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On root and subordinate clause structure in Kabardian

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Abstract

The paper¹ gives a short overview of the general properties of the grammar of Kabardian (East Circassian) followed by sections on verbal forms in subordination and basic aspects of complementation.

General properties

Kabardian is a Northwest-Caucasian language, most closely related to Adyghe (West Circassian). It is spoken by 390.800 people in the Kabardino-Balkarian republic in the Russian Federation and by large communities in Turkey, Syria, and Jordan.

We refer to Kumakhov 1989 and *Grammatika kabardino-čerkeksskogo literaturnogo jazyka* (1957) for more comprehensive studies of Kabardian nominal and verbal morphology.

Nominal morphology

The nominal morphology is fairly simple compared to the polysynthetic verbal forms. The noun distinguishes the morphological categories case, definiteness, and number. Plural is marked by the suffix *-xe*, which precedes the case marker: *wəne* 'house', *wəne-xe-r* (house-PL-ABS) 'houses'. Cases include the absolutive (*-r*) and ergative (*-m*) as well as the instrumental (*-č'e*) and adverbial (*-w/we*) cases. Cases such as the genitive and dative are lacking. Note that the case marker *-m* is not only the marker of the ergative proper. It also occurs in indirect and oblique object positions. First and second personal pronouns, proper nouns and other highly individuated nouns do not take case marking.

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A special feature of the nominal morphology is that definiteness is marked by the same suffixes *-m*, *-r* that mark ergative and absolutive case. In examples (1a-b), the opposition between \emptyset and *-r* corresponds to a difference in definiteness. This may be seen from the fact that the presence of the marker *-r* is not obligatory from a grammatical point of view.

- (1) a. Ps'as'e ma-k'°e² b. Ps'as'e-r ma-k'°e
 girl S3SG-walk.PRS girl-DEF.ABS S3SG-walk.PRS
 'A girl is walking.' 'The girl is walking.'

The distinction indefinite/definite is not available in all positions. In the subject position of transitive verbs the suffix *-m* is obligatorily present. No differentiation between definite/indefinite is thus possible here.

- (2) Ps'as'e-m tχəłə-(r) je-h
 girl-ERG book-(ABS.DEF) S3SG-carry.PRS
 'The girl is carrying the book.'

In other positions that are marked by the ergative case (indirect and oblique object positions), the distinction indefinite/definite is available (contrary to expectation, the verb 'read' in (3) is intransitive in Kabardian).

- (3) S''ale-(r) tχəłə-(m) j-o-že
 boy-(ABS.DEF) book-(ERG.DEF) O3SG-DYN-read.PRS
 'A/the boy is reading a/the book.'

The distinction indefinite/definite is limited to nouns in the singular. The suffixes *-r*, *-m* are always present when the plural marker *-χe* is present, and thus mark the absolutive and ergative cases respectively.

Possessive forms

The possessive is marked on the head noun of the possessive construction. The possessive prefixes distinguish three persons and singular/plural. In contrast to the closely related Adyghe, Kabardian does not distinguish alienable and unalienable possession. The selection of the possessive prefix is based on the person and number of the possessor: *wi-q'°e* 'your son', *di-q'°e* 'our son'. In the third person, the number of the possessor is only shown by the possessive prefix on the head noun and not by the *χe*- 'PL' on the possessor noun.

- (4) a. fəzə-m jə-psəle b. fəzə-m ja-psəle
 woman-ERG POSS3SG-word woman-ERG POSS3PL-word
 'the woman's word' 'the women's word'

The structure of NP

Word order within the NP is fixed. The head noun of an NP may take both preposed and postposed attributes. Adjectives (except so-called relative adjectives) and numerals follow the head noun: *tχəł c'ək'°* (book small) 'a small book'. Numerals as well as adjectives cliticize to the preceding word when the adjective or numeral has a simple syllable structure (CV): *tχəł-i-s'ə-r* (book-and-three-ABS) 'three books'. Relational adjectives are found before the head noun (5).

- (5) γ°əs'' wəne-z'χe-r
 stone house-old-PL-ABS
 'the old stone houses'

Grammatical suffixes marking case, number, coordination etc. are added only to the final element of the NP:

- (6) pxe wəne daye c'ək'°-i-s'ə-r
 tree house beautiful little-and-three-ABS
 'three beautiful little wooden houses'

The verbal complex

The verb does not only include cross-reference markers of subject, direct object, indirect object and oblique objects but also prefixes of comitative, reciprocity, potentiality, version (benefactive and malffective relations), causativity, reflexiveness, local and spatial relations, negation, interrogativity, tense, mood, completion, etc. This creates a complex polysynthetic verb form, which may include up to over 15 morphemes. The order among the morphemes is fixed. Some slots allow the choice of only one affix in a set. For instance, the local affixes form one set, where only one may occur in a verb form. The same goes for the markers of comitative and reciprocity. As shown by the verb below, person is marked in the positions before the stem, whereas tense/mood follow the stem.

- (7) f- a- χ°- je- z- ye- š- a- s'
 DO2PL O3PL V O3SG S1SG CAUS lead PERF ASSRT
 'I made him lead you for them'

²The transcription used in the paper is based on Kumakhov 1981 with some changes. A chart of the transcription is given in Kumakhov & Vamling 1993:130-131.

Transitive and intransitive verbs

The orderings of affixes fall into two groups – one for intransitive verbs and one for transitive ones. In intransitive verbs the subject prefix occupies the initial position, but in transitive verbs, the initial position is occupied by the direct object marker.

- (8) a. Intransitive verb
Subject–Object(s)–Root–Tense/Mood–Assertive
- b. Transitive verb
Direct object–Objects–Subject–Root–Tense/Mood–Assertive

The notion transitive/intransitive in Kabardian differs from what is assumed in relation to Indo-European and many other languages. In particular, it is important to note that the category transitive/intransitive in Kabardian is not only determined on the basis of semantic characteristics of the predicate but also on the formal basis of the morphological structure of the verb. Moreover, transitive and intransitive verbs are related to different syntactic constructions, the ergative and absolutive.

An intransitive verb in Kabardian may or may not require an object. Intransitive verbs are exemplified by *pte-n* 'look', *we-n* 'hit', *ježe-n* 'read', *jez'e-n* 'wait for', *t'e-n* 'dig', *xe-n* 'mow', *de-n* 'sew', *s'e-n* 'weave', *xe-n* 'tie', *ʔ'e-n* 'grind', whereas *hə-n* 'carry', *še-n* 'lead', *tχə-n* 'write', *s'ə-n* 'do', *šχə-n* 'eat', *jetə-n* 'give' are examples of transitive verbs.

The main criteria for differentiating the transitive and intransitive verbs above is the structure of the verb, i.e. the alignment of cross-reference prefixes and the form of the subject prefix. Transitive verbs are polyvalent (correlating with up to five NPs). Intransitive verbs accommodate one or several cross-reference markers.

In a simple transitive verb (9a), the direct object is found in the initial position, followed by the subject marker and the root. In a bivalent simple intransitive verb (9b), the ordering of the markers of cross-reference is the reverse. The subject marker is in the initial position, followed by the object.

- (9) a. də- f- š- a- s'
 DO1PL S2PL lead PERF ASSRT
 'You led us.'
- b. də- ve- z'- a- s'
 S1PL O2PL wait PERF ASSRT
 'We waited for you.'

In ditransitive verbs (10a), the markers of cross-reference before the root align in the order: Direct object-Indirect object-Subject. Trivalent intransitive verbs are always derived, i.e. they include derivational affixes such as version (benefactive, malfactive), comitative etc. In (10b) the comitative prefix *d-* adds one object position for a cross-reference marker.

- (10) a. w- je- s- tə- n- s'
 DO2SG IO3SG S1SG give FUT ASSRT
 'I will give you to him.'
- b. sə- b- d- je- z'- at
 S1SG O2SG CO O3SG wait- PERF2
 'I together with you waited for him then.'

4-valent verbs occur only in derived forms, where the number of persons marked in the verb increases as a result of including various affixes such as comitative, version, location etc. This is illustrated in the transitive (11a), which shows the version (V) prefix χ° - 'for, for the benefit of...'. (11b) is another example of a 4-valent verb. Here, the intransitive verb includes the version marker and also the marker of comitative *də-*.

- (11) a. w- a- χ° - je- s- tə- nu- s'
 DO2SG O3PL V IO3SG S1SG give FUT ASSRT
 'I will give you to him for them.'
- b. w- a- q'ə- də- s- χ° - je- z'e- nu- s'
 S2SG O3PL LOC CO O1SG V O3SG wait FUT- ASSRT
 'For me you will wait there together with them.'

Affixes that have an impact on the transitivity of the verb are the causative, version, potentiality and comitative markers. The addition of a causative marker to an intransitive verb (12a) makes it transitive (12b). Note here the change in the ordering of the cross-reference markers.

- (12) a. wə- k'°- a- s'
 S2SG go PERF ASSRT
 'You went.'
- b. wə- z- ye- k'°- a- s'
 DO2SG S1SG CAUS go PERF ASSRT
 'I made you go.; I sent you.'

A transitive verb may be detransitized by the addition of the potential and reciprocity markers (13). The subject in (a) is marked by the ergative case and in (b) by the absolutive.

Table 1. Tense and negation in finite and non-finite forms

	Fin.	Partic.	Ger.	Altern.	Cond.	Inf.	Verbal
N							
Present	+	+	+	+	+	-	-
Perfect I	+	+	+	+	+	-	-
Perfect II	+	-	-	-	-	-	-
Pluperfect I	+	+	+	+	-	-	-
Pluperfect II	+	-	-	-	-	-	-
Imperfect	+	-	-	-	-	-	-
Future	+	+	+	+	-	-	-
Negation	<i>mə-</i>	-	+	+	+	+	+
	<i>-q'əm</i>	+	-	-	-	-	-

- (13) a. *aχe-m s-a-łey°-a-s'*
 they-ERG DO1SG-S3PL-see-PERF-ASSRT
 'They saw me.'
- b. *aχe-r zəɾə-łey°-a-s'*
 they-ABS RECIP-see-PERF-ASSRT
 'They saw each other.; They met.'

Finite and non-finite forms

Kabardian has a rather rich set of tense forms for the finite verbs. Present is the unmarked form, usually lacking any overt suffix (- \emptyset (-*r*)). Other tense forms are: Future1 -*n*, Future2 -*nu*, Imperfect -*t*, Perfect1 -*a*, Perfect2 -*at*, Pluperfect1 -*ya*, Pluperfect2 -*yat*. The marker -*t* that shows up in several forms emphasizes the notion of temporal distance. The category tense is more restricted in non-finite than in finite forms. Among the non-finite forms, the participles and gerunds have the richest set of tense forms (Table 1).

Note also that all finite and non-finite forms may be negated, showing a difference in affix ordering. Finite forms are negated by the suffix -*q'əm*, whereas non-finite forms take the negating prefix *mə-*. The difference in the placement of the negation in Kabardian verb forms has traditionally been used as the main criterion for differentiation between finite and non-finite forms.

The following forms are classified as non-finite: (1) participles, (2) gerunds, (3) masdars, (4) infinitive, (5) mood forms (except the indicative), (6) forms with the coordination suffix, (7) interrogative forms, (8) some verb forms with adverbial functions, (9) the alternative ('whether... or not'). The non-finite forms are dependent forms in the sense that they occur

in positions where they are dependent on a finite form. The interrogative forms are used in simple questions but are also dependent in the sense that they always presuppose an answer. Various non-finite forms are illustrated below.

A wide range of participle forms are found in Kabardian: *p-tχə* (S2SG-write.PRS) 'that which you write', *wə-zə-tχ* (O2SG-REL-write.PRS) 'he who writes to you', *zə-tχ* (REL-write.PRS) 'he who writes', *sə-zəɾə-k°e-r* (S1SG-how-go-ABS) 'how I go', *sə-s°e-k°e-nu-r* (S1SG-when-go-FUT-ABS) 'when I will go', *sə-s°e-k°e-ya-r* (S1SG-why-go-PLUP-ABS) 'why I went then', *sə-zde-k°e-a-r* (S1SG-where.to-go-PERF-ABS) 'to where I went'.

Gerunds form another group of non-finite verb forms:

- (14) a. *w-je-ž-a-we*
 S2SG-O3SG-read-PERF-GER
 'your having read it'
- b. *w-je-mə-ɸ-a-we*
 S2SG-O3SG-NEG-see-PERF-GER
 'your not having seen it'
- c. *wə-s-χ°e-mə-k°e-ya-we*
 S2SG-O1SG-V-NEG-go-PLUP-GER
 'your not having gone for me then'

The so-called masdar forms, or verbal noun forms, also belong to the group of non-finite forms: *wi-tχe-n* (POSS2SG-write-VN) 'your writing', *wi-s°ə-mə-?e-n* (POSS2SG-here-NEG-have-VN) 'your being absent (lit. your not being here)'

Among the non-finite forms are also found infinitives, marked by the suffix -*n*: *s°e-n* 'to do', *hə-n* 'to carry', *že-n* 'to run'.

Different non-finite mood forms are illustrated by: *wə-z-ya-k°e-me* (DO2SG-S1SG-CAUS-go-if) 'if I made you go', *mə-k°e-ye-n* (NEG-go-PERF-probably) 'he probably didn't go', *jə-rje-k°e* (S3SG-OPT-go) 'let him go', *də-k°e-n-t* (S1PL-go-FUT-COND) 'we would have gone', *wə-k°e-a-s'eret* (S2SG-go-PERF-OPT) 'if only you had gone', *jə-rje-s°-i* (S3SG-OPT-do-if) 'if he will do it'.

Forms including the coordinative suffix -*i* are classified as non-finite forms: *sə-k°e-n-s°-i* (S1SG-go-FUT-ASSRT-CRD) 'I will go and', *s-je-ɸ-a-s°-i* (S1SG-O3SG-see-PERF-ASSRT-CRD) 'I looked and'.

Interrogative forms belong to the non-finite forms: *wə-tχe-re?* (S2SG-write-Q) 'Are you writing?', *wə-z-mə-łey°-a?* (DO2SG-S1SG-NEG-see-PERF) 'Didn't I see you?', *w-je-z-mə-ya-ž-a-re?* (DO2SG-O3SG-S1SG-NEG-CAUS-read-PERF-Q) 'Didn't I make you study?'

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Interrogative forms belong to the non-finite forms: *wə-tχe-re?* (S2SG-write-Q) 'Are you writing?', *wə-z-mə-ley°-a?* (DO2SG-S1SG-NEG-see-PERF) 'Didn't I see you?', *w-je-z-mə-ya-ž-a-re?* (DO2SG-O3SG-S1SG-NEG-CAUS-read-PERF-Q) 'Didn't I make you study?'

Finally, the non-finite forms also include verbs with certain adverbial suffixes: *wə-k'°e-χ°* (S2SG-go-while) 'while you will go', *w-o-k'°a-pe* (S2SG-DYN-go-finally) 'you go finally'.

The ergative and nominative constructions

The classification of a verb as transitive or intransitive also determines the choice between the ergative or absolutive constructions. As expected, a transitive verb assigns the ergative case to its subject (15a). The subject of an intransitive verb is marked by the absolutive case (15b).

- (15) a. ɬ'ə-m wəne-r jə-s''-a-s'
man-ERG house-ABS S3SG-make-PERF-ASSRT
'The man built the house.'
- b. ɬ'ə-r wəne-m je-pl-a-s'
man-ABS house-ERG O3SG-look-PERF-ASSRT
'The man looked at the house.'

In Kabardian there is a group of verb stems that are neutral with respect to transitivity. They occur both in transitive and intransitive constructions, both with ergative and absolutive subjects. The difference in these cases emerges in the cross-reference markers. As illustrated in (16a-b) the stem does not undergo any changes.

- (16) a. ɬ'ə-m s''ə-r je-ve
man-ERG earth-ABS S3SG-plough.(PRS)
'The man ploughs the field.'
- b. ɬ'ə-r ma-ve
man-ERG S3SG-plough.(PRS)
'The man ploughs.'

Word order

Word order may play different roles, grammatically and stylistically. When the subject and the object NPs are proper nouns or other nouns that do not differentiate ergative and absolutive case, the word order is fixed SO with bivalent verbs – transitive in (17a) and intransitive in (b). A change of the order SO, is accompanied by a change of the grammatical meaning.

- (17) a. Inal Anzor je-h
Inal Anzor S3SG-carry.PRS
'Inal carries Anzor.'

- b. Inal Anzor j-o-we
Inal Anzor O3SG-DYN-hit.PRS
'Inal hits Anzor.'

The most neutral word order in this type of sentence is SOV. The orders VSO and SVO do occur but they are stylistically marked. When the NPs are case-marked, there is greater freedom in ordering. Indirect objects immediately follow the subject.

Null subjects and objects

As shown above, due to the richness of cross-reference marking, pronominal null subjects and objects are common in any position. Note also the close phonological similarity between the pronouns and cross-reference markers.

- (18) (Se) s-o-s''e (wə) (se) sə-q'ə-zərə-p-š-a-r
I S1SG-DYN-know.PRS you me DO1SG-DIR-PCP-S2SG-lead-PERF-ABS
'I know that you brought me here.'

Coordination

Coordination is marked by affixes, conjunctions, and juxtaposition. The coordination suffixes are used both as single markers and repeated on each conjunct. The suffix *-i* follows the markers of number and definiteness/case, tense/mood and assertive. Starting with NPs, the coordination is marked by suffixes, which are added to each constituent.

- (19) Inal-i Anzor-i ma-txe
Inal-CRD Anzor-CRD S3SG-write.PRS
'Both Inal and Anzor writes.'

The suffix *-i* is found postpositionally, as the final element in the phrase:

- (20) a. pxe wəne dax-i
wood house beautiful-CRD
'and a beautiful wooden house'
- b. pxe wəne daxə jən-i
wood house beautiful big-CRD
'and a big beautiful wooden house'

In the coordination of VPs, the suffix *-i* is added either to the verb (21a) or the object (21b), in both cases keeping the two-sided coordination.

- (21) a. S''ale-r tχətə-m je-že-ri k'ež-a-s'
boy-ABS book-ERG O3SG-read-AOR.CRD leave-PERF-ASSRT
'The boy read the book and left.'

- b. S'ale-r je-že-s' tχələ-m-i k'°ež-a-s'
 boy-ABS O3SG-read.AOR-ASSRT book-ERG-CRD leave-PERF-ASSRT
 'The boy read the book and left.'

The suffix *-re*, like *-i*, occurs as a single marker and repeatedly. This suffix occurs with a wide range of categories, for instance: participles (22a), gerunds, masdars, and infinitives (22b). (23) shows coordination with the conjunction *abi* 'and'.

- (22) a. De də-s'a-laz'e-re də-s'°e-laz'e-re abə jə-s'°e-r-q'am
 we S2PL-where-work-CRD S2PL-why-work-CRD it-ERG S3SG-know-PRS-NEG
 'He doesn't know where (when) we work and why we work.'

- b. Tχələ-r p-tχə-n-re te-b-že-n-re χ°ej-s'
 book-ABS S2SG-write-INF-CRD LOC-S2SG-throw-INF-CRD have.to-ASSRT
 'You have to write and publish the book.'

- (23) Se tχələ-m s-je-že-s' abi we we-s-t-a-s'
 I book-ERG S1SG-O3SG-read.AOR-ASSRT and you I2SG-S1SG-give-PERF-ASSRT
 'I read the book and gave it to you.'

Verbal forms in subordination

Non-finite verb forms of different types play an important role in subordination. In this section we will briefly look at adverbial participles and mood forms in subordinate clauses. The following section deals with non-finite forms in complement clauses.

The conditional forms are divided into proper conditional (24), temporal-conditional (25), subjunctive-conditional (26), and permissive-conditional (27).

- (24) Se sə-ve-z'-a-me fe fə-q'ə-ze-z'e-ž
 I S1SG-O2PL-wait-PERF-if you S2PL-DIR-O1SG-wait-RA
 'If I waited for you, you wait for me.'

- (25) a. Se ar s'ə-s-lay°-č'e s-je-k'°e-ł'e-n-s'
 I he-ABS LOC-S1SG-see-if S1SG-O3SG-go-up.to-FUT-ASSRT
 'If I see him, I will walk up to him.'

- b. Se ar s'ə-s-lay°-č'e s-je-we-n-s'
 I he-ABS LOC-S1SG-see-when S1SG-O3SG-hit-FUT-ASSRT
 'When I see him, I will hit him.'

- (26) a. Fe pismo-r dəy°ase f-tχə-ya-me
 you letter-ABS yesterday S2PL-write-PLUP-COND
 se ar nobe q'ə-s-žerəhe-n-t
 I it-ABS today DIR-S1SG-receive-FUT-CONJ
 'If you had written the letter yesterday, I would have received it today.'

- b. De q'ale-m də-k'°e-n-t we də-b-ut'əps'-a-m
 we town-ERG S1PL-go-FUT-CONJ you O1PL-S2SG-permit-PERF-COND
 'We would have gone to town, if you had let us go'

- (27) Ar jə-rje-že abi q'ə-rje-h
 he-ABS S3SG-OPT-run and here-OPT-fetch
 'Let him run and fetch it.'

The conditional forms have a very limited use in complement clauses. They are found with desiderative matrix predicates (cf. (33f)).

The participle forms express various adverbial relations: condition, location, reason, goal, possibility, concession. Participle forms marking location are formed by the prefixes *s'*-, *zde*-, *zerə*-. These prefixes have several meanings, depending on the context: *s'*- 'where' (28a), 'when' (b); *zde*- 'where' (29a), 'to where' (b); *zerə*- 'where' (30a), 'how' (b).

- (28) a. ł'ə-m wəne-r s'-i-s'°ə-r we q'a-s'°e
 man-ERG house-ABS where-S3SG-do-ABS you DIR-know
 'Find out where the man builds the house.'

- b. A-r mežə-m s'ə-k'°e-r we w-o-s'°e
 he-ABS wood-ERG when-go-ABS you S2SG-DYN-know
 'You know, when he goes to the wood.'

- (29) a. Ps'as'e-r zde-s'əsə-r s'ale-m jə-łey°-a-s'
 girl-ABS where-sit-ABS boy-ERG S3SG-see-PERF-ASSRT
 'The boy saw, where the girl sits.'

- b. Ps'as'e-r zde-k'°e-r s'ale-m jə-łey°-a-s'
 girl-ABS where-go-ABS boy-ERG S3SG-see-PERF-ASSRT
 'The boy saw, where the girl went to.'

- (30) a. we wə-zerə-mə-tə-m wədz q'°-o-č'e
 you S2SG-where-NEG-stand-ERG grass DIR-DYN-grow
 'The grass grows where you don't stand.'

- b. we wə-zerə-k'°e-r se s-s'°e-r-q'am
 you S2SG-how-go-ABS I S1SG-know-PRS-NEG
 'I don't know how you go.'

Participle forms including the meaning 'the reason for, why' are formed by the prefix *s''(e)-* (31a) and the suffix *-ti* (b).

- (31) a. Se abə sə-s''e-k''e-r fe f-s''e-r-q'əm
I it-ERG S1SG-why-go-ABS you S2SG-know-PRS-NEG
'You don't know, why I go there.'
- b. we abə wə-k''-a-ti q'e-p-h-a-s'
you it-ERG S2SG-go-PERF-as DIR-S2SG-bring-PERF-ASSRT
'Since you went there, you brought something.'

The suffixes *-mi* (32a) and *-č'e* (b) mark participles of concession:

- (32) a. we pismo p-tχ-a-mi abə ʔerəh-a-q'əm
you letter S2SG-write-PERF-even it-ERG give-PERF-NEG
'Even if you wrote the letter, he wouldn't get it.'
- b. we wə-k''-a-č'e zəri q'-i-č'ə-nu-q'əm
you S2SG-go-PERF-even nothing DIR-LOC-go.out-FUT-NEG
'Even if you went, nothing would come of it.'

Complementation

An interesting feature of Kabardian is that all predicates of complement clauses are non-finite forms, with no accompanying complementizers. The main complement types are gerunds *-w(e)*, participles, infinitives *-n(u)*, verbal nouns, the alternative form marked by the repeated *-re... -re* 'whether or not', and the conditional *-m* (cf. Kumakhov & Vamling 1993). It is important to bear in mind the special content of the distinction finite/non-finite used here (see above *Finite and non-finite verbs*). Finite forms are independent, whereas non-finite forms in some sense are dependent on a finite verb. Most of the non-finite forms include both tense and full agreement marking, as seen in Table 2.

Table 2. Features of non-finite forms

	Ger.	Altern.	Cond.	Partic.	Inf.	Verbal N
Tense	+	+	+	+	-	-
Subject agreement	+	+	+	+	+	+ ³
Object agreement	+	+	+	+	+	-
Case marking	-	-	-	+	+	+

³Cf. (33d) in the following section.

The subject of the complement clause

All types of non-finite forms include subject cross-reference markers. This is illustrated below with respect to the main types of complement predicates: (33a) participle, (b) gerund, (c) infinitive, (d) verbal noun, (e) alternative form, and (f) the conditional.

- (33) a. (Se) s-o-s''e (wə) (se) sə-q'ə-zerə-p-š-a-r
I S1SG-DYN-know.PRS you me DO1SG-DIR-PCP-S2SG-lead-PERF-ABS
'I know that you brought me here.'
- b. (wə) wi-g'əye-s' (de) də-k''-a-we
you.SG S2SG-think.PRS-ASSRT we S1PL-go-PERF-GER
'You think that we left.'
- c. (Fe) tχət (fe) f-tχə-n(ə-r) fi-murad-s'
You.PL book (you) S2PL-write-INF-(ABS) POSS2PL-intention.PRS-ASSRT
'You intend to write a book.'
- d. De də-wəχ-a-s' (de) di-tχə-nə-r
we S1PL-finish-PERF-ASSRT we POSS1PL-write-VN-ABS
'We finished writing.'
- e. De d-o-ləy° wə-tχe-re wə-mə-tχe-re
we S1PL-DYN-see.PRS S2SG-write-CRD S2SG-NEG-write-CRD
'We see if you write or not.'
- f. Hes''e-m jə-f'ef'-s' se sə-q'a-k'əe-m
guest-ERG S3SG-want.PRS-ASSRT I S1SG-DIR-come-COND
'The guest wants me to come.'

Cross-reference markers occurring in non-finite forms are identical to those used in the corresponding finite forms. This is shown in participles, gerunds and infinitives (33a-c), and the corresponding markers of the finite forms are shown in (34a-c).

- (34) a. (Wə) (se) sə-q'ə-p-š-a-s'
you me DO1SG-here-S2SG-lead-PERF-ASSRT
'You brought me here.'
- b. (De) də-k''-a-s'
we S1PL-go-PERF-GER
'We left.'
- c. (Fe) tχət f-tχə-nu-s'
You.PL book S2PL-write-FUT-ASSRT
'You will write a book.'

One form constitutes an exception to the identity between finite/non-finite cross-reference markers. In (33d), where the complement predicate is a verbal noun, the subject marker is a possessive prefix. A corresponding finite form is *de də-tχ-a-s'* (we S1PL-write-PERF-ASSRT) 'we wrote'.

The general rule is that cross-reference markers are obligatorily present. An exception to this is the infinitive, where the subject marker is optional under certain circumstances (cf. Kumakhov & Vamling 1993:123).

- (35) Se s''e-z-dz-a-s' sə-k''e-n / k''e-n
I LOC-S1SG-begin-PERF-ASSRT S1SG-go-INF / go-INF
'I began to walk.'

In contrast to the presence of the cross-reference markers on the verb, non-emphatic, personal pronouns are usually dropped, both in matrix and subordinate clauses. As shown in many examples, both subjects and various objects are dropped.

Only in one case is the presence of a personal subject pronoun blocked. This occurs when a second person singular subject marker in the complement predicate is used in marking arbitrary reference of the subject (Kumakhov & Vamling 1994). If a second person pronoun is inserted, it is no longer possible to get the arbitrary reference reading (36b).

- (36) a. ?'eχ°əšχ°e-s' a tχəfə-r (*we) p-tχə-nə-r
important.PRS-ASSRT this book-ABS you S2SG-write-INF-ABS
'It is important to write this book.'
- b. ?'eχ°əšχ°e-s' a tχəfə-r we p-tχə-nə-r
important.PRS-ASSRT this book-ABS you S2SG-write-INF-ABS
'It is important for you to write this book.'

The assignment of case to the arguments of the non-finite complement predicates is in principle identical to that of the finite verbs.

Adverb or adjective modification?

A common verbal feature of three non-finite forms is that they are modified by adverbs. The adverb *psəns''ew* 'quickly' has been inserted in the sentences below with subordinate predicates: (37a) participle, (b) gerund, and (c) infinitive. In (d), the verbal noun is modified by an adjective in postposition.

- (37) a. A-bə tχəf psəns''ew zər-i-tχə-nu-r ž-i-? -a-s'
he-ERG book quickly PTC-S3SG-write-FUT-ABS LOC-S3SG-say-PERF-ASSRT
'He said that he will write the book quickly.'

- b. Se sə-s'-o-g°əy a-bə tχəf psəns''ew jə-tχ-a-we
I S1SG-LOC-DYN-hope he-ERG book quickly S3SG-write-PERF-GER
'I hope that he wrote the book quickly.'
- c. Se tχəf psəns''ew s-tχə-nu sə-χ°ej-s'
I book quickly S1SG-write-INF S1SG-want.PRS-ASSRT
'I want to write the book quickly.'
- d. Se si-tχə-n psəns''e-r sə-wəbl-a-s'
I POSS1SG-write-VN quick-ABS S1SG-begin-PERF-ASSRT
'I began my quick writing.'

Causatives

The morphological causative is formed by the prefix *ye-* which shows great productivity (38a). In some cases, however, the prefix loses its primary causative meaning and functions as a transitivizing prefix. This results in reduplicated causative markers when such verbs combine with the causative prefix, as in (38b). A causative matrix verb is illustrated in (38c).

- (38) a. Se we wə-z-ye-ž-a-s'
I you DO2SG-S1SG-CAUS-run-PERF-ASSRT
'I made you run.'
- b. Se a-bə lə-r je-z-ye-ye-v-a-s'
I he-ERG meat-ABS DO3SG-S1SG-CAUS-boil-ASSRT
'I made him cook the meat.'
- c. Se a-r je-z-yez-a-s' a-bə nobe
I he-ABS DO3SG-S1SG-force-PERF-ASSRT he-ERG today
lez'əye-r jə-wəχə-nu
work-ABS S3SG-finish-INF
'I forced him to finish the work today.'

The subject of the intransitive verb assumes the grammatical role of direct object in the transitive construction (39a). A direct object retains its role in the causative of the transitive verb, while the causee becomes an indirect object (39b-c).

- (39) a. Se a-r s'ə-z-ye-t-a-s'
I he-ABS LOC-S1SG-CAUS-stand-PERF-ASSRT
'I made him stand.'
- b. Wə-s-h-a-s'
DO2SG-S1SG-carry-PERF-ASSRT
'I carried you.'
- c. Se we a-bə w-je-z-ye-h-a-s'
I you he-ABS DO2SG-IO3SG-S1SG-CAUS-carry-PERF-ASSRT
'I made him carry you.'

The potential construction

The potential construction is formed by the affixes χ° - and *-f*. The suffix *-f* is used with both transitive and intransitive verbs and χ° only with transitive. (41) shows a modal matrix predicate with similar meaning.

- (40) a. De fe fə-d-o-tay^o-ə-f
we you DO2PL-S1PL-DYN-see-POT (PRS)
'We can see you.'
- b. We se wə-q'ə-z-o-pekə-f
you I S2SG-DIR-O1SG-DYN-look.at-POT (PRS)
'You can look at me.'
- c. Fe de fə-q'ə-t-χ^o-e-s''e-žə-r-q'əm
you we DO2PL-DIR-S1PL-POT-recognize-RA-PRS-NEG
'We can't recognize you.'
- (41) Se s-təč'-a-s' mə wəne-r s-s''ə-n
I S1SG-can-PERF-ASSRT this house-ABS S1SG-make-INF
'I was able to build this house.'

Word order

Complement clauses are found both in subject (42a) and object (b) position.

- (42) a. Deγ^o-e-s' nobe zə-b-γepsč'ə-n
nice-ASSRT today REFL-S2SG-bathe-INF
'It's nice to take a swim today.'
- b. ps'as'e-m pismo jə-tχə-n χ^oej-a-s'
girl-ERG letter S3SG-write-INF want-PCP-ASSRT
'The girl wanted to write a letter.'

As noted above, word order is rather free, allowing SOV, VSO and SVO. The most neutral order is SOV, in both simple and complex sentences. The object complement clause occurs in medial position, i.e. before the matrix verb (43a). Other orderings are also possible (b-c), although stylistically marked:

- (43) a. Fəzə-m [q'ale-m k'e-n] jə-wəbl-a-s'
woman-ERG town-ERG go-INF S3SG-begin-PERF1-ASSRT
'The woman began to go to town.'
- b. Fəzə-m jə-wəbl-a-s' [q'ale-m k'e-n]
- c. [Q'ale-m k'e-n] fəzə-m jə-wəbl-a-s'

Fəzə-m is the matrix subject in (43), as seen from the ergative marking triggered by the transitive matrix verb. The subject of the intransitive *k'e-n* 'go' in the complement is assigned the absolutive case:

- (44) [Fəzə-r k'e-n q'ale-m] jə-wəbl-a-s'
woman-ABS go-INF town-ERG S3SG-begin-PERF-ASSRT
'The woman began to go to town.'

Clauses in subject position are usually postposed, although not necessarily.

- (45) Heləmet-s' [tχələ-r p-tχə-nə-r]
Interesting-ASSRT book-ABS S2SG-write-INF-ABS
'It is interesting to write the book.'

Selectional restrictions with respect to verb classes

On the basis of a study of the selectional restrictions on complement types with respect to different classes of matrix predicate (classification based on Noonan 1985 with some changes) we make the following observations. Generalizing the picture somewhat, one might say that matrix predicates that require their complement to appear as an infinitive make up one group and matrix predicates that choose participles and gerunds for their complement form another group. Roughly speaking, the two groups seem to correspond to matrix predicates in more familiar European languages that take infinitives and finite complements respectively.

In the first group we find such matrix predicates as manipulative (46a), achievement (b), modal (c), and phasal predicates.

- (46) a. Se a-bə ž-je-s-ʔ-a-s' a-r wəne-m
I he-ERG LOC-S1SG-say-PERF-ASSRT he-ABS room-ERG
s'e-mə-č'ə-nu
LOC-NEG-leave-INF
'I told him not to leave the room.'
- b. De t-s'əγ^o-əps'-a-s' fe fə-q'-je-d-yebleye-n
we S1PL-forget-PERF-ASSRT you DO2PL-DIR-S1PL-invite-INF
'We forgot to invite you.'
- c. Se s-təč'-a-s' a wəne-r s-s''ə-n
I S1SG-can-PERF-ASSRT that house-ABS S1SG-make-INF
'I could build that house.'

The second group includes predicates of knowledge (47a) and propositional attitude, pretence, and utterance (b) predicates. This group of

matrix predicates does not impose restrictions on the time reference of the complement. Here we find the tensed complement types.

- (47) a. Ane-m je-s'ə jə-q'ə-r q'ə-zerə-k'e-žə-r
 mother-ERG S3SG-know.PRS POSS3SG-son-ABS DIR-PCP-go-back-ABS
 'Mother knows, that her son returns home.'
- b. S'əle-m xəbar s-i-ye-s'a-s' zerə-səmaž-a-r
 boy-ERG news DO1SG-S3SG-CAUS-know-ASSRT PCP-sick-PERF-ABS
 'The boy told me, that he was ill.'

The utterance and knowledge predicates also select the 'alternative' type ('whether... or not'), as shown in (48).

- (48) Fe de fə-q'ə-de-wəp's'-a-s' də-txe-n-re
 you us S2PL-DIR-O1PL-ask-PERF-ASSRT S1PL-write-FUT1-CRD
 də-mə-txe-n-re
 S1PL-NEG-write-FUT1-CRD
 'You asked us whether we will write or not.'

Complements of commentative predicates show up either as participles (49a) or infinitives (b). They differ in character in so far as the infinitival complement in (b) has arbitrary subject reference while the participial complement in (a) has specific subject and time reference.

- (49) a. ʏes'ey'en-s' Bibe wəne-m zer-i-mə-s-a-r
 surprising.PRS-ASSRT Biba home-ERG PCP-S3SG-NEG-be-PERF-ABS
 'It is surprising that Biba wasn't at home.'
- b. ʔ'ex'əšx'e-s' a txe-tə-r p-txe-nə-r
 important.PRS-ASSRT this book-ABS S2SG-write-INF-ABS
 'It is important to write this book.'

Table 3 summarizes the selectional restrictions imposed on complement predicates with respect to different classes of matrix predicates.

Table 3. Matrix predicates and complement types.

	Partic.	Ger.	Altern.	Inf.	Verbal N
Phasal predicates				+	+
Predicates of intention				+	
Modal predicates				+	
Achievement predicates				+	
Manipulative predicates				+	
Commentative predicates	+			+	
Propositional attitude predicates		+	+		
Pretence predicates	+	+			
Predicates of knowledge	+	+	+		
Utterance predicates	+	+	+		

Abbreviations

ABS	Absolutive	NEG	Negating affix
ASSRT	Assertive	OPT	Optative
CO	Comitative	PCP	Participle
COND	Conditional	PERF	Perfect
CONJ	Conjunctive	PLUP	Pluperfect
CRD	Coordinating suffix	POSS	Possessive
DIR	Directional verbal prefix	POT	Potentialis affix
DYN	Dynamic	Q	Interrogative
ERG	Ergative	RA	Reversed action
GER	Gerund	RECIP	Reciprocity
IMP	Imperfect	REFL	Reflexive
INSTR	Instrumental	S	Subject marker
LOC	Locational verbal prefix	V	Version prefix (i.e. benefactive relation)
		VN	Verbal noun (masdar)

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The potential of a parser in a language teaching program

Birgitta Lastow

Introduction

This paper reports on results from studying what a parser can do when combined with Hypercard on a Macintosh computer to form a pedagogical tool for language teaching purposes. The system was applied to Japanese, but the exercises could easily be altered to suit other languages as well. There are exercises for learning vocabulary, hiragana (see *Writing system* below) and grammar. The focus is on syntax and the exercises have an increasing degree of complexity.

By using a computer for language teaching, and not a book, you can produce very flexible exercises, which are easy to change, more varied and more interesting to use. You can use sound and moving objects. In the program to be presented, a parser is used. This novel feature has many advantages and, for instance, makes it possible comment on spelling or grammatical errors.

The environment

The language teaching program has two major parts: a Japanese parser (described in detail in Lastow 1994), written in LPA MacProlog 4.5, and a user interface (Apple Hypercard stack, version 2.2). The communication between the two parts is made possible by using Apple System software's Open Scripting Architecture (OSA). Both MacProlog and Hypercard can send and receive OSA-defined messages called Apple Events. This communication is hidden from the user. The interface needed for Prolog to communicate with Hypercard was developed by Stephen Cooper at Uppsala University in co-operation with Nicky Johns at LPA Prolog, and is included in the parser. The Japanese characters have been obtained by using the software 'Japanese Language Kit' within the Swedish system version 7.1.