>bú-diŋa</i>
BEN	<i>áb-ata</i>	<i>úk-ata</i>	<i>bú-data</i>	<i>bú-dita</i>
ABL	<i>áb-aŋal</i>	<i>úk-aŋal</i>	<i>bú-daŋal</i>	<i>bú-diŋal</i>
ADESS	<i>áb-aŋta</i>	<i>úk-aŋta</i>	<i>bú-daŋta</i>	<i>bú-diŋta</i>
PROS	<i>ád-bes</i>	<i>úk-bes</i>	<i>bú-bes</i>	<i>bú-bes</i>
INS	<i>ád-as</i>	<i>úk-as</i>	<i>bú-(k)-as</i>	<i>bú-(k)-as</i>
ABESS	<i>ád-an</i>	<i>úk-an</i>	<i>bú-(k)-an</i>	<i>bú-(k)-an</i>

¹⁸² This parallelism is obscured by our notation, which uses /d/ in the singular, but /t/ in the plural. Though both dentals are quite doubtlessly etymologically identical (and the notation /d/ in the singular is justified by its leniting behaviour in the instrumental and abessive cases: [aras^l], [aran]), the phonotactic context in the plural pronoun provides *sensu stricto* no clue to its originally voiced or voiceless nature. Our notation, with /t/, is, thus, a compromise, in that it follows the general practice of Ketology and Ket orthography.

¹⁸³ It may of course be tempting to plot the different pronouns on a hierarchy of "animacy/empathy" and to view the velar plural suffix of the 2nd person pronoun as justified by a "lesser degree of prototypical animacy", but such an analysis may be regarded as quite bold.

	1PL	2PL	3PLmfn
NOM	ḗtn	ḗkḗ	būḗ
GEN	ḗtn-na	ḗkḗ-na	būḗ-na
DAT	ḗtn-naḗa	ḗkḗ-naḗa	būḗ-naḗa
BEN	ḗtn-nata	ḗkḗ-nata	būḗ-nata
ABL	ḗtn-naḗal	ḗkḗ-naḗal	būḗ-naḗal
ADESS	ḗtn-naḗta	ḗkḗ-naḗta	būḗ-naḗta
PROS	ḗtn-bes	ḗkḗ-bes	būḗ-bes
INS	ḗtn-as	ḗkḗ-as	būḗ-as
ABESS	ḗtn-an	ḗkḗ-an	būḗ-an

All forms ending in final *-a* given above may also occur without this vowel (usually in rapid speech). Some case-inflected forms may be abbreviated in rapid speech; this is particularly frequent for 3rd Person Ablative pronouns, which then lose the phoneme sequence *-ḗa-*: *bú-diḗal* → *búdił*; *bú-daḗal* → *búdal*

4.2.2 Possessive pronouns

The genitive forms of the personal pronouns are directly used as possessive pronouns; they may be nominalized with the ubiquitous nominalizing suffix *-s/-sin* (cf. 4.1.2.1.; 1st SG and 2nd SG pronouns insert /#/ as a binding vowel):

	Nominative	Genitive/Possessive	nominalized
1SG	ā <i>d</i>	ā <i>b</i>	ā <i>bis</i>
2SG	ū <i>k</i>	ū <i>k</i>	ū <i>kis</i>
3SGm	bū	bú <i>da</i>	bú <i>das</i>
3SGf	bū	bú <i>di</i>	bú <i>dis</i>
1PL	ḗtn	ḗtn <i>na</i>	ḗtn <i>nas</i>
2PL	ḗkḗ	ḗkḗ <i>na</i>	ḗkḗ <i>nas</i>
3PL	būḗ	būḗ <i>na</i>	būḗ <i>nas</i>

The nominalized possessive pronouns may be used headlessly, cf. the following sentence (context information: two sons of two different persons have been mentioned):

(177)

ū ā*b-is-daḗa* ī*s* k[u]⁸-ā⁴-baq, bú-di-s-daḗa
 you IGEN-N-DATm meat 2-Th-give he-GEN-N-DATm
 naʔn k[u]⁸-ā⁴-baq
 bread 2-Th-give
 You give meat to my [son], bread to his one. (Werner 1997c, 135)

Nominalized possessives, like nominalized adjectives, may be used predicatively without any copula. However, in Baklanikha, some speakers used consistently the non-nominalized genitive/possessive forms of personal pronouns in predicative function as well:

(178)

tákim àj ókη-na
white sack you\PL-GENpl
The white sack is yours (PL).

Predicative possessive pronouns may also be formed by a different set of suffixes; the basic form is *-ij*, added to the genitive/possessive form of the personal pronoun; *-bij* is used for inanimate possessa; the *b*-element is historically identically with the P³ agreement marker used in verbs for inanimate objects (4.4.5.9); it may etymologically go back to the attested noun *bi* 'thing'. The *-ij*-formation is only found with 1st and 2nd SG possessors (and animate possessa), i.e. 3rd person and plural possessors use the *-s*-nominalization for animate possessa:

	possessor anim. possessum <i>-ij</i>	anim./inanim. possessum <i>-s</i>	inanim. possessum <i>~bij</i>
1SG	<i>áb-ij</i>	<i>áb-is</i>	<i>áb-bij</i>
2SG	<i>úk-ij</i>	<i>úk-is</i>	<i>úk-bij</i>
3SGm	→	<i>búda-s</i>	<i>búda-bij</i>
3SGf	→	<i>búdí-s</i>	<i>búd-bij</i>
1PL	→	<i>ótna-s</i>	<i>ótna-bij</i>
2PL	→	<i>ókηna-s</i>	<i>ókηna-bij</i>
3PL	→	<i>búηna-s</i>	<i>buηna-bij</i>

(179)

kíde íkus áb-ij or: *kíde íkus áb-is*
this house IGEN-POSS this house IGEN-N
This house is mine.

(180)

kíde íkus bú-da-s not: **kíde íkus* ***búd-ij*
this house he-GENm-N
This house is his.

4.2.3 Demonstrative pronouns

Ket demonstrative pronouns are derived from the same set of deictic roots, which form the basis of local adverbs (cf. 4.1.4.1), enlarged by the element *-d/-de* (singular), or *-ne* (plural). Normally, *-d* forms masculine demonstrative pronouns, whereas *-de* is reserved for class *f*. However, our field materials show a marked



tendency to generalize the longer form, *-de*, to both genders. In rapid speech, the demonstrative pronouns may be reduced to their deictic roots:

	demonstr. <i>m</i>	demonstr. <i>f/n</i>	demonstr. (<i>+anim</i>)	allegro form
near-deictic	<i>kīd, (kíde)</i>	<i>kíde</i>	<i>kíne</i>	<i>kī</i>
medium-range-deictic	<i>tūd, (túde)</i>	<i>túde</i>	<i>túne</i>	<i>tū</i>
far-deictic	<i>qād, (qáde)</i>	<i>qáde</i>	<i>qáne</i>	<i>qā</i>

Demonstratives precede their referents and may also be used independently, i.e. without an overt referent, if this is retrievable from the discourse context:

(181)

kíde quʔs áqta-s, túde séla quʔs
 this tent good-N this bad tent
 This tent is a good one, that is a bad tent.

The plural forms are only used with animate nouns; inanimate plurals trigger the generalized singular form of the demonstrative:

	<i>kíde keʔd, kíne deʔη</i>	vs.	<i>kíde baʔη, kíde bán-in</i>
PL	this person this\PL person\PL		this place this place-
	this person, these people		this place, these places

An idiosyncratic use of the plural demonstratives is required by nouns expressing points and spans of time:

(182)

- a)
- | | | |
|-------------|-------------|------------------|
| <i>kíne</i> | <i>kōt</i> | <i>*kíde kōt</i> |
| this\PL | winter | |
| | this winter | |
- b)
- | | | |
|-------------|-----------------|-----------------|
| <i>kíne</i> | <i>iʔ</i> | <i>*kíde iʔ</i> |
| this\PL | day | |
| | this day, today | |

Independently used demonstrative pronouns ("this, that one") assume the usual case endings (but no locative, vocative or translative), differentiated according to class (i.e. with the postbase elements *-di-* for class *f* and *-da-* for class *m*). The

prosecutive forms *kínbes*, *túnbes*, *qánbes*¹⁸⁴ have been lexicalized to denote "such a", "one like this/that"; they may modify adjectives and, in independent use, be pluralized with *-n*:

a)

túnbes keʔd
such person
such a person

b)

túnbes áqta deʔŋ
such good person\PL
such good persons

c)

<i>ā́d túnbes</i>	:	<i>ṓt túnbes-n</i>
I such		we such-PL
I am like that		we are like that

4.2.4 Interrogative pronouns

Ket has the following interrogative pronouns, used in questions asking for animate constituents:

a) gender/class-differentiating interrogative pronouns:

bítse *bésa*
who (m) who (f)

The use of *bítse* (var.: *bísse*) implies that the person asked for is (known/suspected to be) a male human being, whereas *bésa* asks for females:

(183)

bú-ŋ-naŋal bítse [du]ʰ-tʰ-oʰ-bʰ-inʰ-kij
he-PL-ABLpl who\m 3-D-Th-3n-Pst-say
Who (which male person) of them said it?

(184)

bésa daʰ-[ik]ʰ-inʰ-bes
who\ f 3f-direction-Pst-move
Who (which female person) came?

¹⁸⁴ *qánbes* is mentioned in the Ketological literature but it seems not to be attestable in texts.

b) gender/class-neutral interrogative pronouns:

ána, ánet "who (SG¹⁸⁵)"

(185)

ána d[u]⁸-b³-i²-i/bed?
 who 3-3n-Pst-make
 Who made it?

(186)

túde ánet-da qu's
 this who-GENm tent
 Whose tent is this?

There is a plural form *ánet-aŋ* "who (PL)", but it is more common to use *bílaŋsan* (< *bíla* "how, what kind of" + *-ŋ-* "PL" + *-s* "Nominalizer" + *-an* "PL"¹⁸⁶), most commonly found with various case suffixes, instead:

(187)

bílaŋsan-naŋa ku⁸-(k)-a⁴-tn
 who\PL-DATpl 2-(Sep)-Th-go
 To whom (to which people) are you going?

All these interrogative pronouns assume the usual case suffixes found with nouns denoting animate beings (i.e. no locative, prosecutive, and, being pronouns, no vocative). For inanimate constituents, the two available interrogative pronouns show a differentiation not otherwise present in the language.

ák(u)s "what" is used to ask for constituents displaying various syntactic functions, e.g. subject, object, or, with case affixes, various case roles:

(188)

túde ákus?
 this what
 What is this?

(189)

ákus ku⁸-b³-bed?
 what 2-3n-make
 What are you doing?

¹⁸⁵ Or unknown number.

¹⁸⁶ The expected plural affix on the nominalizer *-s* is, however, *-in*.

(190)

ákus-as ku⁸-b³-bed?
 what-INS 2-3n-make
 With what are you doing/making it?

Many different case forms of *ák(u)s* render the notion of "why, for what purpose"; most commonly, the translative case is used in this function, but local cases - ablative, adessive, benefactive - are found here as well:

(191)

áks-csaŋ d[u]⁸-[ik]⁷-in²-bes?
 what-TRANS 3-direction-Pst-move
 Why (for what purpose) has he come?

(192)

ūk áks-dita ku⁸-k⁵-a⁴-do?
 you what-BENn 2-D-Th-watch
 What/why are you staring?

(193)

áks-diŋta óka k[u]⁸-[ik]⁷-in²-bes?
 what-ADESSn here 2-direction-Pst-move
 Why have you come here?

The unexpanded nominative may - like (colloquial) Russian *čto* - serve the same function:

(194)

ūk áks bōn [ku]⁸-sij
 you what not 2-eat
 Why are you not eating?

The indeclinable interrogative *āj*, on the other hand, may be described as an *accusative* form, used only for inanimate direct objects. Krejnovič (1968) observed, in Sulomai, that transitive verbs governing *āj* do not show (or lose) any marker of inanimate object (in P³, cf. 4.4.5.9, whereas verbs governing *ák(u)s* retain such markers):

(195)

<i>ákus du⁸-b³-bed</i>	vs.	<i>āj du⁸-(j)-bed</i>
what 3-3n-make		what 3-(Sep)-make
What is he doing?		What is he doing?

However, more recently recorded data from Southern and Central Ket do not observe this differentiation:

(196)

$\bar{e}k$ $\bar{a}j$ $ku^8-b^3-b\bar{e}d-in$
 you\PL what 2-3n-make-PL
 What are you (PL) doing?

While *ák(u)s* may be (and quite frequently is) incorporated into a verb form, $\bar{a}j$ never is:

(197)

$k[u]^8-akus^7-(s)-i/b\bar{e}d$: $*k[u]^8-aj^7-(s)-i/b\bar{e}d$
 2-what-(Sep)-make 2-what-(Sep)-make
 What are you doing?

Another way to ask for the reason why someone did something is to use the particle *átn*, which usually follows the sentential subject and immediately precedes the predicate¹⁸⁷; the use of *átn* always implies a note of reproach or strong disapproval with the action expressed:

(198)

$\bar{u}k$ $\acute{a}tn$ $\acute{o}tn$ $k\acute{o}ma$ $k[u]^8-aj^7-da\eta/k^6-o^4-[i]n^2-daq$
 you PROH we down 2-down-1PL-Th-Pst-throw
 Why did you throw us on the ground? (Belimov 1976, 22)

There is a whole set of interrogative pronouns derived from the root $*bil^{188}$, e.g. *bílon* "how many, how much" (+ *òn* "much"), var. *bílunon*, *bíla* "how", *bíles* "where to", *bíli(ηa)l* "whence" (cf. Abl. *-i(ηa)l*), *bíltan* "where to" (cf. *-tan* in local/spatial adverbs, (4.1.4.1):

¹⁸⁷ Belimov (1976, 20) states that only in rhetorical questions of the type "Why are there no people on the Dubches river?" (implying a subtext like "what are you talking about, of course there are"), this particle occurs sentence-initially. However, he gives only Yugh examples to illustrate this. In Yugh, the particle *átn* is represented by the shape *áta*; curiously, the *prohibitive* particle (4.4.6.2.6) shows the same variation across the two languages: Ket *átn* : Yugh *áta*, so both are likely to be etymologically identical. The common, or historically underlying, semantic content is the expression of strong disagreement ("why on earth?").

¹⁸⁸ It may be tempting to equate this root with the adverb *bil* "far", but it is not easy to bridge the semantic gap between both roots.

(199)

ūk bīla k[u]ʰ-anunʷ-(s)-i/bed
 you how 2-think-(Sep)-make
 What ("how") do you think?

(200)

ū bīles eiŋʷ-ku/kʰ-oʰ-qon
 you where.to go-2SG-Th-begin\Pst
 Where did you (start to) go?

(201)

ūk bīl-iŋal k[u]ʰ-[ik]ʷ-inʷ-[q]us
 you where-ABL 2-direction-Pst-go
 Where do you come from?

Other interrogative pronouns are:

bīseŋ "where"; this interrogative may receive predicate affixes:

1.SG	<i>bīseŋ-di</i>	"where am I"
2.SG	<i>bīseŋ-ku</i>	"where are you (SG)"
3.SG m	<i>bīseŋ-du</i>	"where is he"
3.SG f	<i>bīseŋ-da</i>	"where is she"
1.SG n	<i>bīseŋ-am</i>	"where is it"
1.PL	<i>bīseŋ-daŋ</i>	"where are we"
2.PL	<i>bīseŋ-kaŋ</i>	"where are you (PL)"
3.PL	<i>bīseŋ-aŋ</i>	"where are they"

áska "when":

(202)

bū áska d[u]ʰ-ikʷ-(s)-i/bes
 he when 3-direction-(Sep)-move
 When does/will he come?

(203)

túde áska obīlda
 this when was
 When was this?

ánun "how many":

(204)

ánun síkŋ úk-aŋa
 how.many year\PL you-DATm
 How old ("how many years") are you?

ásēs, ās "what kind of":

(205)

ásēs asse-n d[u]ʰ-a⁴-q²-εj
 what animal-PL 3-Th-Pst-kill
 What kind of animals did he kill?

4.2.5 Relative pronouns and interrogative relativizers

Relativization - here loosely defined as the use of a predication as a noun-modifying attribute - is generally achieved in Ket by preposing a finite verb form (cf. Vol. II of this grammar); apart from this technique, Ket relative clauses may be introduced by relative pronouns: the general relative pronoun is *qō*, which is used in this form or expanded (cf. the demonstrative pronouns, 4.2.3) to differentiate gender/class and number, at least theoretically¹⁸⁹:

qōd (m) *qóde* (f) *qóne* (m/f/n PL)

It seems to be a relatively recent functional specialization of the particle *qōd(ε)* "like, as", cf.:

(206)

bū túm-du qóde kāl
 he black-PR3m like raven
 He is as black as a raven.

As a relativizer, *qōd(ε)* does not indicate the case role of the relativized constituent:

(207)

kójka-n qóde baat bōn d[u]ʰ-b³-iʰ-[a]
 head-PL REL old.man NEG 3-3n-Pst-R
 (Fish) heads, which old man did not eat. (Werner 1997c, 141)

¹⁸⁹ In actual usage, *qóde* is mostly used for all genders and numbers.

(208)

keʔd qóde obálda ót-na éηqoη-diηta
 person REL was we-GEN.PL village-ADESS
 The man, who was in our village.

(209)

qām qóde úk-aηa bāt d[i]ʰ-asan⁷-i²-bed
 woman REL you-DAT ptcl 1-speak-Pst-make
 The woman about whom I told you before.

Many interrogative pronouns may also be used as relative pronouns, especially in headless relative clauses:

(210)

ána òn du⁸-b³-ded túde bílda itelem
 who much 3-3n-read that all he.knows
 Who reads a lot, knows everything.

(211)

kíde keʔd bítse d[u]ʰ-b³-i²-i/bed áb-ata doʔn
 this person who.m 3-3n-Pst-make I-BEN knife
 This man, who made a knife for me.

(212)

bū-η d[u]ʰ-[ik]ʰ-in²-bes-in túnun bìseη u⁷-b³-a/qot qā
 he-PL 3-direction-Pst-move-PL here.to where stand-3n-R house
 They came there, where a big house is standing.

(213)

ána bìlun du⁸-b³-bed túde túnun òn [du]ʰ-kaj⁷-b³-u/qos
 what how.much 3-3n-make that so.much much 3-take-3n-R
 How much one works ("does"), that much one will take.

More on relative clauses and relativization is to be found in Vol. II. of this grammar.

4.2.6 Indefinite pronouns

Interrogative pronouns can be turned into indefinite pronouns by preposing the particle *tām*:

<i>ák(u)s</i>	<i>tām ák(u)s</i>	"something"
<i>ána/ánct</i>	<i>tām ána/ánct</i>	"someone"

<i>bésa</i>	<i>tām bésa</i>	"some female person"
<i>bítse/bísse</i>	<i>tām bítse/bísse</i>	"some male person"
<i>áses</i>	<i>tām áses</i>	"some (thing, person)"
<i>bìseŋ</i>	<i>tām bìseŋ</i>	"somewhere"
<i>bìles</i>	<i>tām bìles</i>	"to somewhere"
<i>áska</i>	<i>tām áska</i>	"some time, once"
<i>bíla</i>	<i>tām bíla</i>	"somehow"
<i>ák(us)-esaŋ</i>	<i>tām ák(us)-esaŋ</i>	"for some reason"
<i>ánun</i>	<i>tām ánun</i>	"some (quantity)"
<i>bílil</i>	<i>tām bílil</i>	"from somewhere"
<i>bílaŋsan</i>	<i>tām bílaŋsan</i>	"some people"

This particle is also found independently, conveying the disjunctive meaning "or". The combination of *tām* + interrogative pronoun + particle *ána*¹⁹⁰ + negator *bōn*¹⁹¹ yields negative pronouns (or rather collocations):

<i>tām ák(us) ana bōn</i>	"nothing"
<i>tām áska ana bōn</i>	"never"
<i>tām bíla ana bōn</i>	"in no way"
<i>tām bílil ana bōn</i>	"from nowhere"
<i>tām bìseŋ ana bōn</i>	"nowhere"
<i>tām bésa ana bōn</i>	"nobody (female)"
<i>tām bítse ana bōn</i>	"nobody (male)"
<i>tām ana ana bōn</i>	"nobody"

Two other elements with an indefinite force are *qōd* and *nímat*; both are generally viewed as Russian loans; while this is undoubtedly the case for *nímat* (< russ. *níbud'*; it is, like its Russian model, always postposed), *qōd* may, on the other hand be native and historically identical with *qōd* "like, as", treated above¹⁹².

4.2.7 Emphatic/reflexive pronouns

The root *bīn*¹⁹³ is used to convey various notions of reflexivity and emphasis, and may be glossed as "self". In its unexpanded form it may accompany a singular noun or pronoun to emphasize the identity of the referent; it may precede or follow its head; with 3rd person referents preposing appears to be more common than with 1st and 2nd person pronouns:

¹⁹⁰ Often pronounced with a long initial vowel: *aana* (which disrupts the canonical prosodic structure of Ket; this is doubtlessly due to the often emphatic character of negative pronouns; it may then be rendered with "at all"). Apart from the use illustrated here, the particle *ána* is found with the emphasizing meaning "even".

¹⁹¹ The negator is placed immediately in front of the verbal predicate of the sentence, which is more often than not the position given as an example here; in sentences, where, e.g., the negative pronoun is in object function, *bōn* is accordingly detached from it.

¹⁹² The alternative is to view it as copied from Russian *xot'* "at least".

¹⁹³ The role of this root (i.e. as "dummy" subject marker) in the verbal system is discussed in 4.4.5.2.4.

(214)

ād bīn bo/k⁶-a⁴-tn
 I self 1SG/D-Th-go
 I go *myself*.

(215)

bīn bū o/k⁶-o⁴-[i]n²-[t]n
 self he 3SG/D-Th-Pst-go
 He went himself ("It was he himself, who went").

More common, however, are the *expanded* forms of this root, which present a unique morphological pattern. They differentiate person by suffixing predicative affixes (4.4.9.3) and adding to these suffixes the pronominal genitive suffixes¹⁹⁴ (4.2.1); case is differentiated by adding to these forms the set of case suffixes used for pronouns¹⁹⁵ (otherwise, predicate affixes do not tolerate further morphological accretions to the right without prior nominalization):

	1SG	2SG ¹⁹⁶	3SGm	3SGf
Nom	<i>bīn/bīn-di</i>	<i>bīn/bīn-ku</i>	<i>bīn/bīn-du</i>	<i>bīn/bīn-da</i>
Gen	<i>bīn-di-ba¹⁹⁷</i>	<i>bīn-ku-k</i>	<i>bīn-du-da</i>	<i>bīn-da-di</i>
Dat	<i>bīn-di-baŋa</i>	<i>bīn-ku-kaŋa</i>	<i>bīn-du-daŋa</i>	<i>bīn-da-diŋa</i>
Abl	<i>bīn-di-baŋal</i>	<i>bīn-ku-kaŋal</i>	<i>bīn-du-daŋal</i>	<i>bīn-da-diŋal</i>
Adess	<i>bīn-di-baŋta</i>	<i>bīn-ku-kaŋta</i>	<i>bīn-du-daŋta</i>	<i>bīn-da-diŋta</i>
Ben	<i>bīn-di-bata</i>	<i>bīn-ku-kata</i>	<i>bīn-du-data</i>	<i>bīn-da-dita</i>
Prosec	<i>bīn-di-bes</i>	<i>bīn-ku-bes</i>	<i>bīn-du-bes</i>	<i>bīn-da-bes</i>
Ins	<i>bīn-di-(k)as</i>	<i>bīn-ku-(k)as</i>	<i>bīn-du-(k)as</i>	<i>bīn-da-(k)as</i>
Abess	<i>bīn-di-(k)an</i>	<i>bīn-ku-(k)an</i>	<i>bīn-du-(k)an</i>	<i>bīn-da-(k)an</i>
	1PL	2PL	3PL	
Nom	<i>bīn-daŋ</i>	<i>bīn-kaŋ</i>	<i>bīn-aŋ</i>	
Gen	<i>bīn-daŋ-na</i>	<i>bīn-kaŋ-na</i>	<i>bīn-aŋ-na</i>	
Dat	<i>bīn-daŋ-naŋa</i>	<i>bīn-kaŋ-naŋa</i>	<i>bīn-aŋ-naŋa</i>	
Abl	<i>bīn-daŋ-naŋal</i>	<i>bīn-kaŋ-naŋal</i>	<i>bīn-aŋ-naŋal</i>	
Adess	<i>bīn-daŋ-naŋta</i>	<i>bīn-kaŋ-naŋta</i>	<i>bīn-aŋ-naŋta</i>	

¹⁹⁴ It is of course true that, in the 1st person singular pronoun *ād*, Gen. *āb*, the final *-b* cannot straightforwardly be described as a *suffix* (since this would lead to a root **a-*, which otherwise can hardly be justified for Ket or Yeniseic), but the emphatic pronouns treat it quite palpably as a suffix.

¹⁹⁵ I.e. only for those cases, which are based on the genitive form throughout all declensional paradigms of the language.

¹⁹⁶ The phonological /k/ of all genitive-based case forms remains unlenited throughout, cf. the similar situation in the declensional paradigm of the 2nd SG personal pronoun, 4.2.1.

¹⁹⁷ The additional *-a* of this form, not present in the genitive of the 1st person pronoun, has obviously been introduced here from other oblique case forms, where it forms part of the case suffix.

Ben	<i>bín-daŋ-nata</i>	<i>bín-kaŋ-nata</i>	<i>bín-aŋ-nata</i>
Prosec	<i>bín-daŋ-bes</i>	<i>bín-kaŋ-bes</i>	<i>bín-aŋ-bes</i>
Ins	<i>bín-daŋ-as</i>	<i>bín-kaŋ-as</i>	<i>bín-aŋ-as</i>
Abess	<i>bín-daŋ-an</i>	<i>bín-kaŋ-an</i>	<i>bín-aŋ-an</i>

For plural referents, only the expanded forms may be used. They are further obligatory for any non-attributive usage. Reflexive/emphatic pronouns may be accompanied by coreferential personal pronouns, with which they agree in case:

(216)

āđ itpedem sáldo sél-am bín-di-bat
 I I.know smoke bad-PR3n self-PR1SG-BEN
 I know that smoking is bad for me (myself).

(217)

ótn-il bín-daŋ-naŋal bŭ-ŋ oŋ/k⁶-o⁴-[i]n²-[t]n
 we-ABL self-PR1PL-ABL.PL he-PL 3PL/D-Th-Pst-go
 They set out (went) from *us* (and not from someone else).

In oblique cases, the *bin*-pronouns express reflexivity:

(218)

āđ bín-di-baŋa d[u]⁸-kaŋ⁷-bo/[k]⁶-qos
 I self-PR1PL-DAT 3-take-1SG/D-R
 I take it for myself.

However, it *cannot* express a reflexive direct object, either in expanded or unexpanded form. Direct reflexivity is mostly expressed lexically, mostly by verbs belonging to conjugations II and IV (cf. 4.4.3.2, 4.4.3.4), some of which - but by no means all - have inherent reflexive semantics.

On the other hand, *bin*-pronouns are very frequently used in expressions of reflexive possession, i.e. to indicate that the (concrete or metaphorical) possessor of an item is identical with the sentential subject. This usage is highly reminiscent of that of Russian *svoj* (one's own) and may have been influenced by it:

(219)

āđ bo/k⁶-a⁴-tn bín-di-ba ób-aŋ-naŋa
 I 1SG/D-Th-go self-PR1SG-GEN father-PL-DAT.PL
 I go to my (own) parents.

(220)

bū qà áqta itelem bín-du-da qaʔ
 he big good he.knows self-PR3SG-GEN word
 He knows his own language/his mother tongue very well.

(221)

ā́d bín-di-ba dēs-as t̂⁵-o⁴-[i]l̂²-uŋ, bín-di-ba
 I self-PR1SG-GEN eye-INS D-Th-Pst-see self-PR1SG-GEN
ókdi-ŋ-as ba/k⁶-o⁴-b³-i²-da
 ear-PL-INS 1SG/D-Th-3n-Pst-hear
 I saw it with my own eye, heard it with my own ears.

4.2.8 Reciprocal pronouns

For the expression of reciprocal actions, Ket uses the reciprocal pronoun *bíkked* < *bík* "other" + *keʔd* "person":

(222)

bū-ŋ bíkked d[u]l̂⁸-tukun⁷-aŋ/t̂⁶-a⁴-kit-n
 he-PL each.other 3-comb-3PL/D-Th-stroke-PL
 They comb each other (not: *they c. s.o. else). (Vajda 2004, 34)

Another technique is the idiosyncratic and highly lexicalized juxtaposition of the numeral *qókdu* "one (predicative form)" and the cardinal numeral *qoʔk* "one" (a tentative paraphrase could be: "it-is-one [it verb-s] [the other] one"):

(223)

īn kóska-n [du]l̂⁸-toqtad⁷-o⁴-[i]l̂²-beq-in qókdu qoʔk
 two cat-PL 3-chase-Th-Pst-make-PL one-PR3m one.m
 Two cats chased each other.

4.3 Numerals and quantifiers

4.3.1 Cardinal numerals

Ket cardinal numerals are the following:

1	<i>qoʔk</i> (m/f), <i>qūs</i> (n)
2	<i>īn</i>
3	<i>doʔŋ</i>
4	<i>sīk</i>
5	<i>qāk</i>
6	<i>ā / à</i>
7	<i>oʔn</i>
8	<i>īn-am bónsaŋ qō</i>

9 *qús-am bónsaη qō*
 10 *qō*

The numerals "8" and "9" are formed in a subtractive manner:

(224)

ín-am bónsaη qō
 two-PR3n is.not/lacks ten
 "It is two, it lacks, ten" = eight

(225)

qús-am bónsaη qō
 one-PR3n is.not/lacks ten
 "It is one, it lacks, ten" = nine

The internal syntax of these petrified expressions is unusual, in requiring the base numeral to show the (neuter) predicative form (*-am* "it is"), followed by the predicative negation *bónsaη* "it is not".

The cardinal number "one" differentiates animacy, with *qoʔk* being used for animate nouns (class *m* and *f*) and *qūs* for inanimate nouns (class *n*):

(226)

qoʔk hīk, qoʔk qīm, qūs quʔs
 one man, one woman, one house

Used predicatively, cardinal numbers receive predicative suffixes, according to a complex pattern; again, the numeral "one" stands out in receiving personal, class-differentiating, predicative suffixes: *qók-du* (m), *qók-da* (f), *qús-am* (n).

The numerals from 2 - 5 differentiate animacy only; inanimates receive *-am*, whereas for animate numerals the predicative affix is actually identical with the nominal *plural* suffix (*-Vη*, cf 4.1.1.2.4.1):

	+anim	-anim
2	<i>ín-aη</i>	<i>ín-am</i>
3	<i>dóη-aη</i>	<i>dóη-am</i>
4	<i>sík-aη</i>	<i>sík-am</i>
5	<i>qák-aη</i>	<i>qák-am</i>

Numerals above five receive the nominalizer *-s* (cf. 4.1.2.1) in Southern Ket, and its plural form *-sin* in Central and Northern Ket, or the neuter predicative suffix *-am* (for all classes):

- 6 à-s ~ á-(k)am¹⁹⁸
 7 òn-s ~ ón-am
 8 ínam bónsaη qō-s ~ qó-(k)am
 9 qúsam bónsaη qō-s ~ qó-(k)am
 10 qō-s ~ qó-(k)am

The decades are:

- 20 eʔk
 30 dóηa qō
 40 soʔl¹⁹⁹
 50 qóleb kiʔ
 60 áka qō
 70 dóηas bónsaη kiʔ
 80 éks bónsaη kiʔ
 90 qōs bónsaη kiʔ
 100 kiʔ

"30" and "60" are formed from "10" plus the multiplicative (cf. 4.3.3) numerals *dóηa*, *áka* "three, resp. six times". The numeral "50" is literally "half hundred". After sixty the subtractive principle rules again; while "80" and "90" conform to the principle forming the numbers "8" and "9", the word for "70" shows an idiosyncrasy in requiring the minuend to be *dóηas*, i.e. literally "three times", without *qō* "10"; it could be observed that *dóηa* can sometimes be used alone to mean "30".

Between the decades, numerals are formed by joining the predicative form of the digit with the decade (up to X7) by means of the conjunction *śkam* (itself a neuter predicative form of the adjective *eʔk* "superfluous"):

- 21 qúsam śkam eʔk
 22 ínam śkam eʔk
 23 dóηam śkam eʔk
 24 síkam śkam eʔk
 25 qákam śkam eʔk
 26 às śkam eʔk
 27 òns śkam eʔk

For X8 and X9, again the subtractive rule holds:

- 28 ínam bónsaη dóηa (qō)
 29 qúsam bónsaη dóηa (qō).

¹⁹⁸ Phonological /k/ (phonetic [ɣ]) here and in "10" is unetymological and inserted as a hiatus-avoiding device preserving the phonetic body of the predicative affix.

¹⁹⁹ This numeral is often explained as an early Russian loan (< *sorok*); the form preserved in Messerschmidt's diaries from 1723 - *soluk* - lends support to this view.

Multiples of 100 are formed straightforwardly by preposing the respective digit or its multiplicative form to *kiʔ* "100": *ín kiʔ*~*ína kiʔ* "200" (...) *oʔn kiʔ* ~ *óna kiʔ* "700". Again, the last two units of this row use the subtraction method:

800 *ínam k̄is b́ónsaŋ q̄ō kiʔ*
 900 *q́úsam k̄is b́ónsaŋ q̄ō kiʔ*

1000 is either *q̄ō kiʔ* "10-hundred", *q́óka kiʔ* "ten times hundred" or *t́ísa* (< Russ. *tysjačá*)

When higher numbers require the juxtaposition of several numerals, which are formed by subtraction, rather complex number words may result, e.g. (brackets indicate elements forming a closer unit):

82 *ínam ékam (éks b́ónsaŋ kiʔ)*
 92 *(((ínam b́ónsaŋ) q̄ōs) b́ónsaŋ) kiʔ*

Some of these forms are attested and may (with some informants) still be elicited, but native counting rarely goes far beyond 20 nowadays.

4.3.2 Ordinal numerals

To form ordinal numerals, the affix *-amas* is added to cardinals, e.g.:

3 *d́óŋamas*
 9 *ínam b́ónsaŋ q́ó-(k)amas*
 14 *śíkam ékam q́ó-(k)amas*
 20 *éka-amas*

etc.

As in many languages, the meaning "the first" is expressed suppletively/lexically; in Ket there are two possibilities:

q́ótil-s literally "the one in front" (< *q́ót* "in front" + *-il-* "Abl.")
kúbka-s literally "the one in front, at the beginning" (< *kúb* "beak, front part"
 + *-ka* "Loc.")

The vowel-initial ordinal numerals ("2nd", "6th", "7th", "20th") may occur with or without a preposed 3SG possessive prefix, which underscores the relational nature of ordinal numerals ("the xth of..."):

2 *(d)-ínamas*
 6 *(d)-ákamas*
 7 *(d)-ónamas*
 20 *(d)-ékamas*

4.3.3 Multiplicative and distributive numerals

The suffixes *-a* (< **-ha*) and *-sa* form multiplicative and distributive numerals, respectively; the latter are based on the predicative forms of the numeral:

	"... times"	"... each"
2	<i>ín-a</i>	<i>ín-am-sa</i> ~ <i>ín-aη-sa</i>
3	<i>dóη-a</i>	<i>dóη-am-sa</i> ~ <i>dóη-aη-sa</i>
4	<i>sík-a</i>	<i>sík-am-sa</i> ~ <i>sík-aη-sa</i>
5	<i>qák-a</i>	<i>qák-am-sa</i> ~ <i>qák-aη-sa</i>
6	<i>á-(k)a</i>	<i>á-(k)am-sa</i>
7	<i>ón-a</i>	<i>ón-am-sa</i>
	etc.	

"Once" is expressed lexically by *sīn*²⁰⁰.

Numerals precede their heads and require number concord, i.e. counted nouns show plural forms after numerals higher than one:

(227)

īn dc'η, sīk a'q, o'n ékη
 two person\PL four tree\PL seven day\PL
 two persons, four trees, seven days

After the numeral "2", some speakers use singular forms of nouns denoting *inanimate* entities:

(228)

*īn qū-η ~ īn qu's but *do'η qu's*
 two tent-PL two tent three tent

4.3.4 Quantifiers

Attributively used quantifiers include:

<i>òn</i>	"many" ²⁰¹
<i>túnun</i>	"so many" (< <i>tūn òn</i>)
<i>qómat</i>	"few, a little"
<i>bílda</i>	"all, whole"

²⁰⁰ As in English or German, this is also usable as a temporal adverb "once (upon a time), at one time (in the past)".

²⁰¹ Despite the difference in tone, this quantifier is doubtlessly etymologically related to the cardinal numeral "seven" (cf. 4.3.1, especially the role of "seven" as a major caesura in the counting system).

These require plural forms with count nouns and singular forms with mass nouns, e.g.:

(229)

<i>òn</i>	<i>deʔŋ</i>	<i>qómat naʔn</i>	<i>bálda deʔŋ</i>	<i>bálda naʔn</i>
many person\PL	few	bread	all person\PL	all bread
many people	a little bread	all the people	the whole bread	

But cf. *òn là* "many times, often".

4.4 Verbs

*Его величество глагол*²⁰²

The Ket verb constitutes the most complex morphological subsystem of the language, and is arguably one of the most complex verbal systems found in all of Eurasia. Theories about its internal makeup and origin, and on numerous details of virtually any given verbal form, abound in the literature, often widely differing. The following attempt to describe Ket verb morphology is heavily based on the concepts developed by Edward Vajda, which may be regarded as the first successful attempt to describe the bewildering array of surface forms found in Ket in a coherent manner. Hallmarks of this approach are

- the reduction of traditional Ketology's up to 15 morphological slots to only 8 (plus Root and Subject Plural altogether 10),
- the classification of verbs into five conjugation classes, according to the distribution of actant markers in the verb form,
- an intricate set of rules governing *vowel and consonant deletion*, and consonantal as well as vocalic *anaptyxis* (called *morphotactic* rules),
- the observation that certain morphological markers, although functionally independent, occur only in the direct vicinity of others - never alone - and the consequence that they have to be assigned to the same morphological slot,
- the concept of morphotactic *separators*, whose presence is determined by certain slot configurations alone, rather than being independent morphological markers.

The following sections will discuss the Ket verb according to this approach - differing in details, but not in the overall concept - using Vajda's notational conventions throughout. The most important of these are:

²⁰² Title of a Russian schoolbook (Z.D. Lobanovskaja/L.A. Gorbatenkova/M.S. Zimina, St. Petersburg: KORONA, 1998).

- while <-> hyphens separate morphemes belonging to different position classes (or morphological slots), a </> slash separates functionally different morphological elements, which occupy *the same* slot,
- [square brackets] mark elements (morphs or parts of morphs) which are viewed as paradigmatically present (or required by the morphological formula of a given conjugation class), but truncated or elided due to morphotactic or morphonological (or sometimes simply phonological) rules,
- (round brackets) mark non-morphological elements (consonants and vowels), which are inserted *between* certain slots due to morphotactic rules (of anaptyxis) or morphotactic separators (to be discussed in great detail in 4.4.4.4); these are further separated to the left and right by <-> hyphens, though they do not occupy morphological slots of their own,
- for clarity's sake, all elements (including truncated ones) which *do* occupy morphological slots are indicated by a superscript number indicating the respective slot.

Below, we will first give a concise overview of the morphological *categories* expressed in Ket verbs, followed by a short presentation of the five different *conjugation classes* (or simply *conjugations*); after that, the different *position classes* (or *slots*) will be treated, focussing on the morphological material which may fill them (and its functions), and morphotactic (and other) rules which determine their surface realisation. Then, a summary of morphotactic rules and separators will be given. Finally, derived categories (e.g. aktionsarten), mainly expressed by compounding and/or incorporation or by conspiring elements will conclude this chapter.

4.4.1 General overview - categories

Any Ket verb form *will* contain:

- a lexical root, which is generally found at the end of the morpheme chain (followed optionally by a subject plural marker); the lexical core of the verb may be (and very often is) compounded, in which case one of the elements is found further left in the morpheme chain (at position P⁷, where incorporated elements are also placed; in fact, all these cases can be explained as instances of *incorporation*); in a few cases - discussed in 4.4.5.1, the material representation of the root morpheme is eroded, leaving the verb form without an overt root morpheme,
- one or several *actant markers*, indicating at least the person (and, sometimes, class) of the main actant (subject, agent), or the object/patient of transitives; however, a verb with two actant markers may cross-reference the sentential subject *twice* in its morpheme chain; the choice of actant markers and their distribution over the morpheme chain is largely lexically determined and leads to the classification of Ket verbs into five different *conjugations*.

Any Ket verb form *may* furthermore contain:

- a *determiner*, usually consisting of one consonant, and occupying a specific slot in the morpheme chain (P⁵), though this position is debated among Ketologists: while there is general agreement that slot P⁵ exists and is the proper host of determiners, some facts seem to call for analyzing at least *some* determiners as (co-)occupying either slot P⁶ to the left, or slot P⁴ to the right. *Determiner* is a traditional term, which is revived here, though recent works use other designations for this type of morphemes, such as *preverb*, or *adposition*; all observers agree that determiners are lexical/derivative in nature and contribute to the semantics of the complex verb, though the exact semantic force of them is difficult to establish and mostly elusive,
- an overt tense marker, only in preterite forms,
- an overt plural marker, indicating the plurality of the sentential subject or agent,
- an incorporated element; the decision whether a given element is inserted in its appropriate position (P⁷) by productive incorporation or whether a *formal* incorporate has developed, together with the original root, into a compound verb, is largely semantically determined,
- the incorporated element (in slot P⁷) may be morphologically complex, containing i.a. markers of plurality, iterativity, or the highly productive causative marker.

4.4.2 Position class

In the history of Ket studies, the structure of the verb has been described in often widely differing ways. Up to 15 morpheme classes (or position classes, or orders) have been identified. The following treatment of the Ket verb basically follows Vajda's analysis, which assumes the presence of ten distinct position classes (including the root and the rightmost slot for an optional subject plural affix). The following table outlines these position classes (from P⁸, the leftmost slot, counting downward to P¹, the R[oot], and PL, the optional subject plural marker standing after/to the right of the root morpheme):

P⁸ - P⁷ - P⁶ - P⁵ - P⁴ - P³ - P² - P¹ - R - PL

P ⁸	subject person
P ⁷	lexical incorporate
P ⁶	subject or object person (sometimes + /determiner)
P ⁵	lexical determiner
P ⁴	subject/object person or "thematic" vowel, partially sensitive to tense
P ³	(neuter object) person (or - petrified - applicative/intensive)
P ²	tense (preterite)
P ¹	subject or object person (or petrified resultative marker)
R	lexical root
PL	subject plural

The morphological and functional peculiarities of the individual position classes are discussed in the subsections of chapter 4.4.5.

Not all of these slots may be filled simultaneously in any verb form.

A minimal verb form may contain just *R* and exactly one person marker, in most cases in P^8 (although this is not a frequent, let alone productive, pattern):

(230)

di⁸-təəl
1-freeze
I am freezing

A great number of verbs fill the lexical slots P^5 (determiner) and P^7 (incorporate) as well (and the P^7 incorporate may contribute more to the overall semantics of the complex verb than the *R* morpheme). Apart from hosting a 3rd person animate object marker (in conjugations I and III), slot P^4 may be occupied by "thematic" /*a/* (in all conjugations), which, though functionally/semantically not transparent, is also to be regarded as part of the *lexical* makeup of the verb. Any subset of these four lexical slots may be filled simultaneously. In addition, any verb may fill the tense slot P^2 (in the preterite) and any verb of conjugations I, II, or III may fill the rightmost subject plural slot PL, as well.

Maximal occupancy of morphological slots is achieved in different ways, depending on the different conjugational patterns²⁰³:

all verbs mark the sentential subject, mostly in P^8 (conjugation I inactive verbs mark it in P^4 or P^1 , conjugation II intransitives in P^6), verbs of conjugations III and IV (the "coreferential" conjugations) duplicate the subject marking in either P^6 (III), or P^1 (IV), transitive verbs mark additionally the sentential object/patient, in conjugations I and IV, P^6 hosts the object morpheme, conjugations I and III mark one direct object in *either* P^4 , P^3 , or P^1 respectively, according to animacy (3rd animate in P^4 , 3rd inanimate in P^3 , 1st and 2nd animate/speech-act-participant in P^1), PL is only filled for animate subjects in conjugations I, II, and III.

Thus, candidates for verbs forms filling *all ten* morpheme positions may at best be found in transitive conjugation III verbs, where both subject slots (P^8 and P^6) are filled by default and one further object marker is needed²⁰⁴. If P^4 is occupied by (lexical) "thematic" /*a/*, we would have to look for verb forms which either:

fill P^3 with a (neuter) object morpheme (/b/) and P^1 with something else, or fill P^1 with a (1st or 2nd person) object morpheme and P^3 with something else.

²⁰³ The following discussion presupposes some acquaintance with the concept and the crucial facts of the five Ket *conjugations*, cf. 4.4.3.

²⁰⁴ Further criteria for maximum occupancy are, of course, that the lexical core of the verb consists of *R*, a P^7 incorporate and a P^5 determiner; furthermore, the actual verb form has to be preterite (containing an overt morpheme in P^2) and (animate) plural, requiring the filling of PL.

"Something else" can be: for P¹ the (petrified) *resultative morpheme* /a/ (4.4.5.10.2), and for P³ (petrified) *applicative* or *intensive* /b/ (4.4.5.9.2).

Now, the concept of *resultative verbs* precludes any object marking, all such Ket verbs being intransitive (mono-actant) in nature, which cancels option a). Applicative and intensive *b*³ does occur with verbs of all conjugations, but no example has been found with a transitive conjugation III verb. This situation may be an artefact of the rarity of these verbs in general (and thus be merely contingent), but the conclusion from this remains nevertheless that no single Ket verb form has been found, which simultaneously fills all available morpheme slots.

Rather typical examples of verb forms filling *many* of the theoretically available slots, are (here accompanied by analysis in prose, anticipating the detailed discussion of verbal morphology to be dealt with in subsequent chapters):

(231)

*da*⁸-*nanbed*/*q*⁷-*in*²-*daŋ*¹-*ct*
 3f-bake(caus)-Pst-1-make
 She made us bake bread

The root morpheme is *-ct* "make"; however, the semantic content "bake bread" is determined in the P⁷ ("incorporate") position; the element filling this slot is itself complex: *nan-bed* is a compound of *naʔn* "bread" and *-bed* "to make", followed by the causativizer *-q*²⁰⁵. The verb contains two person markers, *da*⁸-, indicating sentential subject (feminine class) in P⁸, and *-daŋ*¹-, marking 1PL object in P¹. P² contains the preterite marker *-in-*.

Phonetically, this verb form is represented as [danan¹betqindaŋet].

A similarly long form, with a different morpheme pattern, is:

(232)

*da*⁸-*tukun*⁷-*ba*/*t*⁶-*o*⁴-*[i]*²-*kit*
 3f-comb-1S/D-Th-Pst-stroke
 She combed me.

Phonetically, the form is [datuɣun¹batol¹git].

The root morpheme *-kit* "to stroke" is accompanied by a (nominal) P⁷ incorporate (*túkun* "comb") in instrument function to produce the meaning "to comb (hair), to stroke with a comb". The sentential subject is again found in P⁸, the object marker (1SG) in P⁶, as stipulated by conjugation II (4.4.3.2). Also in slot P⁶, we find a so-called "determiner", here /t/, with an only vaguely determinable function; the reasons for analysing this as (co-)occupying slot P⁶ (instead of P⁵, where these morphemes may also occur) are discussed in detail in 4.4.5.3. Both slots P⁴ and P² contain information about the fact that the action is situated in the past. P² hosts the

²⁰⁵ The formation of causatives is discussed in 4.4.7.1

actual preterite marker (here *-il-*); however, its vowel has been truncated from the surface due to the action of a *morphotactic rule* (these are discussed in detail in 4.4.4). P⁴ is occupied by what is - for want of better term, resp. a clear functional description - referred to as a *thematic vowel* (in present tense forms: *-a-*). There is no discernable function this vowel fulfils in the morpheme chain, and it is regarded here as another *lexical* morpheme, in addition to R, P⁷ and P⁵ (4.4.5.8.2); the situation in slot P⁴ is, however, more complicated, since it *may* also be occupied - under certain conditions - by a clearly *personal* morpheme, which may also have the form /a/. However, if P⁴ is occupied by *-a-*, personal or "thematic", it will invariably be labialized to *-o-* in the preterite (cf. 4.4.5.8.3), as in this example:

(233)

d[i]⁸-ba/t⁶-o⁴-b³-[i]l²-ij
 1-1S/D-Th-3n-Pst-pull.out
 I pulled it out.

The sentential subject is encoded twice, as stipulated by conjugation III (4.4.3.3), in P⁸ and P⁶ (however, the verb form is *not* reflexive). The person marker in P⁸ was truncated according to TR5 (4.4.4.2.5); P⁶ contains a pleonastic 1SG marker (cf. 4.4.5.7), together with a determiner as in the previously discussed verb form. Past tense is again signalled by two morphemes, *-il-* and the labialization of the (thematic) vowel in P⁴. This form shows clearly that both morphemes belong to different morphemic slots, since they are separated by a marker of 3n object in slot P³.

Phonetic representation: [*dbatobl^{ij}*].

The positions R, P⁵, and P⁷ (and P⁴, when it contains "thematic" /a/) are *lexical* positions, which determine the propositional semantic content of the verb (few verbal roots may occur without P⁵, or P⁷ - often both - slots also filled), whereas the remaining positions may be called *paradigmatic* slots.

Positions P⁸, P⁶, P⁴, P³, and P¹ usually contain *person markers*. Whether a given person slot is filled, and with which morphological material, is exclusively determined by the *conjugation class* a given verb belongs to. Ket distinguishes five conjugation classes (or simply *conjugations*), which are purely lexically determined. This means that neither the form nor the semantic content of a verb (verb root, or verb root together with a P⁵ preverb, a P⁷ incorporate, or both) allows any inference on the conjugational pattern this verb will follow, nor is any inference on the verb's semantic content or syntactic behaviour possible, when the conjugation is known. Every conjugation consists of a specific set of patterns, by which the *person marking* slots of the verbal morpheme chain are filled.

The following discussion of Ket verbal morphemics will begin with a presentation of these five *conjugations*. This will be followed by a detailed presentation of *morphotactic rules*, which pervade the whole verbal morphology; these rules are unique in that they determine truncation and elision of morphological markers (sometimes only parts of them) according to the actual presence or absence of concrete fillers in the various morphemic slots; they do not react simply to the phonetic surrounding of an affected morpheme, nor can they be described as

morphophonemic. We thus follow Edward Vajda, who first described these rules for Ket (Vajda 2001) and dubbed them *morphotactic*.

Following this, the individual morpheme slots will be discussed one by one, showing the possible fillers and their functions, as well as all phonetic distortions they may be subject to (including, of course, again morphotactic rules, but also phonotactic and other factors). The discussion of verbal morphology will then be continued by sections on *mood*, especially *imperatives* (4.4.6). This is followed by a more detailed description of *derived categories* (4.4.7). In this section, some verbal categories, which are regularly expressed by the exploitation of this very productive and versatile morphological technique, will be discussed, too, such as *causatives*, and several *aktionsart*-like categories. Sections on *nominal verb forms* (infinitives, "participles"), "copulae" and predicative affixes, as well as a number of illustrative paradigms - including those of truly idiosyncratic and irregular verbs - conclude this chapter.

4.4.3 The five conjugation classes

In order to be able to correctly inflect a given Ket verb, its conjugation class (or simply *conjugation*) has to be known. Though most verbs (i.e. either verbal roots, or derived verbs consisting of R plus either a P⁵ preverb, a P⁷ incorporate or both) will typically belong to one of these conjugations, some fluctuation does also occur, i.e. some verbs may be inflected according to more than one conjugational pattern (and some paradigms mix forms from different conjugations). It is usually the case that one speaker will conjugate a given verb according to one conjugational pattern only; in some cases a speaker will be willing to *accept* a different pattern, too, but equally often this may be rejected by some speakers, while accepted by others. Generally, no difference in function or semantic content is entailed by such alternatives (nor do the different conjugations as such express any clearly determinable and fully operational semantic/functional content). The (albeit limited) versatility of conjugational patterns for some verbs may reflect as yet undetected dialectal (or subdialectal) differences, which could in principle be elucidated by a full appraisal of all attested conjugated verb forms, but it seems also to be likely that the functional "emptiness" of these patterns, together with ongoing language death (which also led to some cases of first-language-attribution in formerly fully competent speakers) leads to a certain degree of uncertainty on the side of some speakers, how a given verb "should" be conjugated.

Some of the Ket conjugations are markedly characterized by grouping certain argument positions together (or "treating them alike") against others, along the lines of syntactic "alignment". Thus, conjugation I treats sentential subject and object in what has been described as an "active" way, conjugation II may be referred to as "ergative" etc. This is the only grammatical domain of the language where such instances of (non-nominative) alignment are found, and the use of an "ergative" or "active" verb in any construction does not exert *any* influence on the behaviour of any other syntactic constituent.

In order to avoid misunderstandings about alignment in Ket, we mention the respective orientation of the conjugation classes, but will refer to them simply as "conjugation I, II, etc." in the remainder of this grammar²⁰⁶.

The notion of *transitivity* is taken in its traditional (non-scalar) definition, i.e. a transitive construction/verb will be one with (and an intransitive construction one without) an overt patient/object.

4.4.3.1 Conjugation I

The sentential subject is encoded in P⁸ (for transitive and intransitive verbs), objects are referenced in P⁴, P³, or P¹.

The P⁸ subject morphemes, identical for singular and plural²⁰⁷, are:

1SG/PL	<i>di</i>
2SG/PL	<i>ku</i>
3SG/PLm	<i>du</i>
3SG/PLf	<i>da</i> ²⁰⁸

The distribution of object morphemes in transitive verbs of this class is:

1SG	P ¹	<i>di</i>
2SG	P ¹	<i>ku</i>
3SGm	P ⁴	<i>a (o)</i> ²⁰⁹
3SGf	P ⁴	<i>i</i>
3SGn	P ³	<i>b</i>
1PL	P ¹	<i>daŋ</i>
2PL	P ¹	<i>kaŋ</i>
3PL	P ⁴	<i>aŋ (oŋ)</i>

Subject and object morphemes in the verbal chain of conjugation I verbs:

P ⁸	P ⁷	P ⁶	P ⁵	P ⁴	P ³	P ²	P ¹	R	PL
<u>di</u>				<i>a (o)</i>	<i>b</i>		<i>di</i>		
<u>ku</u>				<i>i</i>			<i>ku</i>		
<u>du</u>				<i>aŋ (oŋ)</i>			<i>daŋ</i>		
<u>da</u>							<i>kaŋ</i>		

²⁰⁶ The essence of conjugations I-IV has been clearly worked out and described for the first time by Comrie (1982). He summarizes the *Ket agreement system* in a table on p. 125 (terminology: DI affixes = our P⁸, BI affixes = our P⁶, DII affixes = our P¹); his categories may by and large be translated into our system as follows: a) Primary DI + Secondary Ø, number agreement = conjugation I; Primary DI + Secondary BI, number agreement = conjugation II; Primary DI + Secondary DII, variable number agreement = conjugation IV; Primary DII + Secondary Ø, no number agreement = conjugation III.

²⁰⁷ Subject plural is signalled by the PL morpheme -Vn following R, discussed in 4.4.5.5.

²⁰⁸ The 3SGf subject morpheme *da*⁸ is subject to surface-changing rules discussed in 4.4.4.1

²⁰⁹ The morphemes *a* and *aŋ* undergo *preterite labialization* in past tense forms, cf. 4.4.5.8.3.

Thus, the "speech-act participants" 1 and 2 are encoded closest to the root, in P¹, whereas 3rd person constituents occupy P⁴. Inanimate objects are assigned to slot P³ (and this *b* is the only morpheme which can occupy this verbal slot: it may be etymologically connected with the content noun *bi*? "thing"; for cases in which this morpheme may have historically been an *applicative* or *intensive* marker, cf. 4.4.5.9.2).

Animate subjects in P⁸ trigger plural agreement in position PL, cf.:

(234)

- a) $d[u]^8-i^2-di^1-s$
3-Pst-1-dress
He dressed me.
- b) $d[u]^8-i^2-di^1-s-n$
3-Pst-1-dress-PL
They dressed me.

The intransitive verb $\sqrt{loq\eta}$ "to shiver" shows only P⁸-morphology in the singular (for the form of the plural affix, cf. 4.4.5.5):

$loq\eta$ I_{itr} (il) ²¹⁰	"to shiver, tremble"
present tense	past tense
1SG $di^8-loq\eta$	$d[i]^8-i^2-loq\eta$
2SG $ku^8-loq\eta$	$k[u]^8-i^2-loq\eta$
3SGm $du^8-loq\eta$	$d[u]^8-i^2-loq\eta$
3SGf $d\alpha^8-loq\eta$	$da^8-i^2-loq\eta$
1PL $di^8-loq\eta-in$	$d[i]^8-i^2-loq\eta-in$
2PL $ku^8-loq\eta-in$	$k[u]^8-i^2-loq\eta-in$
3PL $du^8-loq\eta-in$	$d[u]^8-i^2-loq\eta-in$
imperative singular	imperative plural
$i^2-loq\eta$	$i^2-loq\eta-in$
MRs TR 1	

The affixes marking the subject in P⁸ and the object in P⁴, P³, and P¹ may be illustrated by the following paradigm of $b\alpha k$ "to find":

$i/b\alpha k \sim k\alpha k$ I_{tr} (in)	"to find"
Subject: 1SG	
Object ↓:	
present tense	past tense
2SG $di^8-ku^1-b\alpha k$	$d[i]^8-in^2-ku^1-b\alpha k$

²¹⁰ This verbal formula, which summarizes the necessary information required for the proper inflection of a verb, is explained in 2.6.1.

3SGm	$di^8-(k)-a^4-bək$	$d[i]i^8-o^4-[i]n^2-bək$
3SGf	$di^8-[i]i^4-bək$ <di:vək>	$d[i]i^6-i^4-(t)-[i]n^2-i/bək$ <ditnivək>
3SGn	$di^8-b^3-bək$	$di^8-b^3-in^2-kək$
2PL	$di^8-kaη^1-bək$	$d[i]i^8-in^2-kaη^1-bək$
3PL	$d[i]i^8-aη^4-(a)-bək$	$d[i]i^8-oη^4-(o)-[i]n^2-bək$
MRs	TR 1, TR 4, TR 10, SR 3, SR 8, SR 9, FOR	

Subject: 2SG

Object↓:

	present tense	past tense
1SG	$ku^8-di^1-bək$	$k[u]i^8-in-di^1-bək$
3SGm	$ku^8-(k)-a^4-bək$	$k[u]i^8-o^4-[i]n^2-bək$
3SGf	$ku^8-[i]i^4-bək$ <ku:vək>	$k[u]i^8-i^4-(t)-[i]n^2-i/bək$ <kitnivək>
3SGn	$ku^8-b^3-bək$	$ku^8-b^3-in^2-kək$
1PL	$ku^8-daη^1-bək$	$k[u]i^8-in^2-daη^1-bək$
3PL	$k[u]i^8-aη^4-(a)-bək$	$k[u]i^8-oη^4-(o)-[i]n^2-bək$
MRs	TR 1, TR 4, TR 10, SR 3, SR 8, SR 9, FOR	

The root shows partial suppletivism. The variant *kək* is found only in preterite forms with a directly preceding non-truncated *in*²-preterite morpheme (cf. also the imperative *in*²-*kək* "find it!"; cf. 4.4.5.1.1.2.1, where similar partially suppletive roots - with *b* ~ *k* -, but different distributions of variants - are discussed. Pre-root anaptyxis (*i*) is quite common, but not entirely predictable.

A rarer subtype of Conjugation I verbs is found with "inactive" intransitive verbs, which mark their single actant in P⁴ and P¹; this is typically found in verbs of possession (with the possessum incorporated in P⁷):

don^7-bed <i>I</i> _{inactive}	"to have a knife" ²¹¹
present tense	past tense
1SG	don^7-di^1-bed
2SG	don^7-ku^1-bed
3SGm	$don^7-a^4-(j)-bed$
3SGf	$don^7-i^4-(j)-bed$ <dondftlivet>
1PL	$don^7-daη^1-bed$
2PL	$don^7-kaη^1-bed$
3PL	$don^7-aη^4-bed$
MRs	SR 5, SR 8, SR 9, TR 10,

Basically, every noun designating a possessable item (including kinship terms) may occupy P⁷ in verbs of this type.

²¹¹ The same lexical elements, inflected according to the *active* subtype of conjugation I, convey the meaning "to make a knife".

With few exceptions, this pattern requires *monosyllabic* P⁷ incorporates. Disyllabic incorporated possessa trigger a different conjugational pattern (belonging to Conjugation II, but with some irregularities, cf. 4.4.5.2.3.1). This extends to P⁷ incorporates, which are only *historically* disyllabic. The most obvious consequence of this rule/tendency is the fact that pluralized P⁷ possessa allow the *verbum habendi* to be formed according to this Conjugation I pattern only as long as the respective nouns form their lexical plural without any syllabic suffix (cf. 4.1.1.2.4 for the formation of noun plurals in general).

This sensitivity of position P⁷ to the number of syllables it contains or contained is further illustrated in 4.4.5.2.3.1.

Apart from this highly frequent pattern, there is only a handful of Conjugation I intransitives marking their single actant in this ("active") way.

Though this subpattern is indeed rare, the distribution of personal morphemes in non-object function unites this paradigm with the transitive paradigm given above. It is thus certainly justified to view the distribution of morphemes in this conjugation as reminiscent of the "active" alignment pattern (subject/single argument of intransitive inactive verbs encoded like object/patient of transitive verbs, and subject of transitive verbs encoded like subject/single argument of intransitive active verbs). The designation "active conjugation" may thus be used as a mnemonic to show the *resemblance* of the morpheme distribution with otherwise known active/inactive patterns, but it should not lead to far-reaching conclusions about Ket morphosyntax²¹².

4.4.3.2 Conjugation II

Transitive verbs of this class mark their subject in P⁸ and objects in P⁶, while the single actant of an intransitive verb is marked in P⁶ only. This configuration has led observers to refer to this conjugation as the "ergative" (or "absolutive", as in recent works by E. Vajda) conjugation, because it treats the patient of transitive verbs and the subject/single actant of intransitives alike.

The P⁸ (transitive) subject morphemes are the same as in conjugation I ("active"). Here, they can be referred to as the "ergative" actant morpheme. The morphemes filling P⁶ (as indicators of direct object or single actant/subject of intransitives) are:

1SG	<i>ba~bo</i>
2SG	<i>ku</i>
3SGm	<i>a~o</i>

²¹² In fact, I wish to emphasize that I view it as quite unlikely that Ket may be meaningfully described as a language possessing "active" traits. All "inactive" paradigms of conjugation I are (sometimes highly) irregular and it seems possible to make the point that this "pattern" rather consists of an array of verbs, which show various degrees of paradigm mixing, involving "resultativity" and a certain attraction by Conjugation IV (q.v.). I present these patterns here (and some more paradigms in 4.4.10), but a thorough discussion of their *raison d'être* transcends the scope of this grammar and must be placed in a wider - and, of course, historical - context. By the time volume II of this grammar sees the light of the day, I hope to be able to inform readers about the place where this discussion has materialized.

3SGf	<i>i~u</i>
3SGn	<i>Ø~u</i>
1PL	<i>dəŋ</i>
2PL	<i>kəŋ</i>
3PLm	<i>aŋ~oŋ</i>
3PLfn	<i>Ø~u</i>

Only transitive animate subjects trigger an overt plural marker in PL.

Subject and object morphemes in the verbal chain of conjugation II verbs:

P ⁸	P ⁷	P ⁶	P ⁵	P ⁴	P ³	P ²	P ¹	R	PL
<u>di</u>		<i>ba~bo</i>							
<u>ku</u>		<i>ku</i>							
<u>du</u>		<i>a~o</i>							
<u>da</u>		<i>i~u</i>			(b) ²¹³				
		<i>Ø~u</i>							
		<i>dəŋ</i>							
		<i>kəŋ</i>							
		<i>aŋ~oŋ</i>							
		<i>Ø~u</i>							

While the personal morphemes in 2SG, 1PL, and 2PL have only one shape, other persons require a choice between two²¹⁴ variants (including zero). Both series of morphemes (which are conventionally referred to as the "ba"-series and the "bo"-series) encode what has sometimes been called the category of "version", discussed in 4.4.5.7.

P⁶ morphemes are furthermore obligatorily accompanied by a *determiner* (i.e. one of the morphemes /k, /t, /h, /d, /q, /n or /ŋ)²¹⁵. Section 4.4.5.4 discusses these morphemes in greater detail and gives a justification for the analysis adopted here (i.e. for writing them as co-occupants of P⁶; in other morphological contexts, determiners are hosted by P⁵).

An illustrative intransitive paradigm (with P⁶ morphemes of the *bo-* series) is that of the very common verb "to go":

<i>tn II (bo/k) (a) (in)</i>	"to go"
present tense	past tense
1SG <i>bo/k⁶-a⁴-tn</i>	<i>bo/k⁶-o⁴-[i]n²-[t]n</i>

²¹³ Paradigmatically, there is no marking of 3rd SG neuter objects with *b³* in conjugation II. However, a sizable number of conjugation II verbs *does* show this morpheme, but, then, invariably petrified/fossilized and generalized to *all* finite verb forms. This phenomenon is further discussed in 4.4.5.9.2.

²¹⁴ For these persons, a *third* possible allomorph, *bu*, may occupy slot P⁶, but this is confined to conjugation III, discussed below.

²¹⁵ The / slash indicates that they belong to the same slot as the P⁶ person morpheme they are attached to (P⁶ person markers are - with only a handful of exceptions - always accompanied by one of them), but encode their own categorical content.

	<boyut>		<boyon>
2SG	ku/k ⁶ -a ⁴ -tn		ku/k ⁶ -o ⁴ -[i]n ² -[t]n
3SGm	o/k ⁶ -a ⁴ -tn		o/k ⁶ -o ⁴ -[i]n ² -[t]n
3SGf	u/k ⁶ -a ⁴ -tn		u/k ⁶ -o ⁴ -[i]n ² -[t]n
1PL	dəŋ/[k] ⁶ -a ⁴ -tn		dəŋ/[k] ⁶ -o ⁴ -[i]n ² -[t]n
2PL	kəŋ/[k] ⁶ -a ⁴ -tn		kəŋ/[k] ⁶ -o ⁴ -[i]n ² -[t]n
3PL	oŋ/[k] ⁶ -a ⁴ -tn		oŋ/[k] ⁶ -o ⁴ -[i]n ² -[t]n
	imperative singular		imperative plural
	*ku/k ⁶ -a ⁴ -[i]n ² -[t]n		(n.a.)
	<koon>		
MRs	TR 8, TR 10		

The *a*⁴ thematic vowel is mostly found labialized (and often even raised to /u/, as shown in the phonetic representation above) in present tense forms. The root is often abbreviated to *-t*. The parsed forms given above are typical for the dialect of Sulomai, which are in these respects more archaic. The elision of /t/ in the past tense forms is irregular and due to a simplification of the unusual consonant sequence **-ntn#*. The imperative singular is artificially postulated here: the highly irregular attested form may originally have been an allegro variant.

A transitive paradigm is that of *lubid*⁷-*bed* "to love"²¹⁶:

<i>lubid</i> ⁷ - <i>bed</i> II (bo/k) (a) (il)	"to love"
Subject: 3SGf	
Object↓:	
present tense	past tense
1SG <i>da</i> ⁸ - <i>lubid</i> ⁷ -bo/k ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -bo/k ⁶ -o ⁴ -[i]l ² - <i>bed</i>
2SG <i>da</i> ⁸ - <i>lubid</i> ⁷ -ku/k ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -ku/k ⁶ -o ⁴ -[i]l ² - <i>bed</i>
3SGm <i>da</i> ⁸ - <i>lubid</i> ⁷ -o/k ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -o/k ⁶ -o ⁴ -[i]l ² - <i>bed</i>
3SGf/n <i>da</i> ⁸ - <i>lubid</i> ⁷ -u/k ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -u/k ⁶ -o ⁴ -[i]l ² - <i>bed</i>
1PL <i>da</i> ⁸ - <i>lubid</i> ⁷ -dəŋ/[k] ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -dəŋ/[k] ⁶ -o ⁴ -[i]l ² - <i>bed</i>
2PL <i>da</i> ⁸ - <i>lubid</i> ⁷ -kəŋ/[k] ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -kəŋ/[k] ⁶ -o ⁴ -[i]l ² - <i>bed</i>
3PL <i>da</i> ⁸ - <i>lubid</i> ⁷ -oŋ/[k] ⁶ -a ⁴ - <i>bed</i>	<i>da</i> ⁸ - <i>lubid</i> ⁷ -oŋ/[k] ⁶ -o ⁴ -[i]l ² - <i>bed</i>
MRs	TR 8, TR 10

Plural agreement is shown in the following paradigm with 1PL subject²¹⁷:

²¹⁶ A compound verb with *lubit* "love" (< Ru.) occupying P⁷ and *-bed* ("to make").

²¹⁷ Contrary to expectation, the final *-d* of the root *bed* is not phonetically rhotacized to [r] in the intervocalic context produced by adding the PL suffix *-in*. Rather, the devoiced allophone [t], as required by absolute auslaut position, is maintained here. This anomaly is indicated by the underscored glyph <ḏ>.

Subject: 1PL

Object↓:

	present tense	past tense
3SGm	[di] ⁸ -lubid ⁷ -o/k ⁶ -a ⁴ -bed-in	[di] ⁸ -lubid ⁷ -o/k ⁶ -o ⁴ -[i]l ² -bed-in
3SGfn	[di] ⁸ -lubid ⁷ -u/k ⁶ -a ⁴ -bed-in	[di] ⁸ -lubid ⁷ -u/k ⁶ -o ⁴ -[i]l ² -bed-in
2PL	[di] ⁸ -lubid ⁷ -kəŋ/[k] ⁶ -a ⁴ -bed-in	[di] ⁸ -lubid ⁷ -kəŋ/[k] ⁶ -o ⁴ -[i]l ² -bed-in <dlúbitkəŋðlβetin>
3PL	[di] ⁸ -lubid ⁷ -oŋ/[k] ⁶ -a ⁴ -bed-in	[di] ⁸ -lubid ⁷ -oŋ/[k] ⁶ -o ⁴ -[i]l ² -bed-in
MRs	TR 6, TR 8, TR 10	

4.4.3.3 Conjugation III

Two markers of the subject, one in position P⁸, and the other in P⁶, characterize this conjugation; in transitive verbs, the direct object is marked in P⁴-P³-P¹ in the same fashion as in conjugation I. Because of its redundant second subject marker, Vajda refers to this pattern as the "coreferential absolutive construction". The P⁸ subject marker is present in both transitive and intransitive verbs, and transitive objects are marked differently, so this pattern may be said to reflect *nominative* alignment.

The "coreferential" person affixes in P⁶ are identical with the object markers in conjugation II, with the following exception: any 3rd person subject (singular and plural) in P⁶ is encoded by *-bu-*, instead of the array of suffixes found in this slot in conjugation II, where they mark true "absolutive"; in other words, in conjugation III the opposition of class and number is neutralized for 3rd persons in the semantically empty "coreferential" slot.

Subject, coreferential subject, and object markers in Conjugation III verbs:

P ⁸	P ⁷	P ⁶	P ⁵	P ⁴	P ³	P ²	P ¹	R	PL
<u>di</u>		<i>ba-bo</i>		<u>a (o)</u>	<u>b</u>		<u>di</u>		
<u>ku</u>		<i>ku</i>		<u>i</u>			<u>ku</u>		
<u>du</u>		<i>bu</i>		<u>aŋ (oŋ)</u>			<u>daŋ</u>		
<u>da</u>		<i>dəŋ</i>					<u>kaŋ</u>		
		<i>kəŋ</i>							

Like in Conjugation II, all P⁶ actant markers are followed by a *determiner* (4.4.5.3), and, again, they are differentiated according to the "bo-" and "ba-" series.

Intransitive:

ok III (ba/t) (a) (in)

present tense

"to shudder"

past tense

1SG *d[i]⁸-ba/t⁶-ok*
 2SG *[ku]⁸-ku/t⁶-ok*
 3SGm *d[u]⁸-bu/t⁶-ok*
 3SGf *da⁸-bu/t⁶-ok*

d[i]⁸-ba/t⁶-o⁴-[i]l²-ok
[ku]⁸-ku/t⁶-o⁴-[i]l²-ok
d[u]⁸-bu/t⁶-o⁴-[i]l²-ok
da⁸-bu/t⁶-o⁴-[i]l²-ok

(235)

- a) $d[u]^8-a^4-(j)-a^1-tij$
3-Th-(Sep)-3-grow
He grows.
- b) $daan a^4-b^3-a^1-tij$
grass Th-3n-3-grow
The grass (it) grows.

Subject, (*object*)²¹⁹, and coreferential subject morphemes in Conjugation IV:

P ⁸	P ⁷	P ⁶	P ⁵	P ⁴	P ³	P ²	P ¹	R	PL
<u>di</u>		(bo)			<u>b</u>		<u>di</u>		
<u>ku</u>		(ku)					<u>ku</u>		
<u>du</u>		(o)					<u>a</u>		
<u>da</u>		(u)					<u>dan</u>		
		(dɔŋ)					<u>kan</u>		
		(kɔŋ)					<u>aŋ</u>		
		(oŋ)							

A further idiosyncrasy of this conjugation is the fact that *most* verbs of this class do not mark subject plural (PL, cf. 4.4.5.5), doubtlessly, because the coreferential person markers in P¹ indicate the number of the subject person in an unambiguous way. Instead of PL -Vn, some verbs add -ŋ to plural forms, which is sometimes confused with the former. However, its different shape²²⁰ and the fact that it occurs only sporadically and then also with *inanimate* plural subjects (cf. $t^5-a^4-(j)-a\eta^1-daq/\eta$ "they (inan.) fall", Vajda/Zinn 2004, 80, analysis slightly adjusted) stipulates that it be interpreted as an increment of the R(oot) morpheme, indicating "plurality of actions".

Example paradigms:

Intransitive: \sqrt{tan} "to stop, to remain standing":

<i>tan IV (a) (il)</i>	"to stop, remain standing"
present tense	past tense
1SG $d[i]^8-a^4-d[i]^1-tan$	$d[i]^8-o^4-[i]^2-di^1-tan$
2SG $k[u]^8-a^4-ku^1-tan$	$k[u]^8-o^4-[i]l-ku^1-tan$
3SGm $d[u]^8-a^4-(j)-a^1-tan$	$d[u]^8-o^4-[i]l-a^1-tan$

²¹⁹ The brackets are used to emphasize the rarity of conjugation IV verbs filling this slot. It may be speculated that conjugation IV historically did not contain any transitive verbs (Yugh shows the same scarcity of such verbs as Ket).

²²⁰ Though it is true that *nominal* plural suffixes may, i.a., have the shape -(V)n or -(V)ŋ (cf. 4.1.1.2.4.1), *verbal* subject plural markers show invariably only the coronal nasal.

3SGf	$da^8-a^4-(j)-a^1-tan$	$da^8-o^4-[i]l^2-a^1-tan$
1PL	$d[i]^8-a^4-dan^1-tan$	$d[i]^8-o^4-[i]l-dan^1-tan$
2PL	$k[u]^8-a^4-kan^1-tan$	$k[u]^8-o^4-[i]l^2-kan^1-tan$
3PL	$d[u]^8-a^4-(j)-an^1-tan$	$d[u]^8-o^4-[i]l^2-an^1-tan$
MRs	TR 4, TR 10, SR 7, Sync	

Transitive: *qa* "to sell" (to illustrate a full paradigm, we give all actant forms, present and past, for this verb; this is one of the very few true transitive conjugation IV verbs):

<i>qa</i> IV (<i>il</i>)	"to sell"
Subject: 1SG	
Object↓:	
present tense	past tense
1SG --	--
2SG $d[i]^8-ku/k^6-di^1-qa$	$d[i]^8-ku/[k]^6-[i]l^2-di^1-qa$
3SGm $d[i]^8-o/k^6-di^1-qa$	$d[i]^8-o/[k]^6-[i]l^2-di^1-qa$
3SGf/n $d[i]^8-u/k^6-di^1-qa$	$d[i]^8-u/[k]^6-[i]l^2-di^1-qa$
1PL --	--
2PL $d[i]^8-k\partial\eta/[k]^6-di^1-qa$	$d[i]^8-k\partial\eta/[k]^6-il^2-di^1-qa$
3PL $d[i]^8-o/\eta/[k]^6-di^1-qa$	$d[i]^8-o/\eta/[k]^6-il^2-di^1-qa$
MRs TR 6, TR 8, TR 10	

Subject: 2SG	
Object↓:	
present tense	past tense
1SG $k[u]^8-bo/k^6-ku^1-qa$	$k[u]^8-bo/[k]^6-[i]l^2-ku^1-qa$
2SG --	--
3SGm $k[u]^8-o/k^6-ku^1-qa$	$k[u]^8-o/[k]^6-[i]l^2-ku^1-qa$
3SGf $k[u]^8-u/k^6-ku^1-qa$	$k[u]^8-u/[k]^6-[i]l^2-ku^1-qa$
1PL $k[u]^8-d\partial\eta/[k]^6-ku^1-qa$	$k[u]^8-d\partial\eta/[k]^6-il^2-ku^1-qa$
2PL --	--
3PL $k[u]^8-o/\eta/[k]^6-ku^1-qa$	$k[u]^8-o/\eta/[k]^6-il^2-ku^1-qa$
MRs TR 6, TR 8, TR 10	

Subject: 3SGm	
Object↓:	
present tense	past tense
1SG $d[u]^8-bo/k^6-(s)-a^1-qa$	$d[u]^8-bo/[k]^6-[i]l^2-a^1-qa$
2SG $d[u]^8-ku/k^6-(s)-a^1-qa$	$d[u]^8-ku/[k]^6-[i]l^2-a^1-qa$
3SGm $d[u]^8-o/k^6-(s)-a^1-qa$	$d[u]-o/[k]^6-[i]l^2-a^1-qa$
3SGf/n $d[u]^8-u/k^6-(s)-a^1-qa$	$d[u]-u/[k]^6-[i]l^2-a^1-qa$
1PL $[du]^8-d\partial\eta/[k]^6-(s)-a^1-qa$	$[du]^8-d\partial\eta/[k]^6-[i]l^2-a^1-qa$
2PL $[du]^8-k\partial\eta/[k]^6-(s)-a^1-qa$	$d[u]^8-k\partial\eta/[k]^6-[i]l^2-a^1-qa$
3PL $d[u]^8-o/\eta/[k]^6-(s)-a^1-qa$	$d[u]^8-o/\eta/[k]^6-[i]l^2-a^1-qa$
MRs TR 6, TR 8, TR 10, SR 4	

Subject: 3SGf

Object↓:

	present tense	past tense
1SG	$da^8-bo/k^6-(s)-a^1-qa$	$da^8-bo/[k]^6-[i]l^2-a^1-qa$
2SG	$da^8-ku/k^6-(s)-a^1-qa$	$da^8-ku/[k]^6-[i]l^2-a^1-qa$
3SGm	$da^8-o/k^6-(s)-a^1-qa$	$da^8-o/[k]^6-[i]l-a^1-qa$
3SGf/n	$da^8-u/k^6-(s)-a^1-qa$	$da^8-u/[k]^6-[i]l-a^1-qa$
1PL	$da^8-dəŋ/[k]^6-(s)-a^1-qa$	$da^8-dəŋ/[k]^6-[i]l^2-a^1-qa$
2PL	$da^8-kəŋ/[k]^6-(s)-a^1-qa$	$da^8-kəŋ/[k]^6-[i]l^2-a^1-qa$
3PL	$da^8-oŋ/[k]^6-(s)-a^1-qa$	$da^8-o/ŋ/[k]^6-[i]l^2-a^1-qa$
MRs	TR 6, TR 8, TR 10, SR 4	

Subject: 1PL

Object↓:

	present tense	past tense
1SG	--	
2SG	$d[i]^8-ku/k^6-dəŋ^1-qa$	$d[i]^8-ku/[k]^6-[i]l^2-dəŋ^1-qa$
3SGm	$d[i]^8-o/k^6-dəŋ^1-qa$	$d[i]^8-o/[k]^6-[i]l^2-dəŋ^1-qa$
3SGf/n	$d[i]^8-u/k^6-dəŋ^1-qa$	$d[i]^8-u/[k]^6-[i]l^2-dəŋ^1-qa$
1PL	--	
2PL	$d[i]^8-kəŋ/[k]^6-dəŋ^1-qa$	$d[i]^8-kəŋ/[k]^6-i^2-dəŋ^1-qa$
3PL	$d[i]^8-o/ŋ/[k]^6-dəŋ^1-qa$	$d[i]^8-o/ŋ/[k]^6-i^2-dəŋ^1-qa^6$
MRs	TR 6, TR 8	

Subject: 2PL

Object↓:

	present tense	past tense
1SG	$k[u]^8-bo/k^6-kaŋ^1-qa$	$k[u]^8-bo/[k]^6-[i]l^2-kaŋ^1-qa$
2SG	--	--
3SGm	$k[u]^8-o/k^6-kaŋ^1-qa$	$k[u]^8-o/[k]^6-[i]l^2-kaŋ^1-qa$
3SGf/n	$k[u]^8-u/k^6-kaŋ^1-qa$	$k[u]^8-u/[k]^6-[i]l^2-kaŋ^1-qa$
1PL	$k[u]^8-dəŋ/[k]^6-kaŋ^1-qa$	$k[u]^8-dəŋ/[k]^6-i^2-kaŋ^1-qa$
2PL	--	--
3PL	$k[u]^8-oŋ/[k]^6-aŋ^1-qa$	$k[u]^8-oŋ/[k]^6-i^2-kaŋ^1-qa$
MRs	TR 6, TR 8	

Subject: 3PL

Object↓:

	present tense	past tense
1SG	$d[u]^8-bo/k^6-(s)-aŋ^1-qa$	$d[u]^8-bo/[k]^6-[i]l^2-aŋ^1-qa$
2SG	$d[u]^8-ku/k^6-(s)-aŋ^1-qa$	$d[u]^8-ku/[k]^6-[i]l^2-aŋ^1-qa$
3SGm	$d[u]^8-o/k^6-(s)-aŋ^1-qa$	$d[u]^8-o/[k]^6-[i]l^2-aŋ^1-qa$
3SGf/n	$d[u]^8-u/k^6-(s)-aŋ^1-qa$	$d[u]^8-u/[k]^6-[i]l^2-aŋ^1-qa$
1PL	$[du]^8-dəŋ/[k]^6-(s)-aŋ^1-qa$	$[du]^8-dəŋ/[k]^6-[i]l^2-aŋ^1-qa$
2PL	$d[u]^8-kəŋ/[k]^6-(s)-aŋ^1-qa$	$d[u]^8-kəŋ/[k]^6-[i]l^2-aŋ^1-qa$
3PL	$d[u]^8-o/ŋ/[k]^6-(s)-aŋ^1-qa$	$d[u]^8-oŋ/[k]^6-[i]l^2-aŋ^1-qa$
MRs	TR 6, TR 8, SR 4	

As with other conjugation classes, it is and remains unpredictable, whether a given verb will be conjugated according to conjugation IV or not. We thus honour the general practice of treating it as a *lexical* feature of a verb.

4.4.3.5 Conjugation V

This conjugational pattern, which may be called the "possessive" conjugation, stands out by using a distinctly *nominal* technique for the differentiation of subject person. Most verbs belonging to this class describe sounds, or physical sensations (and none describe concrete or metaphorical possession).

They generally contain a P⁷ incorporate (4.4.5.2) and a (semantically quite bleached), root R. Instead of any P⁸ subject marker, the incorporate is preceded by the *nominal possessive clitics* (cf. 4.1.1.4) in the same slot.

Examples:

a) with the root *-eta*, frequently used for acoustic sensations ("to resound, to be heard")²²¹ and the (content) incorporate *siberej⁷* "whisper":

<i>siberej⁷-eta</i> V (<i>il</i>)	"to whisper"
present tense	past tense
1SG <i>b/siberej⁷-b³-eta</i>	<i>b/siberej⁷-b³-il²-eta</i>
2SG <i>k/siberej⁷-b³-eta</i>	<i>k/siberej⁷-b³-il²-eta</i>
3SGm <i>da/siberej⁷-b³-eta</i>	<i>da/siberej⁷-b³-il²-eta</i>
3SGf <i>d/siberej⁷-b³-eta</i>	<i>d/siberej⁷-b³-il²-eta</i>
1PL <i>na/siberej⁷-b³-eta</i>	<i>na/siberej⁷-b³-il²-eta</i>
2PL <i>na/siberej⁷-b³-eta</i>	<i>na/siberej⁷-b³-il²-eta</i>
3PL <i>na/siberej⁷-b³-eta</i>	<i>na/siberej⁷-b³-il²-eta</i>

b) with the root *-kes*, for sounds and movements; conjugation V verbs formed with this root do not differentiate present and past tense at all (*-lakej* "to emit a sharp sudden sound, to bang")²²²:

<i>lakej⁷-kes</i> (V)	"to bang"
present tense	
1SG <i>b/lakej⁷-kes</i>	
2SG <i>k/lakej⁷-kes</i>	

²²¹ Verbs formed with this root contain routinely the morpheme *-b-* in P³, which may be regarded as applicative in these contexts (cf. 4.4.5.9.2). Preterite forms like *b-siberej⁷-b³-il²-eta*, where it is separated by the P² past tense affix, show that it is not part of the root (*contra* Werner 1997c.)

²²² Some phonetic anomalies: the initial clusters are unusual for Ket, /b/ and /k/ are articulated voicelessly, the intervocalic /k/ of the incorporate is not lenited (but rather articulated as [k]); all these may be due to the expressive semantics of this verb.

3SGm *da/lakej⁷-kes*
 3SGf *d/lakej⁷-kes*
 1PL *na/lakej⁷-kes*
 2PL *na/lakej⁷-kes*
 3PL *na/lakej⁷-kes*

4.4.3.6 Mixed paradigms

Some verbs apparently mix forms belonging to one of the aforementioned conjugational patterns; most of these cases have to be counted as irregularities, but a moderately recurrent pattern is presented by verbs, which inflect their singular according to conjugation I and plural forms according to conjugation IV (a more economical - and possibly historically relevant - way to describe this situation could be to speak of conjugation IV verbs which fail to co-index their subject in singular forms).

Two example paradigms:

- a) without subject plural marking by /η:

<i>den I ~ IV (il)</i>	"to cry, weep"
present tense	past tense
1SG <i>di⁸-den</i>	<i>d[i]⁸-il²-den</i>
2SG <i>ku⁸-den</i>	<i>k[u]⁸-il²-den</i>
3SGm <i>du⁸-den</i>	<i>d[u]⁸-il²-den</i>
3SGf <i>də⁸-den</i>	<i>da⁸-il²-den</i>
1PL <i>di⁸-dan¹-den</i>	<i>d[i]⁸-il²-dan¹-den</i>
2PL <i>ku⁸-kan¹-den</i>	<i>k[u]⁸-il²-dan¹-den</i>
3PL <i>du⁸-(j)-an¹-den</i>	<i>d[u]⁸-il²-an¹-den</i>
imperative singular	imperative plural
<i>i[l]²-den</i>	<i>il²-kan¹-den</i>
MRs TR 1, SR 2	

- b) with subject plural marking by /η:

<i>doq I ~ IV (in)</i>	"to fly up"
present tense	past tense
1SG <i>di⁸-doq</i>	<i>d[i]⁸-in²-doq</i>
2SG <i>ku⁸-doq</i>	<i>k[u]⁸-in²-doq</i>
3SGm <i>du⁸-doq</i>	<i>d[u]⁸-in²-doq</i>
3SGf <i>də⁸-doq</i>	<i>da⁸-in²-doq</i>
1PL <i>di⁸-dan¹-doq/η</i>	<i>d[i]⁸-in²-dan¹-doq/η</i>
2PL <i>ku⁸-kan¹-doq/η</i>	<i>k[u]⁸-in²-kan¹-doq/η</i>
3PL <i>du⁸-(j)-an¹-doq/η</i>	<i>d[u]⁸-in²-an¹-doq/η</i>
imperative singular	imperative plural
<i>in²-doq</i>	<i>in²-kan¹-doq/η</i>
MRs TR 1, SR 2	

4.4.4 Morphotactic rules

The Ket verb is uniquely characterized by an intricate system of rules affecting the surface realization of verbal morpheme-chains; since some morpheme slots in Ket may contain phonetically identical markers, which, however, serve often widely different functions according to the actual slot they occupy, and, moreover, in many verb forms only a (sometimes small) subset of slots is actually filled, there is a great potential for confusion as to the actual function of a given, often phonetically short, morpheme (such as /a/, or /i/ etc.) occurring in a verb form. Certain morphological configurations, then, trigger the insertion, others the deletion or truncation of phonological material. Generally speaking, insertion rules may be regarded as motivated by the need to differentiate between morphemes likely to be confused when their proper position in the morphological template is unknown, while deletion rules are more of a phonetic kind (and may in turn increase the degree of confusability). It was not before Vajda 2001 that this feature of Ket has begun to be understood, and the following discussion is largely based on this work, though some interpretations may be found to differ from it.

Following this approach, we may subsume under the label of "morphotactic rules" all processes (vowel-/consonant deletions, anaptyxeis of vowels and consonants, morphotactic separators), which are governed exclusively by the actual presence of morphological material in a certain subset of the 10 morpheme slots (and, thus, not by any purely phonological feature of the verbal form).

4.4.4.1 The surface realization of the P⁸ marker 3SGf /da/

The basic and most frequent realization of the 3SG feminine subject marker in P⁸ (present in all verbs of conjugations III and IV, active (i.e. most) verbs of conjugation I, and transitive verbs of conjugation II; it is moreover never truncated, even under conditions which will shorten or eliminate other P⁸ markers) is /da/. In certain

morphemic configurations, however, its vowel changes to /ə/, resp. to one of its allophones, viz. [ɔ], or [ʌ]²²³.

It surfaces as /də/ [dɔ] in the configuration

P⁸-R²²⁴

²²³ No need to recognize a phonological opposition between [ɔ] and [ʌ] results from this, no true minimal pairs being observable, so the notation of Ket verb forms will acknowledge this surface difference only in this section.

²²⁴ Here and in the discussion of other morphotactic rules, the "configurations" are given as a simple enumeration of slots *actually filled*; in this example, the formula is to be read: "an actual verb form, in which only the person-marking slot P⁸ and the R(oot) slot are filled, or, with zero-morphemes, da⁸-0⁷-0⁶-0⁵-0⁴-0³-0²-0¹-R". (x) means that "any phonetic material"

$d\delta^8-t\delta l$
she freezes

Different P^8 markers require the insertion of (*j*) in this configuration (4.4.4.4), which lends support to the assumption that here [δ] may result from **-aj-*.

[$d\Lambda$] surfaces in:

P^8-P^1-R	$d\delta^8-di^1-b\delta k$ [dΛriβΛk] she-finds-me
P^8-P^3-R	$d\delta^8-b^3-b\delta k$ [dΛbbΛk] she-finds-it
P^8-P^4-R	$d\delta^8-(k)a^4-b\delta k$ [dΛγaβΛk] she-finds-him

Finally, [*da*] occurs in

P^8-P^4-x-R	$da^8-o^4-[i]n^2-b\delta k$ she-found-him
---------------	--

and in all other configurations.

It is the form /*da*/, which most clearly stands outside of the domain of the *phonological word* in Ket (cf. 3.1.3); the other two variants are more usually dragged into its domain, cf. the following verb forms:

$da^8-iI^2-loq\eta$ "she shivered": /*da*/ is required by the configuration P^8-P^2-R , and does not belong to the phonological word, as evidenced by the intact vowel sequence (and cliticization of *da* to any possible preceding element in discourse).

$d\delta^8-b^3-b\delta k$ ('*d*[Λ]*bb*δ*k*): /*d*δ/ is required by the configuration P^8-P^3-R , but this time it stands *within* the phonological word, since it participates in the (only phonological-word-initial) disyllabic contour, and, furthermore, Vowel Insertion Rule 4 (cf. 4.4.4.3.4) does not apply (**d*δ⁸-*b*³-*i*-*b*δ*k*).

4.4.4.2 Truncation and elision

Truncation refers to any process, by which a morphological marker loses some of its phonetic substance, usually its vowel, leaving other parts intact (such as *di-* >

is present at this position, i.e. between two slots (which may be a slot-filling morpheme, or a "separator").

d-), while *elision* refers to complete loss of such a morpheme, although it can be shown to be paradigmatically present. For brevity's sake, both kinds of processes will be referred to as *TRs* ("truncation rules"), which are given in a somewhat arbitrary order below.

4.4.4.2.1 Truncation Rule 1 (TR1):

Any P⁸ subject marker (\neq 3SGf. /*da-*/) loses its vowel when immediately standing before the preterite marker /*il*/, /*in*/ in P², i.e. in configuration P⁸-P²:

$d[i]^8-loq\eta$	"I shiver"
vs.	
$d[i]^8-iI^2-loq\eta$	"I shivered"

That the only /*i*/ present in the surface form belongs to P², rather than to P¹, is clear from the 2SG form:

$k[u]^8-il-loq\eta$	"you shivered"
---------------------	----------------

4.4.4.2.2 Truncation Rule 2 (TR 2)

Any P⁸ subject marker (\neq 3SGf. /*da-*/) loses its vowel when immediately standing before some overt marker in P³ (i.e. *b*, inactive 3SG inanimate, or applicative *and* any phonetic material intervening between P³ and R (P⁸-P³-x-R):

$d[i]^8-b^3-iI^2-a$	"I ate it"
vs.	
$d[i]^8-b^3-a$	"I eat it"

The intervening phonetic material (x) is here, of course, the P² preterite marker, but any morpheme occupying P¹ equally provides the required configuration.

4.4.4.2.3 Truncation Rule 3 (TR 3)

Any P⁸ subject marker (\neq 3SGf /*da*/) loses its vowel in configuration P⁸-P⁵-P⁴-x-R:

$d[i]^8-t^5-o^4-[i]I^2-o\eta$	"I saw"
vs.	
$d[i]^8-t^5-o\eta$	"I see"

Note: the resulting initial sequence *td-* is, in the speech of most speakers, further simplified to *t-*. Other potential clusters resulting from this and similar rules, however, remain intact at least for some speakers (thus producing the only exceptions to the language's general tendency to avoid initial clusters). The P⁴

vowel /a/ (present in the preterite in regularly labialized form) is elided in the present form regularly before a vowel-initial root.

4.4.4.2.4 Truncation Rule 4 (TR 4)

Any P⁸ subject marker (\neq 3SGf. /da/) loses its vowel in the configuration P⁸-P⁴-x-R:

$d[i]^8$ -a ⁴ -(j)-s	"I dress him"
vs.	
$d\bar{i}^8$ -ku ¹ -s	"I dress you"

The bracketed (j) in the first example is due to SR 5 (s. b.).

4.4.4.2.5 Truncation Rule 5 (TR 5)

Any P⁸ subject marker (\neq 3SGf. /da-) loses its vowel immediately before any vowel-initial P⁷ incorporate or P⁶ subject/object marker: P⁸-P⁷_v/P⁶_v:

$d[i]^8$ - σt^7 -a ⁴ -d[i] ¹ -daq	"I go into the forest"
or	
$d[u]^8$ -a/k ⁶ -(i)-(s)-toq	"he assaults him"

The truncation of the last /i/ (P¹) in the first form is due to *Sync* (s.b.). The second example shows two anaptyctic elements, (s) due to SR 4 and (i) because of VIR 3 (operative in that order).

4.4.4.2.6 Truncation Rule 6 (TR 6)

Any P⁸ subject marker (\neq 3SGf. /da-) is completely elided when occurring immediately before any consonant initial P⁷ incorporate or P⁶ subject marker: P⁸-P⁷_c/P⁶_c:

$[du]^8$ -lubid ⁷ -ku/k ⁶ -a ⁴ -bcd	"he loves you"
--	----------------

4.4.4.2.7 Truncation Rule 7 (TR 7)

The P⁶ determiner /k is elided immediately before epenthetic /d/ produced by SR 11 (cf. 4.4.4.4.11):

$d[i]^8$ -bo/[k] ⁶ -(d)-i ⁴ -(t)-[i]l ² -it ²²⁵	<dbodítlit>
I brought her away.	

²²⁵ The second (t) separator in this form is inserted because of SR 9, cf. 4.4.4.4.9.

Non-epenthetic *d*-s (e.g. P⁵ determiners) do not trigger TR 7, cf.:

$d[u]^8$ -bo/ k^6 - d^5 - a^4 - b^3 - $ta\eta$ <dbogápta η >
He drags me (by sled).

A special case of this rule is found with P⁶ /*k* occurring immediately before the preterite morpheme *il/in*. Although the underlying form would not constitute a sufficient context for the elision of the latter's vowel (this would require a directly preceding vowel, cf. TR 10, 4.4.4.2.10), and, thus, a form containing the sequence (...) / k^6 -*in*-(...) (phonetically - γi -) could be expected, in fact *both* phonemes are truncated, cf.:

$d[u]^8$ -o / $[k]^6$ - $[i]^2$ - $a\eta^1$ - qa <dóla η Ra>
They sold him.

4.4.4.2.8 Truncation Rule 8 (TR 8)

P⁶ /*k* is elided after the pluralizer - η , which forms an integral part of plural P⁶ person markers, *except* when anaptyctic (*i*) has been added due to VIR 3.

da^8 -o η / $[k]^6$ - d^5 - a^4 - b^3 - $ta\eta$ "she takes them by sled"
vs.
 da^8 -bo / k^6 - d^5 - a^4 - b^3 - $ta\eta$ "she takes me by sled"
cf.
 $a\eta/k^6$ -(*i*)-(s)- sal "they spend the night"

In the first and second example, P³ *b* is (at least historically) an applicative marker.

4.4.4.2.9 Truncation Rule 9 (TR 9)

Any *thematic* /*a*/ in P⁴ is elided immediately before a vowel initial R (P⁴_{th}-R_v):

di^8 -(*k*)- $[a]^4$ - aq "I go out"
vs.
 $d[i]^8$ -o⁴- $[i]^2$ - aq "I went out"

Preterite-labialized P⁴ *o* is never subject to this truncation rule, nor is any *person marker* *a* in P⁴. The epenthetic (*k*) in the first example is inserted due to SR 3, the truncation of *i* in the preterite morpheme in the second example follows TR 10.

4.4.4.2.10 Truncation Rule 10 (TR 10)

The P² preterite markers *il/in* lose their vowel immediately after any vowel. Note that this vowel may *not* be the inherent vowel of any P⁸ subject marker. In these configurations, it is the P⁸ vowel, which gets truncated, according to TR 1.

That this is the case, is shown by the following set of examples:

a) a form like [dɪlɪ⁸ɪ²okŋ] "I shivered" could in principle be analyzed as either

$$dɪ^8-[i]ɪ^2-loqŋ$$

i.e. with the preterite marker truncated directly after a vowel, or as

$$d[i]ɪ^8-iɪ^2-loqŋ$$

with truncation of the P⁸ person marker.

The second person singular form, however, shows that only the second analysis can be correct:

$$k[u]ɪ^8-iɪ^2-loqŋ$$

Vowels that do trigger TR 10 typically occur in P⁴ (*a/o*), cf. again:

$$d[i]ɪ^8-o^4-[i]ɪ^2-aq \quad \text{"I went out"}$$

4.4.4.2.11 Truncation Rule 11 (TR 11)

Any P¹ person marker /*a/* (subject or object) is elided before vowel-initial R, unless R itself begins with /*a/*, in which case no elision occurs but a (*j*)-separator is inserted between the two vowels (for which see SR 6); (P¹-R_{V(≠/a/)}):

$$\begin{array}{ll} du^8-(j)-[a]ɪ^1-ɛj & \text{"he kills him"} \\ \text{vs.} & \\ du^8-d[i]ɪ^1-ɛj & \text{"he kills me"} \end{array}$$

4.4.4.3 Vowel insertion (anaptyxis)

4.4.4.3.1 Vowel insertion Rule 1 (VIR 1)

P⁶ /*t* and P⁵ *t* require following anaptyctic (*i*) when occurring immediately before a consonant cluster, *including* those produced by the insertion of the (*s*)-separator (on which cf. 4.4.4.4):

$ba/t^6-(i)-b^3-kit^{226}$
I sense it.

$[di]^8-ba/t^6-(i)-(s)-suk$
I push off.

4.4.4.3.2 Vowel insertion Rule 2 (VIR 2)

P⁶ /t triggers anaptyctic (i) when immediately preceded by /η/:

This situation is met with in plural P⁶ forms:

$[di]^8-ka\eta/t^6-(i)-b^3-ij$	"I ask you"
vs.	
$[di]^8-ku/t^6-b^3-ij$	"I ask thee"

4.4.4.3.3 Vowel insertion Rule 3 (VIR 3)

P⁶ /k triggers anaptyctic (i) immediately before any consonant cluster:

$ku/k-(i)-(s)-sal$	"you spend the night"
--------------------	-----------------------

4.4.4.3.4 Vowel insertion Rule 4 (VIR 4)

Any consonant cluster occurring initially in the phonological word (i.e. *after* any P⁸ marker) is separated by anaptyctic (i):

$d[i]^8-k^5-(i)-b^3-ta\eta$	"I roll it"
-----------------------------	-------------

4.4.4.3.5 Vowel insertion Rule 5 (VIR 5)

Any P⁷ incorporate requires anaptyctic (i) when directly occurring before the subject/object markers *di* and *ku* in P¹. This configuration occurs only in verbs of conjugation IV (with a coreferential P¹ subject marker) and I (with P¹ object markers or inactive subject markers). The few verbs fulfilling the conditions for

²²⁶ This anaptyctic vowel may spread by analogy to other forms of the same paradigm, even if they do not provide the exact trigger-context, cf. $d\omega\eta/t^6-(i)-b^3-in^2-kit$ "we sensed it", where the preterite morpheme *-in-* avoids any cluster following the P⁶ marker.

this rule²²⁷ show further that an additional requirement is the disyllabicity (or "heaviness") of the P⁷ incorporate²²⁸:

$[di]^8$ - $cli\eta^7$ -(i)- $d[i]^l$ - bed - n	"we breathe"
vs.	
$[ku]^8$ - kas^7 - di^l - qus	"you grab me"

4.4.4.4 Morphotactic separators

4.4.4.4.1 Separator Rule 1 (SR 1)

Any P⁸ subject marker standing immediately before a R morpheme, which begins with either a vowel, or a labial, velar, or uvular consonant, triggers a (*j*)-separator (P⁸-R_{V/Lab/Vel/Uv}):

di^8 -(<i>j</i>)- aq	"I go"
di^8 -(<i>j</i>)- bed	"I make"
vs.	
di^8 - $t\text{ə}l$	"I freeze"

4.4.4.4.2 Separator Rule 2 (SR 2)

Any P⁸ subject marker standing immediately before a vowel-initial P¹ subject or object marker, triggers a (*j*)-separator (P⁸-P¹_v):

du^8 -(<i>j</i>)- a^l - s	"he dresses himself"
vs.	
du^8 - $k[u]^l$ - ted	"he hits thee"

4.4.4.4.3 Separator Rule 3 (SR 3)

Any P⁸ subject marker standing immediately before P⁴ /*a*/ (thematic or person marker), which in turn directly precedes the root morpheme triggers a (*k*)-separator (which phonetically always surfaces as [*γ*]); (P⁸-4(a)-R):

du^8 -(<i>k</i>)- a^4 - daq	"he lives"
-------------------------------------	------------

Any phonetic material between P⁴ /*a*/ and R blocks this rule (and leads to truncation of the P⁸ marker instead, cf. TR 3).

²²⁷ Since any phonetic material between P⁷ and P¹ would block the rule, the frequent occurrence of P⁵ determiners and the numerous instances of "thematic" *a*⁴ reduce the number of potential examples considerably.

²²⁸ Cf. 4.4.5.2.3.1, where more effects of historical disyllabicity of P⁷ incorporates are discussed.

4.4.4.4.4 Separator Rule 4 (SR 4)

Any monosyllabic (including *etymologically* monosyllabic) P⁷ incorporate, P⁶ person marker, or P⁵ preverb triggers an (s)-separator, when standing immediately before R or a vowel-initial P¹ person marker (P⁷_{monosyll}/P⁶/P⁵-R/P¹_v):

$da^8-don^7-(s)-i/bed$	"she makes a knife"
$d[u]^8-o/k^6-(s)-a^1-qa$	"he sells him"

The *i* in the first example is an instance of a pre-root anaptyctic vowel, discussed in 4.4.4.7.

This rule is of particular importance for the understanding of the Ket verb, since it cancels the often-mentioned "present marker" *s*. This element is, on the contrary, nothing more than a morphotactic separator; the mentioned rule accounts for all instances of its occurrence. Naturally, it is lacking in preterite forms, where phonetic material intervenes (in P²) before R and/or P¹.

4.4.4.4.5 Separator Rule 5 (SR 5)

Any P⁴ person marker (*/a/* or */i/*) standing immediately before R triggers a (*j*)-separator; this separator occurs before all vowel-initial roots, and before most, but not all, consonant-initial ones (P⁴_{pers}-R).

$d[i]^8-a^4-(j)-s$	"I dress him"
--------------------	---------------

4.4.4.4.6 Separator Rule 6 (SR 6)

(This rule is a corollary to TR 11 above):

Any P¹ person marker */a/* requires a (*j*)-separator before */a/*-initial R (P¹-R_(a-)):

$ha^7-(s)-a^1-(j)-aj$	"it is sawed"
-----------------------	---------------

4.4.4.4.7 Separator Rule 7 (SR 7)

Any */a/* in position P⁴ ("thematic" *a* as well as "personal" *a*) triggers a (*j*)-separator before any vowel-initial morpheme in P¹ (i.e. *a* or *aη*):

$d[u]^8-a^4-(j)-a^1-tan$	"he stops"
vs.	
$k[u]^8-a^4-kaη^1-tan$	"you (SG) stop"

4.4.4.4.8 Separator Rule 8 (SR 8)

A P⁴ object marker /aŋ/, preceded by *one* subject marker requires an /a/-separator before consonant-initial R, and an /s/-separator before a vowel-initial R (P⁸-(x)-P⁴ /aŋ/-R_C, P⁸-(x)-P⁴ /aŋ/-R_V).

Bracketed (x) indicates that the filling of any intervening slot is irrelevant here. The condition that only one subject marker may precede, excludes cases with P⁸ and P⁶ (i.e. conjugation III):

$d[i]^8-a\eta^4-(a)-b\text{ə}k$	"I find them"
$k[u]^8-a\eta^4-(s)-e\text{ɟ}$	"you kill them"

The preterite form "I found them" $d[i]^8-o\eta^4-(o)-[i]n^2-b\text{ə}k$ shows that this /a/-separator undergoes preterite labialization (cf. 4.4.5.8.3)²²⁹ as if it were a P⁴ morpheme. Since P⁴ is, however, clearly occupied by a personal morpheme, the analysis advocated here seems to be preferable to any alternative; such possible alternatives include:

a) the interpretation of the "additional" *a* as an integral part of an allomorph of P⁴ 3rd PL $a\eta \rightarrow a\eta a$

b) insertion of *a* due to pure analogy to other verb forms which contain (preterite-labializing) *a* in this position. A strict analysis along the lines of the morphological model used in this grammar would have to admit that, thus, at least some verb forms could contain *two* separate P⁴ morphemes (the second of which would have to be regarded as semantically empty): $*d[i]^8-o\eta^4-o^4-[i]n^2-b\text{ə}k$. The "separator" analysis avoids such confusion.

4.4.4.4.9 Separator Rule 9 (SR 9)

Feminine /i/ in P⁴ immediately before a preterite marker in P² (which in turn precedes a vowel-initial R) requires the insertion of a (t)-separator; after this, *Sync* occurs (s.b.), yielding the sequences /itl/ or /itn/ (P⁴/i/-P²-R_V):

$[di]^8-sidaq^7-q^5-i^4-(t)-[i]n^2-a$	"I taught her"
---------------------------------------	----------------

4.4.4.4.10 Separator Rule 10 (SR 10)

Feminine /i/ in P⁴ immediately before a preterite marker in P² (which in turn precedes a consonant-initial R) inserts a (d)-separator *without* following *Sync*, yielding the sequences /id-in/ or /id-ill/ (realized as [irun] or [irul] in Southern Ket only).

$d[i]^8-i^4-(d)-in^2-ted$	<dirúntet>	"I hit her"
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²²⁹ And, incidentally, that it may be retained in preterite forms, which insert a further morpheme before R.

4.4.4.4.11 Separator Rule 11 (SR 11)

Feminine /i/ in P⁴ immediately preceded by a person marker in P⁶ triggers the insertion of a (d)-separator, which elides any P⁶ /k/, but leaves P⁶ /t/ intact:

[di]⁸-bo/[k]-(d)-i⁴-(t)-[i]n²-am "I took her away"

4.4.4.4.12 Separator Rule 12 (SR 12)

This rule is operative in imperative forms only (on which cf. 4.4.6.2): vowel initial R morphemes (R_v) require a (d)-separator after the P² preterite/imperative morpheme -in-, cf.:

Present:	k[u] ⁸ -a ⁴ -b ³ -i	"you whet it"
Past:	k[u] ⁸ -o ⁴ -b ³ -[i]n ² -i	"you whetted it"
Imperative:	a ⁴ -[i]n ² -(d)-i	"whet it!"

This separator occurs also with verbs which use -il- as their preterite (and hence also imperative) marker; however, in many instances (though not invariably), the separator deletes the consonant of this morpheme (and, since its vowel may have been truncated before due to another morphotactic rule, it may thus disappear altogether), cf.:

Present:	ku ⁸ -(k)-a ⁴ -aq	"you go out"
Past:	k[u] ⁸ -o ⁴ -[i]l ² -aq	"you went out"
Imperative:	a ⁴ -[il] ² -(d)-aq	"go out!"

4.4.4.5 "Feminine Object Rule" (FOR)

This is a special rule, which is operative in verbs of conjugations I and III only. It stipulates that the *feminine object marker* /i/ in P⁴ in *present tense forms*²³⁰ is entirely "swallowed" by any subject marker, which:

- comes to stand immediately before it, i.e. in either P⁸ or P⁶, without any intervening P⁷ incorporate or P⁵ determiner, and
- itself ends in a vowel.

Any P⁶ /k/ is also elided in this situation and the final vowel of the respective P⁸ or P⁶ person marker is usually phonetically lengthened:

²³⁰ In *past tense forms* this P⁴ marker stands immediately before a tense marker /il/ or /in/ in P², which triggers SR 9 or SR 10 and FOR is not effected.

P⁸-P⁴ (i):

<i>dɪ</i> ⁸ -[i] ⁴ -bək	[di·βΛk]	"I find her"
<i>ku</i> ⁸ -[i] ⁴ -bək	[ku·βΛk]	"you find her"
<i>du</i> ⁸ -[i] ⁴ -bək	[du·βΛk]	"he finds her"
<i>dɔ</i> ⁸ -[i] ⁴ -bək	[dɔ·βΛk]	"she finds her"
<i>dɪ</i> ⁸ -[i] ⁴ -bək-in	[di·βΛγin]	"we find her"
<i>ku</i> ⁸ -[i] ⁴ -bək-in	[di·βΛγin]	"you find her"
<i>du</i> ⁸ -[i] ⁴ -bək-in	[du·βΛγin]	"they find her"

P⁶-P⁴ (i):

<i>d</i> [i] ⁸ -bo/[k] ⁶ -[i] ⁴ -qos	[ˈdbɔ·RɔS]	"I abduct her"
<i>d</i> [u] ⁸ -bu/[k] ⁶ -[i] ⁴ -qos	[ˈdbu·RɔS]	"he abducts her"

Cf. the respective preterite forms²³¹, governed by SR 9:

Cf.:	<i>d</i> [i] ⁸ -bo/[k] ⁶ -(d)-i ⁴ -(t)-[i]n ² -am	[ˈdbɔritn ² am]	"I abducted her"
	<i>d</i> [i] ⁸ -bu/[k] ⁶ -(d)-i ⁴ -(t)-[i]n ² -am	[ˈdburitn ² am]	"he abducted her"
	[<i>d</i>] ⁸ -dɔŋ/[k] ⁶ -i ⁴ -qos-n	[ˈdɔŋiRɔS ² n]	"we abduct her"
	[<i>ku</i>] ⁸ -kɔŋ/[k] ⁶ -i ⁴ -qos-n	[ˈkɔŋiRɔS ² n]	"you (PL) abduct her"

4.4.4.6 Syncope (*Sync*)

This is a purely morphological rule, which syncopates unstressed /i/ in the sequence VCiCV (→ VCCV), if no non-permitted consonant cluster results. This rule always operates last, i.e. after all morphotactic rules have been applied:

d[i]⁸-a⁴-*d*[i]¹-tan "I stop, remain standing"

Sync occurs, yielding <*dítan*>.

d[i]⁸-o⁴-[i]l²-*d*i¹-tan "I stopped"

No *Sync* occurs, because a non-permitted consonant cluster would be the result (**doldtan*).

Sync occurs only within the boundaries of the phonological word (cf. 3.1.3), cf.²³²:

<i>d</i> [u] ⁸ -aleŋ ⁷ -i/bed	"he makes a pair of trousers (<i>áleŋ</i>)"
<i>d</i> [i] ⁸ -iŋkus ⁷ -i/bed	"I build a house"

²³¹ The root is suppletive, cf. 4.4.5.1.1.1

²³² Vajda 2000, 20.

Recall from 3.1.3 that a *disyllabic* P⁷ incorporate is usually followed by a *phonological* word-boundary, which distributes the last three vowels of this morphological word between two different phonological words and thus prevents *Sync*. Vajda (2000, 20) shows that this also holds for some *monosyllabic* P⁷ incorporates, which, however, may derive from originally disyllabic nouns, e.g.:

[di]⁸-haj⁷-i/bed "I make oars"

hāj, PL hāj is monosyllabic, but cf. Northern Ket (PL) hāji.

4.4.4.7 Pre-root anaptyxis

In certain contexts, which are not entirely describable in morphonological or morphotactic terms, some roots may be preceded by an excrescent vowel (mostly /i/, sometimes /a/ or /u/), cf.

d[u] ⁶ -iηqus ⁷ -(s)-i/bed	"he makes a house"
d[u] ⁸ -an ⁷ -(s)-i/bed	"he thinks (of someone)"
d[i] ⁶ -i ⁴ -(t)-[i]n ² -i/bək	"I found her"
[di] ⁸ -ba/n ⁶ -k ⁵ -(s)-u/qo-n	"we see"

This process seems to be largely lexically motivated (occurring more commonly with some roots, less commonly with others; *-bed* "to make" is quite often found with *i*); the avoidance of consonant clusters seems also to be one motivation for its occurrence.

4.4.5 The individual position classes (morpheme slots)

This chapter discusses the various position classes of the Ket verb, mostly under formal aspects.

4.4.5.1 R - the root morpheme

As a general rule, the root morpheme in any Ket verb form occupies the rightmost position of the morpheme chain (followed only by an optional marker of subject plural in position PL, confined to certain conjugational patters, cf. 4.4.5.5), all other morphological elements being technically *prefixes*²³³. All cases, where seemingly the root morpheme is found further left (more exactly in P⁷) and the R slot seems to be occupied by an "affix", can be interpreted by a widespread derivational process involving *incorporation* of the lexical ("content") root element and its substitution by a different *root*-morpheme in R, which, however, has gradually acquired, or is in the process of acquiring, affix-like *semantic* properties. Nevertheless, it is

²³³ Some of them, especially the P⁸ feminine subject marker *da-*, should possibly rather be referred to as *proclitics*, due to some characteristics of their behaviour.

unnecessary and confusing to describe the verbal root in Ket as occupying various positions in the morpheme chain, and proper suffixes (apart from PL) playing any role in the formation of finite verb forms. In the following, some general properties of verbal root morphemes will be discussed, together with common idiosyncrasies found with some of them, such as initial consonant mutation, or suppletivism.

Verbal roots are most commonly monosyllabic and monomorphemic. One of the few known exceptions is the R morpheme \sqrt{damin} , which occurs only in some forms of suppletive verbs (4.4.5.1.1.1).

The disyllabic R morpheme \sqrt{bajaj} (only in Central Ket) seems to show petrified actant morphemes, cf. the present tense form (unanalyzed):

oloŋbakabajaj
I am undressed

and its past tense counterpart

oloŋbakolbajaj
I was undressed

While the present tense form would allow a segmentation like

**oloŋ⁷-ba/k⁶-a⁴-b³-a¹-(j)-aj*
cover-1-Th-3n-RES-(Sep)-be.in.state

the past tense form clearly does not, since here the consonant /b/ "slipped" behind the past tense morpheme $[i]l^2$ (on which see 4.4.5.11.1) and thus cannot be assigned to P³ (on which cf. 4.4.5.9). Thus, we are forced to analyze it as

oloŋ⁷-ba/k⁶-o⁴-[i]l²-bajaj
cover-1-Th-Pst-be.in.state

and consequently the present tense form has to be analyzed as *oloŋ⁷-ba/k⁶-a⁴-bajaj*, with /b/ again belonging to R, rather than occupying P³.

If we compare different, but formally somewhat similar, verbs describing steady states, like²³⁴

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tiŋ⁷-k⁵-a⁴-b³-a¹-(j)-aj
stop-D-Th-3n-RES-(Sep)-be.in.state
It is stopped/plugged.

²³⁴ Vajda/Zinn 2004, 112 give \sqrt{abaj} as another disyllabic R for this verb, which, however, does not seem to be necessary. Note that only 3rd person forms of this verb are attested (and, given the semantics, we could say "possible" here; similarly built verbs display meanings like "be smoked", "be split open", "be snowed over", "be tangled up", "be splashed", which are equally unlikely to occur with 1st or 2nd person arguments, cf. Vajda/Zinn 2004, 113), and it is thus impossible to decide whether the /k/ is, as shown here, occupying P⁵ or co-occupying P⁶.

we may hypothesize that the last two syllables of verbs of this type got reinterpreted as a no longer segmentable R, on which the \sqrt{bajaj} -verbs are built. In this verb form, all elements are accounted for by regular morphological categories and processes, viz.: b^3 is a straightforward 3n-actant marker, a^1 a relatively recurrent resultative morpheme (but cf. 4.4.5.10.2), \sqrt{aj} a recurrent R morpheme (with the general meaning "to be in a state/position"), and (j) a separator triggered by SR 6 (cf. 4.4.4.4.6)²³⁵.

The following is a tentatively exhaustive list of verbal roots, which can occur *alone* in a given verb, i.e. without obligatorily accompanying lexical morphemes (i.e. P⁵ "determiners" and P⁷ incorporates; "thematic" a^4 is, however, obligatory with some roots). Meanings are approximate in some cases²³⁶.

\sqrt{a}	"to become"	\sqrt{in}	"to stand"
\sqrt{aq}	"to go"	\sqrt{it}	"to smell"
\sqrt{bed}	"to do, make"	\sqrt{kit}	"to rub, smear"
\sqrt{bes}	"to ignore"	$\sqrt{loq\eta}$	"to tremble"
$\sqrt{b\acute{o}k}$	"to find"	\sqrt{qa}	"to sell"
\sqrt{da}	"to perceive"	\sqrt{qit}	"to scrape"
$\sqrt{dan\eta}$	"to crumple"	\sqrt{qo}	"to die, kill" ²³⁷
\sqrt{daq}	"to live"	\sqrt{qol}	"to get well"
\sqrt{den}	"to cry"	\sqrt{qut}	"to shamanize"
\sqrt{dij}	"to reach"	\sqrt{s}	"to dress"
\sqrt{dis}	"to shout"	\sqrt{sin}	"to become"
\sqrt{dit}	"to count"	\sqrt{suj}	"to swim"
\sqrt{do}	"to cut"	\sqrt{ta}	"to resound"
\sqrt{dok}	"to move"	\sqrt{tan}	"to gird"
\sqrt{doq}	"to fly"	$\sqrt{t\acute{o}l}$	"to freeze"
\sqrt{dob}	"to drink"	\sqrt{tij}	"to grow"
\sqrt{dun}	"to shout"	\sqrt{to}	"to land (ashore)"
\sqrt{dut}	"to kindle"	\sqrt{tus}	"to intend"
\sqrt{ej}	"to kill"	\sqrt{un}	"to cast a net"
$\sqrt{h\acute{o}}$	"to weave"	\sqrt{us}	"to warm"
\sqrt{i}	"to whet"		
\sqrt{il}	"to sing"		

These are 42 different root shapes; there are 26 further shapes, which, however, only occur with obligatory P⁵ "determiners" (4.4.5.4).

²³⁵ This a very isolated example of a seemingly (if only historically) *complex* verbal root. Below we will discuss less than a handful of examples, which may (again, historically) be complex as well; incidentally, these cases seem to involve (a cognate of) the root \sqrt{aj} , too.

²³⁶ This list serves only to illustrate the relative paucity of lexical root morphemes in Ket. Homonyms are, however, not rare (so there are several different roots with the shapes, say, a or qo with different semantics. Here, only one meaning is given for each root).

²³⁷ This and some other roots may be referred to as semantically "labile"; whether the transitive or the intransitive meaning is actuated, is determined by the conjugational pattern a given verb follows.

4.4.5.1.1 Suppletivism

Suppletivism of the root morpheme is a widespread phenomenon in Ket. Suppletive paradigms often show some disturbances in single forms, but basically two types are discernable: paradigms using different roots for *Singular* and for *Plural* subject forms, and paradigms with different R morphemes for *present* and for *preterite* (and *imperative*) forms. R suppletivism may also react to different *object* numbers.

Some suppletive paradigms are characterized by a full replacement of entire root morphemes, without any relationship of the alternants. This will be referred to as "full" (or "true") suppletivism (4.4.5.1.1.1). In other cases, the phonological integrity of R morphemes may be disturbed to a certain degree (i.e. different forms may show different variants of what still seems to be basically the same root; factors governing such alternations - an extreme case of which is complete attrition of the root morpheme in some forms - are not always easy to formulate); we subsume such cases under "partial" or "pseudo"-suppletivism (4.4.5.1.1.2)²³⁸.

Alternating roots or root variants are noted in the verbal formula by <~>, e.g. *qut* ~ *damin* is to be read as: some forms of the paradigm use the R morpheme *qut*, others use *damin*.

4.4.5.1.1.1 Full suppletivism

Singular-vs.-Plural-suppletivism can be illustrated by the following paradigms. Many suppletive paradigms show a host of other irregularities as well, such as unexpected syncope, mixing of conjugation classes etc. Some of these will be discussed here.

One root in all singular forms, another one in all plural forms:

	<i>ikd[a]⁷-daq~qut (IV) (a) (in)</i> present tense	"to go to the river bank and stay" ²³⁹ past tense
1SG	<i>d[i]⁸-ikd[a]⁷-a⁴-d[i]¹-daq</i>	<i>d[i]⁸-ikd[a]⁷-o⁴-[i]n²-di¹-daq</i>
2SG	<i>k[u]⁸-ikd[a]⁷-a⁴-ku¹-daq</i>	<i>k[u]⁸-ikd[a]⁷-o⁴-[i]n²-ku¹-daq</i>
3SGm	<i>d[u]⁸-ikd[a]⁷-a⁴-(j)-a¹-daq</i>	<i>d[u]⁸-ikd[a]⁷-o⁴-[i]n²-a¹-daq</i>
3SGf	<i>da⁸-ikd[a]⁷-a⁴-(j)-a¹-daq</i>	<i>da⁸-ikd[a]⁷-o⁴-[i]n²-a¹-daq</i>
1PL	<i>d[i]⁸-ikd[a]⁷-a⁴-daŋ¹-qut</i>	<i>d[i]⁸-ikd[a]⁷-o⁴-[i]n²-daŋ¹-qut</i>
2PL	<i>k[u]⁸-ikd[a]⁷-a⁴-kaŋ¹-qut</i>	<i>k[u]⁸-ikd[a]⁷-o⁴-[i]n²-kaŋ¹-qut</i>
3PL	<i>d[u]⁸-ikd[a]⁷-a⁴-(j)-aŋ¹-qut</i>	<i>d[u]⁸-ikd[a]⁷-o⁴-[i]n²-aŋ¹-qut</i>
MRs	TR 5, TR 10, SR 7, Sync	

²³⁸ Pre-root anaptyxis (4.4.4.7) could also be regarded as a (mild) form of suppletivism.

²³⁹ The same alternations are found with this root and other spatial adverbs in P⁷ (*ota⁷*, *ta⁷*, *ad⁷*).

ikda is "at, to the river bank" (adv.), with final *-a*. The preterite forms show that the surface /a/ in the conjugated forms has, however, to be parsed as thematic *a*⁴, so the original lexical vowel underwent syncope here.

The 2nd SG present form is mostly found as <*kigdudaq*> with an unexplained (allegro?) syncope: *-ikd|a⁷-k|u¹-*. Also, the 3rd SG pres. is generally heard as <*digdajdaq*>, where *a*¹ is missing from the surface form, but its (structural, historical) presence is firmly marked by the (*j*)-separator.

<i>t⁵-ka</i> ~ <i>qut</i> (IV) (a) (il)	"to walk"
present tense	past tense
1SG [di] ⁸ -t ⁵ -a ⁴ -(j)-ka	[di] ⁸ -t ⁵ -o ⁴ -[i]l ² -ka
2SG [ku] ⁸ -t ⁵ -a ⁴ -(j)-ka	[ku] ⁸ -t ⁵ -o ⁴ -[i]l ² -ka
3SGm [du] ⁸ -t ⁵ -a ⁴ -(j)-ka	[du] ⁸ -t ⁵ -o ⁴ -[i]l ² -ka
3SGf da ⁸ -t ⁵ -a ⁴ -(j)-ka	da ⁸ -t ⁵ -o ⁴ -[i]l ² -ka
1PL [di] ⁸ -t ⁵ -a ⁴ -dan ¹ -qut-n	[di] ⁸ -t ⁵ -o ⁴ -[i]l ² -dan ¹ -qut-n
2PL [ku] ⁸ -t ⁵ -a ⁴ -kan ¹ -qut-n	[ku] ⁸ -t ⁵ -o ⁴ -[i]l ² -kan ¹ -qut-n
3PL [du] ⁸ - ⁵⁵ -a ⁴ -(j)-an ¹ -qut-n	[du] ⁸ -t ⁵ -o ⁴ -[i]l ² -an ¹ -qut-n
MRs TR 3, TR 10, SR 5, SR 7	

Only plural forms show the "coreferential" person marker in P¹, the verb shows thus another "conjugationally mixed" paradigm, combining the techniques of conjugations I and IV (4.4.3.6). However, the presence of the (*j*)-separator in singular present tense forms - inexplicable in synchronic terms alone - may indicate the former presence of a vowel before the root, which, then, could only have been the P¹ "coreferential" actant marker. In this case the verb was originally a fairly regular instance of conjugation IV. However, the use of the PL plural marker *-n* is again atypical for conjugation IV verbs, which adds to the mixed character of this verb.

<i>əqa⁷-qut</i> ~ <i>damin</i> (I) (il)	"to be visible" ²⁴⁰
present tense	past tense
1SG d[i] ⁸ -əqa ⁷ -(j)-qut	d[i] ⁸ -əqa ⁷ -[i]l ² -qut
2SG k[u] ⁸ -əqa ⁷ -(j)-qut	k[u] ⁸ -əqa ⁷ -[i]l ² -qut
3SGm d[u] ⁸ -əqa ⁷ -(j)-qut	d[u] ⁸ -əqa ⁷ -[i]l ² -qut
3SGf da ⁸ -əqa ⁷ -(j)-qut	da ⁸ -əqa ⁷ -[i]l ² -qut
1PL d[i] ⁸ -əqa ⁷ -(j)-damin	d[i] ⁸ -əqa ⁷ -[i]l ² -damin
2PL k[u] ⁸ -əqa ⁷ -(j)-damin	k[u] ⁸ -əqa ⁷ -[i]l ² -damin
3PL d[u] ⁸ -əqa ⁷ -(j)-damin	d[u] ⁸ -əqa ⁷ -[i]l ² -damin
MRs TR 5, TR 10, SR ²⁴¹	

The following very frequent verb is also basically singular-plural-suppletive, but it also shows several disturbances:

²⁴⁰ The suppletive root alternation \sqrt{qut} ~ \sqrt{damin} is fairly well attested in a number of lexical verbs ("to lie down", "to be tied up", "to hold", "to fight").

²⁴¹ The (*j*)-separator in all singular form is irregular. SR 5 comes close in explaining it, we have, however, to assume that the final vowel of the P⁷ incorporate got "interpreted" as a triggering P⁴ vowel.

<i>ik</i> ⁷ - <i>bes</i> ~ <i>qus</i> (I) (<i>in</i>)	"to come"
present tense	past tense
1SG <i>d</i> [i] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>bes</i>	<i>d</i> [i] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² - <i>bes</i>
2SG <i>k</i> [u] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>qus</i>	<i>k</i> [u] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² -[<i>q</i>]us
3SGm <i>d</i> [u] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>ibes</i>	<i>d</i> [i] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² - <i>bes</i>
3SGf <i>d</i> a ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>ibes</i>	<i>d</i> a ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² - <i>bes</i>
1PL <i>d</i> [i] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>qus-n</i>	<i>d</i> [i] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² -[<i>q</i>]us- <i>n</i>
2PL <i>k</i> [u] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>qus-n</i>	<i>k</i> [u] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² -[<i>q</i>]us- <i>n</i>
3PL <i>d</i> [i] ⁸ - <i>ik</i> ⁷ -(<i>s</i>)- <i>i</i> / <i>bes-n</i>	<i>d</i> [i] ⁸ -[<i>ik</i> ⁷]- <i>in</i> ² -[<i>q</i>]us- <i>n</i>
MRs TR 5, SR 4	

Forms which disturb the neat singular-plural distribution of the suppletive variants are the 2nd SG pres. and pret., and the 3rd PL pres. This paradigm, as recorded by Krejnovič in the 1960s, shows, thus, first signs of unification. Diachronically younger instances of this verb, also recorded by Krejnovič and later, show the uniform use of \sqrt{bes} here (<*kíksibes*> "you come" etc.). Bracketed [*q*] in some instances of the root \sqrt{qus} indicates that this consonant is often, but not always, elided in modern Ket. We should also note that the preterite forms are nowadays mostly pronounced with an allegro assimilation on *-in*²-*bes* > *-imes*: <*dímes*>, <*kímes*>, etc. Note also the attrition of the P⁷ incorporate in all preterite forms, also an allegro feature.

The basic singular-plural-suppletivism is also found by the "inchoative" verbal root \sqrt{qan} , which is usually replaced by $\sqrt{(k)sit}$ in plural forms. The root \sqrt{qan} regularly labializes in the preterite (cf. 4.4.5.8.3) and verbs built on it do not show a further P² preterite morpheme. Its plural replacement $\sqrt{(k)sit}$ remains unchanged in the preterite and also does not take a P² tense marker, so the only marker of past tense in these forms is the labialization of the P⁴ vowel. Note also the unusual shape of the "root" $\sqrt{(k)sit}$ with its consonant cluster (missing in present tense forms, incidentally). The origin of the additional /*k*/ remains, however, unclear:

<i>k</i> ⁵ - <i>qan</i> ~(<i>k</i>) <i>sit</i> (I) (<i>a</i>) (-)	"to become" ²⁴²
present tense	past tense
1SG <i>d</i> i ⁸ -(<i>k</i>)- <i>a</i> ⁴ - <i>qan</i>	<i>d</i> [i] ⁸ - <i>o</i> ⁴ - <i>qon</i>
2SG <i>k</i> u ⁸ -(<i>k</i>)- <i>a</i> ⁴ - <i>qan</i>	<i>k</i> [u] ⁸ - <i>o</i> ⁴ - <i>qon</i>
3SGm <i>d</i> u ⁸ -(<i>k</i>)- <i>a</i> ⁴ - <i>qan</i>	<i>d</i> [u] ⁸ - <i>o</i> ⁴ - <i>qon</i>
3SGf <i>d</i> a ⁸ -(<i>k</i>)- <i>a</i> ⁴ - <i>qan</i>	<i>d</i> a ⁸ - <i>o</i> ⁴ - <i>qon</i>
1PL <i>d</i> i ⁸ -(<i>k</i>)- <i>a</i> ⁴ -[<i>k</i>] <i>sit-n</i>	<i>d</i> [i] ⁸ - <i>o</i> ⁴ - <i>ksit-n</i>
2PL <i>k</i> u ⁸ -(<i>k</i>)- <i>a</i> ⁴ -[<i>k</i>] <i>sit-n</i>	<i>k</i> [u] ⁸ - <i>o</i> ⁴ - <i>ksit-n</i>
3PL <i>d</i> u ⁸ -(<i>k</i>)- <i>a</i> ⁴ -[<i>k</i>] <i>sit-n</i>	<i>d</i> [u] ⁸ - <i>o</i> ⁴ - <i>ksit-n</i>
MRs TR 4 ²⁴³ , SR 3	

²⁴² Usually accompanied by an adjective or *to*⁹ⁿ "like that".

²⁴³ TR 4 normally requires additional phonetic material between P⁴ and R, which is, obviously, lacking here. However, the fact that the preterite labialization is the only sign of the past tense in this form, and that an overt P² marker is *irregularly* lacking here, may allow the assumption that P² was "felt" to be (or even diachronically was) present here, which could trigger TR 4, then.

Present-preterite suppletivism is found in considerably fewer cases, though the suppletive root $\sqrt{t} \sim a$ is quite frequently found in derived verbs, many of them causatives. In all cases the second alternant mentioned is found only in the preterite (and imperative, in other words, in forms with the P² marker *in*): In most verbs of this kind, the alternant \sqrt{a} is further confined to 3rd person object forms²⁴⁴:

<i>sitej/q⁷-t ~ a (I) (in)</i>		"to wake up (tr.)"
Subject: 3 rd SG f		
Object ↓:		
	present tense	past tense
1SG	<i>da⁸-sitej/q⁷-(i)-di¹-t</i>	<i>da⁸-sitej/q⁷-in²-di¹-t</i>
2SG	<i>da⁸-sitej/q⁷-(i)-ku¹-t</i>	<i>da⁸-sitej/q⁷-in²-ku¹-t</i>
3SGm	<i>da⁸-sitej/q⁷-a⁴-(j)-(i)-t</i>	<i>da⁸-sitej/q⁷-o⁴-[i]n²-a</i>
3SGf	<i>da⁸-sitej/q⁷-i⁴-(j)-(i)-t</i>	<i>da⁸-sitej/q⁷-i⁴-(t)-[i]n²-a</i>
1PL	<i>da⁸-sitej/q⁷-(i)-dan¹-(i)-t</i>	<i>da⁸-sitej/q⁷-in²-dan¹-(i)-t</i>
2PL	<i>da⁸-sitej/q⁷-(i)-kan¹-(i)-t</i>	<i>da⁸-sitej/q⁷-in²-kan¹-(i)-t</i>
3PL	<i>da⁸-sitej/q⁷-an¹-(i)-t</i>	<i>da⁸-sitej/q⁷-oη-(o)-[i]n²-a</i>
MRs	SR 8, SR 9	

4.4.5.1.1.2 Partial (or "pseudo-") suppletivism

4.4.5.1.1.2.1 The *b- ~ k-* alternation

Some verbal roots change their initial consonant in certain forms; this behaviour is most typical for two quite frequent verbal roots, \sqrt{bed} "to do, make" (and numerous complex verbs derived from it) and $\sqrt{bək}$ "to find"²⁴⁵. These verbs alter their initial /b/ to /k/ (phonetically always [g], due to the phonological context) in preterite and imperative forms²⁴⁶:

<i>d[i]⁸-i²-bed</i>	"I did, made"
<i>il²-ked</i>	"do, make!"
<i>d[i]⁸-o⁴-[i]n-bək</i>	"I found him"
<i>in²-kək</i>	"find!"

The imperative seems to be the original context for this alternation; however, non-imperative, preterite forms (which are characterized by the same morpheme (*il/in*) in P²), may show this alternation too. With the verb *bək* "to find", /k/-initial forms

²⁴⁴ The verb *ej⁷-t ~ a II_r (a) (b) (ij) (balt)* "to leave alone" is one of a handful of exceptions, where the alternant \sqrt{a} is found in all preterite (and imperative) forms.

²⁴⁵ Cf. the paradigm given above, 4.4.3.1.

²⁴⁶ For the formation of imperatives, cf. 4.4.6.2.

are preterite forms with 3SG *neuter* object (marked by P³ /b/)²⁴⁷ and *phonetically intact* P² /in/:

$di^8-b^3-in^2-kək$	"I found it"
$ku^8-b^3-in^2-kək$	"you found it"
$du^8-b^3-in^2-kək$	"he found it"
$dɔ-b^3-in^2-kək$	"she found it"

P² /in/ is not phonetically intact in forms like the following ones, where the truncation rule TR 10 elides its vowel; consequently no *k*-mutation occurs:

$dɑ^8-o^4-[i]n-bək$	"she found him"
$d[u]^8-o^4-[i]n-bək$	"he found him"

P² /in/ is phonetically intact, but separated from R by an object morpheme in P¹ e.g., in:

$k[u]^8-in^2-di^1-bək$	"you found me"
$dɑ^8-in^2-dan^1-bək$	"she found us"

Thus, those preterite forms which do show the *b*→*k* change, are morphotactically most similar to imperative forms in displaying a *phonetically intact* P² marker directly before R, which might be responsible for an *analogical* spread of these alternations to some non-imperative forms.

The root \sqrt{bed} occurs most commonly with some P⁷ incorporate, or, as a transitive verb, with an overt object marker, usually P³ /b/. However, it does occur without such markers (and may then be translated as "to act"). Second person subject forms, in the *present and the preterite*, may then show the same alternation, which is obviously not captured by any of the rules mentioned so far:

$di^8-(j)-bed$	"I act"	SR 1
$ku^8-(j)-ked$	"you act"	SR 1
$d[i]^8-iI^2-bed$	"I acted"	TR 1
$k[u]^8-iI^2-ked$	"you acted"	TR 1

The behaviour of this verb is thus irregular, and may be simply explicable by a progressive assimilation (or "copy") of the initial velar of the P⁸ 2SG morpheme, supported by the vague fact that *some*, but *not all* forms of \sqrt{bed} may change their initial consonant to /k/ in some morphologically rather simple, imperative-like contexts.

This interpretation receives further support from the verbal root $\sqrt{bak} \sim kak$, which behaves exactly alike:

²⁴⁷ This is the actual context, where this change is found. More generally, the fact that in these forms, P¹ is empty, i.e. P² occurs directly in contact with R, seems to be the responsible factor for the consonant change.

<i>bak~kak I_{tr} (il)</i>	"to pull"			
<i>di⁸-b³-bak</i>	"I pull it"	vs.	<i>ku⁸-d[i]¹-<u>k</u>ak</i>	"you pull me"
<i>du⁸-ku¹-bak</i>	"he pulls you"		<i>k[u]⁸-i²-di¹-<u>k</u>ak</i>	"you pulled me"
<i>d[i]⁸-b³-i²-bak</i>	"I pulled it"		<i>ku⁸-daŋ¹-<u>k</u>ak-n</i>	"you pull us"
<i>d[u]⁸-i²-ku¹-bak</i>	"he pulled you"		<i>k[u]⁸-i²-daŋ¹-<u>k</u>ak-n</i>	"you pulled us"

Note that the assimilatory influence of 2nd person subject is not repeated by 2nd person object morphemes in P¹.

The numerous complex verbs containing the root \sqrt{bed} "to do, make" show this alternation rather unpredictably. In many verbs it is altogether absent (i.e. only the variant *bed* occurs in all forms); other compound verbs with this root show a tendency to use the variant *-ked* with 2nd person subject (here the assimilatory influence of the 2nd person P⁸ subject marker *ku* is felt again), and in *imperatives*, cf.:

<i>k[u]⁸-i⁷-(s)-i/ked</i>	"you breathe"
<i>k[u]⁸-i⁷-[i]n²-i/ked-n</i>	"you (pl.) breathed"
<i>i⁷-[i]n²-i/ked</i>	"breathe (ipv. SG)"
<i>i⁷-[i]n²-i/ked-n</i>	"breathe (ipv. PL)"

All other forms use the root shape *-bed*.

Some verbs extend the velar-initial variant to 1st person subjects, too (though restricted to plural forms); this is true for three different *interrogative* verbs which express the meanings "to do what?" and "to make what [out of some material]?" (these may, then, have exerted some analogical influence on each other²⁴⁸); all other forms of the following verbs use *bed*.

<i>d[i]⁸-akus⁷-i²-ked-n</i>	"what did we do/make?"
<i>k[u]⁸-akus⁷-i²-ked-n</i>	"what did you (pl.) do/make?"
<i>d[i]⁸-akus⁷-u/[k]⁶-[i]n²-ked-n</i>	"what did we make out of it?" ²⁴⁹
<i>k[u]⁸-akus⁷-u/[k]⁶-[i]n²-ked-n</i>	"what did you (pl.) make out of it?"
<i>āj d[i]⁸-il-ked-n</i>	"what did we do?"
<i>āj d[i]⁸-il-ked-n</i>	"what did you (pl.) do?"

As a general tendency, it can be said that the variant *ked* is most frequently found in imperative forms, quite commonly found with 2nd person (mostly plural) forms, and rarely present in 1st person (only plural) verb forms built with the R *-bed*.

²⁴⁸ We may hypothesize that the incorporate *ākus* originally triggered *b* --> *k* assimilation in the two verbs which contain it, whence the third (analytical) verb may have adopted this root variant.

²⁴⁹ The "material" out of which "something is made" is encoded as 3rd person neuter object in P⁶.

Vajda (2004, 60) regards instances of initial /b/, which may be replaced by /k/, as remnants of a prehistoric morphological (root-derivational) system, and refers to the initials of such roots as "pre-base /b/". Such an analysis (which could result in writing -b/ed) may indeed be justified, since other b-initial verb roots do not show this behaviour (and should, consequently, be regarded as non-derived historical simplicia). However, the strong "2nd person bias" of many instantiations of the velar onset in this root may favour an assimilation analysis as attempted here (allowing for some analogical spread through and across paradigms).

Other types of partial suppletivism:

A small group of verbal roots appears with and without initial /d/ in some forms (d-forms are typically plurals):

<i>aka⁷-aq ~ daq III (ba/t) (il)</i>	"to run into the forest" ²⁵⁰
present tense	past tense
1SG <i>d[i]⁸-aka⁷-ba/t⁶-(s)-aq</i>	<i>d[i]⁸-aka⁷-ba/t⁶-[i]l²-aq</i>
2SG <i>k[u]⁸-aka⁷-ku/t⁶-(s)-aq</i>	<i>k[u]⁸-aka⁷-ku/t⁶-[i]l²-aq</i>
3SGm <i>d[u]⁸-aka⁷-bu/t⁶-(s)-aq</i>	<i>d[u]⁸-aka⁷-bu/t⁶-[i]l²-aq</i>
3SGf <i>da⁸-aka⁷-bu/t⁶-(s)-aq</i>	<i>da⁸-aka⁷-bu/t⁶-[i]l²-aq</i>
1PL <i>d[i]⁸-aka⁷-dɔŋ/[t]⁶-(s)-daq-an</i>	<i>d[i]⁸-ɔla⁷-dɔŋ/[t]⁶-i²-daq-an</i>
2PL <i>k[u]⁸-aka⁷-kɔŋ/[t]⁶-(s)-daq-an</i>	<i>k[u]⁸-ɔla⁷-kɔŋ/[t]⁶-i²-daq-an</i>
3PL <i>d[u]⁸-aka⁷-bu/t⁶-(s)-aq-an</i>	<i>d[u]⁸-ɔla⁷-bu/t⁶-[i]l²-daq-an</i>
MRs TR 5, SR 4, Sync (the truncation of /t ⁶ in some forms is irregular).	

<i>eska⁷-is ~ dis (I) (in)</i>	"to go upriver and stay" ²⁵¹
present tense	past tense
1SG <i>d[i]⁸-esk[a]⁷-a⁴-b³-is</i>	<i>d[i]⁸-esk[a]⁷-o⁴-b³-[i]n²-is</i> <déskomnis>
2SG <i>k[u]⁸-esk[a]⁷-a⁴-b³-is</i>	<i>k[u]⁸-esk[a]⁷-o⁴-b³-[i]n²-is</i>
3SGm <i>d[u]⁸-esk[a]⁷-a⁴-b³-is</i>	<i>d[u]⁸-esk[a]⁷-o⁴-b³-[i]n²-is</i>
3SGf <i>da⁸-esk[a]⁷-a⁴-b³-is</i>	<i>da⁸-esk[a]⁷-o⁴-b³-[i]n²-is</i>
1PL <i>d[i]⁸-esk[a]⁷-a⁴-b³-dis-n</i>	<i>d[i]⁸-eska⁷-b³-in²-dis-n</i>
2PL <i>k[u]⁸-esk[a]⁷-a⁴-b³-dis-n</i>	<i>k[u]⁸-eska⁷-b³-in²-dis-n</i>
3PL <i>d[u]⁸-esk[a]⁷-a⁴-b³-dis-n</i>	<i>d[u]⁸-eska⁷-b³-in²-dis-n</i>
MRs TR 5, Sync	

Root-final /-ŋ/ alternates with /-k/ before (vowel-initial) PL. This is a rather frequent alternation, cf.:

<i>t⁵-oŋ ~ uk (I) (a) (il)</i>	"to see"
present tense	past tense
1SG <i>di⁸-t⁵-[a]⁴-oŋ</i>	<i>[di]⁸-t⁵-o⁴-[i]l²-oŋ</i>

²⁵⁰ The same phenomenon is found with other adverbial P⁷ incorporates like *eta⁷*, *ɔla⁷* etc.

²⁵¹ This verb shows some irregularities: the notation with a truncated vowel of the P⁷ incorporate and a following overt P⁴ *a* may seem arbitrary, but it was chosen because of the presence of this latter marker (preterite-labialized, of course) in past tense forms. In past tense plurals, then, it is never present, without any good explanations offering themselves.

2SG	$ku^8-t^5-[a]^4-o\eta$	$k[u]^8-t^5-o^4-[i]l^2-o\eta$
3SGm	$du^8-t^5-[a]^4-o\eta$	$[du]^8-t^5-o^4-[i]l^2-o\eta$
3SGf	$d\alpha^8-t^5-[a]^4-o\eta$	$d\alpha^8-t^5-o^4-[i]l^2-o\eta$
1PL	$di^8-t^5-[a]^4-ok-in$	$[di]^8-t^5-o^4-[i]l^2-ok-in$
2PL	$ku^8-t^5-[a]^4-ok-in$	$k[u]^8-t^5-o^4-[i]l^2-ok-in$
3PL	$du^8-t^5-[a]^4-ok-in$	$[du]^8-t^5-o^4-[i]l^2-ok-in$
MRs	TR3, TR 9, TR 10	

A special case of vowel alternation in the root is found in verbs containing the roots $\sqrt{aq} \sim oq$ and $\sqrt{qan} \sim qon$. The forms with /o/ are preterite forms, and the source of this alternation is obviously an over-extension of past tense labialization, which is normally found in P⁴ a (4.4.5.8.3):

$si^7-aq \sim oq$	$II_{itr} (ba/t) (a) (in)$	"to become, to turn into"
	present tense	past tense
1SG	$si^7-ba/t^6-[a]^4-aq$	$si^7-ba/t^6-o^4-[i]n^2-oq$
2SG	$si^7-ku/t^6-[a]^4-aq$	$si^7-ku/t^6-o^4-[i]n^2-oq$
3SGm	$si^7-a/t^6-[a]^4-aq$	$si^7-a/t^6-o^4-[i]n^2-oq$
3SGf	$si^7-[i]/t^6-[a]^4-aq$	$si^7-[i]/t^6-o^4-[i]n^2-oq$
1PL	$si^7-d\alpha\eta/t^6-[a]^4-aq$	$si^7-d\alpha\eta/t^6-o^4-[i]n^2-oq$
2PL	$si^7-k\alpha\eta/t^6-[a]^4-aq$	$si^7-k\alpha\eta/t^6-o^4-[i]n^2-oq$
3PL	$si^7-a\eta/t^6-[a]^4-aq$	$si^7-a\eta/t^6-o^4-[i]n^2-oq$
MRs:	TR 9, TR 10	
	The thematic P ⁴ vowel does not surface before the vowel initial R. The syncope of P in the 3 rd Sf forms is purely phonotactical.	

While the preceding verb still features a P² preterite marker, verbs formed with the following, very frequent, root do not. Here, the labialization of the P⁴ vowel and that of the root²⁵² is the only overt marker of the preterite:

$il^7-qan \sim qon$	$II_{itr} (ba/k) (a)$	"to start singing" ²⁵³
	present tense	past tense
1SG	il^7-ba/k^6-a^4-qan	il^7-ba/k^6-o^4-qon
2SG	il^7-ku/k^6-a^4-qan	il^7-ku/k^6-o^4-qon
3SGm	il^7-a/k^6-a^4-qan	il^7-a/k^6-o^4-qon
3SGf	il^7-i/k^6-a^4-qan	il^7-i/k^6-o^4-qon
1PL	$il^7-d\alpha\eta/k^6-a^4-qan$	$il^7-d\alpha\eta/k^6-o^4-qon$
2PL	$il^7-k\alpha\eta/k^6-a^4-qan$	$il^7-k\alpha\eta/k^6-o^4-qon$
3PL	$il^7-a\eta/k^6-a^4-qan$	$il^7-a\eta/k^6-o^4-qon$

²⁵² There seem to be no examples for *non-thematic* verbs of this kind, i.e. verbs where the alternation in R would be the only marker of the preterite.

²⁵³ As stated in 4.4.5.1.2, this verbal root is semantically very "affix-like". It forms inchoatives with many different (verbal) roots incorporated in P⁷.

An alternation of final consonants seemingly not called for by any storable phonological rule is found in a great number of verbs containing the root $\sqrt{ted} \sim tek$, with the latter variant before the plural suffix, as e.g.:

<i>ted</i> ~ <i>tek</i> (I) (<i>in</i>)	"to beat, hit"
du^8-ku^1-ted	"he beats thee"
$d[u]^8-[i]n^2-ku^1-ted$	"he beat thee"
$du^8-ka\eta^1-tek-in$	"they beat thee (present)"
$d[u]^8-[i]n^2-ka\eta^1-tek-in$	"they beat thee (preterite)"

A similarly conspicuous *-t/-n* alternation is typical for verbs containing the lexical root $\sqrt{sin} \sim sit$, e.g.:

<i>sin</i> ~ <i>sit</i> (I)	"to need" ²⁵⁴
$di^8-b^3-(i)-sin$	"I need it"
$du^8-k[u]^1-sin$	"he needs thee"
$di^8-(k)-i^4-sit-in$	"I need her"
$du^8-ka\eta^1-sit-in$	"they need you"

The frequent root \sqrt{tn} shows alternants, which may be phonetically explained.

This root may be identical with that found in the verb "to go to sleep", which shows a somewhat similar suppletivism, but with *-n* in plural forms²⁵⁵. Thus, no phonetic explanation seems possible here:

t^5-tn (IV) (<i>a</i>) (<i>il</i>)	"to (go to) sleep"
present tense	past tense
1SG $[di]^8-t^5-a^4-di^1-tn$	$[di]^8-t^5-o^4-[i]l^2-di^1-tn$
2SG $[ku]^8-t^5-a^4-ku^1-tn$	$[ku]^8-t^5-o^4-[i]l^2-ku^1-tn$
3SGm $[du]^8-t^5-a^4-(j)-a^1-tn$	$[du]^8-t^5-o^4-[i]l^2-a^1-tn$
3SGf $da^8-t^5-a^4-(j)-a^1-tn$	$da^8-t^5-o^4-[i]l^2-a^1-tn$
1PL $[di]^8-t^5-a^4-da\eta^1-\varnothing n$	$[di]^8-t^5-o^4-[i]l^2-da\eta^1-an$
2PL $[ku]^8-t^5-a^4-ka\eta^1-\varnothing n$	$[ku]^8-t^5-o^4-[i]l^2-ka\eta^1-an$
3PL $[du]^8-t^5-a^4-(j)-a\eta^1-\varnothing n$	$[du]^8-t^5-o^4-[i]l^2-a\eta^1-an$
MRs TR 3, TR 10, SR 7	

A special case of suppletivism: root attrition:

Rarely, the root morpheme may be elided in the surface representation of some verb forms; this is the case with the basic verb \sqrt{a} "to eat" in Southern Ket (not in

²⁵⁴ There are no preterite forms.

²⁵⁵ Werner (2002, II, 260) records the subject plural forms phonetically as <*tár'aηΛ:n*> etc. Both the quality and the marked length of the vowel in R are unexplained.

Central and Northern Ket), cf. the following paradigms (I, you, he she, it eat(s) it, I, you, he, she, it ate it):

SK	CK	SK	CK
$di^8-b^3-[a]$	di^8-b^3-a	$d[i]^8-b^3-il^2-[a]$	$d[i]^8-b^3-il^2-a$
$ku^8-b^3-[a]$	ku^8-b^3-a	$k[u]^8-b^3-il^2-[a]$	$k[u]^8-b^3-il^2-a$
$du^8-b^3-[a]$	du^8-b^3-a	$d[u]^8-b^3-il^2-[a]$	$d[u]^8-b^3-il^2-a$
$d\text{ə}^8-b^3-[a]$	$d\text{ə}^8-b^3-a$	$da^8-b^3-il^2-[a]$	$da^8-b^3-il^2-a$

A possible reason for the anomalous behaviour of this verb may be sought in the fact that the accompanying infinitive is actually *ilɛŋ* (cf. 4.4.8.1). This root form, also found in Yugh (*iriŋ*), may have given rise to a partial reinterpretation of the syllable /il/ - actually the P² preterite morpheme - as the root in SK. No doubt the SK preterite paradigm still remains anomalous even if this assumption should be correct (in which case it would lack an overt preterite marker; moreover, this explanation cannot account for the loss of the root in the present tense).

4.4.5.1.2 Semantically bleached roots or "pseudo-affixes"

It is relatively rare that R is the only lexical morpheme found in a given verb form. Many verbs fill also slot P⁵ (and P⁶, cf. 4.4.5.3) with lexical "determiners" and it is probably safe to say that the majority of verbs also fill P⁷ with a lexical incorporate (cf. 4.4.5.2). Since it is very common that P⁷ incorporates are the semantically dominant (or "rich") lexical element in complex Ket verbs (they may represent nominal, adjectival or verbal semantic content), some R morphemes which predominantly occur in complex verbs have lost a great deal of their semantic autonomy; thus, some of them may be described as having acquired affix-like semantic/functional features, modifying the "rich" semantic content of some P⁷ incorporate in a rather transparent way. A certain number of (mostly phonetically short) R morphemes even defy any attempt to assign a consistent "meaning" to them; these will, as an *asylum ignorantiae*, be glossed simply by "R". Acknowledging this fact, we nevertheless stick to an analysis which always²⁵⁶ identifies a R morpheme at the end of the verbal morpheme chain (i.e. to the left of PL in those verbs which have it) and avoids talking of "affixes" here²⁵⁷. Calling such R morphemes "pseudo-affixes" does less harm to our understanding of the morphological structure of the Ket verb, as long as it remains understood that this notion pertains only to the semantic/functional content of elements, which *formally* remain R(oot)s.

²⁵⁶ Pace the few cases of *root attrition*, cf. *supra*

²⁵⁷ We will thus not, as Krejnovich does in his numerous writings on Ket, speak of "verbs having their root element at the end of the word" and "verbs having their root (elsewhere)"; the root is *formally always* at the right end of the verbal morpheme chain, the Ket verb thus *does* have a unified morpheme structure; only speaking in terms of *lexical semantics*, the Ket verb may show what could be called the "semantic epicentre" "elsewhere".

The following is a list of some commonly found roots which display a considerable degree of semantic bleaching (or "pseudo-affixhood"); it should be borne in mind that assigning meanings/functions to morphemes is sometimes a risky business, and always open to possible revisions; there is no universally satisfying definition of "semantic richness", or, for that matter, of "concrete meaning" vs. "abstract function". The glosses are mostly copied from Vajda/Zinn 2004 (V/Z), accompanied by page number²⁵⁸:

\sqrt{a}	"marker of single action in some verbs" (V/Z, p. 106)
c.g.	
	<i>taŋaj⁷-a II_{tr} (il) (bo/k)</i> "to pull"
	<i>[du]⁸-taŋaj⁷-ku/k⁶-(s)-a</i> "he pulls you"
	<i>[du]⁸-taŋaj⁷-ku/[k]⁶-[i]l²-a</i> "he pulled you"

Also claimed to be present in verbs with meanings along the lines of "to beat", "to pour", "to whistle", "to stretch" etc. (with different P⁷ incorporates, but sometimes also different conjugational patterns).

The function of this pseudo-affix R morpheme is thus very vague at best, and we will simply gloss it as R. There is a homophonous root labelled by Vajda/Zinn as:

\sqrt{a}	"marker in certain verbs expressing active events" (V/Z, p. 107)
c.g.	
	<i>k⁵-a (I_{tr}) (in) (a)</i> "to slash, to cut into pieces"
	<i>[di]⁸-k⁵-a⁴-b³-a</i> "I slash it"
	<i>da⁸-k⁵-o⁴-[i]n²-a</i> "she slashed it"

Also in verbs meaning "to prepare firewood", "to bite, chew", "to cut in half", "to split open a fish's belly".

Given this range of meanings, it may probably be safe to view this as a semantically "rich" R morpheme, meaning basically "to cut, divide"²⁵⁹.

A very frequent R morpheme is

$\sqrt{aj} \sim ij$	"stative marker in certain deagentive verbs" (V/Z, p. 111)
c.g.:	

²⁵⁸ The citation form, including some details of morphological parsing, is adapted to the conventions of this grammar. Note that this section is not intended to criticize the glossings in Vajda/Zinn as erroneous; apart from illustrating the phenomenon of bleaching and "pseudo-affixhood" it tries to highlight the difficulties with assigning proper meanings/functions to these elements, and to justify our decision to resort to a dry "R" in some glosses found in this grammar.

²⁵⁹ These are not the only R morphemes with this shape; another one is \sqrt{a} "to eat". An equally vague semantic range is shown by another \sqrt{a} "to take place of its own accord" (Vajda/Zinn 2004, 105), uniting verbs like "to wake up", "to change", and "to agree". Any answer to the question whether all these \sqrt{a} roots (or any subset of them) may represent on "original" or even "prototypical" semantic content can, of course, only come from deeper historical investigations.

<i>taqaj</i> ⁷ -aj <i>II</i> _{itr} (<i>il</i>) (<i>bo/k</i>)	"to be shot"
<i>taqaj</i> ⁷ - <i>bo/k</i> ⁶ -(<i>s</i>)-aj	"I am shot"
<i>taqaj</i> ⁷ - <i>daŋ</i> /[<i>k</i>] ⁶ -[<i>i</i>] ⁶ -aj	"we were shot"

Also in numerous other verbs with stative meanings, often, but not invariably, *resultative* forms (cf. 4.4.5.10.2).

A straightforward gloss as "be.in.state" offers itself here.

Another semantically quite vague root is

\sqrt{aq}	"marker of single active action in some verbs" (V/Z, p. 113)
e.g.:	
<i>eq</i> ⁷ - <i>aq</i> <i>I</i> _{itr} (<i>il</i>)	"to listen"
<i>d[i]</i> ⁸ - <i>eq</i> ⁷ -(<i>s</i>)- <i>aq</i>	"I listen"
<i>d[u]</i> ⁸ - <i>eq</i> ⁷ -[<i>i</i>] ⁶ - <i>aq</i> - <i>in</i>	"they listened"

Other verbs said to contain this root show meanings like "to pour liquid (once)", "to skin (one animal)", "to bite (once)".

Although semelfactivity seems to be a characteristic of some of them, we may be dealing with homonymy here. However, a gloss like "do.once" seems to be justified, at least provisionally²⁶⁰.

Perhaps the most frequent root in complex verbs is \sqrt{bed} , glossed in Vajda/Zinn (p. 125, 128) as

"marker used in many active verbs", and
 "iterative marker in numerous verbs with an infinitive in P⁷"

We think, however, that a straightforward glossing of this root as "do" or "make" does justice to most if not all of its occurrences.

An almost equally frequent R morpheme occurring in complex verbs with an exceptionally wide range of meanings is

\sqrt{da} "atelic transitive marker in many stems" (V/Z, p. 133)

It is true that the many verbs showing this R morpheme are transitives (conjugations II and III)²⁶¹; on the other hand the majority of verbs of this kind are

²⁶⁰ Apart from this root, Vajda/Zinn treat the very frequent \sqrt{aq} "to go and return (soon)" as merely homonymous. It seem to be justifiable, though, to view this as just another instance of semelfactivity (and some glosses by Vajda/Zinn, like "to go once, to make a single round trip" underline this); a possible drawback could be that in the great number of motion verbs containing \sqrt{aq} we would, then, find no "real" element bearing the notion of "movement", but this is by far not the only case where the ultimate meaning of a Ket verb is not determinable by a simple "addition" of overtly expressed meanings/functions. But note the root \sqrt{daq} "to go once", which may be historically cognate with \sqrt{aq} .

²⁶¹ Meanings attested (and differentiated by different P⁷ incorporates) include, i.a., "to lay down", "to warm", "to hide", "to cook", "to kill", "to show", "to drag", "to dry" etc.

also marked as conveying *iterative* semantics (and *atelicity* is certainly conceptually adjacent to iterativity) as well (but, then, again not invariably); this is another one of the cases for which a gloss as plain "R" seems to be inevitable for the time being.

\sqrt{dij} "atelic intransitive marker in many verbs" (V/Z, p. 145)

cf.:

$us/q^7-dij IV_{itr} (a) (il)$	"to get warm"
$d[i]^8-us/q^7-a^4-d[i]^1-dij$	"I get warm"
$d[u]^8-us/q^7-o^4-[i]l^2-a\eta^1-dij$	"they got warm"

Other meanings expressed by complex verbs with this root include "to appear", "to be placed", "to grow up", etc., as well as a quite large number of verbs denoting a change of state, like (to get) "undressed", "prepared", "dry", "well" and so on. It may be appropriate to use "acquire.state" as a gloss for this root.

For the root

\sqrt{ij} "active process marker in some verbs" (V/Z, p. 162)

a straightforward gloss as "emit.sound" offers itself, since it seems to be confined to verbs like "to shout", or "to call", e.g.:

$es^7-ij I_{itr} (a) (il)$	"to shout"
$da^8-es^7-(s)-ij$	"she shouts"
$d[u]^8-es^7-o^4-[i]l^2-ij-in$	"they shouted"

As a final example of this (incomplete) list of vague or difficult-to-determine meanings of R morphemes/pseudo-affixes, we may have a look at:

\sqrt{t} and $\sqrt{t} \sim a$ "single event transitive marker in many verbs" (V/Z, p. 194):

$t III_{tr} (il) (bo/k)$	"to carry, bring"
$d[u]^8-bu/k^6-ku^1-t$	"he carries you"
$da^8-bu/k^6-o\eta^4-[i]l^2-(i)-t$	"she carried them"
$us/q^7-t \sim a I_{tr} (in)$	"to warm"
$d[i]^8-us/q^7-(i)-ku^1-t$	"he warms you"
$da^8-us/q^7-o^4-[i]n^2-a$	"she warmed him"

Most verbs with these roots are indeed transitive, but there is little else which combines them in terms of semantics (i.a. "to kill", "to break", "to set upright", "to show", "to tie", and also some intransitives like "to get carried by the wind", "to hang oneself", "to blush" etc.). It is still best glossed simply as "R"²⁶².

²⁶² However, this root takes part in a reasonably frequent alternation with the root \sqrt{qut} , where otherwise identical (or at least mostly identical) verbs with $\sqrt{t} \sim a$ represent transitives, and their counterparts with \sqrt{qut} are semantically markedly intransitive, often patient-centered *resultatives*.

There is one very frequent R morpheme, whose function/meaning can be very clearly described in "affix" terms:

$\sqrt{qan} \sim qon$	"to become/acquire a quality, to begin doing something" ²⁶³ :
$a^7-qan \sim qon$	$II_{itr} (a) (-)^{264} (ba/t)$ "to become hot"
a^7-ku/t^6-a^4-qan	"you become hot (or sweaty)"
a^7-i/t^6-o^4-qon	"she became hot/sweaty"
$il^7-qan \sim qon$	$II_{itr} (a) (-) (ba/k)$ "to start singing"
il^7-a/k^6-a^4-qan	"he starts singing"
$il^7-a\eta/k^6-o^4-qon$	"they started singing"

This root, then, can be very straightforwardly described as an inchoative/inceptive "pseudo-affix".

4.4.5.2 P⁷ incorporate

The vast majority of Ket verbs fill P⁷ with a lexical incorporate. Incorporation in Ket is a highly lexicalized process, which serves to produce a variety of derived verbal categories (4.4.7), as well as a great number of compound verbs, the core semantics of which is associated with the incorporate element, rather than with the root morpheme in position R. Given the large amount of lexical verbs formed by means of incorporation, paradigmatic incorporation is a marginal phenomenon in Ket, but it does occur (4.4.5.2.2).

4.4.5.2.1 Incorporable lexical morphemes

P⁷ incorporates are typically nominal, but other parts-of-speech are also frequently encountered in this position. In addition to nouns, adjectives, (local) adverbs and verbal infinitives, there are also categorically obscure P⁷ incorporates, which cannot (any longer) be equated with any unbound lexical morpheme found elsewhere in Ket (or Yugh).

4.4.5.2.1.1 Incorporated nouns

Incorporated nouns may be patients/(effected) objects/targets of change, i.e. objects (a) or, much more frequently, instruments (b); the incorporation of instruments does not reduce the transitivity of the resulting complex verb, any object/patient markers remain intact. In some cases, verbs without any agent marking may

²⁶³A nominal/adjectival P⁷ incorporate favours the first reading, whereas an incorporated infinitive lends itself to the inchoative translation equivalent.

²⁶⁴Preterite forms of this root are formed without an overt P² morpheme; instead, the root itself copies the preterite labialization from a^4 , cf. 4.4.5.8.3.

incorporate a noun, which then fulfils the function of a target of (agentless) change/coming into existence (c):

a)

asle/η⁷ (< *ásle-η* "snow-shoes")
asleη⁷-bed I (il) "to make snow-shoes"
d[i]⁸-asleη⁷-il²-bed "I made a pair of snow-shoes"

bok⁷ (< *bo⁹k* "fire")
bok⁷-det I (il) "to make fire, to kindle"
[di]⁸-bok⁷-(s)-det "I make fire"

akus⁷ (< *ákus* "what")
akus⁷-bed I (il) "to do what"
d[u]⁸-akus⁷-il²-bed-n "what did they do?"

b)

ades/n⁷ (< *ades-n* "iron nails")
ades/n⁷-a⁴-ted ~ tek I (in) "to nail together"
da⁸-ades/n⁷-o⁴-b³-in²-ted "she nails it (*b³*) together"

kulas/n⁷ (< *kúlas-n* "elbows")
kulas⁷-ted ~ tek II (ba/t) (a) (il) "to beat (with the elbows)"
[di]⁸-kulas/n⁷-i/t⁶-a⁴-b³-tek-in "we beat her"²⁶⁵

kid⁷ (< *kí⁹d* "fat")
kid⁷-kit III (ba/t) (a) (il) "get smeared with fat"
da⁸-kid⁷-bu/t⁶-a⁴-b³-kit "she gets smeared with fat"

c)

don⁷ (< *do⁹n* "knife")
don⁷-aq ~ oq II (ba/t) (a) (in) "to get made (a knife)"
don⁷-Ø/t⁶-aq "the knife gets made"²⁶⁶

4.4.5.2.1.2 Incorporated adjectives

Adjectival roots occupying P⁷ usually designate the target of change:

²⁶⁵ Retained *b³* may be a problem in this form, since it cannot be a marker of 3n object; its interpretation as an applicative marker (cf. 4.4.5.9.2) is problematical, too, since the verb form does contain an incorporated instrument (which would normally not be the case with applicatives); however, this and a few other forms may be regarded as instances of "petrified" *b³*, i.e. an applicative marker, which failed to be deleted from the form after incorporation of the instrument.

²⁶⁶ On Zero as the P⁶ 3n marker, cf. 4.4.5.7. That this and similar verbs, which obviously are only attested with 3rd person subjects, really belong to conjugation II, is demonstrated by verbs like *si⁷-aq ~ oq II_{nr} (a) (in) (ba/t)* "to become" (*si⁷-ba/t⁶-aq* "I become", *si⁷-Ø/t⁶-aq* "it becomes" etc.).

a^7 (< \bar{a} "warm")	
a^7 -qan ~ qon II_{itr} (a) (ba/t)	"to become hot, sweaty"
a^7 -daŋ/t ⁶ -o ⁴ -qon	"we became sweaty"
hol^7 (< $hoʔl$ "short")	
hol^7 -t ⁵ -sin ~ sit I_{itr} (a) (il)	"to shorten"
d[i] ⁸ -hol ⁷ -t ⁵ -a ⁴ -b ³ -sin	"I shorten it"

4.4.5.2.1.3 Incorporated adverbs

Ket possesses a rich array of local adverbs with often very specific landscape-related meanings (cf. the list in 4.1.4.1). If incorporated into verbs, they code the *direction* or *path* of a verb of movement:

$\text{ɔ}la^7$ (< $\text{ɔ}la$ "downriver, outside")	
$\text{ɔ}la^7$ -is ~ dis I_{itr} (in)	"to travel downriver" ²⁶⁷
d[i] ⁸ - $\text{ɔ}la^7$ -b ³ -is	"I travel downriver"
aka^7 (< $\acute{a}ka$ "to the forest, to the shore")	
aka^7 -k ⁵ -aq ~ daq III_{itr} (ba/t) (il)	"to go to the forest"
k[u] ⁸ - aka^7 -ba/t ⁶ -(s)-aq	"you go to the forest"
$ikda^7$ (< $\acute{ɪ}kda$ "at/to the river bank")	
$ikda^7$ -aq II_{itr} (bo/k) (il)	"to lead s.o. to the river"
da ⁸ - $ikda^7$ -o/k ⁶ -(s)-aq	"she leads him to the river"

4.4.5.2.1.4 Incorporated verbs (infinitives)

Verb-Verb incorporation is quite common in Ket. Rather than mere verbal roots, *infinitives* occupy the P⁷ position in complex verbs of this kind. Although the infinitive form coincides in many (even most) cases with the shape of the verbal root (4.4.8.1), in some cases it does not, and it is the aberrant infinitive form, which we find in the P⁷ slot²⁶⁸:

il^7 (< Inf. $iʔl$ "to sing")	
il^7 -qan ~ qon II_{itr} (ba/k) (a)	"to start singing"

²⁶⁷ b³ in this form signals the *applicative* meaning of this verb, i.e. "to travel *by some means* of conveyance".

²⁶⁸ Some complex verbs are seemingly exceptions to this generalization: cf. the lexical entry in Werner (2002, 76): *átej* "to descend", with inflected forms like d[i]⁸-at⁷-bo/[k]⁶-[i]²-[q]lot (*datbolot*), where it seems that the P⁷ incorporate is *not* the infinitive given, but rather a verbal root (*át-aj* stripped of the infinitive suffix *-aj*); however, we may regard this verb as a case of *adverb* incorporation, presupposing a local adverb *at*, which, however, is only found in (albeit numerous) verbs of motion. This adverb may have gotten reinterpreted as a verbal root, which served as the basis of the infinitive formation. This infinitive is found in other complex verbs, such as d[i]⁸-ataj⁷-bo/k⁶-(s)-a "I roll down (itr)".

il⁷-i/k⁶-a⁴-qan "she starts singing"

*il⁷η*⁷ (< Inf. *il⁷η* "to eat", but R in inflected finite forms: √*a*)
il⁷η⁷-bed ~ *ked II_{ir} (bo/k) (a)* "to eat (iterative)"
d[i]⁸-il⁷η⁷-u/k⁶-o⁴-[i]²-bed "I ate it (iterative)"

The incorporated infinitive may be complex, i.e. it may contain a preposed patient noun. In other words, the P⁷ infinitive may itself be the result of object incorporation, cf. the following examples:

- I) Verbal root:
 √*bed* "to do, make"
- IIa) Verbal root with incorporated object:
nan⁷-bed "to make bread" (< *na⁷n* "bread")
idi⁷η⁷-bed "to write" (< *idi⁷η* "ornament")
- IIb) Infinitive derived from this complex:
nánbed "making bread"
ídi⁷ηbed "writing"
- III) Infinitive incorporated:
nanbed/q⁷-bed "to cause to make bread"²⁶⁹
idi⁷η/bed⁷-bed "to write (iterative)"

Infinitive incorporation is a highly effective tool for the production of a variety of derived verbal forms, differentiating various aktionsarten (iteratives, inchoatives), and causatives (cf. 4.4.7).

4.4.5.2.1.5 An incorporated particle

The negative particle *bān* "no, not" occupies the incorporate position in the irregular verb *bān⁷-qoj* "not to wish". The irregularity of this verb consists in its unique agreement pattern, which does not conform to any of the conjugation classes above and, to a degree, defies an unequivocal assignment of agreement markers to position classes. The following list shows the attested forms:

<i>bān⁷-ba-qoj</i>	"I don't want/wish"
<i>bān⁷-ku-qoj</i>	"you don't want/wish"
<i>bān⁷-da-qoj</i>	"he doesn't want/wish"
<i>bān⁷-d(i)-qoj</i>	"she doesn't want/wish"
<i>bān⁷-daη-qoj</i>	"we don't want/wish"
<i>bān⁷-kaη-qoj</i>	"you (pl.) don't want/wish"
<i>bān⁷-aη-qoj</i>	"they don't want/wish"

²⁶⁹ The incorporate contains furthermore the causative affix *q*, on which cf. 4.4.5.2.6.4

The 3rd person singular forms are most reminiscent of "possessive" nominals forms, with the prefixes *da-* and *d-* for 3rd SG m and f, respectively (cf. 4.1.1.4). Note that this does *not* hold for the "possessive" conjugation pattern V, since in the latter the possessive prefixes bracket the P⁷ incorporate to the left. We may, thus, assume that these forms are secondarily unverbated negative noun phrases: **bān da-qoʹj*, *bān d-qoʹj* "(it is) not his/her wish".

The other forms of the paradigm do not show this "possessive" pattern: instead, they follow the (itself irregular) variant of conjugation II verbs, which is generally used in *verba habendi* (this pattern is illustrated in greater detail in 4.4.5.2.3.1). Thus, this verb combines two different "possessive" strategies into one paradigm. Unfortunately, no preterite forms are attested.

4.4.5.2.2 Paradigmatic incorporation

Most instances of incorporation serve derivative purposes: they produce new complex verbs, which are viewed as lexicon entries by speakers (i.e. they are willing and able to give infinitive forms for them), and very frequently incorporated elements lead no life of their own outside the P⁷ slot of complex verbs.

However, incorporation may also be used paradigmatically, i.e. speakers may choose to incorporate lexical items into verb frames to achieve semantic and pragmatic effects.

Thus, verb-verb-incorporation producing derived categories like iteratives, causatives etc., is fairly productive in Ket (cf. 4.4.7). But also patients and instruments may be incorporated spontaneously. With patients, incorporation is typically used for *effected* patients, i.e. entities, which are produced or brought into existence by the process described:

(237)

a)

ād ítn dī⁸-b³-bed
I yukola 1-3n-make
I make yukola.

b)

ād d[i]⁸-itn⁷-Ø³-i/bed
I 1-yukola-3n-make
I yukola-make

c)

áŋin dī⁸-b³-ə
thread 1-3n-spin
I spin thread.

- d)
- $d[i]^8$ - $a\eta in^7$ -(i)-(j)- ε ²⁷⁰
 1-thread-(Sep)-(Sep)-spin
 I-thread-spin

The most salient pragmatic effect of this kind of incorporation is the defocusing of the patient of a transitive construction (cf. Maksunova 2001, 2003). Thus, the direct object of a transitive verb, which is coded externally and co-indexed by /b/ in P³, is put right after the leftmost actant-coding morpheme of the verb (P⁸) - that is, it is physically and symbolically "incorporated" into the verbal morpheme chain. The resulting complex verb loses an external argument (the patient), which is consequently no longer co-indexed in P³. Such constructions are thus typical answers to questions like "what are you occupied with, what are you doing all day" and not, when the question is focussed on a possible patient ("what is it you are making/producing at this moment").

With merely *affected* patients, incorporation seems to be used much more sparingly. Some examples (from Krejnovič 1969, 113):

(238)

- a)
- $\bar{a}d \acute{e}nqo\eta k\varepsilon?j$ $d[i]^8$ - iI^2 - aq , $s\acute{e}l$ $d[i]^8$ - a^4 - q^2 - ej
 I today hunt 1-Pst-go reindeer\PL 1-Th-Pst-kill
 Today I went hunting, I killed reindeer.
- b)
- $\bar{a}d \acute{e}nqo\eta k\varepsilon?j$ $d[i]^8$ - iI^2 - aq , $h\bar{a}j$ $d[i]^8$ - seI^7 - q^2 - ej
 I today hunt 1-Pst-go again 1-reindeer-Pst-kill
 Today I went hunting, again I killed reindeer.

Some formally possible transformations were rejected by most speakers²⁷¹, cf.:

(239)

- a)
- $\bar{a}d t\bar{i}b$ dI^8 -(k)- a^4 - ted
 I dog 1-(Sep)-Th-beat
 I beat the dog.

²⁷⁰ The sequence of two inserted elements in this form is not describable in terms of any productive morphotactic rule. We may suspect that (*i*) is copied from the non-incorporated verb (*dívə*), corroborated by the fact that some morphotactic contexts trigger anaptyctic (*i*) after heavy P⁷ incorporates (cf. 4.4.5.2.3.1); the separator (*j*) follows, then, automatically (by an analogical extension of SR 5, 4.4.4.4.5).

²⁷¹ The reason for this may, however, be of the semantic/pragmatic kind, rather than a real grammatical restriction. Dogs being beaten may be regarded as patients, which are somehow untypical candidates for patient defocusing/backgrounding, whereas reindeer being hunted - an everyday activity in traditional Ket society - may more easily be relegated to the pragmatic background.

- b)
- * $\bar{a}d\ d[i]^8\text{-}tib^7\text{-}ted$
I 1-dog-beat

4.4.5.2.3 Formal characteristics of P⁷ incorporates

4.4.5.2.3.1 Light and heavy P⁷ incorporates

P⁷ incorporates may display any number of syllables which may be found with free nouns, adjectives, adverbs or verbal infinitives. However, the number of syllables present in P⁷ determines the morphotactic make-up of the resulting complex verb in the ways described below. The most striking corollary of this is that the Ket verb maintains a certain degree of sensibility to the fact that some synchronically monosyllabic incorporates are reduced forms of *historically longer* elements. This "memory" effect of P⁷ incorporates is evidenced by some *morphotactic rules* (a) and *paradigm change* with *verba habendi* (b).

- a) only "heavy" P⁷ incorporates trigger Vowel Insertion Rule 5 (VIR 5, cf.4.4.4.3.5),
- b) *verba habendi* following the pattern of "inactive" conjugation I verbs (cf. 4.4.7) change to a highly irregular variant of conjugation II (*ba/Ø*), when the incorporate (the *possessum*) is "heavy"²⁷², cf.:

α) monosyllabic incorporate

Cf. the paradigm of *don⁷-bed* "to have a knife" in 4.4.3.1.

β) disyllabic incorporate (due to pluralization)

<i>don/an⁷-bed</i> II _{itr/irreg} (il) (<i>ba/Ø</i>)	"to have several knives"
present tense	past tense
1SG <i>don/an⁷-ba/Ø⁶-(j)-a¹-bed</i>	<i>don/an⁷-b[a]/Ø⁶-o⁴-[i]l²-bed</i>
2SG <i>don/an⁷-ku/Ø⁶-(j)-a¹-bed</i>	<i>don/an⁷-ku/Ø⁶-[o⁴]-[i]l²-bed</i>
3SGm <i>don/an⁷-a/Ø⁶-(j)-a¹-bed</i>	<i>don/an⁷-o⁴-[i]l²-bed</i>
3SGf <i>don/an⁷-i/Ø⁶-(j)-a¹-bed</i>	<i>don/an⁷-i⁴-(t)-[i]l²-i/bed</i>
1PL <i>don/an⁷-daη¹-bed</i>	<i>don/an⁷-daη/Ø⁶-[i]l²-i/bed</i>
2PL <i>don/an⁷-kaη¹-bed</i>	<i>don/an⁷-kaη/Ø⁶-[i]l²-i/bed</i>
3PL <i>don/an⁷-aη¹-bed</i>	<i>don/an⁷-oη⁴-[i]l²-i/bed</i>

²⁷² Defined as synchronically or historically disyllabic or longer.

This paradigm offers some challenges to an analysis in terms of the rules and principles observed so far, and we take the opportunity to dwell on these here in some greater detail:

The plural present tense forms can straightforwardly be analyzed as simply following the inactive pattern of conjugation I (4.4.3.1).

This pattern provides the only instances of P⁶ person markers not obligatorily followed by a "determiner" (cf. 4.4.5.3, which leads to TR 10 in the 1st and 2nd SG past tense forms)²⁷³.

The occurrence of the (*j*)-separator in the singular present tense forms is not captured by any morphotactic rule operative in Ket; recall that typical situations for the (*j*)-separator are the morpheme configurations P⁸-(*j*)-R, P⁸-(*j*)-P¹-R, (...)P⁴-(*j*)-R, or P⁴-(*j*)-P¹-R²⁷⁴. In the analysis given above, we identified the /a/-vowel occurring immediately before the root in these forms with the P¹ *resultative* marker (on which cf. 4.4.5.10.2). That this is correct is reinforced by the semantics of this verb: "to have" = "to have acquired" = "to be in the state of having acquired". Now, the preceding morpheme is clearly *not* any of those which can fill P⁴ (4.4.5.8), *but*: recall that P⁶ morphemes *without* a following "determiner" are a singularity in Ket, *and*: three out of four P⁶ morphemes found in this paradigm (*ba*, *a*, *i*) resemble potential P⁴ morphemes (*a*, *i*) closely enough to be *identified* with them, at least to the degree of triggering the (*j*)-separator, as if the configuration were really (...)P⁴-P¹-R.

However, the past tense paradigm offers more difficulties: the 3rd SG forms confirm that the *a/i*-vowel of the P⁶ morpheme was indeed *reinterpreted* as a P⁴ vowel, since it undergoes preterite labialization (cf. 4.4.5.8.3) in 3rd SGm and triggers Separator Rule 9 (SR 9, 4.4.4.4.9) in 3rd SGf.

The plural past tense forms do not allow for a conjugation I (inactive) analysis, as the respective singular past tense forms seem to do: the position of the P² past tense marker *il* shows that, for *these* forms, only P⁶ can be the appropriate slot (and definitely not P¹).

These difficulties add up to a highly irregular paradigm combining principles and rules from several conjugation classes; the analysis presented here is certainly provisional, but we can summarize the points speaking in favour of it as:

- viewing the plural present tense forms as unchanged instances of conjugation I inactives is supported by the fact that for monosyllabic incorporates this is certainly the correct analysis,
- the idiosyncratic lack of determiners co-occupying P⁶ makes any vowel occurring in this slot obviously vulnerable to reanalysis as a P⁴ vowel, which very obviously happened in singular past tense forms,
- the semantics of these *verba habendi* invites an analysis containing a P¹ *resultative* marker (supported by the operation of a separator rule, which operates *typically* in environments involving such a marker); the complete lack of this resultative morpheme may be explained by the *tendency* of resultatives to avoid past tense forms (though past tense resultatives do occur, cf. 4.4.5.10.2),

²⁷³ This is actually the only reason, why Vajda (e.g. 2004) rejects the unification of the determiners *t* and *k* in one slot with the P⁶ agreement markers.

²⁷⁴ And the morpheme immediately following (*j*) is mostly, though not invariably, vowel-initial.

- plural past tense forms were, then, streamlined under the analogical influence of singular past tense forms (with a "reanalyzed" P⁴ vowel only in the 3rd PL), where both the 3rd SG past tense form (with its "P⁴ⁿ /o/) and the 3rd PL present tense form (with its /aŋ/, there analyzed as P¹, but principally reinterpretable as P⁴, and then "preterite-labializable") make themselves felt as entities exerting analogical influence.

γ) historically disyllabic incorporate

Monosyllabic possessa, which are historically derived from disyllabic words, require the same irregular "conjugation-II-like" paradigm as overtly disyllabic ones, cf. "to have a sable" (èd "sable" < *èdi, cf. NK èdì):

<i>ed⁷-bed</i> II _{itr/irreg} (il) (ba/Ø)	"to have a sable"
present tense	past tense
1SG <i>ed⁷-ba/Ø⁶-(j)-a¹-bed</i>	<i>ed⁷-b[a]/Ø⁶-o⁴-[i]l²-bed</i>
2SG <i>ed⁷-ku/Ø⁶-(j)-a¹-bed</i>	<i>ed⁷-ku/Ø⁶-[o⁴]-[i]l²-bed</i>
3SGm <i>ed⁷-a/Ø⁶-(j)-a¹-bed</i>	<i>ed⁷-o⁴-[i]l²-bed</i>
3SGf <i>ed⁷-i/Ø⁶-(j)-a¹-bed</i>	<i>ed⁷-i⁴-(t)-[i]l²-i/bed</i>
1PL <i>ed⁷-daŋ¹-bed</i>	<i>ed⁷-daŋ/Ø⁶-[i]l²-i/bed</i>
2PL <i>ed⁷-kaŋ¹-bed</i>	<i>ed⁷-kaŋ/Ø⁶-[i]l²-i/bed</i>
3PL <i>ed⁷-aŋ¹-bed</i>	<i>ed⁷-oŋ⁴-[i]l²-i/bed</i>

4.4.5.2.4 The pseudo-incorporate *bin⁷*-

A small group of mostly impersonal verbs require the P⁷ incorporate *bin*. These verbs have in common that they mostly express that some object undergoes a process. Usually, there is no known/knowable instigator of this process, and the obvious etymological identity of this "dummy" incorporate with the reflexive/emphatic pronoun *bīn* "self" (cf. 4.2.7) indicates that the metaphor underlying these formations is that certain objects undergo state-changing processes "by themselves" or "of their own accord". In most cases, the undergoer is cross-referenced in the morpheme chain by 3rd person neuter -*b³*-. Many of the attested forms display some idiosyncrasies, but some basic patterns can be described:

- in past tense forms, the incorporate *bin⁷*- is usually abbreviated to *b⁷*- or *bi⁷*-; though the past tense morpheme can be either *il²* or *in²* in these verbs, a possible reason for this is the avoidance of two consecutive *in*-sequences²⁷⁵, cf. (past tense) **bin⁷-b³-in²-a* "time passed", against attested *bi[n]⁷-b³-[i]n²-a* (<*bīmna*>);

²⁷⁵ Or even the repetition of the whole sequence -*bin*-, as in this example; however, many past tense forms lose *b³*, see below.

- in some past tense forms, b^3 is elided, though its former presence is sometimes still demonstrable through its assimilatory effect on the preceding incorporate.

The following is a fairly comprehensive list of such verbs:

bin^7 -a	"to pass (said of time)"		
bin^7 - b^3 -a		< <i>bím̥ba</i> >	"time passes"
$b[in]^7$ - b^3 - $[i]n^2$ -a		< <i>bím̥na</i> >	"time passed"

Note: /*b-n*/ --> <*-mn*>

bin^7 -aq	"to rot"		
bin^7 - b^3 -aq		< <i>bím̥baq</i> >	"it rots"
$b[in]^7$ - $[b^3]$ - $i\bar{t}^2$ -aq		< <i>bílaq</i> >	"it is rotten"

Note: /*n-b*/ --> <*-mb*>

bin^7 -qut	"to be finished (of processes, of supplies)"		
bin^7 - b^3 - a^1 -qut		< <i>bím̥baqut</i> >	"it is finished"
$b[in]^7$ - $[b^3]$ - in^2 -qut		< <i>bínqu</i> > ²⁷⁶	"it was fin."

Note: $-a^1$ - is written here to account for the pre-root surface vowel, which otherwise would be inexplicable; having *resultative* $-a^1$ - (cf. 4.4.5.10.2) here makes much semantic sense, although it is lacking from the past tense form; the following verb seems to have it in both tense forms, though.

bin^7 -ta	"to resound, to be heard"		
bin^7 - b^3 - a^1 -ta		< <i>bím̥bata</i> >	"it is heard"
$b[in]^7$ - $[b^3]$ - $i\bar{t}^2$ - a^1 -ta		< <i>bílata</i> >	"it was heard"

bin^7 -hə	"to be twisted (said of hair)"		
bin^7 - $[b^3]$ -hə		< <i>bím̥hə</i> >	"it is twisted"
bin^7 - $[b^3]$ - $[i]n^2$ - $[h]ə$		< <i>bím̥nə</i> >	"it was twisted"

Note: here, the former presence of b^3 is demonstrated by the final labial of bin^7 <*bim*>;

bin^7 -oqη	"to be stuck"		
bin^7 - b^3 -oqη		< <i>bím̥boqη</i> >	"it is stuck"
$b[in]^7$ - $[b^3]$ - in^2 -oqη		< <i>bín̥oqη</i> >	"it was stuck"

bin^7 -us	"to melt"		
bin^7 - b^3 -us		< <i>bím̥bus</i> >	"it melts"
$b[in]^7$ - $[b^3]$ - $i\bar{t}^2$ -us		< <i>bílus</i> >	"it melted"

²⁷⁶ Quite often also <*bín̥u*>.

<i>bin⁷-təl</i>	"to freeze"		
	<i>bin⁷-[b³]-təl</i>	< <i>bímtə</i> >	"it freezes"
	<i>b[in]⁷-[b³]-in²-təl</i>	< <i>bíntə</i> >	"it froze"
<i>bin⁷-i</i>	"to become wet"		
	<i>bin⁷-b³-i</i>	< <i>bímbi</i> >	"it becomes wet"
	<i>b[in]⁷-[b³]-in²-i</i>	< <i>bíni</i> >	"it became wet"

Note: here, *b³* seems to have been elided before any assimilatory effect resulted, otherwise *<*bímní*> would have to be expected.

<i>bin⁷-daqη</i>	"to be fried"		
	<i>bin⁷-b³-a¹-daqη</i>	< <i>bímbadaqη</i> >	"it is fried"
	<i>b[in]⁷-[b³]-il²-daqη</i>	< <i>bíldaqη</i> >	"it was fried"
<i>bin⁷-bed</i>	"to be made"		
	<i>bin⁷-b³-a¹-bed</i>	< <i>bímbavet</i> >	"it is made"
	<i>b[in]⁷-[b³]-il²-a¹-bed</i>	< <i>bílavet</i> >	"it was made"

Note: here the *a¹* resultative marker is retained also in the past tense.

At least one of these verbs shows personal forms as well, and, curiously, only these require the pseudo-incorporate:

<i>bin⁷-s</i>	"to be dressed"		
	<i>bin⁷-di¹-s</i>	< <i>bíndis</i> >	"I am dressed"
	<i>bin²-ku¹-s</i>	< <i>bíngus</i> >	"you are dressed"
	<i>a⁴-(j)-s</i>	< <i>ajs</i> >	"he is dressed"
	<i>i⁴-(j)-s</i>	< <i>ijs</i> >	"she is dressed"
	<i>b[in]⁷-il²-daη¹-s</i>	< <i>bíldaηs</i> >	"we were dressed"
	<i>b[in]⁷-il²-kaη¹-s</i>	< <i>bílgaηs</i> >	"you.PL were dressed"
	<i>oη⁴-(o)-[i]l²-s</i>	< <i>óηols</i> >	"they were dressed"
	<i>i⁴-(d)-il²-s</i>	< <i>íruls</i> > ²⁷⁷	"she was dressed"

4.4.5.2.5 Pseudo-suppletivism of P⁷ incorporates

There seem to be no examples of full (or "true") suppletivism in position P⁷. However, some forms found here do show some alternations, which routinely react to their phonological context, but which are not predictable according to general phonological rules operative elsewhere in the language as well. Doubtlessly, the special prosodic position of P⁷ incorporates may be held responsible for this behaviour.

²⁷⁷ Cf. SR 10 (4.4.4.4.10) for an explanation of this surface form.

The following sections illustrate alternations recurrently found in P⁷ incorporates.

4.4.5.2.5.1 -s/-j

Some incorporates show this auslaut alternation reacting on the phonological context; however, no such systematic alternation is present elsewhere in the language. Three such incorporates have been found:

- $es^7 \sim ej^7$ - original meaning or part-of-speech unclear (but possibly "upward"), present in verbs meaning "to throw", "to call someone", "to jump up"
- $kas^7 \sim kaj^7$ - in the frequent verb "to take, to grasp, to catch, to obtain, to buy"
- $us^7 \sim uj^7$ - original meaning unclear (but possibly "downward"), found in verbs meaning "to put", "to hit", "to hold"

The normal distribution of the alternating variants is certainly:

- s before a following vowel
- j before a following consonant

However, all verbs showing this incorporate show at least some disturbances of this, cf.:

- $es^7 \sim ej^7$ -qus II_{itr} (in) (ba/k) "to jump up (suddenly)"
- ej^7 -ba/k⁶-b³-o/qus²⁷⁸ "I jump up"
- ej^7 -ku/k⁶-b³-o/qus "you jump up"
- es^7 -a/k⁶-b³-o/qus "he jumps up"
- es^7 -i/k⁶-b³-o/qus "she jumps up"
- $es^7 \sim ej^7$ -a II_{tr} (a) (il) (ba/k) "to throw"

Most forms follow the abovementioned rule e.g.:

- $d[i]^8$ - ej^7 -ku/k⁶-a⁴-b³-a "you throw me"
- da^8 - es^7 -a/k⁶-a⁴-b³-a "she throws him"
- $k[i]^8$ - ej^7 -dəŋ/k⁶-o⁴-b³-[i]l²-a-n "you (pl.) threw us"
- da^8 - es^7 -a/k⁶-o⁴-b³-[i]l²-a "she threw him"

Disturbances are found, when the incorporate ends up directly before the determiner /k⁶; here, the s-variant prevails²⁷⁹:

- $d[i]^8$ - es^7 -Ø/k⁶-a⁴-b³-a "I throw it"
- $d[i]^8$ - es^7 -Ø/k⁶-o⁴-b³-[i]l²-a "I threw it"

²⁷⁸ Pre-root o/ is idiosyncratic and inexplicable here.

²⁷⁹ But cf. again "you throw me" above, which shows that this cannot be a phonotactic rule.

Other verbs containing this alternating incorporate offer a similar pattern. It may be hypothesized that in these cases the original context might have been prevocalic, as well; as illustrated in 4.4.5.7, nearly all P⁶ person markers require a following "determiner" (which originally occupied P⁵ and is *mostly* of the shape /k); some, if not most, of these elements will surely be functionally motivated, but others might have been introduced to some verb forms for purely analogical reasons; it does not seem unreasonable to see examples like these as instances of such analogical spread of /k/ to new contexts.

A different and puzzling distribution is shown by the frequent verb "to grasp, catch", cf. the partial paradigm:

$kas^7 \sim kaj^7$ -qus ~ am II _{tr} (in)	"to grasp, catch"
Subject: 3SGf	
Object↓:	
present tense	past tense
1SG da^8 -kas ⁷ -di ¹ -qus	--- ²⁸⁰
2SG da^8 -kas ⁷ -ku ¹ -qus	---
3SGm da^8 -kas ⁷ -a ⁴ -qus	da^8 -kas ⁷ -a ⁴ -[i]n ² -am
3SGf da^8 -kas ⁷ -[i] ⁴ -qus	da^8 -kas ⁷ -(t)-i ⁴ -(t)-[i]n ² -am
3SGn da^8 -kaj ⁷ -b ³ -o/qus	da^8 -kaj ⁷ -[b ³]-[i]n ² -am
1PL da^8 -kas ⁷ -daŋ ¹ -qus	---
2PL da^8 -kas ⁷ -kaŋ ¹ -qus	
3PL da^8 -kas ⁷ -aŋ ⁴ -qus	da^8 -kas ⁷ -aŋ ⁴ -[i]n ² -am

Vajda/Zinn (2004, p. 183) describe the distribution of P⁷ variants here as sensitive to object animacy (*kaj* with -anim objects, *kas* with +anim objects). On the other hand, the original distribution is more likely to be phonologically motivated as well; note that a following vowel *always* triggers the expected variant -s (including a later *elided* vowel); only consonants tolerate both variants in front of them here. We may speculate that at least some of these consonants are secondary, which is most obviously the case in the 3SGf object form, where (t) was inserted due to SR 9. The remaining *kas*-C forms show a person marker in P¹, which may be the trigger here. This observation could then shed some light on the diachrony of this person marking slot.

²⁸⁰ These forms are attested (and do illustrate the pattern discussed here), but they show irregularities defying proper glossing: the 1st and 2nd SG object forms are <da⁸ka⁸stinus> and <da⁸ka⁸skinus>, respectively. The only way to account for these surface forms is to assume that here the slots P² and P¹ swapped positions, i.e. da^8 -kas⁷-di²-[i]n¹-[q]us etc. The same holds for 1st and 2nd pl: da^8 -kas⁷-daŋ²-in¹-qus and da^8 -kas⁷-kaŋ²-in¹-qus

4.4.5.2.5.2 -j/-k

This variation is found in one incorporate, namely $ej^7 \sim ck^7$, used in the verb "to forge iron" (see the paradigm below).

-j is found before consonants and -k before vowels. The incorporate is identical with the noun \bar{e} "iron" and shows remnants of the original auslaut, lost in the free-standing noun (Proto-Yeniseic **ega*, cf. Yugh. *éga*, Pumpokol *ag*):

$ej^7 \sim ck^7$ - <i>ted</i> ~ <i>tek</i> <i>I_{itr}</i> (<i>in</i>)	"to forge iron"
present tense	past tense
1SG $d[i]^8$ - ej^7 - <i>ted</i>	$d[i]^8$ - ck^7 - in^2 - <i>tek</i>
2SG $k[u]^8$ - ej^7 - <i>ted</i>	$k[u]^8$ - ck^7 - in^2 - <i>tek</i>
3SGm $d[u]^8$ - ej^7 - <i>ted</i>	$d[u]^8$ - ck^7 - in^2 - <i>tek</i>
3SGf da^8 - ej^7 - <i>ted</i>	da^8 - ck^7 - in^2 - <i>tek</i>
1PL $d[i]^8$ - ej^7 - <i>tek-in</i>	$d[i]^8$ - ck^7 - in^2 - <i>tek-in</i>
2PL $k[u]^8$ - ej^7 - <i>tek-in</i>	$k[u]^8$ - ck^7 - in^2 - <i>tek-in</i>
3PL $d[u]^8$ - ej^7 - <i>tek-in</i>	$d[u]^8$ - ck^7 - in^2 - <i>tek-in</i>
MRs TR 5	

4.4.5.2.6 Morphologically complex P⁷ incorporates

4.4.5.2.6.1 Recursive incorporation

Krejnovič (1969: 113) recorded, in Sulomai (SK), some examples of incorporation, where P⁷ seems to be populated by more than one autonomous element, without one of them being describable as a suffix on the other one; an interpretation of these forms as containing incorporated infinitives-cum-objects (cf. 4.4.5.2.1.4) seems also not possible; cf.

(240)

- a)
- $q\bar{i}b$ $\acute{e}la-d$ $\text{ət } b\bar{a}k$ $d[u]^8$ - cs^7 - a^4 - b^3 -*daq*
 grandfather door-GEN on block 3-up-Th-3n-put
 Grandfather put a block on the door.
- b)
- $q\bar{i}b$ $\acute{e}la-d$ $\text{ət } d[u]^8$ - bak/cs^7 - a^4 -*daq*
 grandfather door-GEN on 3-block/up-Th-put
 Grandfather put a block on the door.

In sentence a), the finite verb contains a P⁷ incorporate (cs^7 ; etymologically this is not easy to identify, but it may be a directional adverb "up"). Now, sentence b) adds a further incorporate, this time a patient (witness the disappearance of b^3 in the now intransitive verb form), *before* this already existent incorporate. No infinitive form

(**bákes* "to put/set a block") is possible here, nor would the juxtaposition of both elements be understandable or usable on its own, if *es*⁷ is really an adverb.

We thus regard these examples as highly exceptional cases of "recursive" incorporation, made possible because the already existent incorporate may have invited its reinterpretation as a verbal infinitive.

4.4.5.2.6.2 Pluralized P⁷ incorporates

P⁷ incorporates may be formally pluralized. This happens under the following circumstances:

- the pluralization of P⁷ is dependent on the subject plural of the verb form

This is the case with P⁷ incorporates that encode the target of a change (in verbs meaning "to become" or "to be formed, to come into existence"), e.g:

<i>kaŋ</i> ⁷ -Ø/ <i>t</i> ⁵ - <i>aq</i>	"a hole is formed"
<i>kaŋ/in</i> ⁷ -Ø/ <i>t</i> ⁵ - <i>aq</i>	"holes are formed"

(*ka*[?]*ŋ*, PL *káŋ-in* "hole")

This (and similar) verbs belong to conjugation II, the pluralization of the P⁷ incorporate is thus the only indication of subject plurality in these forms. Cf. also the personal verb "to become a person":

<i>ked</i> ⁷ - <i>ba/t</i> ⁶ - <i>aq</i>	"I become a person"
<i>ked</i> ⁷ - <i>ku/t</i> ⁶ - <i>aq</i>	"you become a person"
<i>deŋ</i> ⁷ - <i>dəŋ/t</i> ⁶ - <i>aq</i>	"we become people"
<i>deŋ</i> ⁷ - <i>kəŋ/t</i> ⁶ - <i>aq</i>	"you become people"

(*ke*[?]*d*, PL *de*[?]*ŋ* "person")

- the P⁷ plural is independent of the subject plural; this happens when

a) P⁷ is a pluralizable noun in object function:

<i>d[i]</i> ⁸ - <i>qus</i> ⁷ -(<i>s</i>)- <i>i/bed</i>	"I make a tent"
<i>d[i]</i> ⁸ - <i>qus</i> ⁷ -(<i>s</i>)- <i>i/bed-n</i>	"we make a tent"
<i>d[i]</i> ⁸ - <i>quŋ</i> ⁷ -(<i>s</i>)- <i>i/bed</i>	"I make tents"
<i>d[i]</i> ⁸ - <i>quŋ</i> ⁷ -(<i>s</i>)- <i>i/bed-n</i>	"we make tents"

(*qu*[?]*s*, PL *qu*[?]*ŋ* "tent")

b) P⁷ is a lexicalized plural object:

<i>d[i]</i> ⁸ - <i>clín</i> ⁷ -(<i>i</i>)- <i>d[i]</i> ^l - <i>bed</i>	"I breathe, take a breath"
--	----------------------------

$d[i]^8$ - $eli\eta^7$ - dan^1 - bed "we breathe"

($i^?l$, PL $eli\eta$ "[puff of] breath", no SG incorporate is possible in this verb)

c) P^7 is a pluralizable noun in instrument function; here

α) the plural instrument can concretely refer to multiple instruments:

$d[i]^8$ - $ades/n^7$ - a^4 - b^3 - ted "I nail it together"
 $d[u]^8$ - $ades/n^7$ - o^4 - b^3 - in^2 - $tek-in$ "they nailed it together"

($ades$, PL $ades-n$ "iron nail")

β) the plural instrument P^7 helps to build an *iterative* verb form:

$k[u]^8$ - don/an^7 - ba/t^6 - a^4 - do "you (SG) stab me w. a knife"
 $[ku]^8$ - don/an^7 - dan/t^6 - o^4 - $[i]l^7$ - $do-n$ "you.PL stabbed us w. a knife"

($do^?n$, PL $dónan$ "knife"; the forms - including singulars - do *not* imply the use of many knives)

4.4.5.2.6.3 An iterative suffix in P^7

Some P^7 incorporates display a recurrent increment, which is yet another device to produce iterative verb forms. Its shape is $-tiji\eta-$, and it is only found as a suffix on P^7 incorporates. Examples include:

$sen/tiji\eta^7$ - a "to pour (iterative)"
 cf. sen/aj^7 - a ²⁸¹ "to pour (momentaneous)"

$taq/tiji\eta^7$ - a "to shoot at (repeatedly or at many objects), to beat"
 cf. taq/aj^7 - a "to shoot at (once)"

4.4.5.2.6.4 The causative morpheme - a suffix in position P^7

The previous section has shown that the morphological complexity of P^7 incorporates may be increased by true suffixes; here, we will try to argue that the

²⁸¹ Here the incorporate is again complex, $-aj$ being the infinitive suffix (the verbal root is not attested independently); since infinitives are regularly incorporated, P^7 incorporates may consequently always bear infinitive morphology; this is not illustrated here, for infinitives, cf. 4.4.8.1.

highly frequent and productive causative morpheme *-q-* is best described as a suffixal increment on incorporates as well²⁸².

In the overwhelming majority of cases, the causativiser *-q-* occurs directly after a P⁷ incorporate. Position R, then, is stereotypically filled by one of a small set of root morphemes, which seem to be (or seem to have become) largely devoid of any independent semantic content, but do differentiate transitivity and *aktionsarten*.

The morphology and the functional range of Ket causatives are discussed in 4.4.7.1. This chapter deals only with the position of the causative morpheme in the morphological template. The situation is complicated by the fact that causative verbs (which may be morphologically transitive or intransitive) may only belong to either conjugation I (all morphologically transitive causatives), or to conjugation IV (most morphologically intransitive causatives). Now, both conjugational patterns (conjugation I in general, and conjugation IV for intransitives, cf. 4.4.3.1, 4.4.3.4) do *not* fill positional slot P⁶ with any morphemes²⁸³. Consequently, the causativizer might alternatively be regarded as an independent filler of the "determiner" slot P⁵:

- conjugation I transitive causative:

$[ku]^8$ -nan/bcd/q⁷-in²-di¹-t
"you made me bake bread"

- conjugation IV intransitive causative:

$k[u]^8$ -us/q⁷-i²-ku¹-tn
"you warmed yourself (iter.)"

In - albeit very few - cases, *-q-* may occur without any P⁷ incorporate; consequently, it has to be assigned P⁵ status in such verbs; however, the semantic connection with "true" causatives - which require an autosemantic verbal or adjectival incorporate designating the "state-of-affairs brought about by the act of causation", seems to be rather loose, and Vajda (Vajda/Zinn, s.v., Vajda 2004, 62) describes *this -q-* as an adposition²⁸⁴ ("inessive"), both historically and synchronically distinct from the causativizer.

²⁸² The alternative solution - which is defended in Vajda 2004, 63 - is to place it in slot P⁵ as another "determiner". Although the P⁷-suffix solution is maintained here, it is to be admitted that causative *-q-* belongs to those morphemes which present some difficulties to a strict slot-based analysis. In other words, it belongs to the "morphological flotsam", which is clearly placed after any P⁷ incorporate and clearly before any morpheme occupying P⁴, cf. 4.4.5.3.

²⁸³ The verb dictionary by Vajda/Zinn contains a seeming exception to this generalization, the verb "to cover": $\text{ət}i\eta^7$ -q⁵-da, which follows conjugation II (*ba*), thus: $k[u]^8$ - $\text{ət}i\eta^7$ -ba/q⁶-a⁴-b³-da "you cover me"; note the odd entry in slot P⁶ here: *-ba/q-* (according to the treatment of "determiners" when co-occurring with P⁶ personal morphemes, cf. 4.4.5.3), which would be the only case of /q/ in this position; Werner (2002), on the other hand, gives this verb with /k/, rather than /q/, which leaves us with a much more "natural" structure, e.g.: $k[u]^8$ - $\text{ət}i\eta^7$ -ba/k⁶-a⁴-b³-da, and which may thus be more likely to be correct than Vajda/Zinn's form.

²⁸⁴ His term for our "determiner", cf. 4.4.5.3 and Vajda 2004.

However, at least an etymological identity of these *-q-s* cannot be ruled out and both solutions (a suffix on P⁷ and a P⁵ determiner) remain basically defensible. We prefer the former solution, chiefly in order to highlight the function of the causativizer as an operator on the incorporate (if this is a verb, the resulting meaning is a "true" causative, "to make sb. (do) P⁷", if an adjective, factitive meanings result, "to make sb./sth. (be) P⁷"). A further argument comes from the discussion in the following chapter: there, it will be seen that in some cases categorically distinct morphemes tend to co-occur, sometimes to the degree of virtually never being found without each other. "Determiners" are notorious for this behaviour, and (together with the principle not to overpopulate the "true" determiner position P⁵ with more than one morpheme, s.b.), various parsing solutions have been proposed, which allow positions to the right or the left of P⁵ to be co-occupied by a "determiner". Apart from the semantic-functional argument given above, our writing of the causativizer *-q-* as a suffix on P⁷ is consistent with our overall approach of attaching these "out-of-bounds" morphemes to the morpheme to the left, rather than to the right (as it happens in parts of Vajda's system)²⁸⁵. A detailed discussion and justification of this solution is given in the following chapter.

4.4.5.3 "Determiners": flotsam between P⁷ and P⁴

This section discusses morphemes - exclusively consisting of one consonantal phoneme only - found in a great many of verbs between the slot positions P⁷ and P⁴. The morphemes found here are:

t, k (very frequent), *d* (common), *h, n, ŋ* (rare)²⁸⁶

Recall from the previous chapter that the causativizer *q*, though here analyzed as a suffixal increment on P⁷ incorporates, may under certain circumstances also be viewed as belonging to this set of determiners.

The specialist literature refers to these morphemes by a variety of terms (i.a. "preverbs" - Vajda 2000, 2001, or "adpositions" - Vajda 2002 and onward); here we propose to return to the more traditional - and intentionally vague - designation "determiners" (henceforth without quotes). The behaviour of determiners is a healthy reminder that the template structure defended here (as well as any competing slot-based analysis) is a useful way to make sense of the ordering of morphemes in Ket and similarly organized languages, but that, on the other hand, it is also to some degree an artefact of the analysis.

Though it may be regarded as a straightforward solution to assign *all* of these morphemes simply to P⁵, such an option is not without problems. Doing so would

²⁸⁵ This practice implies that we of course accept the possibility that the causativizer originally began its life as just another P⁵ determiner, before permanently leaning leftward to a P⁷ incorporate.

²⁸⁶ These are the possible *shapes* of determiners; though their functions remain difficult to ascertain, it may be the case that the number of actual *morphemes* (i.e. function-form-clusters) is greater.

imply that - at least in some cases - this position would be occupied by two, rather than only one determiner (see below for examples).

Here, we will give a concise overview of the facts and problems involved, and also try to justify the (compromise) solution we adopt for parsed verb forms in this grammar. Readers will be enabled to translate different parsings found elsewhere into the system adopted here or vice versa. Some of these differences may be regarded as having little more than historical relevance, others may invite more in-depth investigations, which may lead to a vindication of other approaches to the "determiner" problem.

Determiners may occur without any preceding P⁶ actant marker, and without any following morpheme in P⁴, in which case it is unproblematic to place them in P⁵:

$k^5-k\epsilon n$ $IV_{itr}(a)$ (<i>in</i>)	"to sit down" [di] ⁸ -k ⁵ -a ⁴ -di ¹ -k ϵ n "I sit down"
$k^5-ti\eta$ $IV_{itr}(il)$	"to fall head over heels" [ku] ⁸ -k ⁵ -i ² -ka η ¹ -ti η "you (PL) fell"
t^5-ki $I_{tr}(a)$ (<i>in</i>)	"to say, tell" [di] ⁸ -t ⁵ -o ⁴ -b ³ -in ² -ki-n "we told it"
$us^7-n^5-ti\eta$ $IV_{itr}(a)$ (<i>il</i>)	"to wallow" da ⁸ -us ⁷ -n ⁵ -i ² -a ¹ -ti η "she wallowed"

P⁶ actant markers, on the other hand, occur *almost never* without a following determiner. In other words, if a P⁶ person marker (in subject or object function, cf. 4.4.5.7) is present in a verb form, this form almost invariably will also contain a determiner immediately following this P⁶ morpheme.

Exceptions are few and practically confined to the highly marked (and historically involved) paradigms of *verba habendi* with "heavy" *possessum*-incorporates (cf. the detailed discussion in 4.4.3.1)²⁸⁷.

Given this marked tendency of P⁶ actant markers to require a following determiner, Vajda (e.g. 2004) chose to place the latter in the same slot as the former²⁸⁸. This allows to view P⁵ as occupied by only one morpheme in those - infrequent, but existing - cases, where two determiners seem to be present, cf.:

(?) k/t^5-ka ~ $qutn$ $IV_{tr}(a)$ (<i>il</i>) (<i>bo</i>)	"to lead around" *[ku] ⁸ -bo ⁶ -k/t ⁵ -o ⁴ -[i] ² -ka "you led me around"
--	--

²⁸⁷ Here, we have of course to discount cases where determiners undergo regular attrition due to morphotactic rules, cf. 4.4.4.

²⁸⁸ He then chose the designation "situation aspect markers" for them.

(?) k/d^5 -do II_{tr} (a) (il) (bo) "prepare by hollowing out"
 * $d[i]^8$ -u⁶-k/ d^5 -o⁴-b³-i l^2 -do-n
 "we prepared it"

The reanalysis consists of acknowledging only one P⁵ determiner and moving the other one as a co-occupant of P⁶ (which, as pointed out above, virtually never occurs without a determiner), thus the verbal formulae and forms given above may be (and are here) rewritten as:

t^5 -ka~qutn IV_{tr} (a) (il) (bo/k) [ku]⁸-bo/k⁶-t⁵-o⁴-[i] l^2 -ka
 d^5 -do II_{tr} (a) (il) (bo/k) $d[i]^8$ -u/k⁶-d⁵-o⁴-b³-i l^2 -do-n

Some other cases, where seemingly two determiners have to be accommodated by the formal analysis can be accounted for in different ways (i.e. by eliminating one determiner from V/Z's representations), cf. the discussion below.

Recently (2003) Vajda proposed to assign several other determiners (namely, some instances of *d* and *t*) to the following slot P⁴, basically using the same argument (i.e. in order to keep P⁵ free of more than one morpheme)²⁸⁹. As a corroborating argument, he points to the fact that these morphemes seem always to co-occur with a following (thematic or actant, cf. 4.4.5.8) morpheme in P⁴, which would mirror the situation found with P⁶.

In sum, if we regard the avoidance of having more than one marker in the lexical slot P⁵ as a justified objective²⁹⁰, we are left with the choice between two basic solutions:

P ⁶		P ⁵		P ⁴
ba/		t		/a
ku/	←	k	→	/i
...	(a)	...	(b)	...

²⁸⁹ He refers to these morphemes as *proclitics*, as opposed to *adpositions*, which occupy his P⁵ position.

²⁹⁰ Of course both solutions have to accept that, then, P⁶ or P⁴ are overpopulated. However, it seems slightly preferable to us to see some P⁵ markers routinely paired with P⁴ (since *thematic a*⁴ is quite frequent in Ket, functionally opaque, and prone to be analogically extended to contexts/paradigms which did not originally possess it). On the other hand, reasons why any verb, which fills P⁶ with an actant marker should *obligatorily* require the verb to possess a (lexical) P⁵ determiner are hard to find. The solution adopted here states simply that *many* verbs fill P⁵ with some determiner, and, if so, they cling closely to any possible preceding P⁶ actant marker, making room for a possible further P⁵ marker; the fact that Vajda's P⁴ *d/* and *t/* occur mostly, if not exclusively, with an overt marker in P⁴ can be viewed as an artefact of the overall high frequency of P⁴ in Ket verbs.

- a) shift determiners as far left in the template as possible (this solution is adopted here): put them in P⁶, whenever this slot is filled, leave them in P⁵, whenever this is not the case, or
- b) shift determiners as far right in the template as possible, but differentiate between *h*, *n*, and some instances of *t* and *k*, which always remain in P⁵, and ("atelic") *t*, which goes into P⁴, whenever this slot is filled and the semantic interpretation of "P⁴ determiners" seems to be fit (this is basically Vajda's solution).

The following conclusions should be drawn:

- though the position class approach is by far the most effective solution to Ket morphology so far, it should nevertheless be borne in mind that morphotactic slots remain *constructs* of linguistic analysis, and thus, to a degree, artefacts of theory; the data are under no obligation to behave as we might want them to,
- the most important fact about determiners is their consistent occurrence between the boundaries formed by P⁷ incorporates to the left and P⁴ thematic markers to the right; a further important observation is their very strong propensity to occur together with P⁶ person markers (or better put the other way round: the remarkable *reluctance* of these markers to occur *without* a following determiner); this should sharpen our senses for the possibility that at least *some* individual instances of determiners (the prime candidate being /*k* after the *ba*-series of P⁶ person markers) are not functionally motivated, but rather automatic insertions due to analogy,
- the occurrence of thematic *a*⁴ may, in some cases, be justified likewise (the acknowledgement of these possibilities may be important for any future attempt to describe the Ket determiners and the "thematic" vowel in functional terms), both types of morphemes show a natural tendency to reproduce through the lexicon for reasons of structural symmetry alone.

The following table gives a choice of verbs, which are analyzed by Vajda/Zinn 2004 (VZ) as containing P⁴ *d/* and *t/*, together with the morphological breakdown followed in this grammar (G)²⁹¹:

- *d/a*⁴:

²⁹¹ Information on conjugation class and preterite marker are given only once in this table. Vajda's notation method forces him to mention the "thematic" vowel as part of the verbal formula, while we add it as additional information in brackets, as with all other thematic verbs.

VZ ²⁹²	G	
a) $lo\eta^7-d/a^4-dan\ I_{tr}\ (il)$	$lo\eta^7-d^5-dan\ (a)$	to knead
b) $d/a^4-dij\ IV_{itr}\ (il)$	$d^5-dij\ (a)$	to be placed
c) $d/a^4-dun\ IV_{itr}\ (il)$	$d^5-dun\ (a)$	to shout (once)
d) $k^5-d/a^4-do\ II_{tr}\ (il)$	$d^5-do\ (a)\ (bo/k)$	to hollow out
e) $al^7-d/a^4-do\ I_{tr}\ (in)$	$al^7-d^5-do\ II_{tr}\ (a)$	to beat, fell a tree
f) $don(in)^7-k^5-d/a^4-qan\sim\ qon\ II_{itr}$	$don(in)^7-d^5-qan\sim\ qon\ (a)\ (bo/k)$	to acquire knives
g) $a^7-k^5-d/a^4-qan\sim\ qon\ II_{itr}$	$a^7-qan\sim\ qon\ (a)\ (ba/t)$	to become hot ²⁹³
h) $ej^7-k^5-d/a^4-t\sim\ a\ II_{tr}\ (j)$	$ej^7-t\sim\ a\ (a)\ (ba/t)$	to leave alone
i) $hil^7-d/a^4-a\ I_{tr}\ (il)$	$hil^7-d^5-a\ (a)$	to bite, chew
j) $ha^7-d/a^4-a\ I_{tr}\ (in)$	$ha^7-d^5-a\ (a)$	to cut in half
k) $et^7-q^5-d/a^4-sin\sim\ sit\ I_{tr}\ (il)$	$et^7-t^5-sin\sim\ sit\ (a)$	to sharpen ²⁹⁴
l) $d/O^4-qo\ I_{tr}\ (il)$	d^5-qo	to get (game)
m) $ha^7-d/O^4-ted\sim\ tek\ I_{tr}\ (il)$	$ha^7-d^5-ted\sim\ tek$	to break in half

Some of these verbs require further comments:

While in most cases our reanalysis is quite simple and straightforward, consisting only of "shifting" the *d*-element of V/Z's d/a^4 to the left, making it an "ordinary" P⁵ morpheme (expls. a, b, c, d, e, f, i, j) and extracting the "thematic" *a* from the lexical morpheme chain to mention it only in brackets²⁹⁵, as well as of avoiding double occupancy of P⁵ by "shifting" one of the determiners to the left and mentioning it together with the 1st person P⁶ morpheme (in Conjugation II verbs), again in brackets at the end of the formula (expls. d, f), the following verbs entail more serious deviations from V/Z's analysis, which may potentially have consequences for their proper (if only historical) understanding: in examples *g* and *h*, we reduced V/Z's sequence of determiners to only *one* determiner with the shape *t* (and, since the verbs are of Conjugation II, co-occupying P⁶).

We may have a look at the paradigm of "to become hot, to sweat" (our analysis, the alternative may be found in Vajda/Zinn 2004, 175):

	present tense	past tense
1SG	a^7-ba/t^6-a^4-qan	a^7-ba/t^6-o^4-qon
2SG	a^7-ku/t^6-a^4-qan	a^7-ku/t^6-o^4-qon
3SGm	a^7-a/t^6-a^4-qan	a^7-a/t^6-o^4-qon
3SGf	a^7-i/t^6-a^4-qan	a^7-i/t^6-o^4-qon
1PL	$a^7-d\eta/t^6-a^4-qan$	$a^7-d\eta/t^6-o^4-qon$
2PL	$a^7-d\eta/t^6-a^4-qan$	$a^7-d\eta/t^6-o^4-qon$
3PL	a^7-an/t^6-a^4-qan	a^7-an/t^6-o^4-qon

²⁹² Slightly rewritten to conform to the conventions adopted here.

²⁹³ Plus a few further verbs with an adjectival incorporate and this root meaning "to become...".

²⁹⁴ Plus several similar verbs with adjectival incorporates, (in Vajda's analysis) the causative affix and this root, meaning "to make/render...".

²⁹⁵ This convention is, admittedly, quite arbitrary.

V/Z analyze this verb as containing (underlyingly) k^5 and d/a^4 , with the corollary that (Vajda/Zinn 2004, 198²⁹⁶) $k^5 + d^4 > t$. We think that such an analysis is not compellingly underpinned by observable facts and thus avoid it. Seeing the determiner t here (co-occupying P⁶, as always, when this slot is filled by personal morphemes), does full justice to the surface paradigm.

In example k we omit the allegedly present causative marker²⁹⁷. Again, Vajda/Zinn (2004, 191) invoke a rule $q^5 + d^4 > t$, but we feel that this solution is quite *ad hoc*²⁹⁸, cf. the forms:

$d[i]^8-ct^7-t^5-a^4-b^3-sin$	"I sharpen it"
$d[i]^8-ct^7-t^5-o^4-b^3-il^2-sin$	"I sharpened it"

Only semantic considerations can lead to the postulation that these "factive" forms might have historically contained a causative affix. While this cannot be ruled out, the synchronic analysis of these forms *sensu stricto* does not call for its earlier or underlying presence.

Finally, example verbs l and m must be mentioned: they do not contain "thematic" a^4 at all, but only P⁴ (object) *person markers* (cf. 4.4.5.8.1). While "break in half" shows the expected alternation of these object suffixes, "get game" does not. In this verb the P⁴ vowel is /o/ throughout ($ku^8-d^5-o^4-qo$ "you get him", $du^8-d^5-o^4-qo$ "he gets you" etc.). Vajda/Zinn (2004, 181) invoke an assimilation of $a > o$ before q ([ɸ]), but such a rule is difficult to justify. At any rate an irregular verb²⁹⁹.

The following list gives V/Z's examples with t/a^4 , together with our alternative parsing:

VZ ³⁰⁰	G	
a) $t/a^4-daq/\eta$ IV _{itr} (il)	t^5-daq/η (a)	to fall (iterative)
b) $t/a^4-ka \sim qut$ IV _{itr} (il)	$t^5-ka \sim qut$ (a)	to walk around
c) $saq^7-t/a^4-ted \sim tek$ I _{itr} (il)	$saq^7-t^5-ted \sim tek$ (a)	to step
d) $saq/\eta^7-t/a^4-ted \sim tek$ I _{itr} (il)	$saq/\eta^7-t^5-ted \sim tek$ (a)	to stomp
e) $saq/\eta^7-k^5-t/a^4-ted \sim tek$ II _{tr} (il)	$saq/\eta^7-ted \sim tek$ (a) (ba/t)	to stomp (iter.) ³⁰¹
f) $k^5-t/a^4-ka \sim qut$ II _{tr} (il)	$t^5-ka \sim qut$ (a) (bo/k)	to lead around

²⁹⁶ One reason for this analysis is certainly the strange imperative form <ejkja> of the verb "to leave alone". However, several k -less imperative forms have also been recorded (cf. Werner 2002, I, 227f.). It is not easy to untangle the mesh of forms of this verb, but any k -s occasionally recorded are best regarded as irregularities.

²⁹⁷ Here it is unimportant whether we write it - as in this grammar - as a suffix on the P⁷ incorporate or assign P⁵ status to it, as Vajda/Zinn do.

²⁹⁸ It would have to be at best a morphological rule, like the one mentioned above. On the purely phonological level, the sequence $-kd-$ is fairly common (phonetically assimilated to $[-gd-]$), and the sequence $-qd-$ is rare, but attested (cf. i.a. compound nouns like *lšqdaŋs* "furrier" or any noun ending in $-q$ with case suffixes beginning with $-d-$, like *áq-díŋa* etc.).

²⁹⁹ The possible ratio for the "o-infection" found with this verb may be an analogical influence from the frequent (and phonetically close) root $\sqrt{qan} \sim qon$ "to become", which is unique in showing this phenomenon.

³⁰⁰ Slightly rewritten to conform to the conventions adopted here.

³⁰¹ Plus several other iterative verbs with the same root.

g)	$do^?n/an^7-k^5-t/a^4-do$	$II_{tr}(il)$	$do^?n/an^7-t^5-do$	(a) (ba/k)	to stab with knife
h)	k^5-t/a^4-ted	$\sim tek$	$II_{tr}(il)$	$t^5-ted \sim tek$	(a) (ba/k) to grab
i)	$n^5-t/a^4-ti\eta$	$III_{tr}(il)$	$t^5-ti\eta$	(a) (ba/n)	to have sex with

Some comments: verbs *c*, *d*, and *e* differ only slightly. The P^7 increment $/\eta$ indicates "plurality" of the (infinitival) incorporate, but only verb *e* has an *explicit* iterative reading (on iterative verbs in general, cf. 4.4.7.2; conjugational pattern II against conjugation I is *not* as such to be taken as a strategy of coding iteratives).

Note that our parsing of verb *e* (and the handful of other verbs following exactly this pattern) omits V/Z's k^5 and acknowledges only one determiner, $/t$, co-occupying P^6 . Forms like

$da^8-saq/\eta^7-ba/t^6-a^4-b^3-ted$	"she stomps on me"
$da^8-saq/\eta^7-ba/t^6-o^4-b^3-il^2-ted$	"she stomped on me"

and others leave little room for an additional *k*-determiner in these verbs, and V/Z's opinion that it "disappeared before t^4 in any case (p. 214)" seems unnecessary to us. Note further that the *t*-determiner in this and other verbs is nothing else but Werner's (cf. Werner 1997c, 207-210) *permansive* affix. According to Werner, the observable opposition between verbs like saq^7-ted $I_{tr}(a)(il)$ "to kick (once)" and verbs *c*, *d*, *e* in the above list is due to an additional "affix" characterizing the action depicted as "permanently sustained", or, in other words, as (a strong variant of) *iteratives*. Werner states that this "permansive" affix is easily confused with a determiner, and admits that it may be historically derived from an element in determiner position. We see no special reason to treat it differently from other determiners, as shown in the parsing in the table above. One of Werner's arguments for keeping it separate from these is, i.a., verb *i* above³⁰², where "the determiner *n* precedes the permansive affix *t*" (Werner 1997c, 210), cf. forms like

$d[u]^8-bu/n^6-t^5-t^4-(j)-ti\eta$	"he has sex with her"
$d[i]^8-ba/n^6-t^5-a^4-b^3-ti\eta$	"I do something with it"

However, the principles adopted in this grammar do allow for the accommodation of two determiners in one form by shifting one of them to the left into P^6 , so a special affix position for the "permansive" affix is not required. Nevertheless, Werner's observations, following Krejnovič, about the possible *function* of this morphological element retain their value and further investigation may strengthen the "permansive" function of this *t*-element, if only as another of the Ket "determiners". To sum up, neither Vajda's "right-drift", nor our "left-drift" solution needs to be anything in the way of a final word on the Ket determiners. While sticking to the latter in the morphological breakdown of verbs in this grammar, we regard the question of the original function of Ket determiners as still open for future research.

³⁰² Also more generally "to do something to someone/something".

4.4.5.4 Determiners in P⁵ (and co-occupying P⁶)

As demonstrated above, the proper morphotactic slot for "determiners" is P⁵, though many of these one-consonant morphemes are "dragged" into the preceding slot P⁶. The following discussion of the determiners' possible functions is thus relevant for both instances, regardless of the slot they are assigned to in our parsings³⁰³.

While Krejnovič (1968) and Werner (1997c) were reluctant to (try to) assign clear functions to Ket determiners, Vajda (2004) devoted considerable energy to this task. We base much of the following discussion on Vajda's argumentation, but we will also have to show that many verbs do not immediately square with his functional descriptions of the determiners³⁰⁴. The main difficulty here is to find clear and true "minimal pairs", which could illustrate the semantic/functional effects these morphemes exert on their bases. Such minimal pairs should display the same (or no) P⁷ incorporate and ideally belong to the same conjugation class. Similar examples are very difficult to find (and the conjugation class differs in most cases, different preterite morphemes or the "thematic" *a*⁴ further complicate the picture), some examples, including near minimal pairs, are³⁰⁵:

\sqrt{da}	<i>da</i> I _{tr} (a) (il)	"to lay down"
	<i>d⁵-da</i> I _{tr} (a) (il)	"to put sth. on sth., to load"
$\sqrt{ta\eta}$	<i>ta\eta</i> I _{tr} (il)	"to drag"
	<i>k⁵-ta\eta</i> I _{tr} (a) (il/in)	"to drag uphill or on the shore"
	<i>d⁵-ta\eta</i> II _{tr} (a) (il) (bo/k) ³⁰⁶	"to drag by sled"
\sqrt{til}	<i>til</i> I _{tr} (a) (in)	"to warm up the shaman's drum"
	<i>d⁵-til</i> I _{tr} (a) (in)	"id." ³⁰⁷
$\sqrt{bed} \sim \textit{kcd}$	<i>bed</i> \sim <i>kcd</i> I _{tr} (in)	"to do, make"
	<i>h⁵-bed</i> ³⁰⁸ I _{tr} (in)	"to lift"
\sqrt{daq}	<i>h⁵-daq</i> I _{tr} (in)	"to shoot (once)"
	<i>k⁵-daq</i> II _{tr} (in) ³⁰⁹	"to throw, shoot"

³⁰³ A general note on terminology: In Vajda (2001) the P⁵ determiners are referred to as "preverbs", whereas those co-occupying P⁶ were called "situation aspect markers" (*t* "stative" and *k* "dynamic"). Later (e.g. Vajda 2004), he calls those determiners he leaves in P⁵ "adpositions" and those reassigned to P⁴ "proclitics".

³⁰⁴ Vajda (p.c.) now regards his semantic labels for the determiner consonants as mainly reflective of diachronic rather than synchronic factors.

³⁰⁵ A complete list would not be much longer, but we confine our examples to cases, where the (synchronic) identity of the R morphemes seems to be clear enough; this is not always the case.

³⁰⁶ Two determiners, *k* and *d*, cf. 4.4.5.3.

³⁰⁷ Obviously a perfect minimal pair, but with no discernable difference in meaning.

³⁰⁸ We do not have enough attestations of this verb to decide whether the root shows partial suppletivism (on which cf. 4.4.5.1.1.2).

\sqrt{uk}	$t^5-uk I_{tr} (il)$	"to put, place (iter.)"
	$h^5-uk I_{tr} (a) (il)$	"to set up tents"
\sqrt{dij}	$dij IV_{itr} (a) (in)$	"to reach"
	$k^5-dij IV_{itr} (a) (in)$	"to grow up"
	$n^5-dij I_{tr} (a) (il)$	"to touch"
\sqrt{doq}	$doq IV_{itr} (in)$	"to fly (away)"
	$k^5-doq II_{tr} (in)^{310}$	"to attack, to throw oneself at"
\sqrt{ij}	$es \sim e_j^7-k^5-ij II_{tr} (a) (il)^{311}$	"to call someone"
	$es \sim e_j^7-t^5-ij II_{tr} (a) (il)^{312}$	"to call someone close by"
\sqrt{qa}	$qa IV_{itr} (il)$	"to barter (intr.)"
	$k^5-qa III_{tr} (il)^{313}$	"to offer for sale"
\sqrt{qit}	$qit I_{itr} (il)$	"to scrape"
	$k^5-qit IV_{itr} (a) (il)^{314}$	"to get scraped off"

The following example, which offers a five-way contrast, has been found by Vajda/Zinn (2004, 89):

\sqrt{do}	$do I_{tr} (a) (in)$	"to cut hair"
	$t^5-do I_{tr} (a) (il)$	"to rough-hew (a surface) "
	$k^5-do I_{tr} (a) (il)$	"to clear away (wood)"
	$h^5-do I_{tr} (a) (il)$	"to erect a tent" ³¹⁵
	$d^5-do II_{tr} (il) (bo/k)^{316}$	"to prepare by hollowing out"

It should become clear from these examples that the functions of the "determiners" are in no way transparent; they belong to the lexical makeup of a given verb and any function which could be associated with them belongs to the history of the language, rather than to its synchronical morphological repository. In the following, we depart from the shape of the determiners, regardless of their slot position, and give a short summary of their occurrence and try to discuss - reluctantly - their possible functions.

³⁰⁹ Here for illustrative purposes given *modo* Vajda. Recall that for Conjugation II and III verbs we would normally write *daq II_{tr} (in) (ba/k)*.

³¹⁰ *doq II_{tr} (in) (ba/k)*

³¹¹ *es ~ e_j⁷-ij II_{tr} (a) (il) (ba/k)*

³¹² *es ~ e_j⁷-ij II_{tr} (a) (il) (ba/t)*

³¹³ *qa II_{tr} (il) (bo/k)*

³¹⁴ *qit IV_{itr} (a) (il) (bo/k)*

³¹⁵ I.e. "to ram poles into the ground".

³¹⁶ I.e. two determiners.

4.4.5.4.1 The determiner *k*

Vajda (2004, 60-62) distinguishes two different *k*-determiners ("adpositions"), which he glosses as *ablative* and *adessive k*, respectively. Apart from their (vaguely discernible and thus *possible*) semantic difference, they are clearly set apart by the different effect they seem to exert on preceding P⁶ morphemes³¹⁷. P⁶ morphemes are discussed in 4.4.5.7, but we have to mention here that they are traditionally grouped into two "series", one of which is characterized by, i.a., the 1st SG morpheme *ba* (the "*ba*-series"), while the other one shows 1st SG *bo* (the "*bo*-series"). The *ba*-series occurs with all determiners (and also, in rare cases, without any determiners), whereas the *bo*-series is invariably accompanied by a *k*-determiner. This led Vajda to the assumption that we are actually dealing with two - at least historically - different morphemes here, one of which *labializes* a preceding P⁶ person marker, while the other one does not:

functional label (Vajda):	adessive	ablative
shape:	<i>k</i>	<i>k</i>
labialization of preceding:	no	yes
example (1 st SG):	<i>ba/k⁶-(i)-(s)-sal</i> "I spend the night"	<i>bo/k⁶-a⁴-tn</i> "I walk"

In other treatments of Ket grammar (most notably in the works of H. Werner), these two series of P⁶ markers are treated as independent morphological devices. However, the distributional characteristics mentioned above (*bo* only before *k*, never before other determiners) renders it highly likely that Vajda is right in viewing the labialization of P⁶ markers as a phonotactic artefact of the following determiner (or adposition, or preverb)³¹⁸.

"Ablative" (labializing) *k* seems to impart the following semantic nuances:

- "dynamic extroverted action"
- movement away, up, down
- disappearing from view, leaving the range of the deictic centre³¹⁹
- a change of state (usually externally motivated)

It is by far more frequent than "adessive" *k*; examples include³²⁰:

³¹⁷ If no P⁶ marker is present, they are formally indistinguishable.

³¹⁸ Vajda's speculation (Vajda/Zinn 2004, 88) that ablative *k* can be derived from a verbal root \sqrt{ok} "move away" has the advantage of providing a motivation for the labializing effect of this morpheme, but also the disadvantage that such a root is only sparsely attested (and, where it is, rather to be glossed as "move up"). It may or may not be correct, but looking for an elided labial vowel in what certainly at one stage was a "pre-grammaticalized" content root is certainly the right track.

³¹⁹ "ego, hic, nunc".

³²⁰ Here, we give only examples *without* any P⁷ incorporate, since the latter, if present, may easily dominate the semantics of the whole compound verb to the extent of rendering all other lexical components secondary in terms of their visible contribution to the meaning of the verb.

<i>bej II_{itr} (il) (bo/k)</i>	"to be carried along by the wind"
<i>qin II_{itr} (il) (bo/k)</i>	"to be taken by the river current"
<i>tn II_{itr} (in) (bo/k)</i>	"to run out (once)"
<i>t II_{tr} (il) (bo/k)</i>	"to bring"
<i>hun II_{itr} (in) (bo/k)</i>	"to slip"
<i>qut II_{itr} (in) (bo/k)</i>	"to faint"
<i>qan II_{itr} (a) (il) (bo/k)</i>	"to get cooked (fish)"

While these and other examples do by and large conform to the rough semantic description quoted above, other verbs seemingly do not, or at least not too obviously, e.g.:

<i>dis II_{tr} (il) (bo/k)</i>	"to scold"
<i>taŋ II_{tr} (in) (bo/k)</i>	"to place wreath on"

"Adessive" (non-labializing) *k* is described as being associated with the following semantic contents:

- "dynamic introverted action/motion"
- internally motivated changes of state

Examples:

<i>sal II_{itr} (in) (ba/k)</i>	"to spend the night"
<i>da II_{itr} (a) (il) (ba/k)</i>	"to hear"
<i>daq II_{tr} (in) (ba/k)</i>	"to shoot"

and many more (most of which also fill P⁷).

As with ablative *k*, many verbs containing the non-labializing *k*-determiner do not lend themselves to a straightforward semantic analysis in terms of the features mentioned. Consider the following near-minimal pair (where the P⁷ incorporate *ikda*⁷ provides the semantic content "river bank"):

<i>aq II_{tr} (il) (bo/k)</i>	"to lead someone somewhere" ("ablative" <i>k</i>)
<i>ikda</i> ⁷ - <i>aq II_{tr} (il) (ba/k)</i>	"to lead someone to the river bank" ("adessive" <i>k</i>)

The different *k*-determiners do not seem to differentiate much here³²¹.

Both *k*-determiners may be subject to morphotactic rules (TR 7, 8; VIR 1, 2, 3, q.v.).

4.4.5.4.2 The determiner *t*

Again, Vajda differentiates two different *t*-determiners/adpositions, although they show no formally different behaviour: "superessive" and "mental state" *t*. The semantic content of the first variant is described as (Vajda/Zinn 2004, 88) an

³²¹ Vajda's speculation that "adessive" *k* may be etymologically connected with the proximal deictic root **ki*- (Vajda/Zinn 2004, 88; cf. 4.2.3) is vague.

indication that the verbal action/process entails "superficial contact with a surface". Some examples square quite well with this description:

<i>suk III_{itr} (il) (ba/t)</i>	"to push oneself off the shore (in a boat)"
<i>aq ~ daq III_{itr} (il) (ba/t)</i>	"to make a quick round trip"
<i>es II_{tr} (in) (ba/t)</i>	"to draw"
<i>t⁵-qut ~ damin I_{tr} (a) (il)</i>	"to lie"

Many verbs with the root \sqrt{kit} "to rub, smear" belong here, but the root morpheme clearly dominates the semantics of these verbs. Other verbs are not so clearly supporting this analysis - some may even contradict it, as e.g. many verbs with the root $\sqrt{aq} \sim oq$ "to become" with incorporates, like *baat⁷-aq ~ oq II_{tr} (a) (in) (ba/t)* "to become an old man", which, if anything, describes an "internally motivated change of state" (cf. "adessive" *k* above, 4.4.5.4.1)³²².

"Mental state" *t*, on the other hand, is better supported; indeed, many (though of course not all) verbs denoting "inner", or mental, states, attitudes or activities, as well as sensual perceptions and speech acts, do show the determiner *t*, cf. i.a.:

<i>kit II_{tr} (in) (ba/t)</i>	"to sense"
<i>i II_{tr} (il) (ba/t)</i>	"to ask"
<i>t⁵-it I_{tr} (a) (il)</i>	"to sniff"
<i>t⁵-ki I_{tr} (a) (in)</i>	"to say"
<i>a/qo II_{tr} (a) (in) (ba/t)</i>	"to agree"

The differentiation of two *t*-determiners is further underpinned by the etymological fact that "superessive" *t* seems to correspond regularly to Yugh *t*, whereas "mental state" *t* is reflected - very regularly - by Yugh \check{c} ³²³.

Our system would require a third *t*-determiner, since we analyze Vajda's P⁴ proclitic *t*/ as just another determiner in P⁵ and P⁶. Its alleged "atelic" function is again quite weakly supported, as the examples enumerated above do not provide much evidence for this analysis.

4.4.5.4.3 The determiner *n*

This determiner is rare and semantically mostly obscure. Some verbs containing it lend a certain degree of support to Vajda's description "movement around an object or some notion associated with circularity", but the matter is far from clear:

<i>us⁷-n⁵-tiŋ IV_{itr} (in)</i>	"to wallow"
<i>n⁵-kil I_{tr} (a) (il)</i>	"to cut something around the edges"
<i>n⁵-i I_{tr} (a) (il)</i>	"to brush snow from around it"

³²² Again, Vajda's idea that this determiner might be etymologically derived from a verb root meaning "to lie down" (loc. cit., cf. Kott *ten*, recte *tĕn* "to lie down") is hardly felicitous.

³²³ Vajda's (loc. cit.) etymological connection of this morpheme with the content noun Ket *tĭ*? "head" (Yugh *čĭ*?) is thus not to be dismissed off-hand.

n^5 -*ted* ~ *tek I_{itr} (a) (in)* "to dive in head first"³²⁴

4.4.5.4.4 The determiner *h*

Again a rare determiner³²⁵, but the semantic description brought forward by Vajda seems to be quite transparent: this morpheme has a marked tendency to occur in verbs for actions/processes, which involve some degree of vertical/perpendicular orientation or posture, e.g.:

h^5 - <i>tes IV_{itr} (a) (il)</i>	"to stand up"
h^5 - <i>ta I_{itr} (a) (il)</i>	"to stand, to be upright"
h^5 - <i>to I_{tr} (a) (in)</i>	"to erect"
h^5 - <i>uk I_{tr} (a) (il)</i>	"to set up a tent"
h^5 - <i>daqη I_{itr} (in)</i>	"to stick to"

4.4.5.4.5 The determiner *d*

Vajda's system does not acknowledge a *d*-determiner (preverb/adposition); instead, it treats all instances of a *d*-morpheme between P⁶ and P⁴ as proclitic elements co-occupying P⁴. For examples see our list in 4.4.5.3. The functional characterization given by Vajda (e.g. Vajda/Zinn 2004, 91) invokes again the conflation of several functions in one morphological expression, i.e.: spatial extension through or across ("to carve out" or d^5 -*suk* "to ford a river"), inceptives with incorporated undergoer (verbs with meanings like "autumn begins") or animacy, more precisely: indicating the animacy of a patient/object in transitive verbs (one example given in Vajda/Zinn 2004, 155, has seemingly *d* as an indicator of the animacy of the intransitive subject; note that this, if correct, would have to be singled out as an ergative trait of Ket, if only a marginal one). The special behaviour of *d*, which gave rise to this interpretation, is the fact that the determiner is present with animate objects/patients, but lacking with inanimate ones. Vajda/Zinn offer about ten Ket verbs with this "animacy-classifying" *d* (in the list given in 4.4.5.3)³²⁶. For convenience, we repeat the relevant verbs from this list here³²⁷:

³²⁴ We mention for completeness' sake that Vajda (Vajda/Zinn 2004, 89) distinguishes - for this and a few other verbs - a different *n*-determiner with a semantic core "(actions involving the) head".

³²⁵ Vajda's proposal that *h* has merged with *k* after P⁶ person markers, with the consequence that some or even many non-labializing *k*-determiners may historically be instances of **h* (< **p*, since Yugh has *f* in its few clear examples) certainly deserves further attention.

³²⁶ Discounting a handful more, which only vary in terms of different P⁷ incorporates. The other *d/a*⁴-verbs are said to belong to either of the other two categories mentioned above; at any rate the empirical base for these functions is small. Nevertheless, further examples may exist.

³²⁷ The numbering is repeated from the earlier list. Again: left column = Vajda/Zinn's parsing, followed by our reanalysis.

a)	$lo\eta^7-d/a^4-dan\ I_{tr}(il)$	$lo\eta^7-d^5-dan\ (a)$	to knead
c)	$d/a^4-dun\ IV_{tr}(il)$	$d^5-dun\ (a)$	to shout (once)
e)	$al^7-d/a^4-do\ I_{tr}(in)$	$al^7-d^5-do\ (a)$	to beat, to fell a tree
h)	$ej^7-k^5-d/a^4-t \sim a\ II_{tr}(j)$	$ej^7-t \sim a\ (a)\ (ba/t)$	to leave alone
i)	$h\dot{i}l^7-d/a^4-a\ I_{tr}(il)$	$h\dot{i}l^7-d^5-a\ (a)$	to bite, chew
j)	$ha^7-d/O^4-a\ I_{tr}(in)$	ha^7-d^5-a	to cut in half
l)	$d/O^4-qo\ I_{tr}(il)$	d^5-qo	to get (game)
m)	$ha^7-d/O^4-ted \sim tek\ I_{tr}(il)$	$ha^7-d^5-ted \sim tek$	to break in half
n)	$ul^7-d/a^4-kan\ I_{tr}(il)$	$ul^7-d^5-kan\ (a)$	to wash

Above (4.4.5.3), we argued that at least one of these verbs (example *h*, "to leave alone") should be reanalyzed as not containing *d* at all, and that verb *l* is in many respects irregular.

Two other verbs (*j* and *m*) are also somewhat problematical. Both contain the P⁷ incorporate ha^7 , which carries most of the semantic weight. Vajda/Zinn (2004, 109) observe that it is "interesting that all verbs with ha^7 also contain the animacy-determiner *d*". However, there is strong indication that the consonant /*d*/ has a different status in these verbs. Thus, for verb *j*, the infinitive form $h\grave{a}do$ is usually given (analyzable as ha^7-do). The infinitive³²⁸ has a different R morpheme, but regular inflected forms of ha^7-do do also exist, cf.:

verb:	$ha^7-d^5-a\ (a)\ (in)\ (=j\ above)$	$ha^7-do^{329}\ (a)\ (in)$
infinitive:	$h\grave{a}do$	$h\grave{a}do$
3SG present:	$d[u]^8-ha^7-d^5-i^4-(j)-a$ "he cuts her in half"	$d[u]^8-ha^7-d^5-a^4-(j)-do$ "he cuts/fells it (tree)"

Thus, we may safely assume that not only the infinitive form was "borrowed" by this verb, but that furthermore the /*d*/-initial of the R \sqrt{do} was analogically extended to verb *j* as well. Consequently, an analysis, which treats this consonant as part of the "root" of the incorporate could be equally well defended as the determiner solution. The verb would, then, not necessarily contain any determiner at all (i.e. had^7-a , and the finite forms would be $d[u]^8-had^7-i^4-(j)-a$ and $d[u]^8-had^7-a^4-(j)-do$, respectively). The absence of /*d*/ in forms with inanimate objects is also quite easily accounted for, cf.³³⁰:

$d[i]^8-ha^7-d^5-(s)-a$	"I cut it in half"	< <i>thása</i> >
$d[i]^8-ha^7-d^5-[i]l^2-a-n$	"I cut it in half (pret.)"	< <i>thalan</i> >

The present tense form contains an (*s*)-separator due to Separator Rule 4 (SR4, 4.4.4.4), in front of which /*d*/ simply could not survive in the surface form. The same is true for the preterite form (**thadlan*), thus the alternation of forms with and without *d* is not (necessarily) morphologically motivated. Much the same

³²⁸ On infinitives cf. 4.4.8.1.

³²⁹ \sqrt{do} itself is a fairly well attested R, which carries the meaning "to cut, to hew".

³³⁰ Note that for our purpose here it is irrelevant, whether we analyze the consonant /*d*/ as a part of the incorporate, a P⁴ proclitic or a P⁵ determiner. Here it is only important that and why it is *missing* in certain forms.

discussion can also be applied to verb *m*.

For verb *a* in the list, Vajda/Zinn (2004, 137) have to admit themselves that the *d*-determiner - contrary to expectations based on its alleged function as an animacy-differentiating morpheme - occurs also with inanimate objects, cf.:

$k[u]^{8}-lo\eta^{7}-d^{5}-a^{4}-(j)-ta\eta$	"you rumple him"	<klóηdajdaη>
$d[i]^{8}-lo\eta^{7}-d^{5}-(i)-(s)-ta\eta$	"I rumple it"	<dlóηdistaη>

Verb *c* is the one intransitive verb in the list, which should raise some suspicion as for the animacy-classifying function of the determiner here. One might ask, why a verb meaning "to shout" might need a paradigmatic animacy classifier at all?

Verb *e* shows the *d*-element in all forms, whether the object/patient is animate ("to beat"), or inanimate ("to fell a tree").

The paradigm of "to bite" (verb *i*) shows a different kind of disturbance: while "he bites it" (<thílsa>) shows the same phonotactic effect as the *ha(d)*⁷-verbs above, this time some forms with inanimate patients *do* have the *d*-element, e.g.:

$[di]^{8}-hí\eta^{7}-d^{5}-a$	"I bit it"	<thílda> ³³¹
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The only verb we are aware of, in which the distribution of forms with and without the *d*-determiner seems indeed to conform with its possible function as a marker of the object/patient's animacy is "to wash", e.g.³³²:

$da^{8}-ul^{7}-d^{5}-a^{4}-(j)-ka\eta$	"she washes him" vs.
$d[i]^{8}-ul^{7}-a^{4}-k\eta$	"I wash it"
$d[i]^{8}-ul^{7}-o^{4}-[i]^{2}-i/k\eta$	"I washed it"

In view of these difficulties and the resulting scarcity of good examples it may be understandable that we find it difficult to accept the "classification of object/patient animacy" as a clear and regular function of (one instance of) the *d*-determiner.

4.4.5.4.6 The determiner *q*

Above, we described the causativizer *q* as a suffixal increment on P⁷ incorporates; however, in a few cases this (or rather a homophonous) element occurs without any incorporate; consequently it is to be described as another determiner, in position P⁵ (and, in one case, as co-occupant of P⁶). These verbs (all from a single R root, differing only in conjugation class) are:

³³¹ The preterite morpheme (*il*) was (irregularly) syncopated by way of haplogy; the most likely direct predecessor of this form would be *thililda, which, however, shows the *d*-determiner in a morphologically impossible position (after P², that is). Probably the course of events was *t-hil-d-il-a > *thililda > thilda. Vajda (p.c.) thinks that the P² morpheme *il* becomes [i]d by dissimilation in a sequence of two *l*-s.

³³² Only a few forms are given here, but others do not contradict the pattern. The partial suppletivism (*kaη*, *kη* and pre-root anaptyxis of this root, are unproblematical).

q^5 -dil I_{tr} (il)	"to put on clothes, to skewer" ³³³
q^5 -dil IV_{tr} (il)	"to put oneself into a narrow space"
dil II_{tr} (il) (ba/q)	"to dress"

Vajda describes its possible function as "inessive". His idea (Vajda 2004, 63) that it might be etymologically derivable from the adverb $q\bar{a}$ "inside" is attractive and probably correct.

4.4.5.4.7 The determiner η

This determiner is found with a single verb only:

qo II_{tr} (a) (il) (ba/ η) "to search for (intrans)"

In spite of the idiosyncratic nature of this element, the morphological makeup of this verb does not allow for a different analysis, cf.:

$[di]^8$ -ba/ η^6 -(s)-u/ qo "I am searching"
 da^8 -bu/ η^6 -[i] I^2 -u/ qo "she was searching"

4.4.5.5 PL - the subject plural

4.4.5.5.1 The distribution of PL suffixes

The only morphological slot to the right of the R morpheme is PL, which hosts the marker of subject/agent plural.

It is not filled in every conjugation class (cf. 4.4.3):

	PL filled for:
Conjugation I	active subjects
Conjugation II	transitive subjects
Conjugation III	all subjects
Conjugation IV	----
Conjugation V	----

Conjugation I:

active subject (+PL):
 $d[i]^8$ -cs⁷-o⁴-[i] I^2 -ij-in "we shouted"
 inactive subject (-PL):

³³³ Meaning "to put on clothes", the verb, obviously, allows animate objects, whereas with the meaning "to skewer" it does not. Both meanings form *slightly* different paradigms, in that the former has the imperative q^5 -i I^2 -dil and "to skewer" the R-suppletive imperative q^5 -i I^2 -on.

*don*⁷-*iI*²-*daŋ*¹-*bed* "we have a knife"

Conjugation II:

transitive subject (+PL):

*d[i]*⁸-*i/t*⁶-*b*³-*es-n* "we draw her"

intransitive subject (-PL):

*dəŋ/[k]*⁶-*b*³-*in*²-*qut* "we fainted"

Conjugation III:

intransitive subject (+PL):

*[du]*⁸-*tukun*⁷-*bu/t*⁶-*o*⁴-*[i]*²-*kit-n*

"they combed themselves"

transitive subject (+PL):

*[ku]*⁸-*kəŋ/[k]*⁶-*daŋ*¹-*(i)-t-n*

"you (PL) carried us"

Conjugation IV:

intransitive subject:

*[ku]*⁸-*eliŋ*⁷-*iI*²-*kaŋ*¹-*bed*

"you (PL) breathed"

transitive subject³³⁴:

*[ku]*⁸-*daŋ/[k]*⁶-*iI*²-*kaŋ*¹-*qa*

"you sold us/offered us for sale"

The PL suffix is also present in plural imperatives (cf. 4.4.6.2).

4.4.5.5.2 The shape of PL suffixes

The form of the PL suffix is *-(V)n*. All vowel-final and many consonant-final R morphemes add PL *-n* directly without any binding vowel, some consonant-final roots do add such a vowel, but the morphotactic ratio of its occurrence and colour remains largely elusive (cf. 4.1.1.2.4.1 on nominal plural suffixes). Only a few tendencies can be made out³³⁵:

Many consonant-final R morphemes do allow the addition of PL *-n* without any binding vowel. This is found most often with coronal consonants (i.e. *s*, *d*, *t*, *l*), but also - though not invariably - with the palatal *j*. Examples for *k* do exist, but these are few in number; some R morphemes seemingly require a binding vowel in some verbs they form part of, but not in others, which underlines the largely lexicalized nature of the various PL variants:

³³⁴ Recall from 4.4.3.4 that transitive Conjugation IV verbs are very rare. In Vajda/Zinn 2004, 174 "to offer for sale" is erroneously labelled as belonging to conjugation III (correct on p. 82).

³³⁵ It has to be mentioned that - as might be expected - present-day native speakers of Ket do show some idiolectal variance here, too.

$d[i]^8-i/t^6-b^3-es-n$	"we draw her"
$d[i]^8-i/t^6-[i]n^2-(i)-bil-n$	"we caught her"
$d[u]^8-bok^7-o^4-[i]l^2-det-n$	"they made a fire"
$d[u]^8-(k)-a\eta^4-bed-n$	"they make/produce them"
$[di]^8-k^5-o^4-[i]n^2-da\eta^1-dij-n$	"we grew/matured"
$d[u]^8-il^2-ka\eta^1-bak-n$	"they pulled you (pl.)"

However, some roots ending in the same consonants - and sometimes even the same roots - do occur with a binding vowel, cf.:

$d[u]^8-idi\eta bed^7-o^4-[i]l^2-bed-in^{336}$	"they wrote"
$k[u]^8-ej^7-da\eta/[k]^6-o^4-[i]l^2-ij-in$	"you (pl.) called us"
$k[u]^8-il^2-da\eta^1-(s)-in$	"you (pl.) dressed us"
$[du]^8-tukun^7-k\eta\eta/t^6-o^4-[i]l^2-kit-in$	"they combed you (pl.)"
$d[u]^8-in^2-qol-in$	"they healed up/got well"

With other final consonants, we usually find a binding vowel. Its colour is, in the overwhelming majority of cases, /i/:

$du^8-ka\eta^1-b\acute{a}k-in$	"they find you"
$d[u]^8-at^7-a\eta^4-b^3-aq-in$	"we pour them"
$d[i]^8-u/k^6-b^3-in^2-ta\eta-in$	"we placed wreath on her"
$k[u]^8-loq\eta-in$	"you (pl.) shivered"

/i/ is found with a few verbs, especially, but not necessarily, in the (immediate or mediated) vicinity of /q/; the sporadic occurrences of /a/ as a binding vowel are also connected with a uvular neighbourhood:

$[di]^8-h^5-o^4-[i]n^2-daq\eta-in$	"we grabbed"
$d[i]^8-i/k^6-in^2-b^3-daq-in$	"we shot at her"
$d[u]^8-il^2-aq-an$	"they went away and returned"
$d[u]^6-ej^7-k\eta\eta/k^6-a^4-b^3-daq-an$	"they throw you (pl.)"

If the R morpheme ends itself in /n/, the usual solution is the haplological elision of the PL suffix, rather than adding it with a binding vowel (*-inin):

$d[i]^8-o^4-[i]l^2-in$	"we stood" (< * $d[i]^8-o^4-[i]l^2-in-in$)
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In this case, the preceding vowel is phonetically lengthened <dóli:n>.

On the element / η , often, but not consequently, found in subject plural forms of Conjugation IV verbs, cf. 4.4.3.4, where we argue, following Vajda, that it is not an allomorph of PL -(V)n.

³³⁶ Phonetically [bet-in], cf. 3.3.2.

4.4.5.6 P⁸4.4.5.6.1 P⁸ actant morphemes - the "D-series"

The actant morphemes filling this leftmost slot of the Ket verb are widely referred to as the "D-affixes" or the "D-series" of the person-differentiating markers of the language (as opposed to the "B-affixes", which occupy position P⁶, cf. 4.4.5.7).

P⁸ is filled in all conjugation classes³³⁷ (save the "possessive" conjugation V); it is obligatorily present in active verbs of conjugation I, transitive verbs of conjugation II and all verbs of conjugations III and IV, which makes P⁸ morphemes the most frequent person markers in Ket. They strictly encode actant (subject) person only, with number being expressed by the subject plural morpheme in PL, or lack thereof:

1 st person	<i>di</i>
2 nd person	<i>ku</i>
3 rd person m	<i>du</i>
3 rd person f/n	<i>da</i>

P⁸ morphemes are routinely - and very often - affected by morphotactic rules, which may reduce their phonetic substance by syncopating their vowel element or eliding them completely. These morphotactic rules are:

TR 1, TR 2, TR 3, TR 4, TR 5, TR 6, SR 1, SR 2, SR 3.

On the various shapes of 3rd person f/m *da* in different morphotactic surroundings cf. 4.4.4.1.

Historically, the "D-Series" seems to be strongly connected with (the nominative form of) personal pronouns, cf.:

<i>di</i>	:	<i>ād</i> "I"
<i>ku</i>	:	<i>ū(k)</i> "you (sg.)"
<i>du, da</i>	:	connection less clear, but one could think of the second syllable/element of demonstrative pronouns like <i>kīd</i> , (<i>kíde</i>) or <i>tūd</i> , (<i>túde</i>) (cf. 4.2.3).

4.4.5.6.2 Petrified P⁸ *da*- in "impersonal" verbs

In a small number of verbs, the feminine/neuter P⁸ marker *da* occurs without directly referring to a concrete actant³³⁸. All of these verbs are transitive (conjugation I, II and III), and encode the personal (most often human) actant as its object/undergoer, which is usually masked by the straightforward translation

³³⁷ Cf. the relevant chapters on the various conjugation classes for examples of their force as person markers.

³³⁸ Such as could be expressed as an independent lexical sentence constituent.

equivalents of these verbs. Morphologically, these verb forms are regular examples of their respective conjugation classes with no further peculiarities, with the only exception that their P⁸ slot is always and only occupied by *da*. Semantically, they comprise verbs for changes of state the personal actant "undergoes" without having or maintaining any control over the process.³³⁹ Hence Vajda's term "involuntative causatives" for this group of verbs. Examples showing the existence of such verbs in conjugation classes I, II, and III include³⁴⁰:

(*da*⁸)-*suleja/q*⁷-*t* ~ *a I_{tr}* (*in*) "to turn/become yellow"³⁴¹

*da*⁸-*suleja/q*⁷-(*i*)-*di*¹-*t* "I turn yellow"
*da*⁸-*suleja/q*⁷-(*i*)-*ku*¹-*t* "you (sg.) turn yellow"
*da*⁸-*suleja/q*⁷-*a*⁴-(*j*)-(*i*)-*t* "he turns yellow"
*da*⁸-*suleja/q*⁷-*in*²-*daŋ*¹-(*i*)-*t* "we turned yellow"

(*da*⁸)-*kudaŋ*⁷-*bed II_{tr}* (*in*) (*bo/k*) "to get wrinkles"

*da*⁸-*kudaŋ*⁷-*bo/k*⁶-(*s*)-*i*/*bed* "I get wrinkles"
*da*⁸-*kudaŋ*⁷-*ku/k*⁶-(*s*)-*i*/*bed* "you (sg.) get wrinkles"

(*da*⁸)-*t III_{tr}* (*il*) "to get blown away by the wind"

*da*⁸-*bu/k*⁶-*di*¹-*t* "I get blown away"
*da*⁸-*bu/k*⁶-*daŋ*¹-(*i*)-*t* "we get blown away"
*da*⁸-*bu/k*⁶-*oŋ*⁴-[*i*]²-(*i*)-*t* "they got blown away"

Other verbs involving impersonal *da*⁸ include:

(*da*⁸)-*qa*⁷-*doq II_{tr}* (*in*) (*ba/t*) "to get angry"³⁴²
(*da*⁸)-*qattij*⁷-*a II_{tr}* (*il*) (*bo/k*) "to fart"
(*da*⁸)-*ətaŋ*⁷-*bed II_{tr}* (*il*) (*bo/k*) "to smile"
(*da*⁸)-*ətaŋ*⁷-*ej II_{tr}* (*ba/k*) "id."
(*da*⁸)-*et II_{tr}* (*ba/k*) (*a*) (*in*) "to understand, to be able to"

One verb, for which "involuntariness" is not straightforwardly imposing itself as the motivation for its impersonal conjugation, is:

³³⁹ The "impersonal" *da* is, thus, reminiscent of impersonal actants, which, in some European languages, are expressed by neuter personal pronouns (*it*, *es*, *il*); however, in Ket all these verbs are transitive. The translation equivalent of, e.g., "it is raining", "es regnet", "il pleut", is *ul*⁷-*a*⁴-*ta*. This verb can also accept personal actant morphemes (in P⁶), cf. *ul*⁷-*ba/k*⁶-*a*⁴-*ta* "it is raining on me". So not all verbal concepts, which may require an "impersonal" translation equivalent in English, German or French, are expressed by the "impersonal" type with generalized *da*⁸.

³⁴⁰ As illustrated by the examples, some, but not all, of these verbs are also morphological causatives (i.e. they contain the causativizer /*q*⁷).

³⁴¹ Similarly a few further verbs with different colour adjectives as incorporates, like "red → to blush", "white → to turn white/grey (hair)".

³⁴² Lit.: "it flies in (my) inside".

$(da^8)-ti\eta$ $I_{tr}(il)$	"to circle (it), to make a detour" ³⁴³
$da^8-di^1-ti\eta$ $<d\acute{o}tti\eta>$	"I circle it"
$da^8-il^2-di^1-ti\eta$	"I circled it"
$da^8-ku^1-ti\eta$ $<d\acute{o}\gammauti\eta>$	"you (sg.) circle it"
$da^8-il^2-ku^1-ti\eta$	"you (sg.) circled it"

4.4.5.7 P⁶ actant morphemes - the "B-series"

P⁶ hosts the actant affixes traditionally referred to as the "B-affixes/series" of Ket personal markers. This slot is filled in verbs of conjugation classes II, III and IV, but only conjugation II offers the full paradigm (for the "ergative"-like patterning of these morphemes, encoding intransitive subjects and objects/patients of transitive verbs, cf. 4.4.3.2); unlike P⁸ "D-series" markers, P⁶ actant morphemes are sensitive to number (and, in 3rd person, to class). The most salient characteristic of this set of morphemes is, however, that it actually consists of two subseries, which may simply be labelled the "ba-" and the "bo-" series. The latter shows a labial vowel in all persons save 2nd SG and 1st/2nd PL. Above (4.4.5.4.1), we expressed tentative consent with Vajda, who thinks that this labialization may actually be an effect of the following *k*-determiner - the *bo*-series is always accompanied by this morpheme, whereas the *ba*-series may show other (or, rarely, no) determiner(s). Though this is in all probability the correct solution to the problem of the alternating P⁶ actant markers, we discuss the possible semantic content of this variation in this chapter. Conjugation II has the following set of markers for both subject and object functions:

1 st SG	<i>ba</i>	<i>bo</i>
2 nd SG		<i>ku</i>
3 rd SG m	<i>a</i>	<i>o</i>
3 rd SG f	<i>i</i>	<i>u</i>
3 rd SG n	∅	<i>u</i>
1 st PL		<i>d\acute{o}\eta</i> ³⁴⁴
2 nd PL		<i>k\acute{o}\eta</i>
3 rd PL m/f	<i>a\eta</i>	<i>o\eta</i>
3 rd PL n	∅	<i>u</i>

The neuter forms are rare (not illustrated in the chapter on conjugation II above, 4.4.3.2), but examples can be found, cf.:

³⁴³ We may speculate that its underlying/historically older meaning might have been "to lose one's way" then. A more literal paraphrase is "it turns me".

³⁴⁴ Etymologically, it seems to be clear enough to regard this and the following plural person markers as simple pluralizations (with **(V)\eta*) of singular (or unmarked) person markers; note that, if this is correct, the 1st PL morpheme would then have to be regarded as "borrowed" from the "D-series"; similar pluralizations of unmarked person markers are to be found in P⁴ and P¹, though the latter slot shows a different vowel.

ba-series:

$a/k^6-(i)-(s)-sal$	"he spends the night"
$i/k^6-(i)-(s)-sal$	"she spends the night"
$\emptyset/k^6-(i)-(s)-sal$	"it/these (things) spend(s). th. n." ³⁴⁵

bo-series:

u/k^6-a^4-tn	"she goes"
$o\eta/[k]^6-a^4-tn$	"they go"
$b\acute{h}lda\ u/k^6-a^4-tn$	"everything passes"

In conjugation III (4.4.3.3), where P^6 morphemes serve only as coreferential subject markers accompanying P^8 "D-series" morphemes, all 3rd person P^6 markers have the shape *bu*, thus the contrast of number and class is neutralized.

The occurrence of P^6 in conjugation IV verbs is marginal. Here, they only mark objects/patients, but transitive verbs of conjugation class IV are very rare in Ket (the paradigm given in 4.4.3.4 may indeed be the only good example). The fact that only the *bo*-series is found in "verbs of this type" is certainly contingent.

Werner (e.g. 1997c, 193) explains the alternation of *ba*- vs. *bo*-suffixes as an expression of the category of *version*³⁴⁶. The *ba*-series is labelled as marking *introvert* version, whereas *bo*-verbs encode *extrovert* actions/processes. Extrovert verbal contents describe actions/processes, which spatially "transcend" the immediate sphere of the actant: most typically, they entail some spatial dislocation/movement "away" from the actant or the "scene" the narration is focussed on. Thus, introvert *ba*-verbs are more likely to describe processes of approaching, remaining within the scene, or non-lasting changes of state, whereas extrovert *bo*-verbs are often found for processes, which involve movement away, disappearing, or permanent changes of state (Werner 1997, 193ff.).

Recall (cf. 4.4.5.4.1) Vajda's claim that the *ba*-/*bo*-distinction is basically due to the labializing effect of one certain determiner (*k*), provisionally referred to as "ablative" /*k*/. The functions Vajda ascribes to this morpheme square well with Werner's notion of extrovert version. However, this reinterpretation does not necessarily render Werner's observations on *ba*-/*bo*- irrelevant or wrong. The functional content (be it of a contextually independent *bo*-series of P^6 affixes, or of a labializing $P^{5/6}$ determiner) of "extroversion" seems to be reasonably clear (but note the exceptions mentioned in 4.4.5.4.1), at least defensible. What is less clear, though, is the question, whether we should speak of a systematic opposition of verbal markers, or, in other words, a functional category of "version" in the Ket verb. The weak leg of such an assumption is certainly the "introvert" character of the *ba*-series, which, as numerous examples show, seems to be as much compatible with "extrovert" meanings as with "introvert ones".

P^6 markers are subject to the following morphotactic rules:

³⁴⁵ Natural context: "some object is kept in some place during the night". Example given by Werner 1997c (193).

³⁴⁶ This term was borrowed from Kartvelian/Georgian linguistics (*kceva*), where it refers to a set of morphological markers, which add *directional* or *beneficial* semantic nuances to a given verb form (i.e. whether the verbal action/process is directed towards/beneficial for a 3rd person indirect object [*saxvıso*], the speaker himself [*satavıso*], or not [*saarvıso*]).

TR 7, TR 8, VIR 1, VIR 2, VIR 3, SR 4

The almost universal co-occurrence of P⁶ actant markers with *determiners* is discussed in detail in 4.4.5.3.

4.4.5.8 Person markers and thematic *a* in P⁴

P⁴ is a complex slot in that it hosts 3rd person actant morphemes as well as a rather frequently found lexical morpheme /*a*/, which does not fulfil any discernable grammatical/semantic function. We will refer to it as "thematic" /*a*/.

4.4.5.8.1 P⁴ actant markers

The slot P⁴ is filled with person markers in conjugation classes I and III. All denote 3rd person *objects*³⁴⁷:

3.SGm	<i>a/o</i> ³⁴⁸
3.SG f	<i>i</i>
3.PL	<i>aŋ/oŋ</i>

Note that these markers coincide formally with 3rd person markers in P⁶ (4.4.5.7), but their different position in the template sets them clearly apart. The labialized variants³⁴⁹ cannot be compared, since they owe their *o*-vocalism to quite different factors.

In the following forms, 3rd person object-marking P⁴ morphemes are highlighted:

Conjugation I (*ted* ~ *tek* I_r (*in*) (*bo/k*) "to beat"):

<i>dɔ̃⁸-(k)-ã⁴-ted</i>	"she beats him"	Pret.: <i>dã⁸-õ⁴-[i]n²-ted</i>
<i>dĩ⁸-ĩ⁴-ted</i>	"I beat her"	Pret.: <i>dĩ⁸-ĩ⁴-(d)-in²-ted</i> < <i>diruntet</i> >
<i>dã⁸-aŋ⁴-(a)-ted</i>	"she beats them"	Pret.: <i>dã⁸-oŋ⁴-(o)-[i]n²-ted</i>

Conjugation III (*t III_r* (*il*) (*bo/k*) "to carry"):

<i>dã⁸-bu/k⁶-ã⁴-(j)-(i)-t</i>	"she carries him"	Pret.: <i>dã⁸-bu/k⁴-õ⁴-[i]l²-(i)-t</i>
<i>[dĩ⁸]-bo/k⁶-ĩ⁴-(j)-(i)-t</i>	"I carry her"	Pret.: <i>[dĩ⁸]-bo/k⁶-(d)-ĩ⁴-(t)-[i]l²-(i)-t</i> < <i>bógditlit</i> >
<i>dã⁸-bu/k⁶-aŋ⁴-(i)-t</i>	"she carries them"	Pret.: <i>dã⁸-bu/k⁶-oŋ⁴-[i]l²-(i)-t</i>

³⁴⁷ Other (1st and 2nd person, 3rd person neuter) object markers are, in these conjugations, distributed over slots P³ and P¹.

³⁴⁸ The morphemes *o* and *oŋ* show *preterite-labialization*, illustrated in 4.4.5.8.3.

³⁴⁹ Unlike with the P⁶ 3rd SG f marker, /*i*/ has *no* variant /*u*/ here.

P⁴ actant markers participate in the following morphotactic rules:

TR 9, SR 5, SR 7, SR 8, SR 9, SR 10, SR 11

4.4.5.8.2 *a*⁴ as "thematic" marker

In a great number of verbs, in all conjugation classes, P⁴ is always occupied by a morpheme *a/o*, which does not seem to fulfil a clearly determinable function. We call it, following Vajda 2001, "thematic" *a*⁴, and verbs characterized by this (lexical) element "thematic" verbs³⁵⁰. The following intransitive paradigms illustrate its occurrence:

athematic verb		thematic verb	
<i>qol I_{itr} (in)</i> "to get well"		<i>daq I_{itr} (il)</i> "to live"	
<i>di</i> ⁸ -(j)- <i>qol</i>	"I get well"	<i>di</i> ⁸ -(k)- <i>a</i> ⁴ - <i>daq</i>	"I live"
<i>ku</i> ⁸ -(j)- <i>qol</i>	"you (sg.) get well"	<i>ku</i> ⁸ -(k)- <i>a</i> ⁴ - <i>daq</i>	"you (sg.) live"
<i>du</i> ⁸ -(j)- <i>qol</i>	"he gets well"	<i>du</i> ⁸ -(k)- <i>a</i> ⁴ - <i>daq</i>	"he lives"
<i>dɔ</i> ⁸ -(j)- <i>qol</i>	"she gets well"	<i>dɔ</i> ⁸ -(k)- <i>a</i> ⁴ - <i>daq</i>	"she lives"
<i>d[i]</i> ⁸ - <i>in</i> ² - <i>qol</i>	"I got well"	<i>d[i]</i> ⁸ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>daq</i>	"I lived"
<i>k[u]</i> ⁸ - <i>in</i> ² - <i>qol</i>	"you (sg.) got well"	<i>k[u]</i> ⁸ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>daq</i>	"you lived"
<i>d[u]</i> ⁸ - <i>in</i> - <i>qol</i>	"he got well"	<i>d[u]</i> ⁸ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>daq</i>	"he lived"
<i>dɔ</i> ⁸ - <i>in</i> ² - <i>qol</i>	"she got well"	<i>a</i> ⁸ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>daq</i>	"they lived"

Should a thematic verb need to encode a (human, thus *m* or *f*) object, P⁴ actant markers override the existing thematic marker; however, clear examples are rare, since the overwhelming majority of thematic transitives allow *inanimate* objects only. A possible (albeit semantically a bit less than natural) example is:

- a)
- | | |
|---|--------------------------------|
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>a</i> ⁴ - <i>dan</i> ¹ - <i>don</i> | "he tears us apart, in pieces" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>dan</i> ¹ - <i>don</i> | "id. (pret.)" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>a</i> ⁴ - <i>ku</i> ¹ - <i>don</i> | "he tears you (sg.) apart" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>ku</i> ¹ - <i>don</i> | "id. (pret.)" |
- b)
- | | |
|---|----------------------|
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>a</i> ⁴ -(j)- <i>don</i> | "he tears him apart" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>o</i> ⁴ - <i>[i]</i> ² - <i>don</i> | "id. (pret.)" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>i</i> ⁴ -(j)- <i>don</i> | "he tears her apart" |
| <i>d[u]</i> ⁸ - <i>usn</i> ⁷ - <i>i</i> ⁴ -(d)- <i>i</i> ² - <i>don</i> | "id. (pret.)" |
- <*dusniruldon*>

³⁵⁰ This is a deliberate analogy to the practice and terminology of Indo-European linguistics, where verbs may be "athematic" or "thematic", the latter ones showing a functionally opaque ablauting vocalic root-increment (**e/o*).

Observe that the forms in b) show P⁴ object markers, where the forms in a) have only thematic P⁴ (and object markers in P¹). One may suspect that the formal closeness of actant and thematic P⁴ may at times give rise to a certain degree of ambiguity as to the identity of a given a⁴/o⁴ morpheme³⁵¹. However, the operation of specific morphotactic rules helps to disambiguate them; while, e.g., *Separator Rule 3 and 7* (4.4.4.4.3, 4.4.4.4.7) apply to both personal and thematic a⁴ alike, *Separator Rule 5* (4.4.4.4.5) inserts a (j)-separator after *personal*, not after *thematic* a⁴, mechanically before vowel-initial R, less consistently before consonant-initial R (cf. <dùsnajdon> above).

Truncation Rule 9 (4.4.4.2.9) elides only thematic P⁴ a³⁵². It leaves, however, preterite o⁴ intact, with the effect that some paradigms may give the impression of being *semi-thematic*, i.e. thematic in preterite tense forms only, e.g.:

k[u] ⁸ -lab ⁷ -ba/t ⁶ -aq "you (sg.) bite me"	k[u] ⁸ -lab ⁷ -ba/t ⁶ -o ⁴ -[i]n ² -aq "you (sg.) bit me"
dī ⁸ -t ⁵ -it "I sniff"	dī ⁸ -t ⁵ -o ⁴ -[i]l ² -it "I sniffed"
[du] ⁸ -bu/t ⁶ -ok "he shudders"	[du] ⁸ -bu/t ⁶ -o ⁴ -[i]l ² -ok "he shuddered"
dī ⁸ -t ⁵ -oη "I see (it)"	dī ⁸ -t ⁵ -o ⁴ -[i]l ² -oη "I saw (it)"

All these cases are sufficiently explained by TR 9.

Vajda (e.g. 2004) labels lexical P⁴ a/o as "durative". While it seems to be correct that the (large) group of thematic verbs does not contain many true semelfactives³⁵³, we think it wiser to refrain from such a functional description of this morpheme. Thematic a⁴ is present in what seems to be the absolute majority of Ket verbs (in terms of type-frequency)³⁵⁴, and the meanings encoded by these verbs range from clearly "durative" processes and states (like "to grow", "to get used to", or many verbs with decidedly iterative semantics) to clearly punctual/sudden activities/processes (like "to beat", "to shoot" etc.). Lack of thematic a⁴ is likewise compatible with a similar range of meanings, though Vajda is certainly right in observing that most true *iteratives* are after all thematic.

³⁵¹ Recall that aη/oη⁴ will *always* be a 3rd plural object marker, as well as i⁴ is, of course, always a feminine object morpheme.

³⁵² The *disambiguating* force of this rule is, however, marginal at best, since *non-thematic transitive* verbs of conjugation classes I or III, which semantically allow for an *animate masculine* object, are extremely rare if not absent altogether. We could not find one.

³⁵³ V./Z. write "no true semelfactives", but this should be rewritten to "not many", cf. e.g. kas⁷-tet ~ tek II_r (a) (il) (ba/k) "to kick (once)", which is thematic and *expressedly* semelfactive in meaning. Similarly lab⁷-aq II_r (a) (in) (ba/t) "to bite (once)".

³⁵⁴ A rough count revealed ca. 60% of the verbs listed in Vajda/Zinn 2004 to be thematic.

4.4.5.8.3 Preterite-labialization of P⁴ /a/, /aŋ/

Any a^4 is labialized in preterite forms to o^4 (including $a\eta^4 \rightarrow o\eta^4$), whether thematic or actant marker (cf. the many examples in the forms and paradigms discussed above, or elsewhere in this grammar). Given the frequency of thematic verbs on the one hand, and that of conjugation I transitives on the other hand, an o -vowel to the left of the preterite marker *il/in* is present in so many actual preterite verb forms of Ket that it was repeatedly described as the true preterite/past tense morpheme of the language³⁵⁵ (e.g. Werner 1997c, 203f.). However, it is really only present when the non-past forms offer an a^4 (or $a\eta^4$) to labialize, and any independent status as a tense morpheme should thus be excluded. As a consequence, Werner (ibid.) views a^4 as an explicit marker of *present tense*, but, again, ca. 40% of Ket verbs do not show this morpheme in their present tense forms, so we still prefer the neutral label "thematic" for this frequent, but not ubiquitous, morpheme³⁵⁶. We are thus unable to follow Werner (1997c, 204), who explains the lack of a^4/o^4 (i.e. the whole class of athematic verbs) as a kind of stylistic option³⁵⁷.

The result of preterite-labialization is in almost all instances the vowel o in P⁴. In a few cases, the labializing effect extends to neighbouring segments as well. Thus, the (a)-separator inserted by *Separator Rule 8* is routinely labialized in the preterite alongside the P⁴ morpheme $a\eta \rightarrow o\eta$ itself (cf. $[di]^8-o\eta^4-(o)-b\acute{o}k$ "I found them"). A rather spectacular case of over-extended preterite labialization is offered by two verbal roots, $\sqrt{aq} \sim oq$ "to become" and $\sqrt{qan} \sim qon$ "to become, to begin", which labialize the root vowel in preterite forms alongside with thematic a^4 . In a few verbs, the P⁴ vowel is consistently further raised to /u/ in the preterite, mostly in the vicinity of phonetic $[\gamma]$ or phonemic /h/, cf.:

$[di]^8-h^5-a^4-d[i]^1$ -tes "I stand up"	$[di]^8-h^5-u^4-[i]^2$ -dan ¹ -tes "we stood up"
$[ku]^8$ -don ⁷ -ba/k ⁶ -u ⁴ -[i] ² -ted "you stabbed me"	

³⁵⁵ P² *il/in* was, then, mostly regarded as a marker of *aspect*, cf. 4.4.5.11.1.

³⁵⁶ It is of course true that *unlabialized* a^4 may only occur in present tense forms, and never in the preterite, thus describing it as a "present tense marker" may actually do little harm to a consistent synchronic ("surface") analysis of Ket; however, it seems to be clear enough that historically it cannot have had this function. The origin of preterite-labialization remains unclear, though, very probably it owes its existence to some segment following $a(\eta)^4$, but such a segment must have been lost as early as proto-Yeniseian (Kott, too, shows a variety of preterite-labialization, also without offering any clue to its origin).

³⁵⁷ "Da sie [the "tense affixes" *a* and *o*, St.G.] aber in den Vergangenheitsformen der meisten Verben erscheinen und folglich aufs engste mit dem Tempus verbunden sind, werden oft aus ökonomischen Gründen [sic] und ohne jeglichen Nachteil in der Bedeutung die Tempussuffixe in den entsprechenden Verbalformen weggelassen".

4.4.5.9 Inanimate object/subject markers and petrified b^3

Slot P^3 may only be filled by a single morpheme, b^3 (which may sometimes surface as $[m]$, cf. 3.3.2). Again, we have to differentiate between truly *actant marking* b^3 and instances of *petrified* b^3 's, which fulfil a variety of functions.

4.4.5.9.1 Actant b^3

Verbs of conjugation classes I, III, and IV may fill P^3 with the morpheme $/b/$, indicating an *inanimate* (i.e. *neuter*) object in transitive verbs of conjugation classes I and III, but co-referencing inanimate *subjects* in conjugation I and IV intransitives³⁵⁸.

The role of b^3 as a marker of neuter/inanimate objects as against animate masculine/feminine objects can be illustrated by the following sets of forms (present and preterite contrasted, to highlight position class)³⁵⁹:

a) conjugation I

$ku^8-d\bar{i}^1-b\bar{a}k$	$k[u]^8-in^2-d\bar{i}^1-b\bar{a}k$	"you find/found <u>me</u> "
$di^8-k\bar{u}^1-b\bar{a}k$	$d[i]^8-in^2-k\bar{u}^2-b\bar{a}k$	"I find/found <u>you</u> "
$d\bar{a}^8-(k)-\bar{a}^4-b\bar{a}k$	$d\bar{a}^8-\bar{a}^4-[i]n^2-b\bar{a}k$	"she finds/found <u>him</u> "
$di^8-\bar{b}^3-b\bar{a}k$	$di^8-\bar{b}^3-in^2-k\bar{a}k$	"I find/found <u>it</u> "

b) conjugation III

$[ku]^8-ku/k^6-d\bar{i}^1-t$	$[ku]^8-ku/[k]^6-[i]l^2-d\bar{i}^1-t$	"you bring/brought <u>me</u> "
$[di]^8-bo/k^6-k\bar{u}^1-t$	$[di]^8-bo/[k]^6-[i]l^2-k\bar{u}^1-t$	"I bring/brought <u>you</u> "
$d\bar{a}^8-bu/k^6-\bar{a}^4-(j)-(i)-t$	$d\bar{a}^8-bu/k^6-\bar{a}^4-[i]l^2-(i)-t$	"she brings/brought <u>him</u> "
$[di]^8-bo/k^6-\bar{b}^3-(i)-t$	$[di]^8-bo/k^6-\bar{b}^3-il^2-(i)-t$	"I bring/brought <u>it</u> "

In intransitive verbs of conjugation classes I and IV, the functional orientation of b^3 is reversed. Here, this morpheme references the single actant of a typically non-controlled process (mostly a state, motionless "position" or a change of state) as its undergoer³⁶⁰; consequently, there are no P^8 actant markers in such forms:

$d\bar{i}l^8-a\eta^7-(i)-(s)-ta$	$d\bar{i}l^8-a\eta^7-i\bar{l}^2-ta$	"I am/was hanging"
$a\eta^7-(i)-\bar{b}^3-ta$	$a\eta^7-(a)-\bar{b}^3-i\bar{l}^2-ta$ ³⁶¹	" <u>it</u> is/was hanging"

³⁵⁸ b^3 in defective verbs with the incorporate bin^7 is illustrated in 4.4.5.2.4.

³⁵⁹ On the partial root suppletivism in this root, cf. 4.4.5.1.1.2.1.

³⁶⁰ Of course, this could be counted as another "ergative" trait of Ket, albeit a rather inevitable one: a marker reserved for inanimate participants will more likely (or better: more frequently) than not encode patients/undergoers rather than agents; if it may occur as the single actant of monovalent verbs as well, its patterning will quite naturally be "ergative".

³⁶¹ Anaptyctic (a) in this form was obviously inserted in analogy to SR 9 (4.4.4.4.9), due to the formal similarity of the P^7 incorporate $a\eta^7$ "hang" with the P^4 (plural) actant marker $a\eta$.

$\underline{d}\bar{a}^8-t^5-a^4-qut$	$\underline{d}\bar{a}^8-t^5-o^4-[i]l^2-qut$	" <u>she</u> is/was lying"
$t^5-a^4-\underline{b}^3-qut$	$t^5-o^4-\underline{b}^3-il^2-qut$	" <u>it</u> is/was lying"

Many verbs of this kind do not allow for animate undergoer-subjects at all, in most cases for quite obvious semantic reasons:

$t\eta^7-k^5-(i)-b^3-qut$	$t\eta^7-k^5-(i)-b^3-[i]l^2-[q]ut^{362}$	"it is/was stopped up"
---------------------------	--	------------------------

Apart from the examples given above, *most* instances of conjugation I intransitives with subject marking b^3 are further marked by what is described by Vajda (2004) as "petrified" *resultative a*¹:

$usn^7-a^4-b^3-a^1-don$	$usn^7-o^4-b^3-[i]l^2-a^1-don$	"it is/was torn"
$a^4-b^3-a^1-do$	(- ³⁶³)	"it is scraped off"

Below (4.4.5.10.2) we will argue that these instances are better reinterpreted as more regular resultative formations involving a change of conjugation class (from I to IV). We acknowledge, though, the existence of petrified resultative a^1 , but only for conjugation II verbs.

Another large group of verbs of this kind is formed with the (semantically affix-like, cf. 4.4.5.1.2) root morpheme $\sqrt{qan} \sim qon$ "to become, acquire a state", like

$(to^n) k^5-qan \sim qon I_{tr}(a)$	"to become (like this)"
$to^n d\bar{i}^8-k^5-a^4-qan$	"I become like this"
$to^n k^5-a^4-b^3-qan$	"it becomes like this"

and many others, with different P⁷ incorporates encoding the adjectival target of change.

Conjugation IV intransitives with subject/undergoer b^3 are rarer, but by no means uncommon, e.g.:

$d[i]^8-\dot{i}t^7-k^5-a^4-d^1-dij$	"I show myself, appear"
$\dot{i}t^7-k^5-a^4-b^3-a^1-dij$	"it shows itself, appears"

4.4.5.9.2 Non-actant (petrified) b^3

Apart from the paradigmatical use of b^3 as an actant marker illustrated above, several verbs show b^3 in *all* finite forms³⁶⁴. We regard such cases as instances of (analogically extended and thus) petrified/fossilized b^3 and subsume this obligatory morpheme under the *lexical* elements forming these verbs (which, then, has to be

³⁶² <*t\eta givlut*> with $q > 0$ due to cluster reduction.

³⁶³ A preterite form is not attested, though resultatives do generally inflect for tense.

³⁶⁴ b^3 , petrified or paradigmatic, is, with few and irregular exceptions, absent from imperative forms, cf. 4.4.6.2.

incorporated into their verbal "formula"). Such verbs are not rare and it seems justified to search for possible motivations for the presence of this morpheme in them. Vajda (2004, 67ff.) discriminates between the following cases: according to him, petrified b^3 can form *applicatives*, *intensives*, *involuntary causatives*. It should be borne in mind, though, that these labels are by no means to be taken as functional descriptions of live morphological categories of Ket. They may serve as more or less felicitous mnemonics trying to capture what are at best *former*, historical functions of the b^3 -marker, which can no longer be actively "switched on or off" by Ket speakers to achieve a desired semantic effect, nor is its presence or absence governed by any syntactic circumstances or rules. Before we have a look at the array of functional labels mentioned above we should, however, review the distribution of such verbs among the different conjugation classes. An inspection of the "b-verbs" listed in Vajda/Zinn 2004 shows that, out of 56 verbs (discounting verbs which are only differentiated by different and semantically transparent P^7 incorporates), no less than 43 belong to conjugation class II (27 transitives, 16 intransitives). Conjugation II is, thus, the hotbed of petrified b^3 , which is quite surprising, since this conjugation does not normally mark a neuter object in this position, but in P^6 with a completely different set of morphemes (cf. 4.4.3.2). We may then try to look for possible reasons why this phenomenon seems to favour conjugation II. If we narrow down the sample of conjugation II verbs to those which fill P^6 with the *ba*-series of person markers (4.4.5.7), we should take cognizance of the fact that, for this subgroup, the regular marker of 3rd SG neuter objects is \emptyset . Though *bo*-verbs with petrified b^3 do occur, *ba*-type conjugation II verbs are by far the most frequent subtype showing this phenomenon, which lends some strength to the scenario outlined here (recall that *bo*-verbs mark 3rd neuter object in P^6 by u^6 , thus no need would arise to introduce a "foreign" marker from a different class to overtly mark this actant).

The regular 1st SG subject 3rd neuter object form of a conjugation II *ba*-verb like k^5 -*daq* "to throw, shoot" would then be:

* di^8 - \emptyset/k^6 -*daq* <*dikdaq*> "I shoot it"

Now, while this form would be perfectly correct according to the conjugational pattern (and such forms do in fact remain unchanged in some cases), it will be quite understandable that the lack of an overt marker of the inanimate object may be felt as infelicitous, so a suitable marker, namely b^3 , could have been analogically introduced from other conjugation classes to yield:

[di]⁸- \emptyset/k^5 -(*i*)- b^3 -*daq* <*kibdaq*> "I shoot it"

This is the actually attested form (surface-changed by morphotactic rules, which operated regularly and predictably after the introduction of b^3 into this form, which is its only "non-Conjugation II" feature). From here, this b^3 will then have spread through the paradigm to be eventually present in all finite forms. Being an analogical process, we should not expect it to take place always and everywhere (it does not, of course), and we also expect to find verbs where b^3 was introduced into 3rd SG neuter object forms, but not extended to other forms. In fact we do find (albeit a few) such verbs, like for example:

*donan*⁷-do *II_{tr}* (a) (il) (ba/t) "to stab with a knife (iter.)"

[*di*]⁸-*donan*⁷-Ø/*t*⁶-*a*⁴-*b*³-do "I stab it repeatedly with a knife"

but:

*da*⁸-*donan*⁷-aη/*t*⁶-*a*⁴-do "she stabs them"

Note that the first form also allows for a straightforward analysis in terms of conjugation I: [*di*]⁸-*donan*⁷-*t*⁵-*a*⁴-*b*³-do (i.e. with no marker at all in P⁶ and regular object marking in P³)³⁶⁵. We could thus speak of a "mixed" paradigm here, which combines conjugation I and conjugation II forms; conjugation mixing is not uncommon in Ket (4.4.3.6), but this analysis does of course not work for verbs, which generalize this *b*³ throughout the paradigm, like e.g.:

*t*⁵-es *II_{tr}* (b) (in) to draw

Subject: 3rd SG f

Object↓:

present tense

1SG *da*⁸-*ba*/*t*⁶-*b*³-es

2SG *da*⁸-*ku*/*t*⁶-*b*³-es

3SGm *da*⁸-*a*/*t*⁶-*b*³-es

3SGf *da*⁸-*i*/*t*⁶-*b*³-es

3SGn *da*⁸-*t*⁵-(*i*)-*b*³-es

1PL *da*⁸-*dəη*/*t*⁶-(*i*)-*b*³-es

2PL *da*⁸-*kəη*/*t*⁶-(*i*)-*b*³-es

3PL *da*⁸-*aη*/*t*⁶-(*i*)-*b*³-es

The zero-marking of 3rd SG neuter objects in conjugation II *ba*-verbs³⁶⁶ is thus a "keyhole", through which *b*³ objects markers may have been introduced into such forms, from where they could be generalized to the whole paradigms. This should alert observers to the possibility that *many* (if not necessarily all) instances of generalized/petrified/fossilized *b*³ may be (and some certainly are) due to a purely formal, analogical process, for which no functional explanations are necessary. That said, there are of course instances of generalized *b*³ in conjugation II *bo*-verbs and, though quite rarely, in verbs of other conjugation classes, including also intransitive verbs. For these³⁶⁷, we may look for possible *functional* explanations. First of all, there are verbs, in which petrified *b*³ seems to fulfil the

³⁶⁵ Recall the oscillation of "determiners" between P⁶ and P⁵ from 4.4.5.3.

³⁶⁶ A further corollary is that the verb should be semantically capable of taking *inanimate objects*, of course.

³⁶⁷ And of course for some conjugation II *ba*-verbs as well: for some of these, *both* the formal, analogical, explanation *and* one of the functional possibilities mentioned below seem to make much sense. Since the fossilization of *b*³ is in no case predictable, both

function of an *applicative* marker. We define an *applicative* construction as one, in which a peripheral sentential constituent is "promoted" to direct object status. Such constituents are cross-linguistically often instruments, and we do find examples of b^3 -verbs which explicitly convey the meaning that some action is carried out by means of an instrument (very often a vehicle or other means of transport). Cf. the following example (Vajda/Zinn 2004, 93):

(241)

bū-ŋ ād sūl-as da⁸-əla⁷-bo/k⁶-d⁵-o⁴-b³-il²-taŋ
 he-PL I sled-INS 3f-outside-1/D-Th-b-Pst-drag-dragged
 She dragged me outside by sled.

The verb has *three* actant markers (in P^8 , P^6 and P^3 respectively), and it seems well justified to view b^3 here as cross-referencing the instrument "sled" (in the instrumental case).

b^3 -verbs which semantically imply the use of instruments include:

<i>əla⁷-is I_{itr}(a) (b) (in)</i>	"to travel downriver by boat"
<i>at⁷-aq I_{itr}(b) (ij)</i>	"to pour liquid matter" ³⁶⁸
<i>k⁵-taŋ II_{itr}(b) (in)</i>	"to place wreath on sb." ³⁶⁹
<i>dil II_{itr}(b) (il) (ba/q)</i>	"to dress sb."
<i>kit⁷-ted ~ tek II_{itr}(a) (b) (il) (ba/t)</i>	"to smear with fat" ³⁷⁰

In some verbs, petrified b^3 seems to *intensify* the meaning conveyed, many - not all - of these verbs show explicitly iterative semantics, cf.³⁷¹

<i>kaskun⁷-t⁵-ted ~ tek II_{itr}(b) (il)</i>	"to kick (iter.)"
<i>koon⁷-t⁵-ted ~ tek II_{itr}(b) (il)</i>	"to punch (iter.)"
<i>kulasn⁷-t⁵-ted ~ tek II_{itr}(b) (il)</i>	"to push (iter.)"
<i>toon⁷-t⁵-ted ~ tek II_{itr}(b) (il)</i>	"to grab (iter.)"
<i>ej⁷-k⁵-daq III_{itr}(a) (b) (in)</i>	"to throw os. on the ground"

In some cases, such "intensive" verbs have a "non-intensive" counterpart without petrified b^3 :

factors may at times have reinforced each other to produce the actual paradigm. Sometimes one of these factors was sufficient, sometimes both were not. Ket is like that.

³⁶⁸ The *object* of this verb is the person/thing the stuff is *poured on*, the substance poured is the *instrument*, cf. the German gloss *begießen (mit)*.

³⁶⁹ Again, "wreath" is the *instrument* (German: *jd. bekränzen*); note that the instrument does not have to be explicitly mentioned in sentences containing this kind of "applicatives". It can be, but it may be left implicit.

³⁷⁰ This verb - as others with the root $\sqrt{\text{kit}}$ "stroke, smear, rub" - incorporates the instrument in P^7 .

³⁷¹ None of these examples display the "keyhole" for the analogical introduction of b^3 described above.

k^5 - <i>tn</i> <i>II</i> _{itr} (<i>b</i>) (<i>in</i>) (<i>bo/k</i>)	"to run out (once)"
<i>bo/k</i> ⁶ - <i>a</i> ⁴ - <i>b</i> ³ -(<i>i</i>)- <i>tn</i>	"I run out"
< <i>bóγavitn</i> >	

vs.

k^5 - <i>tn</i> <i>II</i> _{itr} (<i>in</i>) (<i>bo/k</i>)	"to go"
<i>bo/k</i> ⁶ - <i>a</i> ⁴ - <i>tn</i>	"I go"
< <i>bòγotn</i> >	

Or cf. the following verbs which fall a bit short of a perfect minimal pair since it remains unclear if and how the determiner t^5 contributes to the "intensive" meaning:

saq^7 - t^5 - <i>ted</i> ~ <i>tek</i> <i>I</i> _{itr} (<i>a</i>) (<i>b</i>) (<i>il</i>)	"to stride"
[<i>di</i>] ⁸ - saq^7 - t^5 - <i>a</i> ⁴ - <i>b</i> ³ - <i>ted</i>	"I stride"
< <i>sáktaptet</i> >	

vs.

saq^7 - <i>ted</i> ~ <i>tek</i> (<i>a</i>) (<i>il</i>)	"to take a step"
[<i>di</i>] ⁸ - saq^7 - <i>a</i> ⁴ - <i>ted</i>	"I take a step"
< <i>sákratet</i> >	

A further group of verbs with petrified b^3 is called "involuntary causatives" by Vajda. They are all conjugation II intransitives and denote processes the single actant undergoes involuntarily or without consciously or wilfully controlling them, including, but not limited to, sensual perceptions. Recall from 4.4.3.1 that some conjugation I verbs use b^3 to denote *inanimate* undergoers of certain states. The difference to conjugation II "involuntary causatives" is clear enough, since the latter denote processes rather than states and the undergoer is overtly expressed (in P⁶ and not at all by b^3 ; most if not all of such verbs do not allow for an animate undergoer/actant at all); nevertheless, it may be speculated that the group of verbs discussed here may have been influenced by the (more regular) use of b^3 in conjugation I verbs with inanimate undergoers; these verbs include:

<i>qut</i> <i>II</i> _{itr} (<i>b</i>) (<i>in</i>) (<i>bo/k</i>)	"to faint"
<i>sati</i> ⁷ - <i>san</i> <i>II</i> _{itr} (<i>b</i>) (<i>in</i>) (<i>ba/k</i>)	"to get ashamed"
<i>kit</i> <i>II</i> _{itr} (<i>b</i>) (<i>in</i>) (<i>ba/t</i>)	"to sense"
<i>da</i> <i>II</i> _{itr} (<i>b</i>) (<i>il</i>) (<i>ba/k</i>)	"to hear"
<i>tate</i> ⁷ - <i>a</i> <i>II</i> _{itr} (<i>a</i>) (<i>b</i>) (<i>in</i>)	"to agree"
<i>ket</i> ⁷ - <i>qan</i> ~ <i>qon</i> <i>II</i> _{itr} (<i>a</i>) (<i>b</i>)	"to get offended"

4.4.5.10 P¹4.4.5.10.1 Actant-marking P¹

Actant-marking affixes in P¹, immediately before the lexical root, occur in conjugation classes I, III, and IV. As true actant (i.e. object) markers they surface in conjugations I and III, and there only for 1st and 2nd person SG and PL (3rd person objects being encoded in position P⁴ and P³ in these conjugations); the singular markers are formally identical with P⁸ subject markers, whereas the plural affixes are closer to, but because of the vowel not entirely identical with, P⁶ subject/object markers:

1 st person SG	<i>di</i>
2 nd person SG	<i>ku</i>
1 st person PL	<i>daŋ</i>
1 st person PL	<i>kaŋ</i>

In conjugation IV, where P¹ is filled by merely "coreferential", semantically empty, markers echoing the person marking in P⁸, two further exponents for 3rd SG and PL are added, which are formally identical to P⁴ 3rd person object markers:

3 rd person SG	<i>a</i>
3 rd person PL	<i>aŋ</i>

P¹ markers are subject to the morphotactic rule TR 11.

4.4.5.10.2 *a*¹ as a petrified resultative marker

A sizable group of verbs contain a stable, petrified morpheme *a* in P¹. Verbs of this kind denote a state, described as the result of some action/process, which took place previous to the speech act (the only overtly expressed actant is then the undergoer of this action/process and consequently of the resultant state). All resultative verbs of this kind are intransitives, and some of them may be contrasted with (transitive) non-resultatives formed basically from the same lexical and morphological material (*minus a*¹), though good minimal pairs of this kind are rare:

<i>ul</i> ⁷ - <i>daq</i> II _{tr} (a) (b) (il) (ba/t)	"to let loose"
<i>k[u]</i> ⁸ - <i>ul</i> ⁷ - <i>ba</i> / <i>t</i> ⁶ - <i>a</i> ⁴ - <i>b</i> ³ - <i>daq</i>	"you (sg.) let me loose"
<i>ul</i> ⁷ - <i>daq</i> II _{itr} (a) (b) (in) (res)	"to be loose, free" ³⁷²
<i>ul</i> ⁷ - <i>ba</i> / <i>t</i> ⁶ - <i>a</i> ⁴ - <i>b</i> ³ - <i>a</i> ¹ - <i>daq</i>	"I am (let) loose, I am free"

³⁷² The (lexical) choice of P² preterite markers does not contribute to the resultative meaning of this verb. Resultatives, non-resultatives, in fact all kinds of Ket verbs, may show either P² preterite morpheme.

According to Vajda (e.g. 2004), this phenomenon occurs with verbs of conjugations I and II. In the following, we will argue that only in conjugation II we can speak of truly "petrified" a^1 , whereas in conjugation I the formation of resultatives is morphologically more transparent and the presence of a^1 may be functionally explicable there. In fact, we will defend the conclusion that "conjugation I resultatives with petrified a^1 " are rather to be re-interpreted as regular object-oriented forms of conjugation IV.

Verbs of conjugation II do not normally fill P^1 at all with any actant morphemes (cf. 4.4.3.2). The fact that resultatives do contain this marker in this position, and the additional fact that it is always a (only conjugation IV has the morpheme a in P^1 , and only as "coreferential" marker of 3rd person, conjugations I and III know only 1st and 2nd person object markers in this position), forces us to describe it as *petrified* in ca. a dozen of verbs. Most of these verbs tolerate only 3rd person actants (undergoers), and only very few of them have full personal paradigms. One of these is the verb for "to be beaten"³⁷³:

$ba/k^6-a^4-b^3-a^1-ted$	"I am beaten" (state)
$ku/k^6-a^4-b^3-a^1-ted$	"you (sg) are beaten"
$a/k^6-a^4-b^3-a^1-ted$	"he is beaten"
$i/k^6-a^4-b^3-a^1-ted$	"she is beaten"
$da\eta/[k]^6-o^4-b^3-[i]l^2-a^1-ted$	"we were beaten"
$ka\eta/[k]^6-o^4-b^3-[i]l^2-a^1-ted$	"you (pl) were beaten"
$a\eta/[k]^6-o^4-b^3-[i]l^2-a^1-ted$	"they were beaten"

Vajda (e.g. Vajda/Zinn 2004, 153) describes verbs of the following type as conjugation I verbs with the same "petrified" P^1 resultative marker:

$un^7-a^4-b^3-a^1-don$	"it is torn up"
$un^7-o^4-b^3-[i]l^2-a^1-don$	"it was torn up"

There are ca. 30 verbs of this type listed by Vajda/Zinn 2004. All have in common that they *only* allow 3rd person (in the overwhelming majority of cases: inanimate) actants/undergoers. Superficially - and in the absence of non-3rd person forms, which could help to disambiguate the situation - it is of course formally possible to assign these verbs to conjugation I and to invoke the same kind of "petrified" resultative marker as for the conjugation II verbs discussed above.

4.4.5.11 P^2 : preterite and imperative

Apart from the obligatory preterite-labialization of a , $a\eta$ in P^4 (cf. 4.4.5.8.3), P^2 is the only slot which contains markers of *tense*. If this slot is not filled, the verb form is unmarked for tense, which generally translates into present tense or indefinite (gnomic etc.) tense³⁷⁴; the only morphemes, which can fill it in indicative forms are

³⁷³ This paradigm also illustrates that resultatives are inflected for tense as well.

³⁷⁴ On the expression of future time reference cf. 4.4.6.1

markers of *past* or *preterite* tense. Functionally, the preterite locates an event in the time before the speech act, with no further differentiation of absolute or relative proximity or relative ordering of events expressed by this category. Two preterite markers, *il* and *in*³⁷⁵ form the overwhelming majority (by type and token frequency) of preterite markers, and one of these two affixes is also obligatorily present in *imperative* forms. The formation of imperatives will be illustrated in 4.4.6.2.

4.4.5.11.1 The P² preterite markers *il* and *in*

The dichotomy between verbs marking the preterite by the morpheme *il* and those using *in* has repeatedly been interpreted as an opposition of *aspect* marking. Werner (1997c, 206) explicitly supports this view³⁷⁶, and he refers to the work of Gajer (1980) as most instrumental in forming his thoughts on this matter. Gajer's solution is to analyze the distribution of these morphemes in terms of a contrast of *telicity*. Thus, *il* is used in *atelic* verbs, and *in* is used in *telic* verbs; telic verbs have, according to Gajer, typically a human, highly active agent/subject, whereas the role of the agent in atelic verbs is said to be only minimally active. The choice is dependent on the inherent semantics of the given verb, i.e. lexical rather than paradigmatical. Examples, which are given to illustrate this dichotomy, include

<i>il</i>		<i>in</i>	
<i>bed I_{tr}</i>	"make sth."	<i>ted ~ tek I_{tr}</i>	"beat, hit"
<i>loŋ I_{tr}</i>	"shiver"	<i>qo I_{tr}</i>	"die"
<i>oŋ ~ uk II_{tr} (a) (ba/t)</i>	"see"	<i>qol I_{tr}</i>	"recover, heal up"

However, it is not at all difficult to show a sizable number of examples, for which this semantic interpretation is not possible, cf.:

<i>il</i>		<i>in</i>	
<i>taŋ II_{tr} (bo/k)</i>	"bring by sled"	<i>ɔla⁷-is I_{tr} (a) (b)</i>	"go downriver"
<i>cska⁷-aq ~ daq II_{tr} (ba/t)</i>	"go upriver and return"	<i>kit II_{tr} (b) (ba/t)</i>	"sense"
<i>ikda⁷-aq II_{tr} (ba/k)</i>	"lead so. to the bank"	<i>hil III_{tr} (ba/n)</i>	"shudder"

In this set of examples, verbs taking *il* are ostensibly not "atelic", nor do *in*-verbs necessarily imply that a goal is reached, the verbal action comes to a conclusion or that its actor is necessarily very active³⁷⁷.

³⁷⁵ It should be mentioned that, in the great majority of cases, these morphemes occur only truncated, i.e. as *l* and *n*, respectively (and consequently they are mostly given in the Ketological literature as one-consonant morphemes); only the concept of morphotactic rules (4.4.4) allowed to restore their full (and original) form *with* the vowel as integral part.

³⁷⁶ As a corollary, P⁴ preterite labialization is seen as the only true marker of *tense* in Ket.

³⁷⁷ Both lists can of course be vastly expanded, to eventually include *all* Ket verbs. We believe that the great number of verbs mentioned in this grammar, as formula or in partial and full paradigms, will serve to illustrate the distribution of the two main preterite markers and, then, to show that neither "telicity", nor "aspect" describe this distribution satisfyingly.

Werner accepts the basic distribution of these morphemes according to Gajer in principle, but interprets its functional-semantic content as a straightforward contrast of *aspect*, with *il* for imperfective verbs and *in* for perfective verbs.

This is even less felicitous, since there is no evidence whatsoever in Ket that this category, as we should expect from an "aspect"-marking device, is systematically exploited to form oppositions of otherwise propositionally identical verbs. There are practically no minimal pairs, nor can any rules be set up which would stipulate/exclude the use of "imperfective" or "perfective" verbs in mutually exclusive functional-semantic circumstances.

Actually, one contrasting pair of verbs, differentiated only by the choice of preterite morphemes, is mentioned by Werner, cf. the preterite forms

$ha^7-ted \sim tek I_r$

$d[i]^8-ha^7-[i]^2-ted$

$d[i]^8-ha^7-[i]n^2-ted$

Both are translatable as "I broke (it) in half", the *il*-form is labelled by Werner as "imperfective", the *in*-form as "perfective"³⁷⁸. However, a more appropriate translation equivalent for the *il*-variant is "I broke it repeatedly", thus the *il-in*-opposition is, here, exploited to mark a form as specifically *iterative*. Now, Ket possesses a very large number of verbs which are semantically clearly marked as iterative (in Vajda/Zinn 2004, ca. 60 such verbs are listed). Though there is no unambiguous and paradigmatic iterative morphology, *all* iterative verbs require the P² preterite marker *il*, none of them shows *in* (though, again, the number of clear minimal pairs boils down to just this example).

There is no denying that in languages with clear aspectual oppositions iterativity is much more compatible with imperfective forms/verbs than with perfective ones. It is thus likely that the *il-in*-opposition in Ket is somehow connected with the inherent lexical semantic of the (in every case morphologically complex) verb. The observations of scholars like Gajer, Werner and others, though not entirely conclusive, thus remain important for a future solution of this problem, which, like many other similar problems in Ket, will be a historical solution, rather than a one-to-one matching of form and function on the synchronic level. The fact that P² morphemes are obligatorily present in *imperatives* will have to play a decisive role in any future investigation of the problem³⁷⁹.

³⁷⁸ Werner (1997c, 207) translates these forms as "*ich brach es durch*" vs. "*ich habe es durchgebrochen*"; though there is no systematic "aspect"-opposition in German, which is expressed by the opposition of simple preterite and perfect, this translation attempts to underline that the "perfective" form is more "resultative"-like than the "imperfective" one.

³⁷⁹ A preliminary working hypothesis: *il*-verbs are by far more common than *in*-verbs (the estimated ratio is at least 2 : 1); we may thus assume that, in contemporary Ket, *il* has expanded at the expense of *in*, thus obscuring what might have been the original distribution. This squares with Vajda's (2004, 46) observation that the "telic-atelic"-opposition seems to be disturbed in exactly this direction (i.e. by and large intact, but semantically "implausible" cases show mostly *il*, where this would "not be expected", rather than *in*, which remains to a large degree compatible with non-prolonged, non-iterative, non-static, maybe non-"dynamic" semantic readings of the verbs involved).

Synchronically, Ket has no productive grammatical means coding *aspect* of any kind.

In but two examples, formed with the same root morpheme, the P² preterite marker oscillates between *il* and *in* within a single paradigm, and, curiously, the animacy of the object plays the triggering role here. *il* appears with inanimate objects, *in* with animate ones. The two verbs are

$k^5\text{-ta}\eta$ I_{tr} (<i>il</i> ~ <i>in</i>)	"to roll downhill or up"
$k^5\text{-ta}\eta$ I_{tr} (<i>a</i>) (<i>il</i> ~ <i>in</i>)	"to drag uphill"

Forms like

$[di]^8\text{-}k^5\text{-}o^4\text{-}b^3\text{-}i^2\text{-ta}\eta$	"I dragged it uphill"
$[ku]^8\text{-}k^5\text{-}o^4\text{-}[i]n^2\text{-}di^1\text{-ta}\eta$	"you (sg.) dragged me uphill"

illustrate this distribution. However, most speakers nowadays accept all preterite forms with *il* as well, so this - hard to explain and at any rate isolated - differentiation is at least disturbed, and, not surprisingly, in the direction of an extension of *il*.

The P² preterite markers *il* and *in* are subject to morphotactic rule TR 10.

4.4.5.11.2 Other preterite markers

Only a handful of verbs show different preterite markers in P², namely *ij* and *q*.

4.4.5.11.2.1 The preterite marker *ij*

A small group of verbs show this P² marker, which behaves just like other preterite markers in this position in terms of morphotactic rules (i.e. TR 10), cf.:

$at^7\text{-aq}$ I_{tr} (<i>b</i>) (<i>ij</i>)	"to pour liquid/granular matter"
$d[i]^8\text{-}at^7\text{-}b^3\text{-aq}$	"I pour it"
$d[i]^8\text{-}at^7\text{-}b^3\text{-}ij^2\text{-aq-in}$	"we poured it"
$d[i]^8\text{-}at^7\text{-}a\eta^4\text{-}(i)\text{-}b^3\text{-}[i]j^2\text{-aq}$	"I poured them"

However, this affix, which might be a variant (allegro?) of *il*, is largely confined to Southern Ket; Northern Ket knows preterite forms like $d[i]^8\text{-}at^7\text{-}o^4\text{-}b^3\text{-}[i]l^2\text{-aq}$ "I poured it" etc.

4.4.5.11.2.2 The pseudo-preterite marker *q*

The root \sqrt{ej} "to kill", in at least three different lexical verbs, uses the affix *q* as its past tense marker. The clearest cases showing that this morpheme occupies P² are forms like:

$us^7-ej I_{tr}(q)$	"to kill, to hunt (intr.)"
$d[i]^8-us^7-(s)-ej$	"I kill"
$d[i]^8-us^7-q^2-ej$	"I killed"

However, this marker occurs also in clearly different positions, thus cf.

$q^5?-ej I_{tr}(q?)$	"to kill"
ku^8-d^1-ej	"you kill me"
$[ku]^8-q^5-o^4-d^1-ej$	"you killed me"

The presence of labialized o^4 , lacking in the present, clearly shows that *q* is a P⁵ determiner here³⁸⁰. Determiners present in past tense forms and lacking from present tense forms are otherwise unknown in Ket. The imperative "kill him!":

a^4-q^2-ej	"kill him!"
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shows it in P² again. Add to this that in $d[i]^8-us^7-q^2-ej$ we assigned the past tense morpheme to slot P², because *nothing speaks prima facie against this*, but that an analysis as $d[i]^8-us^7-q^5-ej$ could also - formally - be defended, and it becomes clear that *q* is thus at best a *pseudo*-suffix marking the past tense in verbs for "to kill". It may be safe to propose that it is an intrusion of (or "infected by") the semantically adjacent root \sqrt{qo} "to die".

A special case of non-affixal preterite formation is presented by inchoative verbs with the root $\sqrt{qan} \sim qon$. Formally a case of root suppletivism, the root form regularly found in the past tense shows a symbolic over-extension of *preterite-labialization* (which normally affects P⁴ *a*, cf. 4.4.5.8.3); any further preterite marker is lacking from these forms, which have a high token-frequency.

4.4.6 Mood and tense

4.4.6.1 Present, preterite, and future

The temporally unmarked form of any Ket verb, i.e. a form which has no marker in P², references present or general tense. Past tense reference, absolute only, is

³⁸⁰ Recall from 4.4.5.2.6.4 that *q* is a Ket causativizing morpheme, mostly found as an increment of P⁷ incorporates, but sometimes also as a P⁵ "determiner".

always³⁸¹ marked by the P² preterite markers and, where applicable, by preterite-labialization, discussed above (4.4.5.11, 4.4.5.8.3). There is no bound morphological marker for future time reference. Generally, temporally unmarked forms may refer to the time of the speech act or to the future:

d[i]ʰ-ikʷ-(s)-i/bes <*d[iksivis]*>
I am coming, I come, I will come, I am about/intend to come

(242)

śtn d[i]ʰ-anʷ-(s)-i/bed-in ulʷ-aʷ-ta ánoks tām bōn
we 1-mind-(Sep)-make-PL water-Th-R tomorrow or NEG
We wonder whether it will be raining tomorrow, or not.

In order to explicitly locate an event in the future, Ket uses a particle, *ās* or *ásn*³⁸², which may immediately precede a temporally unmarked (present) verb form:

(243)

ād ās [di]ʰ-lobedʷ-aʷ-bed
I FUT 1-work-Th-make
I will work. (Maksunova 2001, 11)

It may do so, but this particle is actually very rarely used with finite verb forms³⁸³. Vajda (2004, 90) views it as a marker of *habitual* future actions. This interpretation is backed up by the observation that it is actually quite normally encountered with *predicative adjectives*, which, naturally, describe a prolonged state, rather than a temporally shorter, let alone punctual or semelfactive, action, cf.:

(244)

ēn bōn in ās ús-am
now NEG long FUT warm-PRn
Now it will not be warm for long. (Maksunova 2001, 11)

Cf. further (compatible with habitual reading):

³⁸¹ This means, there is no "*praesens historicum*" or the like, i.e. temporally unmarked ("present tense") forms with explicit and intended past time reference.

³⁸² Both variants seem to be freely exchangable without any restriction, functional or in terms of phonotactics.

³⁸³ It may be worth noting that, during bilingual elicitation sessions in Baklanikha, Vereshchagino and Kellog, the present author's consultants never responded with this strategy when prompted to give future forms. They almost invariably gave simple present tense forms or, sometimes, responded with the "inchoative" strategy, s.b.

(245)

qām bīk éηηη-dīŋta ād ās dī⁸-(k)-a⁴-daq
 soon other village-ADESSn I FUT 1-(Sep)-Th-live
 I will soon live in a different village. (Werner 1997, 365)

Or (not compatible with habitual reading, and [therefore?]) without the particle):

(246)

qām dī⁸-(j)-a⁴-qo
 soon 1-(Sep)-Th-die
 Soon I will die. (Werner 1997, 375)

Informants prompted to provide sentences with future time references also often respond with synthetic inchoatives, using the root $\sqrt{qan} \sim qon$, e.g.:

(247)

áska ūk tósa [ku]⁸-ha⁷-[k]u¹-tes ótn ilīŋ⁷-dəŋ/k⁶-a⁴-qan
 when you up 2-vertical-2-R we eat-1PL/D-Th-R(inch)
 When you get up, we will eat.

Vajda (2004, 90) mentions a further particle *kīm* "indeterminably distant future". However, this is rather a temporal adverb, with the meaning "then, at that time", which may refer to the future or the past, cf. :

- with future time reference³⁸⁴:

(248)

[ku]⁸-qa⁷-(k)-o⁴-qon kīka kīm da⁸-t⁵-a⁴-b³-ki
 2-big-(Sep)-Th-R(inch) when then 3SGf-D-Th-3n-tell
 When you will have grown up³⁸⁵, then she will tell it. (Werner 2002, 436)

- with past time reference:

(249)

kīm [du]⁸-ada⁷-o⁴-[i]l²-den
 then 3-ill-Th-Pst-be.ill
 At that time he was ill. (Werner 2002, 436)

³⁸⁴ Vajda's example (2004, 90): *kīm d[i]⁸-i[k]⁷-[i]n²-bes <dímbe>* "I'll come one of these days" is actually a past tense form; the correct translation is: "I came then, at that time".

³⁸⁵ Note that this (<qāγovon>) is formally a past tense form, but its future time reference is secured from the (elicitation) context and the time reference of the "main clause". This is a very rare example of a "futurum exactum" ("when you will have...") in Ket. It remains unclear, though, whether this a native Ket option, or rather a copy of a Russian model.

4.4.6.2 Imperative and prohibitive

The only morphologically marked non-indicative mood of Ket is the imperative. Common to all imperative forms is the obligatory preservation of the (preterite, cf. 4.4.5.11.1) marker *il* or *in* in P².

Apart from this, all purely *lexical* constituents of a given verb are preserved in imperative forms³⁸⁶, i.e.:

P⁷ incorporates:

asliŋ⁷-il²-bed "make skis !"

P⁵ determiners³⁸⁷:

k⁵-in²-daq "throw it !"

Lexical P⁴ a:

a⁴-[i]l²-kit "search for it !"

Any subset of these or all of the above:

ul⁷-t⁵-a⁴-[i]l²-daq "throw it !"

Preterite-labialization of *a⁴* is generally (and expectedly) absent from imperatives, though it seems to have crept into a handful of forms³⁸⁸, cf.:

ej⁷-aŋ/[k]⁶-o⁴-[i]l²-bed-in "kill them (pl.) !"

lab⁷-aŋ/t⁶-o⁴-[i]n²-aq-an "bite them (pl.) !"

The formation of imperatives differs across conjugation classes, mostly regarding the presence of *object* markers in transitive imperative forms. Below, we illustrate imperative formation for the different conjugations.

In an earlier period of its linguistic history, Ket (or rather Yenisei-Ostyakic) may have possessed a dedicated imperative marker *d*. However, nowadays this is better described as a morphotactic separator confined to some, but not all, imperative forms. Its occurrence is governed by *Separator Rule 12*, discussed in 4.4.4.4.12, and thus not (no longer?) morphologically, phonologically, or morphonologically predictable.

³⁸⁶ With the notable exception of (petrified) *b³*, which, alongside with (neuter) object marking *b³*, is generally *not* found in imperatives. This observation is possibly of historical relevance, since it seems to bespeak the relative late time, at which *b³* "petrified", where it did, cf. 4.4.5.9.2

³⁸⁷ Or, in conjugations II and III, determiners co-occupying P⁶.

³⁸⁸ Vajda (p.c.) thinks that the preceding velar labial may be responsible for this.

4.4.6.2.1 Imperatives in conjugation I

Intransitive conjugation I verbs are among the simplest of Ket verb forms; P⁸ subject markers³⁸⁹ are dropped, P² *il* or *in* are retained, and the imperative formula can be given as:

$$(P^7)-(P^5)-(a^4)-P^2-R-(PL)$$

Without any lexical elements other than R, the maximally simple imperative form consists of P² *il/in* and the root:

il²-kak "pull it !"

Transitive conjugation I verbs are built alike, but they retain (animate) *object* markers in P⁴ and P¹, respectively; P³ object *b* is, though, generally dropped; a form without any object marker is thus interpreted as "VERB *it* !":

$$(P^7)-(P^5)-(a^4/P^4)-P^2-(P^1)-R-(PL)$$

Cf. a full object paradigm:

	"beat ..."
me	<i>in²-di¹-ted</i>
him	<i>a⁴-[i]n²-ted</i>
her/it	<i>i⁴-[i]n²-ted</i>
us	<i>in²-daη¹-ted</i>
them	<i>aη⁴-(a)-[i]n²-ted</i> ³⁹⁰

4.4.6.2.2 Imperatives in conjugation II

There are no imperatives formed from conjugation II intransitives³⁹¹. Transitive conjugation II imperatives contain object markers in P⁶:

³⁸⁹ I.e. the logically expectable P⁸ 2nd person marker *ku*⁸. Imperatives may, cross-linguistically, not be *expected* to contain a 2nd person subject marker; however, "coreferential" 2nd person markers are retained in those conjugation classes, which have them. In this respect, we may be allowed to say that other imperative forms "drop" those markers (cf. below).

³⁹⁰ The presence of the (a)-separator in this form is irregular. It is highly likely that it serves to emulate the *-an*-sequence of the 3rd SG object form.

³⁹¹ Vajda/Zinn 2004 (p. 185 and 219) list two such forms, *ku/k⁶-in²-qut* (Pl. *kəŋ/[k]⁶-in²-qut*) from *qut II_{ir}* (b) (*in*) *bo/k* "to faint", and *ku/k⁶-a⁴-b³-in²-den* (Pl. *kəŋ/[k]⁶-a⁴-b³-in²-den*) from *tn ~ den II_{ir}* (a) (*in*) *bo/k* "to run out (once)". However, these are most likely simply

(P⁷)-P⁶-(P⁵)-(a⁴)-P²-R-(PL)

A full object paradigm is:

	"paint ..."
me	<i>ba/t⁶-in²-es</i>
him	<i>a/t⁶-in²-es</i>
her/it	<i>i/t⁶-in²-es</i>
us	<i>dəŋ/t⁶-in²-es</i>
them	<i>aŋ/t⁶-in²-es</i>

4.4.6.2.3 Imperatives in conjugation III

In intransitive conjugation III imperatives, the "coreferential" P⁶ subject marker - for the 2nd person, obviously - is retained throughout:

ej⁷-ku/k⁶-a⁴-[i]l²-[k]il "bundle up!"
ej⁷-kəŋ/[k]⁶-a⁴-[i]l²-[k]il-n

tukun⁷-ku/t⁶-a⁴-[i]l²-kit "comb!"
tukun⁷-kəŋ/t⁶-a⁴-[i]l²-kit-n

However, imperatives of conjugation III verbs are not numerous; some verbs of this class form their imperative according to a different conjugational pattern; thus, e.g., the imperative forms of

ej⁷-daq III_{irr}(a)(b)(in)(ba/k) "to throw oneself down"
k[u]⁸-ej⁷-ku/k⁶-a⁴-b³-daq "you throw yourself down"

is clearly formed according to the imperative pattern of conjugation I³⁹²:

ej⁷-k⁵-a⁴-[i]n²-daq "throw yourself down!"
ej⁷-k⁵-a⁴-[i]n²-daq-n

preterite indicative forms of the respective verbs ("faint" being an unlikely candidate for imperative formation in the first place). Only the lack of *b³* is reminiscent of imperative-like behaviour. Vajda (p.c.) is now inclined to view these forms as erroneously labeled. They are not imperatives, but preterite indicatives, which were accompanied by the optative particle *qān* (cf. 4.4.6.3.2) in the original context.

³⁹² And, for these forms, which lack any morphological material in P⁶, the verbal formula would have to be restated as *k⁵-daq I_{irr}(a)(in)*.

In conjugation III, *transitive* verbs generally form no imperatives. A candidate for exception status is one of the verbs meaning "to carry away":

<i>t III_{tr} (il) (bo/k)</i>	
$[di]^8$ -bo/k ⁶ -b ³ -(i)-t	"I carry it away"
da^8 -bu/k ⁶ -aη ⁴ -(i)-t	"she carries them away"

The imperative forms are, according to Vajda/Zinn 2004, 194, (phonetically), <kúyilit> "carry it away" and, e.g., <káηaηlitn> "(ye) carry them away!", to be analyzed as:

ku/k^6 -[i]l ² -(i)-t, and
$kaη/[k]^6$ -aη ⁴ -[i]l ² -(i)-t-n

These forms show the same "retention" of the P⁶ "echo" markers and thus seem to be quite normally formed conjugation III imperatives. However, no further examples of this kind could be found.

4.4.6.2.4 Imperatives in conjugation IV

Like in conjugation III, conjugation IV routinely retains the "coreferential" subject marker for the 2nd person, this time in position P¹. Most verbs of conjugation IV are intransitive, e.g.:

<i>eliη⁷-bed IV_{itr} (il)</i>	"to breathe"
$d[i]^8$ -eliη ⁷ -(i)-d[i] ¹ -bed	"I breathe"
$k[u]^8$ -eliη ⁷ -iI ² -ku ¹ -bed	"you breathed"

Imperatives:

$eliη^7$ -iI ² -ku ¹ -ked	"breathe!"
$eliη^7$ -iI ² -kaη ¹ -ked	"breathe (PL)!"

The isolated transitive conjugation IV verb *qa IV_{tr} (il) (bo/k)* "to offer for sale" (cf. 4.4.3.4) does form an imperative, which shows the expected patterning of morphemes:

$u/[k]^6$ -[i]l ² -ku ¹ -qa	"offer it for sale!"
$oη/[k]^6$ -iI ² -kaη ¹ -qa	"(ye) offer them for sale!"

4.4.6.2.5 Common irregularities found in imperative forms

Imperative forms are subject to irregularities, which mostly involve the truncation of phonological material (which may extend to the elimination of whole

grammatical morphemes); generally, this may be understandable due to the fact that the uttering of direct commands involves a certain emotional involvement on the part of the speaker (loosely speaking, "emphasis"), which may give rise to *allegro* variants, here perhaps more than elsewhere in this or perhaps any language.

In the following subsections, some of the more recurrent *allegro* effects found with imperative forms are illustrated. It was not attempted, though, to give a full list of imperative forms, which in one way or another defy morphological rules.

4.4.6.2.5.1 The erosion of the P² marker *il*

In some imperative forms, the P² marker is lacking altogether from the surface form. This seems, however, only to happen to the allomorph *il*, while *in* remains intact³⁹³ under all circumstances; examples include:

$hi^7-[il]^2-(d)-a$ "bite it!"

Here, the juxtaposition of two near-identical syllables led to (*allegro*-induced) haplogy; the (subject and object) plural form

$hi^7-d^5-a\eta^4-(a)-[il]^2-(d)-a-n$ "bite them (pl.).!"

shows the P² marker intact, where it is separated from the P⁷ incorporate.

Several verbs with superficially similar root morphemes ($\sqrt{do(b)}$) show the same phenomenon:

$a^4-[il]^2-dob$ "drink it!" <*árop*>
 $a^4-[il]^2-do[b]-n$ ³⁹⁴ "id. (pl.)" <*áro:n*>

The verb $d^5-do I_r(a)$ (*il*) "to hollow out (a log)" shows similar imperatives:

$d^5-a^4-[il]^2-do$ "hollow it out!" <*dáro*>
 $d^5-a^4-[il]^2-do-n$ "id. (pl.)" <*dáro:n*>

³⁹³ Pace the regular syncope of its vowel due to morphotactic rules, q.v.

³⁹⁴ The verb *dob I_r(a)* (*il*), or, rather, several verbs formed on the basis of the root \sqrt{dob} "drink" show(s) more irregularities. Thus, the root-final consonant *-b* disappears regularly before *-n*, i.e. in plural subject forms, cf. (from u^7-dob , "to drink water") $d[i]^8-u^7-a^4-dob$ "I drink water" vs. $d[i]^8-u^7-a^4-do[b]-n$ "we drink water". This behaviour recurs in the plural imperative form illustrated here. However, "ordinary" preterite forms are also subject to heavy distortion. Both the simplex verb and some of its compounds show forms with a seeming lack of P² preterite markers: phonetically <*dógdon*> "we drank (it)" or <*dúlogdon*>. Vajda/Zinn (2004, 149) reckon with an irregular (*allegro*?) development of $*o^4-b^3-[il]^2-d-$ > *-ok-* and assign, for want of a better solution, the resulting velar consonant to slot P³: $d[i]^8-o^4-k^3-do-n$. This may be correct, and the lack of an overt P² marker in the imperatives discussed here may then be explicable as an analogical extension from such forms. That the "lost" preterite marker in these verbs was indeed *il*, and not *in* is supported by Northern Ket forms like <*dóvildop*> $d[i]^8-o^4-b^3-i^2-dob$ "I drank it".

Preterite forms behave more regularly, cf. $di^8-d^5-a^4-b^3-il^2-do-n$ "we hollowed it out". Though semantically clearly not closely associated, the root of this verb does resemble that of "to drink", and the former may well have analogically influenced the latter's imperatives (note the long <o:> in the phonetic representation of the plural imperative; this normally points to a contraction or "Ersatzdehnung"³⁹⁵, which is manifest in the verb "to drink", but unmotivated in "to hollow out", which nowhere has a trace of a root-final consonant)³⁹⁶.

This erosion may be partial only, resulting in il^2 , cf.

$den IV_{itr}(il)$	"to weep, cry"		
	il^2-den	"weep!" ³⁹⁷	< <i>íren</i> >
	il^2-kan^1-den	"id. (pl.)"	< <i>ilgan</i> >

Most of the forms discussed here involve a situation, in which the consonantal element of $P^2 il$ would be in direct contact with a following d , which can be either a part of the root ("weep", "drink", "hollow out") or the inserted "imperative separator" d (cf. 4.4.4.12). However, the consonant sequence $-ld-$ is generally *not* avoided at all in Ket (as the imperative "bite it!" <*hílda*> above illustrates clearly enough). Nevertheless, the sequence of $il^2 + (d)/\sqrt{d}$ is avoided in a sizable number of imperative forms beyond the ones discussed here. The alternative avoiding technique is *assimilation*, illustrated in the following section.

4.4.6.2.5.2 Assimilations

Most irregular assimilations found in imperatives involve the P^2 marker il and the immediately following "imperative separator" d (on which cf. 4.4.4.12). The direction of these assimilations is unpredictable; thus we find $-ll-$ and $-dd-$ alike:

$aq I_{itr}(il)$	"go and return"	
	$il^2-(d)-aq$	"go!" < <i>íllaq</i> >
	$il^2-(d)-aq-an$	"id.(pl.)" < <i>íllaqan</i> >

Cf. the very similarly shaped root in the verb "to live" (here, d is part of the root):

$daq I_{itr}(a)(il)$	"to live"	
	$a^4-[i]l^2-daq$	"live!" < <i>állaq</i> >
	$a^4-[i]l^2-daq/\eta$ ³⁹⁸	"id.(pl.)" < <i>állaqη</i> >

³⁹⁵ Cf. the similar phenomenon in "contractive" nominal plurals of the kind discussed in 4.1.1.2.4.6.

³⁹⁶ Vajda/Zinn (2004, 151) report even a third verb with a formally identical root morpheme, $k^5-do I_{itr}(a)(il)$ "to look, watch", which shows, if only sporadically, the same phenomenon, cf. ipv. sg. <*káro*> $k^5-a^4-[il]^2-do$ besides <*káldo*> $k^5-a^4-[i]l^2-do$.

³⁹⁷ All singular forms of this verb lack the coreferential person marker in P^1 , in other words, they follow conjugation pattern I.

³⁹⁸ This plural marking is irregular in conjugation I and more typical for conjugation IV, cf. 4.4.3.4.

Regressive assimilation is found in:

$kutolej^7$ -a III_{ir} (il) (bo/k)	"to whistle"
$kutolej^7$ -ku/[k] ⁶ -[i]l ² -(d)-a	"whistle!"
<kutolejkudda> ³⁹⁹	
∂la^7 -aq ~ daq III_{ir} (il) (ba/t)	"to run out"
∂la^7 -ku/[t] ⁶ -[i]l ² -(d)-aq	"run out!"
< $\Lambda la\gamma udda$ >	

The plural imperative of the latter verb shows nothing like this⁴⁰⁰:

∂la^7 -kəŋ/[t] ⁶ -i ² -daq-an	"run out (pl)"
< $\Lambda la\gamma \eta i l d a \bar{a} n$ >	

The imperative separator acts as the agent of a regressive assimilation also in:

i II_{ir} (il) (ba/t)	"to ask"
a/[t] ⁶ -[i]l ² -(d)-i	"ask him!"
< $\acute{a} d d \bar{i}$ > ⁴⁰¹	

A different, and similarly irregular, assimilation is found, albeit sporadically, in:

qo I_{ir} (il)	"to lick"
$i\bar{l}^2$ -qo < $i l k o$ > ~ < $i l l o$ >	"lick it!"

4.4.6.2.5.3 The erosion of velar and uvular consonants

Velar and (more rarely) uvular stops are particularly vulnerable to (nevertheless unpredictable) attrition in imperative forms. This phenomenon affects particularly often root-initial consonants, cf.:

ul^7 -d ⁵ -kaŋ I_{ir} (a) (il)	"to wash"
ul^7 -a ⁴ -[i]l ² -[k]aŋ	"wash it!" < $\acute{u} l a l a \eta$ >

³⁹⁹ The plural imperative form of this verb loses the P² marker altogether: <kutoligaŋdan> kutolij⁷-kaŋ/[k]⁶-[i]l²-(d)-a-n.

⁴⁰⁰ This verb shows some further peculiarities, which should be mentioned here: the root is presented as suppletive, with and without initial *d*-. Forms with *d*- are common with (most, not all) plural subjects, while singular forms lack this consonant: $d[i]j^8$ - ∂la^7 -ba⁶-(s)-aq "I run out" vs. $d[i]j^8$ - ∂la^7 -dəŋ/[t]⁶-i²-daq-an "we ran out" (the truncation of the determiner *t*, which co-occupies P⁶ is irregular and not stipulated by one of the morphotactic truncation rules). Consequently, we analyze the pre-root *d* in the singular imperative above as the "imperative separator", whereas in the plural form below it is viewed as a part of the root, though superficially both *d*-s seem to be etymologically identical in both forms.

⁴⁰¹ Vajda/Zinn 2004, 162, give an alternative account for this form: according to them, the geminate *-dd-* results from the determiner *t* (co-occupying P⁶; indeed, it should not be missing here) and the imperative separator: *-t-d->-dd-*. If this analysis is correct, this imperative form is another instance of *i²-erosion*".

<i>bed-ked</i> I_{itr} (<i>il</i>)	"to do, make"
$i\bar{l}^2$ -ked ~ $i\bar{l}^2$ -[k]cd	"do it!" < <i>ilget</i> > ~ < <i>ilct</i> >

The verb *ik*⁷-bes ~ *qus* I_{itr} (*in*) "to come" shows two such elisions in the imperative:

$i[k]^7$ -[i]n ² -[q]us	"come!"	< <i>inus</i> >
$i[k]^7$ -[i]n ² -[q]us-n	"id.(pl.)"	< <i>inustn</i> >

Sometimes, the velar initials of (2nd person) P¹ markers are affected, too:

d^5 -dun IV_{itr} (<i>a</i>) (<i>il</i>)	"to shout"
\bar{a}^4 -[i]l ² -[k]u ¹ -dun	"shout!" < <i>alurun</i> >
\bar{a}^4 -[i]l ² -[k]a η ¹ -dun	"id. (pl.)" ⁴⁰² < <i>alanηdun</i> >
<i>tij</i> IV_{itr} (<i>a</i>) (<i>il</i>)	"to grow"
\bar{a}^4 -[i]l ² -[k]u ¹ -tij	"grow!" < <i>alutij</i> >
\bar{a}^4 -[i]l ² -[k]a η ¹ -tij	"id. (pl.)" < <i>alanηtij</i> >

The sporadic nature of this process is illustrated by the following verb, which has it in the singular imperative, but not in the plural:

t^5 -daq IV_{itr} (<i>a</i>) (<i>il</i>)	"to fall (iter.)"
t^5 - \bar{a}^4 -[i]l ² -[k]u ¹ -daq	"fall!" < <i>taluraq</i> >
t^5 - \bar{a}^4 -[i]l ² -ka η ¹ -daq/ η	"id. (pl.)!" < <i>talgaηdaqη</i> >

4.4.6.2.5.4 Marginal phenomena in irregular imperative forms

In a few cases, the vowel quality of the P² preterite/imperative marker changes from *i* > *u*. Adjacent /k/ ([γ]) and /h/ seem to play a role here, cf.:

qa^7 -h ⁵ -daq IV_{itr} (<i>a</i>) (<i>in</i>)	"to go past"
qa^7 -h ⁵ - $\bar{u}n^2$ -ku ¹ -daq	"go past!"
qa^7 -h ⁵ - $\bar{u}n^2$ -ka η ¹ -daq	"id. (pl.)"

bok^7 -det I_{itr} (<i>il</i>)	"to make a fire"
bok^7 - $\bar{u}l^2$ -det	"make a fire!"
bok^7 - $\bar{u}l^2$ -det-n	"id. (pl.)"

*b*³ is generally not found in imperatives, whether as an object marker or in one of its "petrified" functions (4.4.5.9). A unique exception is:

⁴⁰² The imperatives lack the *d*-determiner. However, in Krejnovič 1968, 272, we find the (unsynopated) form <*dálgurun*> d^5 - \bar{a}^4 -[i]l²-ku¹-dun.

<i>dis IV_{itr} (b) (il)</i>	"to swear"
$b^3-i\ell^2-ku^1-dis$	"swear!"
$b^3-i\ell^2-ka\eta^1-dis$	"id. (pl.)"

Werner (1997, 296) reports a pair of verbs with a particular kind of root suppletivism⁴⁰³. Both of them replace their indicative root \sqrt{dil} by \sqrt{on} in the imperative:

$q^5-dil I_{tr} (il)$	"to put on a skewer"
$[di]^8-q^5-(i)-b^3-dil$	"I put it on a skewer"
$q^5-i\ell^2-on$	"put it on a skewer!" ⁴⁰⁴
$q^5-dil II_{tr} (b) (il) (ba/k)$	"to dress (s.o.)"
$[ku]^8-ba/k^6-(i)-b^3-dil$	"you dress me"
$ba/[k]^6-[i]\ell^2-on$	"dress me!"

The subject plural of the latter verb shows a further root variant, \sqrt{otn} :

$ba/[k]^6-[i]\ell^2-otn$	"dress me (PL)!"
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4.4.6.2.6 Prohibitive forms

Prohibitives are formed analytically, by preposing the particle $\bar{a}t$, $\acute{a}tn$ to the verb form.

Generally, this is a present indicative form:

(250)

$\acute{a}ska$	$ku^8-t^5-on\eta$	$q\dot{o}j$	$\bar{a}t$	$k[u]^8-cj^7-t^5-a^4-qot$
when 2-D-see	bear	PROH	2-run-D-Th-run	
When you see a bear, don't run!				

(251)

$\bar{a}t$	$[ku]^8-q\acute{o}ksn^7-a^4-[i]\ell^2-ked$
PROH	2-hurry-Th-Pst-make
Don't hurry!	

However, imperative forms may also be turned into prohibitives with these particles. Gajer (1973, 22) maintains that imperative-based prohibitives represent stronger, more categorical commands than indicative-based ones:

⁴⁰³ On root suppletivism in general, cf. 4.4.5.1.1.

⁴⁰⁴ Vajda/Zinn 2004, 147, based on fresh fieldwork with the Kellog dialect of Southern Ket, report the regular imperative $q^5-i\ell^2-dil$ for this verb. They do give, however, $qilon$ for the verb $q^5-dil I_{tr} (il)$ "to put on clothes". Both verbs may actually be originally identical (cf. the Russian translation of "to skewer": *nadet' na vertel*, lit.: "to dress (sth.) on a skewer").

(252)

*kójka-s átn in-tiŋ*⁴⁰⁵
 head-INS PROH Pst-turn
 Don't turn your head!

4.4.6.3 Analytically expressed moods

Ket has two particles, which have the force of adding modal nuances to the meaning of the finite verb form, to which they are (invariably) preposed. These are *sīm* "irrealis, subjunctive", and *qān* "optative".

4.4.6.3.1 The irrealis particle *sīm*

The basic function of this particle may be described as "irrealis" or "subjunctive"; it is mostly⁴⁰⁶ found with past tense forms. In simple sentences, it denotes irreal statements:

(253)

ād sīm d[i]⁸-ba/t⁶-o⁴-[i]l²-ok
 I IRR 1-1/D-Th-Pst-scare
 I would have been scared.

(254)

toʔn sīm [du]⁸-toqtad⁷-a⁴-bed
 so IRR 3-run-Th-make
 He would run like that.

But much more often than in simple sentences, the particle *sīm* is found in irreal, non-independent, conditional sentences. Here, it may signal the irrealty of the condition in the subordinate clause alone or, very often, in both the conditional protasis and the "main" apodosis clause:

(255)

ād sīm it⁷-ba⁶-d[i]/t⁶-[a]m áska bŭ-ŋ d[u]⁸-ik⁷-(s)-i/bes-n, ād sīm
 I IRR know-1-1-R when he-PL 3-come-(Sep)-R-PL I IRR
d[i]⁸-at⁷-o⁴-b³-[i]l²-ij saʔj
 1-pour-Th-3n-R tea
 If I knew that they came, I would make (lit.: pour) tea.

⁴⁰⁵ Gajer reports this form from Sulomaj. In Kellog, the verb "to turn" uses P² *it*: *it²-tiŋ*.

⁴⁰⁶ Werner 1997c, 227 says, contradicting Dul'zon, "exclusively"; however, we find that it can be used with present tense verb forms as well, s.b.

4.4.6.3.2 The optative particle *qān*

This particle, found immediately before a finite indicative verb form, expresses that the speaker wishes or desires that the state-of-affairs expressed by the finite verb be/come true. It is compatible with all subject persons:

speaker wishes that...

<i>ād</i>	<i>qān</i>	<i>d[i]⁸-lobed⁷-a⁴-bed</i>	I	worked
<i>ūk</i>	<i>qān</i>	<i>k[u]⁸-lobed⁷-a⁴-bed</i>	you sg.	worked
<i>bū</i>	<i>qān</i>	<i>d[u]⁸-lobed⁷-a⁴-bed</i>	he	worked
<i>bū</i>	<i>qān</i>	<i>da⁸-lobed⁷-a⁴-bed</i>	she	worked
<i>ótn</i>	<i>qān</i>	<i>d[i]⁸-lobed⁷-a⁴-bed-in</i>	we	worked
<i>ókŋ</i>	<i>qān</i>	<i>d[i]⁸-lobed⁷-a⁴-bed-in</i>	you	worked
<i>būŋ</i>	<i>qān</i>	<i>d[i]⁸-lobed⁷-a⁴-bed-in</i>	they	worked

The speaker's wish expressed is usually not unreal and pertains to the future and not, counterfactually, to the past.

With 2nd person subject forms, the analytic optative is, of course, close in meaning to the imperative, the difference obviously being one of emphasis, with the analytic technique expressing a somewhat "weaker", or less categorical, command/request:

(256)

áqta-m qāj, qān da⁸-(k)-a⁴-daq
 good-PRn Ptcl OPT 3f-(Sep)-Th-live
 Maybe it is good, let her live (there, i.e. in the city).

(257)

ánoks ād qónoks bōn [di]⁸-ha⁷-d[i]¹-tes ād in di⁸-t⁵-a⁴-qut, bíksin
 tomorrow I early NEG 1-up-1-R I long 1-D-Th-sleep other
qān [du]⁸-lobed⁷-a⁴-bed-in
 OPT 3-work-Th-make-PL
 Tomorrow I won't get up early, I will sleep long, let others work

The optative meaning can be reinforced by the purposive (cf. 4.1.4.4.18) "pseudo-postposition" *-esaŋ*:

(258)

t^5 - a^4 -[i]n²-kij áks qàsçη si⁷-Ø/ t^6 - o^4 -[i]n²-oq ād qān
 D-Th-Pst-tell what there happen-3n/D-Th-Pst-R I OPT
 it⁷-ba⁶-d[i]l-am-csaη⁴⁰⁷
 know-1-1-R-PURP
 Tell me what happened there, so that I know (it).

In Baklanikha, we noted a rare instance of *qān* used not with a finite verb form, but with the *infinitive* (4.4.8.1) of the following verb; the example also shows the normal position of the prohibitive particle before the optative particle:

(259)

āna bōn [du]⁸-lobed⁷- a^4 -bed túde āt qān sīj
 who NEG 3-work-Th-make DEM PROH OPT eat\Inf
 Who doesn't work, shouldn't eat !

4.4.7 Derived categories

The main technique for forming derived verbs, i.e. verbs which add a functional nuance to the propositional content embodied by the lexical meaning of the root, involves the incorporation of the autosemantic verbal morpheme in P⁷ and the replacement of the morphological root R by another root with a more or less bleached/vague semantic content of its own (cf. 4.4.5.1.2). The only segmental morpheme which can be safely described as a morphological derivator, is the causative marker /q/, which has been described above as, in most cases, an increment to P⁷ incorporates (with occasional instances where, in the absence of an incorporate, it occupies the "determiner" slot P⁵, a position from where it may well have originated historically).

The morphological behaviour of this causative morpheme has been discussed in 4.4.5.2.6.4. In this section, we will have a closer look at causatives in general, including the patterns of root suppletivism associated with them. Two other derived categories presented here are *iteratives* (4.4.7.2) and *inchoatives* (4.4.7.3).

4.4.7.1 Causatives

The general way of forming causative verbs out of non-causative, basic, verbs can be summarized in the following instruction: to make a given verb causative, take its lexical (R) root and incorporate it in P⁷, add the causativizer -q- to the incorporate and replace the original root by a different one⁴⁰⁸. Thus:

⁴⁰⁷ The analysis of the highly irregular verb form <ítpadam> "I know" follows (largely) Vajda 2004, 47); on this verb cf. 4.4.10.

⁴⁰⁸ This is a simplified account. Given the great frequency of Ket verbs, which contain a P⁷ incorporate in the first place, and the relative paucity of verbs which do not, in many cases there is no "moving" of a R root to P⁷, but only the replacement of one R root by one of the roots mentioned below. The main point about causatives is that they have a P⁷ incorporate,

sal II_{itr} (in) (ba/k) "to spend the night"

ba/k⁶-(i)-(s)-sal "I spend the night"

Causative:

sal/q⁷-t ~ a I_r (in) "to leave overnight"

[ku]⁸-sal/q⁷-(i)-di¹-t "you (sg.) leave me overnight"

As in the above-mentioned example, the most frequent of the "replacement" roots in causatives is $\sqrt{t} \sim a^{409}$.

There are few other roots⁴¹⁰, which fulfil a similar function, namely \sqrt{da} and \sqrt{dij} . Of these, \sqrt{da} is most frequently found, and causatives formed with this root are more often than not semantically marked as *iteratives*⁴¹¹, e.g.:

qodan/aj⁷-bed I_r (a) (il) "to be afraid"

da⁸-qodan/aj⁷-a⁴-bed "she is afraid"

Causative:

qodan/q⁷-da I_r (a) (il) "to frighten, scare"

da⁸-qodan/q⁷-a⁴-(j)-da "she keeps frightening him"

The overwhelming majority of causative verbs belong to conjugation I. The only exception⁴¹² is a relatively small, but visible, number of conjugation IV (formal) causatives, all of which use \sqrt{dij} as their "replacement" root. The lexically dominant, P⁷, root in all but a few of these verbs is adjectival in nature and origin,

which semantically represents the "caused" action/state, the causative marker *q*, and a semantically pale root (taken from a small repertory of possibilities, s.b.) in position R. The incorporated root may also be adjectival in nature, in which case we could refer to the resultant forms as *factitives*, rather than *causatives*, but both are formally identical formations and hence not artificially differentiated here.

⁴⁰⁹ This root is found in a few transitive, but (formally) non-causative, verbs as well, e.g. *di⁷-t ~ a I_r (in)* "to hide".

⁴¹⁰ Apart from the roots listed here, Vajda/Zinn 2004 give ca. a dozen of "causative" (better "factive", since all of them use an adjectival P⁷ incorporate) verbs with the root $\sqrt{sin} \sim sit$. Above (4.4.5.3), we argue, however, that these verbs do not contain the causativizer *q* at all (it is absent from the surface forms anyway, and the rule, which allegedly made it disappear does not seem to hold).

⁴¹¹ This root is, again, also found with non-causatives, and there it is also connected with iterative semantics, cf. the section on iteratives below (4.4.7.2).

⁴¹² Vajda/Zinn (2004, 135) record one conjugation II causative (**otiη⁷-q⁵-da II_r (a) (b) (il)* "to cover"); however, other sources (e.g. Werner 2002) give this verb phonetically as, e.g., *<otiηbayavræ>*, which prompts an analysis as *otiη⁷-da I_r (a) (b) (il) (ba/k)*; the crucial thing being that the consonant following the P⁶ marker is /k/ and not /q/. No causative here.

and the meaning of the resultant complex intransitive verb is "to acquire a property/state" :

$\bar{u}s$	$us/q^7-dij IV_{itr} (a) (il)$	"warm" "to get warm"
$s\acute{i}da$	$sida/q^7-dij IV_{itr} (a) (il)$	"usual, used to" "to learn"
$\acute{u}tis$	$utis/q^7-dij IV_{itr} (a) (il)$	"near, close" "to approach"
$t\acute{a}t\acute{i}\eta$	$tat\acute{i}\eta/q^7-dij IV_{itr} (a) (il)$	"straight, not bent" "to get well, recover"

The root \sqrt{dij} , in simplex verbs, shows a meaning oscillating around the notion of "to move/change in the direction of some location/state and reach/attain it", cf.:

$dij IV_{itr} (a) (in)$	"to reach"
$d^5-dij IV_{itr} (a) (il)$	"to be placed"
$k^5-dij IV_{itr} (a) (in)$	"to grow up"

If we try to answer the question, how basically *intransitive* verbs may sport an overt causative marker, we may propose a scenario along the following lines:
If we depart from an adjective like $\bar{u}s$ "warm", the starting point may have been an ordinary transitive conjugation I verb like (attested):

$us^7-qan \sim qon I_{itr} (a)$	"to get warm"
$d[i]^8-us^7-a^4-qan$	"I get warm"

A straightforward causative (better: "factitive") would then be, and is actually attested as:

$us/q^7-t \sim a I_{itr} (in)$	"to make warm"
$d[i]^8-us/q^7-(i)-b^3-(i)-t$	"I make it warm"

From here, a conjugation IV verb is simply arrived at by adding the "coreferential" P¹ marker echoing the subject person marked in P⁸ (in both conjugations I and IV); replacing the root in R by \sqrt{dij} (both other roots found in the verbs above are semantically "pale", morpheme-like, roots as well), which, where it occurs, always requires conjugation IV; the verb pattern obtained is:

$us/q^7-dij IV_{itr} (a) (il)$	"to get warm"
$k[u]^8-us/q^7-a^4-ki^1-dij$	"you (sg.) get warm"

Werner (2002, 365) gives the translation "to warm oneself", i.e. to "get warm" as a result of the subject's own doing. This gives this verb a decidedly reflexive flavour,

and, though transforming verbs to conjugation IV is *not* a productive way of forming reflexive verbs in Ket (nor is it true that conjugation IV verbs are generally reflexives), reflexivity may well have been part of the *original* semantics of this conjugation pattern. The causativizer *q* may, thus, be seen as a "leftover" from a former derivation stage of a, first, transitivized/causativized and then further again detransitivized verb.

4.4.7.2 Iteratives

Ket has a variety of means to mark verbs as iterative⁴¹³. Iteratives are always derived, in the sense that their semantically dominant root is incorporated in P⁷, and the original R root is replaced by a semantically pale, "affix-like" replacement root. In the overwhelming majority of cases, this replacement root is either $\sqrt{bed} \sim ked$ or \sqrt{da} .

- $\sqrt{bed} \sim ked$:

<i>q̇id</i> <i>I_{tr}</i> (<i>il</i>)	"to scrape"
<i>q̇id</i> ⁷ - <i>bed</i> \sim <i>ked</i> <i>I_{itr}</i> (<i>a</i>) (<i>il</i>)	"to scrape (iter.)"
<i>k⁵-taŋ</i> <i>I_{tr}</i> (<i>a</i>) (<i>il/in</i>)	"to drag (up)"
<i>taŋ</i> ⁷ - <i>bed</i> \sim <i>ked</i> <i>II_{tr}</i> (<i>a</i>) (<i>il</i>) (<i>bo/k</i>)	"to drag (iter.)"
<i>ej</i> <i>I_{tr}</i> (<i>il</i>)	"to kill"
<i>ej</i> ⁷ - <i>bed</i> \sim <i>ked</i> (<i>a</i>) (<i>il</i>) (<i>ba/k</i>) "	"to kill (iter.)"

In a few cases, the "basic" infinitive does already contain the root \sqrt{bed} , in its lexical meaning "to make". Then, the resultant iterative verb may contain two instances of this root:

<i>asliŋ</i> ⁷ - <i>bed</i> \sim <i>ked</i> <i>I_{itr}</i> (<i>il</i>)	"to make a pair of skis"
<i>asliŋbed</i> ⁷ - <i>bed</i> \sim <i>ked</i> <i>I_{itr}</i> (<i>a</i>) (<i>il</i>)	"to many skis"

- \sqrt{da} :

This iterative "replacement" root occurs typically with causatives, and is very often paired with non-iterative $\sqrt{t} \sim a$:

<i>kit/q⁷-t</i> \sim <i>a</i> <i>I_{tr}</i> (<i>in</i>)	"to roll (tr.)"
<i>kit/q⁷-da</i> <i>I_{tr}</i> (<i>a</i>) (<i>il</i>)	"to roll (tr., iter.)"

⁴¹³ The notion of iterativity employed here includes other cases of *mnogokratnost' dejstvija* ("plurality of actions"), as, e.g., habitual actions or actions performed on multiple as opposed to single objects. Morphologically, Ket blends these different "non-singulatives" by and large into a single, albeit not uniformly expressed, "category".

$us/q^7-t \sim a I_{tr} (a) (il)$	"to warm"
$us/q^7-da I_{tr} (a) (il)$	"to warm (iter.)"

Iterativity can also be achieved by putting a (nominal, usually instrumental) P⁷ incorporate into the plural (cf. 4.4.5.2.6.2):

$koq^7-ted \sim tek II_{tr} (a) (il) (ba/k)$	"to punch"
$kon^7-ted \sim tek II_{tr} (a) (b) (il) (ba/t)$	"to punch (iter.)"
$kas^7-ted \sim tek II_{tr} (a) (il) (ba/k)$	"to kick"
$kaskun^7-ted \sim tek II_{tr} (a) (b) (il) (ba/t)$	"to kick (iter.)" ⁴¹⁴

It will be noted that several of these (and other) iterative forms use further morphological elements, which differentiate them from the respective non-iteratives and thus seem to be capable of reinforcing the iterative semantics; these include the determiner t^5 (cf. Werner's "permansive", 4.4.5.3) and "intensive" b^3 (4.4.5.9.2). Whether the change of conjugation class contributes autonomously to the notion of iterativity, remains less clear, though. We can, however, state that the overwhelming majority of iterative verbs belong to conjugation classes I and II. Conjugation III iteratives seem to be completely absent, and conjugation IV iteratives extremely rare at best⁴¹⁵.

4.4.7.3 Inchoatives

Inchoatives render the notion of beginning, starting, and getting about with an action, but they may also be used to convey intent or the conviction that some action/process will begin/take place in the immediate future (without factually "having begun" yet at the time of speaking).

Again, the content root is relegated to P⁷, and R is occupied by a replacement root, which alone renders the verb inchoative. In almost all cases, this root is $\sqrt{qan} \sim qon$. Cf. 4.4.5.1.1 for a paradigm (and for the illustration that the alternant root variants differentiate present and preterite without the assistance of a P² morpheme), and 4.4.5.1.2 for the "affix-like" character of this root, as well as examples for its use.

Another root with an inchoative-like function is \sqrt{san} , which is considerably rarer:

$qo I_{itr} (in)$	"to die"
$qo^7-san I_{itr} (in)$	"to start to die"
$bin^7-us IV_{itr} (il)$	"to melt, thaw"
$us^7-san I_{itr} (in)$	"to start to thaw"

⁴¹⁴ The element /kas/ is not independently attested, but it seems to be identical with ki^9s "leg", which has an alloform /kas/ in several compounds, cf. $kássad$ "sole of foot" (+ a^2d). The form $káskun$ is a (contractive, cf. 4.1.1.2.4.6) plural of $káskub$ "tip of foot" ($kūb$ "tip, end").

⁴¹⁵ One possible example is $t^5-daq/\eta IV_{itr} (a) (il)$ "to fall (iter.)". Note that there is no incorporate, and that both the "permansive" determiner and, more so, the "plural" root increment carry the iterative semantics here.

4.4.8 Nominal verb forms

4.4.8.1 Infinitive and participle

Morphologically unmarked verbal roots may be used independently, i.e. as prosodically and grammatically autonomous words, to fulfil a variety of functions, which invite the functional label of an "infinitive" form. Some uses of these *semi-nominal* forms may justify the term "participle" as well⁴¹⁶.

We refer to Ket infinitives as "semi-nominal" in character, because, in terms of morphological behaviour, they participate in some, but not all, characteristics of both substantive nouns and adjectives. Thus, like substantive nouns (and unlike adjectives), infinitives may accept possessive prefixes (4.1.1.4). They also may take case suffixes, but apart from the translative suffix *-esaŋ* (4.1.1.3.11), there are few unambiguous cases⁴¹⁷.

And like adjectives (contrary to substantive nouns), Ket infinitives may be used attributively and accept the nominalizing suffix *-s* (4.1.2.1). Examples for these behavioural characteristics will be given in the remainder of this section, but we will begin with the most *verb-like* use of these forms, i.e. as a complement of verbs (and particles) of intent, movement, ceasing, and a few other "complementable" verbs⁴¹⁸; the following is a fairly representative assortment of verbs/expressions, which take infinitive-complements:

a) ability:

With the verb *et II_r (a) (in) (ba/t)* "to be able to, to know how to"⁴¹⁹:

⁴¹⁶ Generally, we use only the term *infinitive* in this grammar, though.

⁴¹⁷ In other words, the Ket infinitive is not fully declinable "gerund". "Unambiguous" means that it is not easy to draw a clear-cut boundary between infinitive forms and outright substantive nouns with the same shape. Thus, *iʔl* may be treated as the verbal infinitive meaning "to sing, singing", as in, e.g. *iʔl náda* "it is necessary to sing, one has to sing" (cf. the finite verb *il I_r (il): di⁸-b³-il* "I sing it", [*di*]⁸-b³-i²-il "I sang it"), and concrete nouns like *iʔl* "song", with its full morphological noun-like potential (including a plural *élaŋ*). Many, but by no means all, verbal infinitives are formally identical with nouns in this way. This may raise the question, whether concrete nouns have been dragged into the verbal system (first, maybe, as P⁷ incorporates, which position may host nouns and infinitives alike), or whether we are dealing with nominalized verbal roots here. In the absence of overt morphological material, which would clearly differentiate both "avatars" of roots with similar shape and content, there seems to be no simple answer to this question. In some cases, lexical etymology might help, thus, if *iʔl* is indeed a loan from early Turkic *ḡr* "song" (and I am confident that it is, already at the Yenisei-Ostyakic stage), the concrete noun would be primary. But this should probably not be rashly generalized to all cases of noun-infinitive homonymy.

⁴¹⁸ Apart from these independent uses, the most natural habitat of infinitive forms is slot P⁷ of complex verbs, cf. 4.4.5.2.1.4.

⁴¹⁹ The subject of this verb is always 3rd SG impersonal, 4.4.5.6.2, and the person being able to do something is construed as its object. The surface form given here <*dabátaveč*> could of course also invite a parsing with a R element *bed* "to make"; that this is wrong, is illustrated by preterite forms like <*dabatómneč*> *da⁸-ba/ʔ⁶-o⁴-b³-[i]n²-et*, which show clearly that we are dealing with *b³* here.

(260)

ād da⁸-ba/t⁶-a⁴-b³-ct túdc bēd
 I 3f-1/D-Th-b-R DEM decd
 I can do that.

The word order of matrix verb and complement infinitive is variable, cf.:

(261)

ād sùj da⁸-ba/t⁶-a⁴-b³-ct
 I swim\Inf 3f-1/D-Th-b-R
 I can swim. (Werner 2002, II, 225)

More frequently, the irregular verb *it⁷-am* "to know" is used (4.4.10):

(262)

ād iʔl it⁷-ba⁶-di¹-am
 I sing\Inf know-1-1-R
 I can/know how to sing. (Vajda 2004, 78)

b) inability:

The above verbs can, expectedly, be negated with *bēn*. There is also a particle expressing inability with infinitives: *qóηan*⁴²⁰. We have not been able to record this in the field, but Werner (2002, II, 108) presents several examples with various constructions, thus with an impersonal predicative suffix and the subject of the infinitive in the dative:

(263)

úk-aηa ūη qóηan-am
 you-DAT sit\Inf not.able-PRn
 You (sg.) cannot sit.

Another method of expressing inability involves this particle incorporated into an inchoative (4.4.7.3) verb and the subject of the infinitive in the nominative, co-indexed in the finite verb form:

(264)

bū ūη da⁸-qoηan⁷-d⁵-a⁴-qan
 she sit\Inf 3f-not.able-D-Th-R
 She cannot sit, will not be able to sit.

⁴²⁰ According to Werner (2002, II, 108) < *qōη* "shape" + Abessive *-an*.

It can, apparently, also be constructed with finite verbs instead of infinitives⁴²¹:

(265)

bū tām āks ána bōn du⁸-b³-bed qóηan-am
 he pteck what what NEG 3-3n-make not.able-PR3
 He cannot do anything.

c) necessity:

The concept "to have to, must" is generally expressed by means of the invariable modal particle *náda*, which is, of course, a direct loan from Russian *nádo*:

(266)

ásseno náda
 hunt\Inf must
 It is necessary to/one must hunt.

The embedded subject is usually in the dative, and the infinitive is mostly (but not generally, see the above example), further marked by the translative case suffix *-esaj* (4.1.1.3.11), which thus forms a supine:

(267)

áb-ajja ássano-esaj náda
 I-DAT hunt\Inf-TRANS must
 I have to hunt. (Vajda 2004, 77)

d) volition:

Verbs for "to want/wish" with infinitive (+ *-esaj*) are:

t⁵-baq IV_{itr}(a) (il):

(268)

bū da⁸-t⁵-o⁴-[i]l²-baq íleη-esaj
 she3f-D-Th-Pst-want eat\Inf-TRANS
 She wanted to eat.

tus IV_{itr}(in):

⁴²¹ The construction seems to be hybrid, with the nominative of the personal pronoun and the impersonal particle of inability, which otherwise requires the dative. An explanation could be that the finite verb form "attracted" the case form of its subject, and the particle of inability stands, here, outside of the syntactic construction, possibly as a kind of afterthought.

(269)

suul béd-esan di⁸-d[i]¹-tus
 sled make\Inf-TRANS 1-1-want
 I want to make a sled. (Werner 2002, II, 291)

e) purpose, i.a. with verbs of motion:

(270)

bū d[u]⁸-cd/q⁷-i⁴-(j)-it béd-esan na⁹n⁴²²
 he 3-make.bread/Caus-3f-(Sep)-R make\Inf-TRANS bread
 He sends her to make bread.

(271)

ād d[i]⁸-in²-bes baklánixa-din̄a òstikan-bes sídaqat-esan
 I 1-Pst-come B.-DAT Ostyak-PROS lear\Inf-TRANS
 I came to Baklanikha to learn Ket.

(272)

ídeηbed-esan kooη dáska-din̄a
 write\Inf-TRANS go\Ipv blackboard-DAT
 Go to the blackboard to write.

f) request:

(273)

ōt d[i]⁸-si⁷-[i]²-aq-an íl-esan, bū bāda ād bōn di⁸-b³-il
 we 1-ask-Pst-R-PL sing\Inf-TRANS he said⁴²³ I NEG 1-3n-sing
 We asked (him) to sing, (but) he said: I do not sing (it).

g) consequence:

(274)

ād bōn anun/an⁷-ba/k⁶-o⁴-qon to⁹n béd-esan
 I NEG mind/without-1/D-Th-R so make-TRANS
 I have not become crazy, that I should do such a thing.

⁴²² Note that another possibility would have been to use the complex, object-incorporating infinitive *nánbed-esan* here. With this strategy, the subject would have sent the object person to "busy herself with baking bread", whereas here the request is to "make a concrete amount of bread", with a clear focus on the result.

⁴²³ This verb form is highly irregular and cannot be straightforwardly parsed, cf. the paradigm in 4.4.10

h) be suited for:

(275)

āb doʔn áqta-la bin⁷-b³-a¹-bed ūk dón-dil ísbed-esaŋ
 my knife good-COMP self-3n-RES-make your knife-ABL make-TRANS
 My knife is (made) better for working fish than your knife.

i) impersonal *it is good/bad to...*:

With or without *-esaŋ*:

(276)

áska ólka ī qà áqta-m tájka-esaŋ
 when outside sun big good-PRn go\Inf-TRANS
 When the sun is shining, it is good to go for a walk.

(277)

sél-am ásanəj səl qà
 bad-PRn say\Inf bad word
 Cursing is bad.

Infinitive forms may, like adjectives, be used attributively ("present participles"):

(278)

bōn ídeŋbed dəʔŋ ād [di]⁸-sida/q⁷-o⁴-[i]²-bed
 NEG write\Inf person\PL I 1-learn/Caus-Th-Pst-make
 I taught analphabets ("not-writing-people").

Another characteristic infinitives share with adjectives is the fact that they can be "nominalized" with the suffix *-s* (cf. 4.1.2.1); the result of this process is not a *nomen actionis*, but a *nomen agentis* ("VERB-ing one; one, who habitually VERB-s"), cf.:

ídiŋ⁷-bed I_{itr} (il) "to write"

--> Inf.: *ídiŋbed*

--> used attributively, e.g.: *ídiŋbed keʔd* "a writing person"

--> nominalized: *ídiŋbed-s* "s.o. who is able to write, s.o. who habitually writes, author"

For intransitives like (in Ket) "to write", the attributive participle has only one reading, which equates the head of the construction *ídiŋbed keʔd* with the subject of the infinitive. With transitives, however, a complication arises (cf. Werner 1997c, 180): if the head is an inanimate noun (a typical patient, or a less-than-

typical agent), it will be interpreted as the patient of the attributive participle as well:

bèd doʔn
a knife, which was/is being made

If it is an animate noun, two readings are possible: a) the head is the patient of the participle, b) the head is its agent, thus

tàd keʔd
a beating person, a person who is beating, or
a beaten person, a person who has been or is being beaten

On the other end of the scale, infinitives display very "nouny" features, in that they are able to accept possessive clitics and case suffixes. Not all case suffixes seem to be attested with infinitives, but the genitive (also with postpositions) and the local cases are fairly common to form complex predications⁴²⁴, cf.:

(279)

huʔn ùseŋ-diŋal siʔ-(d)-iʔ-(t)-[i]n²-a
daughter sleep\Inf-ABLf wake-up-(Sep)-3SGf-Pst-R
After sleeping (after the sleep), the daughter woke up.

(280)

sájdo-d kálka bīs d[u]ʔ⁸-ikbes⁷-o⁴-[i]l²-bed-n
drink.tea\Inf-GEN after evening 3-come-Th-Pst-make-PL
They came in the evening, after drinking tea.

With the prosecutive case suffix (4.1.1.3.8), converb-like constructions are formed:

(281)

bū daq-bes [du]ʔ⁸-qan⁷-[i]n²-kij⁴²⁵
he smile\Inf-PROS 3-speak-Pst-R
He spoke with a smile ("smiling...").

Werner (1997c, 180) gives a full paradigm of an infinitive with possessive prefixes (*tàd* "to beat": *b-tàd* "my beating", *k-tàd* "your beating" etc.), and Dul'zon (1968) mentions the phenomenon, as do Belimov (1973) and Vajda (2004, 78). The present author was not able to record such forms in the field. Some examples from the literature:

⁴²⁴ It is somewhat more common in Ket to have finite verbs with case suffixes for this kind of subordination. The examples are from Belimov (1973).

⁴²⁵ This form is a tentative, but the most likely, analysis of Belimov's surface form <*qaiŋni*> (dialect: Sulomaj).

(282)

āḏ na-qúšbed-diḡta *d[i]̄⁸-anun⁷-(s)-i/bed*
 I PPL-make-tents-ADESSn 1-mind-(Sep)-make
 I am thinking about their tentmaking. (Vajda 2004, 78)

This example shows, besides a possessive prefix, also a (non-subordinating) case suffix (the infinitive is, here, semantically *endocentric*, i.e. a *nomen actionis*, whereas in the examples above, we are dealing with more or less *exocentric* participle-like infinitives; there is no further formal distinction between the two, and the interpretation is dependent on the particular instance of use).

(283)

āb tād bin⁷-b³-a¹-qut
 IGen beat\Inf self-3n-RES-end
 My beating ends.

Vajda (2004, 78) mentions the same ambiguity as to transitivity with this kind of constructions as described above for attributive participles⁴²⁶. Indeed, the sentence can be read as "someone stopped beating me" or as "I stopped beating someone or something".

In terms of their form, (simple) infinitives⁴²⁷ are very often, but by no means invariably, materially identical with roots occupying the rightmost (R) position in the morpheme chain of finite verbs with the same semantics. In many cases, the infinitive shows a "fuller", historically older, shape of a verbal content root, while its R-"variant" (or better "counterpart") may display several degrees of phonological attrition. In some cases, infinitives are paired with R roots without any discernable material or etymological connection between both elements. The following lists give some examples for all possibilities:

a) Infinitive identical⁴²⁸ with R element of full verb:

Infinitive		Full verb (ex.) ⁴²⁹	
<i>bēd</i>	"to make"	<i>dī⁸-(j)-bed</i>	"I make"
<i>dīl</i>	"to put on"	<i>d[u]̄⁸-q⁵-(j)-b³-dil</i>	"he puts on"
<i>doo</i>	"to hollow out"	<i>d[i]̄⁸-d⁵-a⁴-b³-do</i>	"I hollow it out"

⁴²⁶ Here we have a proposed pronominal genitive instead of a fused possessive prefix, but both constructions are functionally equivalent.

⁴²⁷ Complex infinitives contain a P⁷ incorporate, which may represent different semantic roles, cf. 4.4.5.2.1.1

⁴²⁸ The notion "identical" has to be qualified: being prosodically independent phonological words, infinitives have of course an autonomous prosodical structure (i.e. a *tone* of their own, cf. 3.1), which is invariably lost both in the positions R and P⁷ of fully conjugated verbs.

⁴²⁹ In many cases, there is more than one verb associated with a given infinitive, often belonging to different conjugation classes or differentiated by different determiners (these are not preserved in infinitives, whereas P⁷ incorporates generally are).

<i>dàm</i>	"to bark"	$d[u]^8-a/k^6-a^4-dam$	"(the dog) barks at him"
<i>áqan</i> (a^7-qan)	"to sweat"	a^7-ba/t^7-a^4-qan	"I sweat"

And many more; note that, however, many infinitives never occur in position R at all, but only as P⁷ incorporates⁴³⁰, cf., as one example out of a great number:

ésa (Inf., "to lay down"), attested verbs containing this root include *esa⁷-daq* I_{tr} (*in*) "to lay down", *esa⁷-a* I_{tr} (*il*) "to lay down (iter.)", *esa⁷-daq* II_{tr} (*a*) (*il*) (*ba/k*) "to fell (a tree)", etc., but no verbs with *-*esa* in position R.

b) Infinitive clearly etymologically identical with R, but phonetically altered (mostly "weakened"):

Infinitive		Full verb (ex.)	
<i>dəj</i> ⁴³¹	"to touch"	$da^8-n^5-o^4-[i]l^2-dl^1-dij$	"she touched me"
<i>èj</i>	"to kill"	$d[u]^8-d[i]^1-ij$	"he kills me"
<i>qī</i>	"to trade"	$d[i]^8-il^2-dan-qa$	"we traded"
<i>dəʔq</i>	"to live"	$di^8-(k)-a^4-daq$	"I live"
<i>qīn</i>	"to flow"	$(sūl) u/k^6-a^4-qan$	"(blood) flows"
<i>kəʔj</i>	"to go, walk"	$da^8-t^5-o^4-[i]l^2-ka$	"she went"
<i>tàd</i>	"to beat"	du^8-ku^1-ted	"he beats you"

Some cases are due to (relatively) recurrent phonological processes; thus root-initial /h/ or /q/ are sometimes lost in position R:

Infinitive		Full verb (ex.)	
<i>həə</i>	"to twist, plait"	$di^8-b^3-[h]ə$	"I plait it" ⁴³²
<i>hiʔη</i>	"to swell"	$b^3-il^2-[h]əη$	"it is swollen"
<i>qoo</i>	"to die"	$du^8-[i]n^2-[q]o$	"he died"
<i>qut</i>	"to climb"	$d[i]^8-k^5-o^4-[i]n^2-[q]ut$	"I climbed"

c) Infinitive expanded by a suffixal element:

A sizable number of infinitives seemingly contain an incremental element *-aj*, *-ij*, or *-j*, which is not present in the corresponding incorporate⁴³³, e.g.:

⁴³⁰ On these cf. 4.4.5.2, with many observations, which are relevant for infinitives, as well.

⁴³¹ Sporadically, the infinitive *nəj* is attested as well, obviously a contamination of the original root with the P⁵ determiner *n*; cf. below for infinitives, which preserve determiners.

⁴³² Central Ket has a surprising assimilation here: <*dibbə*>, possibly influenced by forms like <*dibbet*>.

⁴³³ Good examples for cognate roots in position R lacking the increment have not been found. All of the examples given here show, incidentally, a petrified P⁵ determiner, in the last verb we have *b*³ taken over to the infinitive as well, which is quite unique.

Infinitive		Full verb	
<i>éqtij</i>	"to listen"	<i>d[i]ʰ-cq⁷-[i]l²-aq</i>	"I listened"
<i>ístij</i>	"to clean fish" ⁴³⁴	<i>d[u]ʰ-is⁷-t⁵-aŋa⁴-tet</i>	"he cleans them"
<i>hábij</i>	"to shoot"	<i>d[u]ʰ-h⁵-o⁴-b³-[i]l²-a</i>	"he shot"

d) Infinitive completely different from R, i.e. suppletive:

Infinitive		Full verb	
<i>éjiŋ</i>	"to go"	<i>bo/k⁶-a⁴-tn</i>	"I go"
<i>ílaŋ</i>	"to eat"	<i>di⁸-b³-a</i>	"I eat it"
<i>hij</i>	"to build" ⁴³⁵	<i>d[u]ʰ-h⁵-o⁴-[i]n²-to</i>	"he built"

In violation of the general rule, less than a handful of infinitives do contain a P⁵ determiner. The fact that the lexical roots are, in each case, vowel-initial, may have favoured this petrification:

Infinitive		Full verb	
<i>tábaq</i>	"to wish, want"	<i>da⁸-t⁵-o⁴-[i]l²-i/baq</i>	"she wished"
<i>kīj</i>	"to scratch"	<i>d[i]ʰ-k⁵-o⁴-b³-[i]n²-ij</i>	"I scratched it"
<i>qīl</i> ⁴³⁶	"to dress"	<i>da⁸-q⁵-a⁴-(j)-dil</i>	"she dresses him"

4.4.9 Copulae, existentials and predicative affixes

4.4.9.1 The null-copula and the past tense copula *òbilda*

Statements of equality, category membership, or location use no overt copula (or a "null-copula") in Ket, for all persons:

(284)

kíde áqta doʔn
 DEM good knife
 This is a good knife.

⁴³⁴ I.e. to scrape scales off them. Cf. the Northern Ket form <*distijaqaŋit*>, which contains the full infinitive (and an unclear /a/), Werner 2002, I, 381.

⁴³⁵ More generally: "to stick something (a pole) into the ground to erect a tent". This infinitive, too, seems to contain a petrified determiner.

⁴³⁶ In view of the *d*-initial of the finite verb, this could also be seen as a case of suppletivism; however, a simplification of the non-permitted cluster **qd*- in the infinitive may be more likely.

(285)

ə̄k kɾɪstʃan-aŋ
 you\PL peasant-PL
 You are peasants.

(286)

ə̄t sɪdaqat-s-en
 we teach\Inf-NM-PL
 We are teachers.

(287)

bū-ŋ ət-na sɪdaqaj-s-in
 he-PL we-GEN learn\Inf-NM-PL
 They are our pupils.

(288)

āb keʔd ɔstɪkan
 IGEN person Ostyak
 My friend is a (Yenisei-) Ostyak.

(289)

ət-na ɛŋqon qáde qáŋ-na ɪndi-ka
 we-GEN village DEM hill\PL-GEN.PL below-LOC
 Our village is (located) under those hills.

In the preterite, however, there is an obligatory overt copula, <*ə̄bilda*>:

(290)

ād tómsk-diŋta qūs sɪi ə̄bilda
 I T-ADESS one year was
 I was for one year in Tomsk.

(291)

áks ə̄bilda sókat ɪd
 what was last autumn
 What happened ("was") last autumn.

This element can be pluralized by *-n*, but the plural form is not invariably used with plural subjects:

(292)

qàseŋ díłkat òbìlda-n
 there child\PL was-PL
 There were (some) boys.

(293)

bū òbìlda stùdent
 he was student
 He was a student.

(294)

āđ tām áks ána bōn ās [dɪ]⁸-t⁵-o⁴-[i]l²-uŋ, toʔn òn òbìlda sūj
 I ptcl what what NEG ptcl 1-D-Th-Pst-see so many was mosquito
 I could not see anything, there ("here") were so many mosquitoes.

We note this copula, apart from the (optional) pluralization, as an unanalyzable particle, but formally, it seems to be possible to see it as a Ket verb form (which, however, begins quite uncanonically with P⁴):

o⁴-b³-i^l²-da

The back vowel of the P² preterite marker is unusual, and *b³* must be seen as petrified, since the form refers to all subject persons. The R element may, then, be identified with one of the numerous roots of this shape, possibly with \sqrt{da} "to spend time".

However, it is most likely that this element is an "ostyakized" Russian loan element, viz. Russ. *byl* "was (masc., all persons)". Two of the "morphemes" of the above analysis are already "in place" here (and we have an explanation for the back vowel). This view is underpinned by the fact that Yugh does not know *òbìlda* at all, but uses, quite unabashedly, *bīl*.

Of course, it is also possible that we are dealing here with a genuine verb from, which was reinforced and influenced by the Russian verb.

4.4.9.2 (Non-) existentials

The (non-) existence of an item (in general, or at an indicated location) is expressed by the particles *ùseŋ* and *bónsaŋ*⁴³⁷:

⁴³⁷ Which latter obviously contains the general negative particle *bōn*. It is, in Central Ket at least, almost always pronounced as <*bótsaŋ*>, or even <*bótjaŋ*>.

(295)

kíde sés-ka ùseη īs
 DEM river-LOC exist fish
 There are fish in this river.

(296)

ót-na bál-ka ùseη sáldo-s-in
 we-GEN among-LOC exist smoke\INF-NM-PL
 There are smokers among us.

(297)

āđ úkaηa dī⁸-k⁵-(s)-i/bes, kīseη tām bítsa ána bónsaη
 I you\DAT 1-D-(Sep)-come here ptcl who/m ptcl not-exist
 I come to you, here is nobody.

This technique is also exploited for the expression of predicative possession:

(298)

úkaηta ùseη stàkan-aη?
 you\ADESS exist glass-PL
 Do you have glasses?

(299)

ábaηta tām ās stàkan-aη bónsaη
 I\ADESS ptcl ptcl glass-PL not.exist
 I do not have any glasses.

However, predicative possession can also be expressed without the existential particle:

(300)

ábaηta do'η kéηasse-η
 I\ADESS three bird-PL
 I have three birds.

Existence and possession in the past can be expressed with the help of the past copula *òbilda*, replacing the existential:

(301)

ábaŋta òbilda òn lóbed
 \ADESS was much work
 I had a lot of work.

Negated possession in the past uses *òbilda* with *bōn*, which sometimes, as in the following example, is expanded by the nominalizer *-s*:

(302)

ábaŋta bōn-s òbilda áqta sákdi-n.
 \ADESS NEG-NM was good boot-PL
 I didn't have good boots.

4.4.9.3 Predicative concord suffixes

One of the differentiating criteria between substantive nouns and adjectives (cf. 4.1.3.1) is the fact that the latter need person-differentiating predicative suffixes to be used predicatively, while the former do not⁴³⁸. Adjectives share this capability with numerals (4.3), pronouns and *case-inflected* nouns (local cases and abessive, cf. 4.1.1.3.10).

The paradigm of predicative suffixes is as follows:

1SG	<i>-di</i>	1PL	<i>-daŋ</i>
2SG	<i>-ku</i>	2PL	<i>-kaŋ</i>
3SGm	<i>-du</i>	3PLm	<i>-aŋ</i>
3SGf	<i>-da</i>	3PLf	<i>-aŋ</i>
3SGn	<i>-am</i>	3PLn	<i>-am</i>

Examples for the use of predicative suffixes with adjectives:

(303)

ād ín-am bónsaŋ qō síkŋ-as úkaŋal qá-dí
 I two-PRn not-exist ten year\PL-INS you\ABL big-PR1
 I am eight years older than you.

(304)

áska bēk óŋ-ku, bēk [ku]⁸-sí⁷-t⁵-aq
 when always healthy-PR2 always 2-live-D-R
 When you are always healthy, you will live forever.

⁴³⁸ Castrén 1858, 100-3, however, mentions this possibility, which apparently was alive in his time: <*uob-dí*> *ób-dí* "I am (a) father" etc., cf. also Werner 1997c, 306.

(305)

kíde éηqon bíl-am
 DEM village far-PR3n
 This village is far away.

The 3rd SG neuter predicate affix is also used with subjectless sentences:

(306)

qà áqta-m tájka-esan
 big good-PR3n go\Inf-TRANS
 It is very good to go for a walk.

Suffixal adjectival predicates are generally indifferent to tense, thus

bū áqta-du

can be read as "he is good" or as "he was good".

The predicative use of possessive pronouns, also with the support of a (different) suffix, is discussed in 4.2.2.

4.4.10 Problematic and idiosyncratic verb paradigms

In this section, some verb paradigms are shown and discussed, which show any kind of morphological irregularities not discussed so far.

A rare subtype of Conjugation I verbs is formed by "inactive" verbs (cf. 4.4.3.1), which mark their single, inactive, actant in P⁴-P³-P¹. However, the handful of verbs following this pattern all show distortions and indiosyncrasies of various kinds, such as *i* ~ *ik*⁷-*bed* "to spend the day":

<i>i</i> ~ <i>ik</i> ⁷ - <i>i</i> / <i>bed</i> <i>I</i> _{inact} (<i>in</i>)	"to spend the day"
present tense	past tense
1SG <i>i</i> ⁷ - <i>di</i> ¹ - <i>bed</i>	<i>i</i> ⁷ -[<i>i</i>]n ² - <i>dan</i> ¹ - <i>bed</i>
2SG <i>i</i> ⁷ - <i>ku</i> ¹ - <i>bed</i>	<i>i</i> ⁷ -[<i>i</i>]n ² - <i>kan</i> ¹ - <i>bed</i>
3SGm <i>ik</i> ⁷ - <i>a</i> ¹ - <i>bed</i>	<i>i</i> ⁷ -[<i>i</i>]n ² - <i>aη</i> ¹ - <i>bed</i>
3SGf <i>ik</i> ⁷ - <i>i</i> ¹ - <i>bed</i>	<i>ik</i> ⁷ - <i>i</i> ⁴ -(<i>t</i>)-[<i>i</i>]n ² - <i>i</i> / <i>bed</i>
	< <i>iyitnivet</i> >

MRs TR 10, SR 9

Plural forms are not attested. The past tense forms show clearly that all actant markers are in P¹ position. However, the 3SGf past tense form shows an anomaly in that here the subject marker stands in P⁴.

<i>sit</i> ⁷ - <i>a</i> <i>I</i> _{inact} (<i>in</i>)	"to wake up"
present tense	past tense
1SG <i>sit</i> ⁷ - <i>di</i> ¹	<i>sit</i> ⁷ -[<i>i</i>]n ² - <i>di</i> ¹
2SG <i>sit</i> ⁷ - <i>ku</i> ¹	<i>sit</i> ⁷ -[<i>i</i>]n ² - <i>ku</i> ¹

3SGm	$sit^7-a^4-(j)-a$	$sit^7-o^4-[i]n^2-a$
3SGf	$sit^7-i^4-(j)-a$	$sit^7-(d)-i^4-(t)-[i]n^2-a$
1PL	sit^7-dan^1-a	$sit^7-dan^4-[i]n^2-a$
2PL	sit^7-kan^1-a	$sit^7-kan^4-[i]n^2-a$
3PL	sit^7-an^4-a	$sit^7-on^4-[i]n^2-a$
MRs	SR 5, SR 9, SR 11	

This verb gives the impression of displaying root attrition in the 1SG and 2SG forms. However, an alternative explanation might see these forms as standing outside of the paradigm and showing predicative suffixes instead (cf. 4.4.9.3); if correct, this should, however, be viewed as a singularity in the language. The elision of the vowel from the preterite marker in^2 in the 1st and 2nd PL past tense forms is not exactly governed by any morphotactic rule (we would expect either an immediately preceding vowel for TR 10 to occur, or else a vowel initial following element for Sync being responsible for the truncation. The paradigm shows, thus, a certain degree of analogical levelling, without, however, a very "level" result. The verb "to say that..." is at the same time very frequent and wholly irregular. It has not been possible so far to offer a proper parsing, which takes account of all morphological elements present; the paradigm is, unanalyzed:

	present tense	(no present/past differentiation)
1SG	<i>níma</i>	
2SG	<i>kúma</i>	
3SGm	<i>báda</i>	
3SGf	<i>mána</i>	
1PL	<i>níman</i>	
2PL	<i>kúman</i>	
3PL	<i>mánman</i>	

Vajda (2004, 47) gives the following tentative breakdown, which seems to get as close to a solution as possible:

1SG	<i>níma</i>	$*di^8-b^3-in^2-a$
2SG	<i>kúma</i>	$(?) *ku^1-b^3-in^2-a$
3SGm	<i>báda</i>	$(?) *b/a^3-in^2-d/a$
3SGf	<i>mána</i>	$(?) *b/a-in-a$
1PL	<i>níman</i>	$*di^8-b^3-in^2-a/\eta$
2PL	<i>kúman</i>	$*ku^8-b^3-in^2-a/\eta$
3PL	<i>mánman</i>	$(?) *b/a^3-in^2-da/\eta$

Thus, the first assumption is that all forms contain, historically, the preterite marker in^2 (the absence of which is only clearly felt in *báda*). The shape of the root oscillates between \sqrt{a} and \sqrt{da} . The rest are assimilatory processes, which have (mostly) no parallel in the language (*níma*(η)!), but which may be motivated by allegro contexts. The co-occupancy of morpheme slot three with b/a (and why b^3 in the first place?) awaits a proper explanation⁴³⁹.

⁴³⁹ A different - and daring ~ analysis, worthy of note, can be found in G. Starostin (2003).

Another very irregular verb is the verb "to know". We give the paradigm (again no tense differentiation) together with Vajda's (loc. cit.) analysis:

1SG	<i>ítpadam</i>	<i>*it⁷-ba⁶-di¹-am</i>
2SG	<i>ítkum</i> ⁴⁴⁰	<i>*it⁷-ku⁶-am</i>
3SGm	<i>ítalam</i>	<i>*it⁷-a⁴-il²-am</i>
3SGf	<i>ítlam</i>	<i>*it⁷-i⁴-il²-am</i>
1PL	<i>ítdaŋlam</i>	<i>*it⁷-daŋ⁴-il²-am</i>
2PL	<i>ítkaŋlam</i>	<i>*it⁷-kaŋ⁴-il²-am</i>
3PL	<i>ítaŋlam</i>	<i>*it⁷-aŋ⁴-il²-am</i>

What seems clear is that the verb contains a P⁷ incorporate *it⁷*, that its root is \sqrt{am} , and that all forms save 1st and 2nd SG contain the petrified P² preterite marker *il*. The syncope of *i* in the plural forms is elegantly captured by *Sync*, whereas in *ítlam* we would have to assume a succession of TR 10 and *Sync*. The person marking pattern, however, follows none of the other conjugation classes of Ket.

4.5 Other parts-of-speech

4.5.1 Particles and Conjunctions

Particles, i.e. small words and clitics, which are not inflected for any morphological category, play an important role in the structuring of Ket sentences and figure prominently in any stretch of continuous Ket prose. They may be subdivided into particles, which directly modify a verb form, or add quasi-categorial content to it, and particles, which operate on the syntactic/pragmatic level, adding contrastive, emphasizing or epistemological content to propositions and complex sentences. The detailed study of the functions of the latter group is reserved for the chapters on Ket syntax in Vol. II of this grammar.

The first group comprises the following lexical particles, which are, in this volume, discussed in the chapters and sections indicated below:

<i>ána</i>	indefinite, "at all"	4.2.6
<i>átn</i>	prohibitive	4.4.6.2.6
<i>bōn</i>	negative	4.4.5.2.1.5 and <i>passim</i>
<i>ās, ásn</i>	future	4.4.6.1
<i>náda</i>	necessity	4.4.8.1
<i>qān</i>	optative	4.4.6.3.2
<i>qóŋan</i>	inability	4.4.8.1
<i>sīm</i>	irrealis, subjunctive	4.4.6.3.1
<i>tām</i>	indefinite	4.2.6
<i>ùseŋ</i>	existence	4.4.9.2
<i>bónsaŋ</i>	non-existence	4.4.9.2

Particles with a more syntactic/pragmatic functional scope include:

⁴⁴⁰ Phonetically often heard as <*íkjum*>

<i>āks</i>	rhetorical questions
<i>ān</i>	habituality
<i>bā</i>	prolonged, repeated, habitual action
<i>bāt</i>	assertive
<i>bīn</i>	mirativity, inferentiality
<i>qāj</i>	backgrounding, "anti-mirativity"
<i>hīs(a)</i>	contrastive, emphasis
<i>qām</i>	temporal proximity
<i>tè</i>	floor-taking, discourse structuring
<i>ūs</i>	emphasis

The structuring of complex sentences by means of subordinating conjunctions is not widespread in Ket; however, some elements fulfilling such functions do occur; these include the following, also to be discussed in greater detail in the syntax sections of Vol. II of this grammar:

<i>aska</i>	"when"
<i>átin</i>	"so that not"
<i>bān</i>	"so that"
<i>hāj</i>	"and, too, again"
<i>qāj</i>	"although"

4.5.2 Interjections and ideophones

Commonly found interjections include (written more or less phonetically):

<i>aj, aj-aj</i>	pain
<i>eʹ</i>	yes
<i>ecgíga</i>	disagreement, disapproval
<i>oŋŋɔ</i>	pain
<i>po-po-po</i>	pain
<i>qalés</i>	strong disagreement, or surprise
<i>suu</i>	sensation of cold
<i>uu</i>	fear
<i>ɔj/ɔjɔ</i>	address, <i>hey!</i>
<i>íŋa</i>	pain
<i>íígá</i>	surprise

5 References

My original plan was to fill the following pages with no less than a (reasonably) complete list of published Ketological and Yeniseiological works; with the advent of Vajda's bibliography (Vajda 2001) this is no longer necessary. This superb work - which provided tremendous assistance in the compilation of this grammar - manages not only to be complete, it lists works the present author could not have dreamed of locating, so readers who are seriously interested in Yeniseic should without fail procure this book; the following list of references can be confined, then, to those works which either are indispensable for any student of Ket (mostly monographs), or which have been specifically used by the author of this grammar or mentioned in its text. Thus, the omission of titles from this list of references does not constitute negative judgement.

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Pars superat coepti, pars est exhausta laboris;
Hic teneat nostras ancora iacta rates
(Ovid, *Ars amatoria*, I, 771-2)

