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Directional Markers in Q'anjob'al: Their Syntax and Meaning[1]

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0. Introduction

Directionals (DIR) are grammaticized intransitive motion verbs that form serial verbs with a structure [[V1+V2]+argument]] (V1=main verb, V2=DIRs). I refer to it as 'directional construction' (DIRC). Some examples are shown in (1).

(1) a. Max-ø b'ey-**aj** naq unin[2].
COM-A3S walk-DIR CL child
'The child started walking'.

b. Max-ø s-k'ux-**kan-aj-teq** no chej an ak'un.
COM-A3S E3S-eat-DIR-DIR-DIR CL horse CL grass
'The horse ate [upwards] the grass here [in relation to something else]'.

c. Max-ø b'ey-**aj-teq** naq unin.
COM-A3S walk-DIR-DIR CL child
'The child walked from down there to here'.

Some preliminary observations on DIRCs follow. Directionals trace the trajectory or movement of an entity as in *aj* 'up' and *teq* 'toward X' in (1b-c). They also have aspectual meanings like the inceptive meaning of *aj* (1a). The DIR *kan* 'stay' in (1b) has an adverbial meaning. Furthermore, a clause may have up to three directionals (1b). Finally, *teq* in (1c) overrides the inceptive meaning of *aj* in (1a) but it does not affect the meaning of *kan* in (1b).

[1] Earlier drafts of this paper benefited from discussions and comments from Carlota Smith, Nora England, Rajesh Bhatt, John Haviland, and Roberto Zavala. All errors are my own responsibility.
[2] The abbreviations used are: 1=1st person, 2=2nd person, 3=3rd person, A=absolutive, ADV=adverb, AF=agent focus, AP=antipassive, COM=completive, DEM=demonstrative, DER=derivation, DIR=directional, E=ergative, EXCL=exclusive, FOC=focus, INC=incompletive, IND=indefinite INF=infinitival, IRR=irrealis, IV=intransitive, NEG=negation, P=plural person, PL=pluralizer, PAS=passive, POS=positional, REFL=reflexive, SUF=suffix, TNS=intensifier, TV=transitive.

The goals of this paper are (i) to describe briefly the morphosyntax and syntax of DIRCs in Q'anjob'al, (ii) to propose a classification of directionals based on their combination and meaning, and (iii) to show that their meanings are partially predictable from the syntax and verb meaning.

The grammaticization of motion verbs into directionals, their inventory, and part of their grammatical features are well documented in Maya (England 1976a, 1976b, Haviland 1991, 1993, Zavala 1993, 1994, and Aissen 1994). This paper builds on this work. In section 2, I propose that DIRCs form complex predicates headed by the main verb (V1) and directionals. The main verb controls the transitivity of the construction and directionals depend on one of its argument or interact with its argument structure. Section 3 proposes a classification of DIRs based on distributional properties and meaning. DIRs are classified into three groups: set I (*kan* 'stay') has an adverbial meaning, set II (*aj* 'up', *ay* 'down', *ok* 'enter', *el* 'out', and *ek'* 'pass') has aspectual/trajectory meanings, and set III (*teq* 'toward X', *toq* 'away from X') has deictic meanings. These sets follow the fixed ordering: [V1+I +II+III]. This is presented in section three. Section 4 shows that set II and III directionals interact with the event and argument structure of V1 but set I does not. Furthermore, set III overrides the aspectual meaning of set II. Thus, in the combination II+III, the meaning is always spatial. Section 5 concludes the paper. In general, the meanings of DIRs correlate with their syntax and are partially predictable from aspectual and syntactic structure.

1. Background on Q'anjob'al

Q'anjob'al is a Mayan language spoken in the northwest of Guatemala in the towns of *Santa Cruz Barillas*, *Santa Eulalia, San Pedro Soloma*, and *San Juan Ixcoy*. This study is based on the Q'anjob'al spoken in Santa Eulalia and the data is taken from Mateo (2004b), unless otherwise stated.

Q'anjob'al is an ergative and head marking language without case marking on noun phrases. It has split ergativity conditioned by the absence of preverbal tense/aspect markers (i.e. nonfinite clauses) (Mateo 2004a). It follows a fixed VSO word order. The verbs regarded as directionals are grammaticized motion verbs that also function as main verbs. In their directional form, they appear on any predicate (i.e. verbal and nonverbal predicates) and on relational noun phrases (i.e. prepositional phrases). I concentrate on directionals on verbal predicates.

2. Defining the Properties of DIRCs in Q'anjob'al

DIRs form a closed system. The full list is: *ek'/ik'/k'* 'pass by', *kan* 'stay/remain', *ay/ey* 'down', *aj* 'up', *ok/uk* 'in', *el/il* 'out', *pax* 'return', *teq* 'toward X', and *toq* 'away from X'. The motion verb counterparts are: *ek'* 'to cross', *kan* 'to stay/remain', *ay* 'to go down', *aj* 'to go up', *ok* 'to enter', *el* 'to go out/exit', *pax* 'to return', *?teq* 'to come (here)', and *toj* 'to go (future)', respectively.

As mentioned in the introduction a directional construction may have up to four verbs, V1 plus three DIRs (3). Based on the list of DIRs and example (2), DIRCs form an asymmetric type of serial verb (Aikhenvald 2006:3).

(2) Max-ach y-awtej-kan el-teq heb'.
COM-A2S E3S-call-DIR DIR-DIR they
'They called you, you came out and stayed there [while they left]'.

The verbs in DIRCs do not exhibit embedding or coordination[3]. The DIRC in (2) contrasts with (3) in this respect; (3a) shows a subordinated aspectless complement clause and (3b) a coordinated construction through *kax* 'then/and'.

(3) a. Max-ø y-ojtaq-ne-j [ø s-pich-on s-b'a]
COM-A3S E3S-know-DER-TV A3s E3S-dress-ON E3S-REFL
'S/he learned to dress herself/himself'.

b. [Asan max-ø s-txon ix an] kax [max-ø el ix].
only COM-A3S E3S-sell CL CL then COM-A3S go CL
'As soon as she sold it (plant), she went away'.

In a DIRC, there is only one inflectional domain. The arguments are marked only once on the main verb (i.e. inflecting the DIR is ungrammatical). Note also that argument marking follows a normal ergative-absolutive pattern.

(4) Max-ach w-il-ek'-teq. /*Max-ach w-il (max)-ach ek'-teq.
COM-A2S E1S-see-DIR-DIR COM-A2S E1S-see COM-A2S DIR-DIR
'I saw you from the other side toward here'.

The number of arguments in any DIRC is defined by the valence of the main verb. In this sense, intransitive verbs form intransitive directional constructions (5a), transitive verbs form transitive directional constructions (5b), etc. Note also that the arguments follow the VSO word order found with single headed clauses.

(5) a. Max-ø toj-kan ix ix (y-ul-a').
COM-A3S go-DIR CL woman E3S-inside-water
'The woman fell into the river and stayed there [never taken out]'.

b. Max-ø s-man-el-teq xal jun amb'al tu.
COM-A3S E3S-buy-DIR-DIR CL IND medicine DEM
'The old woman bought that medicine'.
Lit: 'The old woman bought that medicine; it came out (here)'.

[3] DIRCs are like simple clauses regarding argument fronting, topicalization, classifiers (see Craig 1986, Zavala 2000, for details on classifiers). They are also like single headed clauses regarding intonation. If a DIR is at final intonational boundary, it takes *-oq* (e.g. *Maxach skol-el-oq* 'S/he defended you'), except teq/toq. *-oq* marks infinitival status. Thus, the DIR has an infinitival form.

All verbs in a DIRC form a single predicate nucleus in that they behave like a single unit (6). Specifically, person clitics (6a) and incorporated nouns (6b) follow the last DIR (c.f. inflection & word order above).

(6) a. Max-on xiw-kan-el hon. /*xiw hon kan-el/*xiw kan hon el.
COM-A1P afraid-DIR-DIR EXCL
'We (except you) became afraid and remained afraid'.

b. Max-ø kol-wi el anima naq unin. / *kol-wi anima el …
COM-A3S help-AP DIR people CL child.
'The child defended people'.

Suffixes marking voice alternations and fronting appear on the main verb (6) and (7). Modals and negation scope over all the verbs (8).

(7) Max-ø maq'-lay el-teq**.** /*-el-teq-lay
COM-A3S hit-PAS DIR-DIR
'It was taken out [by hitting it]'.

(8) a. Low-an kan-oq!/*low-kan-an
eat-IMP DIR-SUF
'Stay eating!/*eat! and stay'.

b. Maj-ø i-lay aj-teq ix.
NEG-A3S take-PAS DIR-DIR CL
'She was not taken out'.

In summary, a DIRC is like a single clause regarding word order, number of arguments, inflection, particle placement, incorporation, etc. Furthermore, all verbs function as a single predicate but the DIRC seems to be controlled by V1.

3. Classification of Directionals

Directional chains follow a fixed ordering. The possible combinations group them into three types (9). Below I use DIR1, DIR2, and DIR3 interchangeably with Set I, Set II, and Set III. I also use adverbial directional, aspectual directional, and deictic directional; instead of set I, II, and III when discussing their meanings.

(9) Directional Types & Combinatorial Restrictions
a. Set I: *kan* 'remain'
b. Set II: *ek'* 'pass by', *ay* 'down', *aj* 'up', *el* 'out', and *ok* 'in', *pax* 'return'
c. Set III: *toq* 'toward there' and *teq* 'toward here'

All the possible linear combinations of DIRs in (9) are attested (10). Furthermore, all possible reverse combinations are ungrammatical (e.g. set II+I+III: **ek'-kan-teq,* set II+III+I: **ek'-teq-kan,* Set II+I: **ay-kan*, set III+I: **teq-kan*, and set III+II: **teq-el*). Another restriction on DIRs is that two DIRs from the same set in the same construction are ungrammatical as in **Max koman-el-ay-oq* 'we bought -EL-AY something' and **Max koman-teq-toq* ('we bought -TEQ-TOQ some-

thing'). These restrictions show that each set has a particular function and only one member does that function. In other words, there is one syntactic position for each set-function. Thus, two DIRs from the same set are ungrammatical. Below I show how these restrictions correlate with their meaning and syntax.

(10)a. Max-ø aw-j-i kan ek'-teq naq unin. [I+II+III]
COM-A3S shout-DER-IV DIR DIR-DIR CL child
'The child called (somebody) toward here [in relation to something else]'.

b. Max-ø lajwi kan-ay jun ilya tu'. [I+II]
COM-A3S end DIR-DIR IND illness DEM
'That illness ended (down) [in relation to something else]'.

c. Max-ø y-al kan-teq naq. [I+III]
COM-A3S E3S-say DIR-DIR CL
'He told it toward here [in relation to something else]'.

d. Max-ø s-jaq-el-teq heb'. [II+III]
COM-A3S E3S-open-DIR-DIR PL
'They opened it out [to here]'.

The next sections show that DIR1 has an adverbial meaning, DIR2 has a trajectory or aspectual meaning, and DIR3 a deictic meaning. A DIRC follows the fixed template in (11). The evidence for this template comes from their meanings, function, and syntax. It is relevant to note that Craig (1992) discusses a different ordering in Popti' and Haviland (1991:28) shows another ordering in Tzotzil, based on orientation, which does not apply to Q'anjob'al.

(11) DIRC template: [v1+adv-DIR1+asp/trajectory-DIR2+deictic-DIR3]

3.1. Syntactic Dependency and Contribution of DIRs

The DIRs from set II and III generally depend on a syntactic argument. Furthermore, they may contribute to the argument structure of the DIRC. The following examples show that a direct object must be syntactically visible for DIR2s. DIR2s are ungrammatical with the absolutive antipassive (12c) because this antipassive removes the theme argument from the syntactic structure.

(12)a. Max-ø man-lay el jun no kaxhlan. [man-lay-kan/teq]
COM-A3S buy-PAS DIR IND CL chicken
'A chicken was bought'.

b. Max-ø man-wi el kaxhlan naq Lwin. [man-wi kan/toq kaxhlan]
COM-A3S buy-AP DIR chicken CL Lwin
'Lwin bought chickens'.

c. *Max-on man-waj el (y-in no kaxhlan). *[man-waj-kan/teq]
COM-A1P buy-AP DIR E3S-at CL chicken
'We bought (at the chicken)'.

The ungrammaticality of (12c) is not due to a restriction on semantic roles or to the distinction between aspectual and nonaspectual meanings (13). Specifically, a DIR is grammatical with an intransitive verb taking a theme or agent argument (13a-b). Furthermore, (13b) has an aspectual meaning and (13c) a trajectory one and both are grammatical. Therefore, it is a syntactic constraint referring specifically to the syntactic presence of a direct object.

(13)a. Max-ø q'aj-ok jun s-q'ab' te te'. [theme argument]
COM-A3S break-DIR IND E3S-hand CL tree
'A branch of the tree broke [on itself]'.

b. Max-ø mulnaj aj heb' konob'. [agent argument]
COM-A3S work DIR PL people
'The people started working'.

c. Max-ø ko-lo-aj xe ak'un y-uj wajil. [aspectual meaning]
COM-A3S E1P-eat-DIR root plant E3S-by starvation
'We started eating plant roots because of starvation'.

Another feature of DIR2 and DIR3 is their contribution to grammatical functions and semantic roles. Due to space constraints, I illustrate these changes with one case from each directional set. The clearest case from DIR2 is shown by the directional *ok* 'enter' with verbs taking a goal/target argument (14). *Ok* affects the grammatical and thematic relations of the arguments. In (14a) *no no*' is the direct object and the goal but in (14b) it becomes an adjunct and a new direct object/theme is introduced. This structural change could be summarized as: [V+S+O/GOAL] » [V-ok+S+O/THEME+ adjunct/GOAL].

(14)a. Max-ø s-q'oq naq Xhwan no no'.
COM-A3S E3S-throw CL Xwhan CL animal
'Xhwan threw (something) at the animal'.

b. Max-ø s-q'oq-ok naq Xhwan ch'en ch'en y-in no no'.
COM-A3S E3S-throw-DIR CL Xwhan CL rock E3S-at CL animal
'Xhwan threw the rock at the animal'.

Regarding DIR3 *teq/toq*, they introduce a change in semantic roles (15). Again, in (14a) the direct object *no no*' 'the animal' is the goal but in (15a) *no no'* changes to a theme and continues to be the direct object. (15b) shows that this change does not arise with the adverbial DIR *kan* (15b).

(15)a. Max-ø s-q'oq-teq naq Xhwan no no'.
COM-A3S E3S-throw-DIR CL Xwhan CL animal
'Xhwan threw the animal to here'.
*'Xhwan threw something to the animal here'.

b. Max-ø s-q'oq-kan naq Xhwan no no'.
COM-A3S E3S-throw-DIR CL Xwhan CL animal
'Xhwan threw (something) at the animal [before something else]'.

In summary, DIR2s require the syntactic realization of a direct object. Furthermore, DIR2 and DIR3 contribute to the thematic and grammatical relations in the clause. However, DIR1 does not drive these changes.

3.2. Lexical Restrictions on DIRs

Several lexical restrictions apply to directionals from Set II and III but not to set I. I only show a case of clash in reference point. The achievement motion verbs *ek'* 'to pass', *kan* 'to stay/remain', *jay* 'to come here', and *apn* 'to arrive there' specify a reference point and specify movement prior to reaching the reference point (see section 4 for the classification of events). Others verbs like *ek'* or *ul* may specify movement after their reference point[4]. In principle, DIRs could apply to this prior/posterior movement. However, this is ungrammatical (16a). Arguably, DIR2 and DIR3 are ungrammatical because the preliminary stages of these events are not available for modification. (16b) shows that this restriction does not apply to the directional *kan*. (17) illustrates that all directionals are grammatical with verbs like *b'ey* 'to walk', *txakw* 'to move on four legs', *jutx* 'to carry away', etc. These verbs do not specify a lexical reference point or direction.

(16)a. *Max-ø apni-aj/ek'/teq naq unin.
COM-A3S arrive.there-DIR/DIR/DIR CL child
'The child arrived there coming up /passing there/here'.

b. Max-ø kan-kan naq unin.
COM-A3S stay-DIR CL child.
'The child stayed there [in relation to another event]'.

[4] The verbs *ul* 'to come and go back' and *b'et* 'to go and come back' specify movement before and after their reference point. The only DIRs compatible with these verbs are *kan* (DIR1) (e.g. *ul/b'et-**kan*** 'to come/go and return in relation to...') and *ek'* (DIR2) (e.g. *ul/b'et-**ek'*** 'to come/go and return passing'). *Ek'* means 'going by a point', which is compatible with *b'et* and *ul*. Other combinations are ungrammatical (e.g. ***ul aj/ay/ok/el/teq** 'come and return -AJ/AY/EL/TEQ).

(17)a. Max-ø txak-wi kan-oq.
COM-A3S move.4.legs-DER DIR-SUF
'She/he stayed walking on four legs'.

b. Max txakwi ajoq.
'She/he started walking on four legs (e.g. baby)'.

c. Max txakwiteq.
'She/he walked on four legs toward here'.

4. The Meanings and Interaction of Directionals

I follow the tradition of classifying events into activities, accomplishments, and achievements (Vendler 1957, Dowty, 1979, Smith 1991, 1999). Following Smith (1991) I also assume a 'semelfactive' type. I illustrate how the distributional patterns of DIRs correlate with their meanings. Specifically, DIR1 has an adverbial meaning, DIR2 an aspectual/trajectory one, and DIR3 a deictic meaning.

Regarding the meaning of set I, *kan* 'to stay' usually appears with two events [event-*kan*, (event)]. It roughly means "the event-*kan* happens in Y location in relation to X"; where X is another event. When *kan* appears in single clauses, another event is inferred (18b). In general, *kan* establishes a spatiotemporal relationship between two events (18b-c).

(18)a. Max-ø s-man ix Lolen jun te na.
COM-A3S E3S-buy CL Lolen IND CL house
'Lolen bought a house'.

b. Max-ø s-man-<u>kan</u> ix Lolen jun te na.
'Mikin bought a house (somewhere) [before she died]'.
'Mikin bought a house (somewhere) [and she left or somebody else left]'.

c. Y-et <u>max-ø toj</u> ix Lolen yokti', max-ø <u>kaj-kan</u> ix te na.
E3S-when COM-A3S go CL Lolen west COM-A3S live-DIR CL CL house
'Lolen lived in the house before she went to the U.S.'.

The directionals in set II have aspectual and/or trajectory meanings. I use ***aj*** to show the two meanings (See Mateo 2004b for details of each DIR). (19) shows its **inceptive** meaning and (20) illustrates its trajectory/movement meaning. The events in (19) have only one endpoint available (the initial endpoint in activities, a stage in achievements and semalfactives). Then, the inceptive meaning is obtained when ***aj*** modifies this endpoint or stage. In other cases, the meaning is trajectory or movement as illustrated by the achievement situation in (20).

(19)a. Max-ø ko-txon-aj ixim ixim. [activity] *(without aj)*
COM-A3S E1P-sell-DIR CL corn
'We started selling the corn'.

b. Max-ø q'aj-aj s-q'ab' te te'. [achievement]
COM-A3S break-DIR E3S-hand CL tree
'The tree branches started breaking'.

c. Max-ø at'ixhli aj naq unin. [semelfactive]
COM-A3S sneeze DIR CL child
'The child started sneezing'.

(20) Max-ø ha-b'is-aj jun koxhtal mansan. [accomplishment]
COM-A3S E2S-count-DIR one sack apple
'You counted [upwards] a sack of apples (i.e. from the floor)'.
*'You started counting a sack of apples'.

The generalization above accounts for most of the data but it is not without exceptions. Other factors may affect the meaning. Examples like *??kotxon-aj* 'start selling/sell upwards' (trajectory/movement)*, alji aj* 'to reproduce/start being born' (shift in meaning), *?echb'anej aj* 'to start waiting' (?not repeatable), etc. are marginal or do not fit the patterns above.

The directionals from set III have deictic meanings. *Teq* 'toward X' and *toq* 'away from X' add a spatial/temporal bound and/or a path (Talmy 1985, Krifka 1999) to the construction. The speaker is the point of origin in *toq* and it is the final point in *teq*. I use *teq* to illustrate their meanings[5].

Teq adds a **spatial bound** and **path** to unbound events of change of location (e.g. *iq* 'carry', *achinwi* 'swim', etc.). This makes the event telic. In (21a) the event without *teq* is an activity and *teq* shifts it into accomplishment. However, *teq* has a directional meaning with verbs without change of location (21b).

(21)a. Max-ø b'ey-teq naq unin.
COM-A3S walk-DIR CL child
'The child walked [from there] to here'.

[5] For simplicity *teq* is glossed 'toward here', and *toq* 'toward there'. *Toq* and *teq* do not always have opposite directions. *Toq* in *Max poj-**toq*** 'It broke into pieces' is not opposite to *teq* in *Max poj-**teq*** 'It came broken'. Here *teq* indicates a COMING event. This appears when no change of location, mover, and direction is available (e.g. *Max kam-teq no'* 'It died and came here').

b. Max-ø s-taynej-teq naq Mekel ixim awal.
COM-A3S E3S-take.care.of-DIR CL Mekel CL corn.plant
'Mekel took care of the corn plant toward here'.

In closing this section I illustrate the interaction among DIRs. As shown above *kan* has an adverbial meaning and function. It is independent of argument and event structures. It does not interact with other directionals either (22).

(22)a. Max-ø kam-kan ay jun-tzan an ak'un tu'. set I+II
COM-A3S die-DIR DIR IND-PL CL plant DEM
'Those plants died there completely [in relation to another event]'.

b. Max-ø s-man-kan-teq naq unin jun an keney. set I+III
COM-A3S E3S-buy-DIR-DIR CL child IND CL banana
'The child bought a banana [in relation to…] and it came here'.

DIR2 and DIR3, however, interact with each other. When both sets have trajectory meanings, they are compatible (23). However, when DIR2 has a trajectory meaning, DIR3 overrides it and the spatiotemporal meaning of DIR3 prevails (24).

(23)a. Max-ø ko-chot-b'aj aj tx'otx' xhaltin. set II
COM-A3S E1P-seat-DER DIR CL frying.pan
'We set the frying pan UPWARD'.

b. Max-ø ko-chot-b'aj-teq tx'otx' xhaltin. set III
COM-A3S E1P-seat-DER-DIR CL frying.pan
'We set the frying pan down TOWARD the speaker'.

c. Max-ø ko-chot-b'aj aj-teq tx'otx' xhaltin. set II +III
COM-A3S E1P-seat-DER DIR-DIR CL frying.pan
'We put the frying pan DOWN oriented TO the speaker [higher location]'.

(24)a. Max-ø b'ey-aj naq unin. [inceptive meaning]
COM-A3S walk-DIR CL child
'The child started walking'.

b. Max-ø b'ey-teq naq unin. [spatial bound]
COM-A3S walk-DIR CL child
'The child walked [from there] to here'.

c. Max b'eyajteq naq unin. [trajectory/movement]
'The child walked from DOWN there TO here'.
*'The child started walking from down there to here'.

In summary, DIR3 overrides the aspectual meaning of DIR2 but DIR1 is independent of other DIRs. Each DIR set differs in scope (25a). In the surface syntax, however, the most embedded DIR has the least interaction with the verbal complex (25b). In this sense, DIR1 operates at a clausal level.

(25)a. Scope of DIRs: [DIR1 + [[V1 + DIR2] + DIR3]]
b. Surface Syntax template: [V1+DIR1 + DIR2 +DIR3]

5. Conclusions and further research

In this paper, I have shown the following syntactic properties and meaning of directional constructions in Q'anjob'al. First, DIRCs form one clause with a complex predicate head partially controlled by V1. However contrary to what is usually assumed for Mayan languages, in Q'anjob'al directionals interact with the argument structure of V1. Second, there are three classes of directionals: an adverbial type (*kan* 'stay'), a trajectory/movement or aspectual type (*aj, ay, ok, el, ek';* 'up, down, enter, out, pass'), and a deictic type (*teq, toq;* 'toward X, away from X'). The first type establishes a spatiotemporal relationship between two events. The second type contributes aspectual information to the clause, which is partially true for the third type. Furthermore, the deictic type overrides the aspectual meaning of the second type. Third, a DIRC has a fixed template [V1 + adv-DIR + trajectory/aspectual-DIR + deictic DIR], which does not reflect the immediate meaning.

In general, the meanings of directionals correlate with their syntactic behavior and are partially predictable from aspectual and syntactic information, and the interaction among them. However, further, analysis is needed for the individual directionals, which should focus on the event structure of the main verb.

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