

EXTENDING THE CHALLENGE OF CONTROL PHENOMENA

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Abstract

Within a semantic approach, control phenomenon is understood as a property of infinitival clauses based on the semantic properties of matrix verbs (Foley and Van Valin 1984; Comrie 1985; Cutrer 1993): aspectual, modal, and desiderative predicates show actor control, whereas implicative and jussive verbs show undergoer control. That is, control as a property of complementation (Landau 2000). More recently, Van Valin (2005) posits that control may not be a uniform phenomenon since controllers may vary from construction to construction even within a language (e.g. English shows syntactic controllers in coordinate sentences, but semantic controllers in infinitive clauses). The present study examines cases of control relations based on Southern Uto-Aztecan languages. The analysis focuses on a special type of adverbial subordination: purpose relations. It is shown that control phenomena are not restricted to the domain of complementation or particular syntactic structure, but it results from the semantics and pragmatics of certain construction types.

Keywords: semantic control, purpose, complementation, Uto-Aztecan languages

1. Introduction

In simple clauses, the semantic notion of goal can add information to the internal aspectual structure of the event. In contrast to pure motion (1a), the sentence in (1b) implies two sub-events, the action of running and the resulting change of location as *Aurelia arriving at the store*. The notion of reaching a goal is likewise expressed within motion-*cum*-purpose (2a) and purpose (2b) constructions, where the main clause encodes an action and the dependent clause, the purpose unit, expresses the motivating event.

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|-----|-----------------------|---|
| (1) | a. motion | <i>Aurelia ran every morning</i> |
| | b. motion + goal | <i>Aurelia ran to the store</i> |
| (2) | a. motion + purpose | <i>Aurelia went to buy milk</i> |
| | b. activity + purpose | <i>Aurelia bought milk to prepare a milkshake</i> |

This paper investigates the syntactic and semantic properties of purpose relations, an intriguing but very much ignored clause in the literature of subordination. Previous works on the topic are Thompson (1985) and Jones (1991) on English purpose clauses, and more recently Verstrate (2008) and Schmidtke-Bode (2009) from a typological perspective. For the study of purpose relations, two apparently conflicting assumptions come into sight:

- Syntactically, purpose clauses are considered as a type of adverbial subordination, i.e. argument-adjunct (Jones 1991), peripheral unit (Van Valin & LaPolla 1997; Ernst 2001: 355), a special type of resultative (Nedjalkov 1998)

- Semantically, purpose clauses share meanings with other complex sentences such as explanation (reason and cause clauses), future-oriented (sequential clauses), and intention (modal clauses) (Givón 2001; Cristofaro 2003)

In turn, purpose can be grouped with other semantic relations within the domain of adverbial subordination, such as cause and reason clauses, or can be aligned with certain complement relations as in desideratives. In the former, the syntactic and semantic properties of the dependent unit are barely restricted by the main clause, as long as the event is unrealized. In the latter, such properties can be determined by the whole clause in a similar way that complement-taking predicates specify the morpho-syntactic properties of a dependent unit.

The aim of this paper is to demonstrate that purposive linkages are not privative of adverbial subordinations or infinitive complements, but they serve as a general strategy of clause union. Indeed, complex structures taking a purposive linkage evoke a set of semantic notions including volition, future expectation, the participant's willingness towards the realization of another action and, most importantly, semantic control relations. That is, purposes always entail a referential dependence between a core argument of the matrix unit and an argument of the linked core (cf. Curter 1993, Van Valin 2009); most of the time, the pivot or controllee is covert but it can be also a copied pronoun (Stiebels 2007). The analysis focuses on Southern Uto-Aztecan languages; Yaqui (Taracahita) will be analyzed in detailed since it is the language of which I have sufficient data from fieldwork. The data come from reference grammars, grammatical sketches, as well as other linguistic materials. The organization is as follows. Next section provides a definition and major characteristics of purpose clauses cross-linguistically; §3 outlines the different strategies for coding purpose relations found in Southern Uto-Aztecan languages and explores first their syntactic properties, and then §4 their semantic characteristics, where special attention is placed on the notion of semantic control. Last section §5 highlights the fact that purposive linkages are not exclusive of the adverbial domain but they also combine with specific complement-taking predicates in the family.

2. Defining purpose clauses

A purpose clause encodes a particular relation between two events. This relation is such that one of the linked events (the one coded by the main unit) is performed with the goal of obtaining the realization of the other one (the one coded by the purpose or dependent event) (Cristofaro 2003: 157; 2005). As an adverbial relation, purposes fall on the group of adverbial clauses coding a proposition, hence they cannot be substituted by adverbs or adverbial phrases (Thompson & Longacre 1985; Matthiessen & Thompson 1988; Thompson *et al* 2007). In addition, purposes are considered a type of clause-modifying strategy which imposes few restrictions over the event with which they relate “which correctly predicts their relative freedom” (Ernst 2001: 355-6).

Although the semantic characterization is very much the same, the formal structure of purpose clauses varies even within the same language. In English, they can be expressed by an adverbial clause introduced by *in order to* (3a), the linker *so that* (3b), as well as by an infinitive clause introduced by *to* (3c). In Nupé (Kwa; Nigeria) purpose is expressed by verbal serialization without linkers (3d); in Triqui, the two unites are juxtaposed and the intentional meaning is expressed by the anticipatory mood coded by tone (3e); in Modern Greek, the purpose is expressed by means of a subjunctive clause and a general subordinator (3f); in Turkish (3g) it takes the form of an infinitival additionally introduced by a clause linkage

marker; finally, in some Bantu languages a purpose clause (3h) is equally marked on the verb as a benefactive nominal argument (3i).¹ In the examples, the purposive unit is in brackets.

- (3) a. *I came [in order to help you with the cooking]*
- b. *I came [so that I can help you with the cooking]*
- c. *I came [to help you with the cooking]*
- d. *Musa bé [lá èbi]*
Musa came took knife
'Musa came to take the knife.' (Nupé; George 1975)
- e. *Ri³ki²³ i³ čha³ [žá⁵h]*
gave the tortilla will.eat.I
'You gave me tortilla for me to eat.' (Chichauxtla Triqui; in Longacre 2007: 397)
- f. *írφame [na se voiφíso]*
come.PAST.1PL SBJV 2SG.ACC help.1PL
'We came (in order) to help you.'
(Modern Greek; Joseph & Philippaki-Warburton 1987:31)
- g. [*Çarşı-ya git-mek üzere] otobüs-e bin-di*
market-DAT go-INF in.order.to bus-DAT get.on-PAST.3
'She got on the bus to go to the market.' (Turkish; Lewis 1967:167-8)
- h. *Abaantu bi-iig-ir-a [ku-menya ubwéenge]*
people SUB.PRO-study-BEN-ASP INF-know knowledge
'People study in order to learn.'
- i. *Umugóre a-rá-kor-er-a umugabo*
woman SUB.PRO-PRES-work-BEN-ASP man
'The woman is working for the man.' (Kinyarwanda; Kimenyi 1976)

There is a general assumption that goal and purpose, like companions, beneficiaries, instruments, sources, and locations tend to be associated to non-core arguments hence marked as oblique. Yet, in several languages the case marker used for datives, benefactives or allatives (Haspelmath 2003) is used also for purpose relations. In English, recipients, goals, and purpose are all introduced by the preposition *to*. The very same preposition can encode a result state for some action described in the main verb (Hoekstra 1998) as in *the surprise brought Linda to unconsciousness*. Besides some semantic and pragmatic differences, in Spanish there is an overlap between the prepositions *a* 'to' and *para* 'for' introducing spatial

¹Abbreviations: 1, 2, 3: first, second, third person; A: ergative, B ~ ABS: absolutive, ACC: accusative, AND: andative, APPL: applicative, ASP: aspect, BEN: benefactive, CONT: continuativo, CLS: classifier, COMP: completive, DAT: dative, DEF: defined, DES: desiderative, DEM: demonstrative, DET: determiners, DIR: directional, EMPH: emphatic, FUT: future, GEN: genitive, INCOMP: incompletive, INF: infinitive, INSTR: instrumental, INTEN: intensifier, IMPFV: imperfective, LOC: locative, NEG: negation, NF: non finite, NOM: nominative, PAS: passive, PAST: past, POT: potential, PFV: perfective, PL: plural, PRES: present, PRO: pronominal, PURP: purpose, REF: referential, RDP: reduplication, SG: singular, SUB: subject, SBJV: subjunctive.

goal (4a), beneficiaries (4b), motion-cum-purpose (4c) but not purpose clauses (4d). As in English, different purpose clauses involve extra morphology as in *Juan compró un pastel [para que su hijo lo llevara a la fiesta]* ‘John bought a cake in order for his son to take it to the party.’

- (4) a. *Juan fue a / para la tienda*_{Goal}
 ‘John went to the store.’
- b. *Juan le compró un pastel a María*_{Ben}
- b’. *Juan compró un pastel para María*_{Ben}
 ‘John bought a cake to/for Mary.’
- c. *Juan fue a la tienda [a / para comprar un pastel]*_{Purp}
 ‘John went to the store to buy a cake.’
- d. *Juan compró un pastel [*a / para llevarlo a la fiesta]*_{Purp}
 ‘John bought a cake to/in order to take it to the party.’

The most typical case of purpose relations involves motion verbs in the main unit. In Mayan languages, the motion can come out as an independent verb, auxiliary or verbal affix (Zavala 1993). Compared to the full coding of TAME morphology and pronominal markers in main predicates, the intransitive purpose clauses in (4a) from Akatek show how the dependent unit shows up as non-finite clause ‘subordinated’ to the previous predicate without any subordinator (Zavala 1993: 25-6). In Q’eq’chi, the purpose event in (4b) is introduced by the clause linkage marker *chi*, whereas in (4c) the motion and purpose events are fully attached in a co-lexicalized structure.²

- (4) a. *Ch-in-too-ok-toj* [wey an b’ey s-sat ko-tx’at tu’]
 INC-B1S-go-DIR:in-DIR:thither sleep CL1S to A3-face A1P-bed DIST
 ‘I am going to sleep in our bed.’
- b. *T-in-xik* [*chi b’ane’k*]
 FUT-B1-go CLM cure.PASS
 ‘I will go to be cured.’ (Bernstein 1985: 262; cited in Zavala 1993: 55)
- c. *S-ul-in-atin-q*
 CM-come-B1-bathe-NF
 ‘I came to bathe.’ (Stewart 1978: 144; cited in Zavala 1993: 54)

Moreover, purposes are traditionally associated with cause and reason adverbial relations; the three relations provide explanations or accounts for the occurrence of a given state or action, except that purposes express a motivating event where the intended result is yet to be achieved (Kortmann 1997: 86); less finite (5a) vs. more finite (5b).

² As it happens with many other semantic relations, ‘purpose’ can be expressed too by means of constructions involving two coordinated sentences as in *I will go to the store (and) I will buy some milk*. Only sentences showing some degree of integration –syntactic and/or semantic- are considered in this study.

- (5) a. *Biska* [Monguno-ro lete-ro tawange] ciwoko
 yesterday Monguno-to go.NF-ro early:1SG get.up:1SG:PAST
 ‘Yesterday, I got up early to go to Monguno.’
- b. *Biska* [Monguno-ro lenging-dø-ro tawange] ciwoko
 yesterday Monguno-to go.1SG:IMPFV-DEF-ro early:1SG get.up:1SG:PAST
 ‘Yesterday, I got up early because I was going to Monguno.’ (Hutchison 1976: 147)

3. Southern Uto-Aztecan purpose clauses

In the Southern branch of the Uto-Aztecan family, three major structures coding purpose are found: the motion-cum-purpose clause type (6a) and (6b), the intentional clause type (6c), and the finality clause type (6d). The first type is restricted to motion verbs in the main unit, such as the notion of intention is inferred by the construction as a whole; the intentional and finality types involve any kind of activity predicate plus the purpose unit; in the former, there is an explicit volitional/desiderative verbal marker in the dependent unit, while in the latter there is a clause linkage marker indicating the semantic relations among the two units. There is also a distinction in terms of animacy: intentional purpose demands human actors; motion-cum-purpose and finality allows animates, but only the last type allows inanimate entities as main actors.

(6) Motion-cum-purpose type

- a. *Huma hihim* [va'igiti igai]
 together go:CONT bring DEM
 ‘Together (they) went to bring (them).’ (Pima; Estrada 1998: 34)
- b. *Lupe-Ø wakas-ta jinu-se-k*
 Lupe-NOM meat-ACC buy-PURP.SG-PFV
 ‘Lupe went to buy the meat.’ (Yaqui)

Intentional type

- c. *Wanita werumá puusi-ta-re* [kawé nene-narí=a]
 Juana big eye-make-PFV well see-DES-EMPH
 ‘Juanita opened her eyes a lot to see better.’ (Guarijío; Félix: 2005:321)

Finality type

- d. *Min-Ø u-ka kaba'i-ta nenka-k* [kaba'ite-ne-betchi'ibo]
 Min-NOM DET-ACC horse-ACC buy-PFV horse.ride-POT-PURP
 ‘Fermín bought a horse to ride on it.’ (Yaqui)

The syntactic characteristics of purpose types are examined next based on: (i) argument coding (i.e., the omission of an argument, its expression as accusative, possessor or oblique); (ii) operator coding (i.e., the verb form employed, whether it is finite, non-finite, or it has a special form); (iii) the scope of negation; (iv) the presence of clause linkage markers, and (v) the position of the linked unit with respect to the main clause.

3.1. *Argument coding.* Purpose relations do not logically entail the participants of the dependent unit or whether the performer of the main action controls the realization of the dependent one (Cristofaro 2003: 157). Yet the first most striking feature of purposes is the necessarily occurrence of an argument in the dependent unit which must be identified with one core argument of the matrix clause. In the most typical situation, the main and dependent

actors are the same and so the dependent actor is absent; that must be the case for purpose of motion (7a) and intentional clause types (7b).

- (7) a. Motion-cum-purpose type
Nabí=rawe=mu_i ee-héna-ni [____i i'á-mi kawaí]?
 every=day=2SG.NOM RDP-come-PRES look.for-FUT horse
 ‘You come every day to look for the horse?’ (Guarijío; Miller 1993: 104)
- b. Intentional type
Wanita_i werumá puusi-ta-re [____i kawé nene-narí=a]
 Juana big eye-make-PFV well see-DES-EMPH
 ‘Juanita opened her eyes a lot wanting to see better.’ (Guarijío; Félix 2005:321)

Many languages have distinct syntax for purpose clauses whose subjects are different (Thompson and Longacre 1985: 187). Data is scarce, but at least in Yaqui and Guarijío, finality structures work well for both same subjects (8a) and different subjects (8b); notice that the dependent actor is marked accusative when it is different to the main actor. The occurrence of extra morphology like the adverbs *ruhka* and *olaga* ‘like this’ (8c) in Guarijío is not rare –but not obligatory– with different subjects.

- (8) Finality type
- a. *U o'ou-Ø_i uya-u siika [____i mas-ta me'e-betchi'ibo]*
 DET man-NOM mount-DIR go.SG.PFV deer-ACC kill.SG-PURP
 ‘The man went to the mount to kill the deer.’ (Yaqui)
- b. *U maso-Ø_i bwite-k [u-ka o'ou-ta_j ka a_i me'e-ne-betchi'ibo]*
 DET deer-NOM run.SG-PFV DET-ACC man-ACC NEG 3SG.ACC kill.SG-POT-PURP
 ‘The deer ran quickly so that to the man wouldn’t kill him.’ (Yaqui)
- c. *Oí-re [ihí-bo olága]*
 invite-PAS drink-PURP.PL like.this
 ‘(He_i) invited them ____{i+v} to drink.’ (Guarijío; Miller 1993: 206)

There is one important consideration in the study of purpose relations: there **must be** one shared participant between the two units, such as a main core argument controls the identity of an argument of the dependent unit, i.e. semantic control relation. Outside purely syntactic definitions, control is generally associated to an absent controllee (gap) in the linked unit. I am adopting Stiebels (2007) control’s definition, where the controllee may be also a pronominal argument as long as there is a **referential dependency** among the two cores. Thus, the controllee can be either absent (a syntactic missing argument) or overt (a non-referential copied pronoun). Stiebels also proposes a different set of semantic control patterns:

- (9) Different control patterns (cf. Stiebels 2007)
- i. Exhaustive: the referents of the controller and controllee overlap completely
Sue_i wants ____i to leave
- ii. Partial: the controller’s reference is property included in the controllee’s referents
Sue_i wants ____{i+v} to meet

- iii. Split: two arguments of the control predicate jointly control the controllee
Carl_i want to go to the market with Rose_j ____{i+j} to buy some wine
- iv. Arbitrary: there is no local controller³
____{arb} to smoke around babies_i is dangerous for them_i

The semantic notion of control is crucial for purpose relations when the subjects are different, since other instances of semantic correlation may take place. In contrast to the main actor controlling the identity of the dependent actor in (8a), the main actor controls the dependent undergoer in *the deer ran in order for the man not to kill it* (8b); the two cases show exhaustive control, in terms of Stiebels. In (8c), there is a partial control relation, since the main actor is hopefully included in the set of people who will drink. A more complex situation is found when the main clause is transitive. In (10a) below, both the main actor controls the identity of the dependent actor, and the main undergoer controls the dependent undergoer; in (10b), the main undergoer controls the identity of the missing actor in the linked unit; though the theme is also shared, there is a coreferential pronoun *am* ‘them’ in the dependent unit; in (10c) the main undergoer controls the identity of an optional instrument phrase. The examples are from Yaqui.

(10) Finality type

- a. *Min-∅_i u-ka kaba’i-ta_j nenka-k [____i ____j kaba’ite-ne-betchi’ibo]*
 Min-NOM DET-ACC horse-ACC buy-PFV horse.ride-POT-PURP
 ‘Fermin bought a horse to ride on it.’ (Yaqui)

- b. *Min-∅_i u-ka yoi-ta_j kaba’i-m_k reuwa-bae*
 Min-NOM DET-ACU yori-ACC horse-PL lend-DES

[____j am_k wiria-ne-betchi’ibo]
 3PL.ACC feed-POT-PURP

‘Fermin wants to lend the foreigner the horses in order for him to feed them.’

- c. *Min-∅_i u-ka tractor-ta_j jinu-k*
 Min-NOM DET-ACC tractor-ACC buy-PFV

[enchi_k (a-e)_j bwia-ta tekpanoa-ne-betchi’ibo]
 2SG.ACC 3SG.NS-with land-ACC work-POT-PURP

‘Fermín bought the tractor in order for you to work the land (with it).’

Therefore, the controllee is absent in (10a), but not in (10c) where there is an indexed pronominal phrase; (10b) shows both situations. In addition, due to word-formation requirements, Náhuatl and Corachol motion-*cum*-purpose structures disallow the omission of the dependent actor (11a); however, it cannot be either a full NP or an independent pronoun. That is, an elaborated NP is disallowed, only co-indexed pronouns are allowed.

(11) a. Motion-*cum*-purpose type

Ni-yawi [ni-k-tegi-ti tro:ha chi:hli]
 1SG-go 1SG-3O-cut-AND a.lot chile

‘I am going to cut a lot of chile.’ (Pajapan Nahuatl; Peralta 2007)

³ Rather than arbitrary, this situation clearly involves pragmatic factors, i.e. the speaker has somebody in mind.

a'. *Ni-yawi* * \emptyset -*k-tegi-ti tro:ha chi:hli*

a''. *Ni-yawi* *[**newa ni-k-tegi-ti tro:ha chi:hli**]

3.2. *Operator coding*. A purpose relation is oriented toward a time subsequent to that of the main verb. Cross-linguistically, the operator information is usually unmarked (infinitive) or limited to future, potential, irrealis or subjunctive meanings (non-finite forms). Regardless the tempo-aspectual marking of the main unit, intentional structures must be unmarked (12a) whereas motion-*cum*-purpose and finality both allow future-like suffixes, except when the motion event is attached to the intended event forming a complex predication (12c).⁴

(12) a. Intentional type

Goyo- \emptyset_i wikia-ta jaiwa-k [$____i$ *kaba'i-ta suma-bae-kai*]
 Goyo-NOM rope-ACC look.for-PFV horse-ACC tie-DES-CLM
 'Goyo was looking for a rope wanting to tie the horse.' (Yaqui)

b. Motion-*cum*-purpose type

Pedro_i moena-re [$____i$ *potace-mia karí howará-chi*]
 Peter climb-PFV cover-FUT/PURP house hole-LOC
 'Peter climbed up to cover the hole in the house's roof.' (Guarijío; Félix 2005:323)

c. *Awí-si-nir-i*

dance-motion-DES-IMPF
 'She wanted to go along dancing.' (Tarahumara; Caballero 2008: 140)

The examples below show the scope of the deontic modal *-maachi*, a core operator. It modifies the two cores in purpose of motion and intentional structures (13a-b); but for finality, the operator has scope only within the first core (13c). Additionally, only finality clauses allow a temporal adverb *yooko* 'tomorrow' inside the linked unit (13c) and, under certain conditions, the dependent verb can be affected by passivization (13d). Indeed, passive voice is very restricted in this kind of construction.

(13) a. Motion-*cum*-purpose type

Lupe- \emptyset wakas-ta jinu-se-maachi.
 Lupe-NOM meat-ACC buy-PURP.SG-SHOULD
 'Lupe should go to buy the meat.'

b. Intentional type

Lupe- \emptyset_i wakas-ta jinu-maachi [$____i$ *wakabak-ta ya'a-bae-kai*]
 Lupe-NOM meat-ACC buy-SHOULD wakabaki-ACC make-DES-CLM
 'Lupe should buy meat to cook the wakabaki.'

c. Finality type

Lupe- \emptyset_i wakas-ta jinu-maachi [$____i/j$ *wakabak-ta yooko*]
 Lupe-NOM meat-ACC buy-SHOULD wakabaki-ACC tomorrow

⁴ The situation regarding TAM operators is to some extent complicated. There are no 'pure' tense markers; the tempo-aspectual suffixes expressing future, irrealis, and potential are historically derived from the suppletive stems 'go (sg/pl)' and 'die (sg/pl)', i.e. a morpheme like *-mia* (11b) can be glossed as future as well as purpose of motion. This situation corroborates the strong correlation between purpose, desire, future-oriented events, goal and allative meanings (cf. Haspelmath 1988).

ya'a-ne-betchi'ibo]

make-POT-CLM

'Lupe should buy the meat in order to cook the wakabaki tomorrow.'

- d. *Lupe-Ø wakas-ta_i jinu-k [____arb wakabak-ta_i*
Lupe-NOM meat-ACC buy-PFV wakabaki-ACC

ya'a-na-wa-betchi'ibo]

make-POT-PAS-CLM

'Lupe bought the meat in order for the wakabaki to be cooked (by someone else).'

3.3 *Negation*. Languages might show a different structure in a situation where the main action takes place in order to prevent another event from occurring. Data is sparse but purpose of motion and intentional structures limit the scope of negation to the main action (13a), but negation can be allocated in both the main or linked units inside a finality clause (13b).

- (13) a. Motion-cum-purpose type
Joan-Ø kaa aabo kochi-se-k
John-NOM NEG here sleep-PURP:SG-PFV
'John didn't come to sleep here/ *John come to not sleep here.' (Yaqui)
- b. Finality type
Tiburcio hená [ka'í amó tewi-mí ruhka]
Tiburcio come.PFV NEG 2SG:NS see-PURP like.this
'Tiburcio came so that you couldn't see him.' (Guarijío; Miller 1993: 136)

3.4. *The presence of CLM*. Since purpose clauses are essentially goal-oriented, they are usually introduced by clause linkage markers indicating benefactive and dative arguments, as well as recipient, allative, and goals. Apart from the Uto-Aztecan markers historically related to motion, purpose of motion appears generally unmarked; the intentional structure is unmarked in Guarijío but marked by the sequence desiderative-same subject marker in Yaqui (14a). Finality structures all display an overt marker: it can be the same indicating benefactives (14b-b') in Pima, Yaqui and Guarijío; it can be the same marking instrumentals (14c-c') in Huichol, or a general connector which easily marks some adverbials, complements and coordinate units inside the Tepiman sub-branch (14d).

- (14) Intentional type
a. *Te_i saja-k [_____i yi'i-bae-kai]*
1PL:NOM go:PL-PFV dance-DES-CLM
'We left because we want to dance.' (Yaqui)

Finality type (14b')

- b. *Higai timiti-m in taan a-daad-vuika*
3SG tortilla-PL 1SG.O ask 3SG:O-mother-PURP
'She asked me for tortillas for her mother.' (Pima; Estrada 1988: 80)
- b'. *Aan_i sudag nukad [_____i i'i-ag-vuika]*
1SG water have:IMPF drink-FUT-PURP
'I don't have water to drink.' (Pima; Estrada 1988: 59)

- c. Finality type (14c')
- Miiki yu-kíye-kí me-pe-i-kuuwaazí*
 3PL REFL-stick-INSTR 3PL:S-AS-3SG:O-beat
 'They beat him with their stick.' (Huichol; Comrie 1982: 103)
- c'. *Kareta ne-p-e-nanai [kíye-xi ne-'ikata-mi-kí]*
 cart 1SG:S-ASI-INV-buy:PFV wood-PL 1SG:S-carry-IMPL-INST
 'I bought the cart to carry out the wood.' (Huichol; Gómez 1988: 172)
- d. *Gu chi-chioñi bopa-mít [na-mít ___i tusa-m gu tai]*
 DET RED.PL-man run-PFV CLM-PFV extinguish-OBJ DET fire
 'The men run to extinguish the fire.' (S. Tepehuan; García Salido 2008)

3.5. *The position of the purposive unit.* For adverbials in general, Diessel (2001) claims that in languages in which adverbial clauses have a final subordinator, the dependent unit tends to precede the main clause, whereas in languages with initial subordinator, the adverbial unit may occur in both sentence-initial and sentence-final. For purpose in particular, it has been observed that the purposive unit usually follows the main action, although it may also appear pre-posed with a different, more general meaning (Thompson 1985: 61). In the family, purpose does exhibit a rather fixed position: they follow the main action regardless whether the clause linkage marker appears at the beginning as in (14d) or the end as in (14a), (14b') and (14c'). This motivating action-purpose events order mimics the chronological order of those events, as they are supposed to have occurred in the real world.

3.6. *The juncture-nexus relations of purpose.* Therefore, the morpho-syntactic characteristics defining purpose clauses yield non-subordinated nexus relations at the core level and, just for certain types of finality clauses, at the clause level. A brief summary of such properties is listed below.

Motion-cum-purpose type

- the main actor controls the dependent actor
- the controllee is covert except in Nahuatl, Cora and Huichol (argument dependency)
- the linked event is future-oriented, and then unmarked or marked by a special set of morphemes (irrealis, potential) but not for tense and mood (operator dependency)
- the linked unit cannot be negated
- the linked unit lacks CLMs
- the purposive unit follows the main action
- Therefore: nuclear or core cosubordination & core coordination, depending on (i) the valence of the dependent verb, and (ii) whether the linked verb takes aspectual

b) Intentional type

- the matrix actor controls the dependent actor
- the controllee is always covert (argument dependency)
- the intended verb is only marked by the desiderative forms only (operator dependency)
- the dependent unit cannot be negated
- Guarijío lacks CLMs but Yaqui takes a special same-subject marker *-kai*
- the dependent unit cannot be negated
- the dependent unit must follow the main action
- Therefore: core cosubordination

Finality type

- the matrix actor can be the same and different than the dependent actor
 - the controllee is preferably omitted within the linked unit (argument dependency)
 - the dependent verb can be optionally marked by aspectual-like morphemes
 - the linked unit can be negated independently of the matrix clause,
 - there is an overt clause linkage marker indicating the idea of ‘purpose’
 - the dependent unit follows the matrix clause
- Therefore, core coordination ⁵

At this point, it is important to know how a typical adverbial relation looks like in Yaqui, in order to understand how a purpose relation differs from this domain. The examples below illustrate typical cases of ad-clausal subordination. The closely related reason construction is introduced by *bweituk* ‘because’ (15a). Notice that in (15a), the clause linkage marker is right in the middle of the two units; although identical, the linked unit explicitly codes its actor as a nominative and full pronoun, and this is impossible in purpose relations; also, the dependent verb is fully marked by TAM operators and it can appear at the beginning of the clause as in (15a’). The last examples illustrate two temporal related constructions. The sequential subordinator *-o* (15b) and the simultaneity *-kai* in (15c) are both linked to the dependent unit; the linked verbs are fully marked by tempo-aspectual operators, and the order among the two clauses are relatively free. Notice also that in (15c) the dependent actor is again accusative.

(15) a. Reason clauses

Te saja-k bweituk itepo ka ye’e-k
1PL:NOM go.PL-PFV because 1PL:NOM NEG dance-PFV
‘We left because we didn’t get to dance.’

a’. *Bweituk itepo ka ye’e-k te saja-k*
because 1PL:NOM NEG dance-PFV 1PL:NOM go.PL-PFV
‘Because we didn’t get to dance, we left.’

b. Temporal clauses

Te saja-k Goyo-ta aabo yepsa-k-o
1PL:NOM go.PL-PFV Goyo-ACC here arrive.SG-PFV-CLM
‘We left when Goyo arrived.’

c. *Joan-Ø kot-bae [jiba yepsa-kai]*
Joan-NOM sleep-want just arrive-CLM
‘John_i is going to sleep as soon as he_i arrives.’

c’. *[jiba yepsa-kai] Joan-Ø kot-bae*
just arrive-CLM Joan-NOM sleep-want
‘As soon as he_i arrives, John_i is going to sleep.’

4. The semantics of purpose clauses

Semantically, a purpose linkage evokes intention and personal thoughts, future expectation, and the participant’s willingness for another state of affairs to take place –and this alone can be a reason and motivation to actually do something. The semantic sub-hierarchies proposed by RRG in (16), are valid for both complement and adverbial relations.

⁵ Constructions like those in (14d) can be analyzed as clausal coordination.

- (16) Semantic sub-hierarchies (Van Valin 2005; Guerrero 2006)
- a. Temporal hierarchy:
Phase of a single event > simultaneous events > sequential events > unspecified
 - b. Causal hierarchy: physical > verbal > underspecified_[non-defeasible], inferred_[defeasible]
 - c. Participant's mental disposition (PMD):
Intention > internal/direct experience > mental experience: commitment >
mental experience: reasoning > non-mental experience: report
 - d. Necessarily shared participant (NSP): Yes > No

Based on these semantic sub-hierarchies, the three purpose strategies are evaluated in Table 1. The only strategy that can be clearly differentiated is motion-cum-purpose which can be conceived as macro-event where the motion and the intended actions are two phases of a single event (first value of the temporal scale).

	temporality	causal	PMD	NSP
motion-cum-purpose	1 st value	4 th value	1 st value	1 st value
intentional	3 rd value	4 th value	1 st value	1 st value
finality	3 rd value	4 th value	1 st value	1 st value

Table 1. Degree of semantic cohesion of purpose clauses

Then, it seems it is hard to predict the morpho-syntactic differences between the three purpose clause types based on the juncture-nexus relationships (i.e. core non-subordination) and their degree of semantic cohesion. Still, there is one semantic feature that can distinguish among each type: semantic control relations. By analyzing purpose clauses in English, Curter (1993:178) demonstrates that this construction type really involve two control relations: the first one on the dependent actor and the second one on the dependent theme; the former can be optional (different subjects), but not the latter. Likewise, Van Valin (2009: 48) claims that in purpose clauses the obligatory control relationship is between the post-nuclear arguments in each core; the examples below are from Van Valin.

- (17) a. *Pat brought the book_i for her sister to read ____i.*
 b. **Pat brought the book for her sister to read **it**.*
- c. *Pat_j brought the book_i ____j to read ____i.*
 d. **Pat_j brought the book ____j to read **it**.*
- e. *Pat brought the book in order (for her sister) to read **it**.*
 f. **Pat brought the book in order (for her sister) to read ___.*

Thus, while sharing the actor is optional (17a) and (17c), sharing the undergoer (theme) is obligatory (17b) and (17d). This property distinguishes between 'pure' purpose clauses from 'rationale' purpose clauses in (17e), since in the latter there is no obligatory controller-controllee relationship of any kind (i.e. there is not a missing syntactic argument).⁴ So despite the semantic similarities of the two constructions, their syntactic properties are different, particularly with respect to the crucial controller-pivot relationships. In contrast to core non-subordinate linkages for purpose, Cutrer (1993: 177) proposes that clauses like (17e) correspond to clausal junctures.

The essential point here is that all purpose relations necessarily entail a semantic control relation between the two units. In fact, there is no data so far where a purpose relation does not involve any kind of semantic control, i.e. a situation in which all the participants of the main activity and all the participants of the intended event are different entities. Based on these correlations, the semantic sub-hierarchy in (16e) below seeks to examine the different instances of control over a core argument in the linked unit. The scale is based on RRG's theory of control in (18) (Foley & Van Valin 1984), but it goes one step forward since it is not restricted to control matrix predicates.

(18) RRG's theory of obligatory control (Foley and Van Valin 1984)

- a. Causative and jussive verbs have undergoer control
- b. All other (M-)transitive verbs have actor control

(16) e. Semantic control

The matrix actor controls the linked actor > the matrix undergoer controls the linked actor > a matrix argument controls a linked argument

The degree of semantic cohesion and their syntactic manifestation are now fully captured in Table 2. The **first value** reflects such predicates demanding the actor of the matrix unit to be identical to the dependent actor, i.e. actor, agent-oriented or inducing control verbs like phasal, intention, desires, promise, and expectation. The **second value** represents such predicates requiring the undergoer of the matrix verb to control the dependent actor; this is the case of causatives and jussive verbs. Furthermore, the **third value** encodes such cases where a control relation is hold between a core argument of the matrix verb and any core argument of the linked unit, and this is what happens outside complementation: in purpose relations.

	temporality	causal	PMD	NSP	semantic control
purpose of motion	1 st value	4 th value	1 st value	1 st value	1 st value
intentional	3 rd value	4 th value	1 st value	1 st value	1 st value
finality	3 rd value	4 th value	1 st value	1 st value	1 st / 2 nd values
rationale	3 rd value	4 th value	1 st value	1 st value	3 rd value

Table 2. The semantic degree of purpose relations (revised)

What purpose relations evoke are different instances of the controller & the controllee: for the Southern Uto-Aztecan languages, motion-cum-purpose (19a) and intentional linkages (19b) demand actor control. In contrast, finality purpose may show actor control (20a), undergoer control (20b), and other instances of semantic control, e.g. the main undergoer controls the theme or instrument entity in the dependent unit (20c-d); the last type are equivalent to English rationale expressions.

(19) Motion-cum-purpose type: Actor control only

- a. *U-me o'ow-im sinto-ta aabo joo-bo-Ø.*
the-PL man-PL belt-ACC here make-PURP.PL-PRES
'The men come here to make a belt.' (Ya; Guerrero 2006: 128)

Intentional type: Actor control only

- b. a. *U o'ou-Ø bwite-k [maso-ta me'e-bae-kai]*
DET man-NOM run:SG-PFV deer-ACC kill:SG-DES-CLM
'The man ran in order to kill the deer.' (Ya; Guerrero 2006: 129)

- (20) Finality type: Actor control
- a. *Tibu-Ø_i tractor-ta jinu-bae [____i tekipanoa-ne-betchi'ibo]*
 Tibu-NOM tractor-ACC buy-DES work-POT-PURP
 'Tibu wants to buy a tractor to work.'

Finality type: undergoer control

- b. *Inepo Maria-ta_i tejwa-ne [puatom a_i sabu-e*
 1SG.NOM Mary-ACC tell-POT dish:PL 3SG:ACC soap-INST
baksia-ne-betchibo]
 wash-POT-PURP
 'I'll tell Mary to wash the dishes with soap.'

Finality type: other instances of semantic control

- c. *Tibu-Ø_i Min-ta_j bicha-k [____{i&j} beemela tractor-ta jinu-ne-betchi'ibo]*
 Tibu-NOM Min-ACC see-PFV new tractor-ACC buy-POT-PURP
 'Tibu met Fermín in order to buy a new tractor (= to go together).'
- d. *Lili-Ø_i Suichi-u yepsa-Ø*
 Lili-NOM Vicam-DIR arrive-PRES
[Jiak-nok-ta ne a_i majta-ne-betchi'ibo]
 Yaqui-word-ACC 1SG:ACC 3sg:ACC teach-POT-CLM
 'Lili comes to Vicam in order that I teach her Yaqui.'

That is, purpose, as certain complement constructions, obligatorily establishes a control relationship with their dependent unit. As a matter of fact, an additional distinctive feature between purpose and reason/causal adverbial relations is the notion of obligatory semantic control since the last two may but not must undertake semantic control, e.g., *I went to the party because my sister wanted to meet that guy*, while purpose relations must. A first try to establish the logical structures for these purposive linkages is presented in (21) based on the logical structures proposed in Van Valin (2005: 207).

(21) c. Modifying sub-events:

5. Purpose of motion: **want'** (x_i, LS_2) \wedge DO ($x_i, [\textbf{motion}' (x_i)] \diamond$ CAUSE [$LS_2 \dots x_i \dots$])

d. Psych-action: **want'** ($x_i, [LS_2 \dots x \dots] \wedge$ DO ($x_i, [LS_1 \dots x_i \dots] \diamond$ CAUSE [$LS_2 \dots x_i \dots$])

e. Purposive: **want'** (x_i, LS_2) \wedge DO ($x_i, [[LS_1 \dots x_i \dots]] \diamond$ CAUSE [$LS_2 \dots y \dots$])

5. 'Purpose' as a general clause linkage type

Outside the relationship of purpose with other adverbial clauses, little has been said about the semantic and syntactic similarities between purpose and complement relations, like modal verbs (cf. Wierzbicka 1988: 28-9; Givón 2001: 337; Cristofaro 2003: 158). Indeed, one of the most common functions of purposive-like linkages is to serve as a (infinitive) complement, e.g., *I wanted to see you but you forgot to call me.*⁶ As said before, certain complement-taking predicates require one argument of the linked unit to be identified to an argument of the

⁶ See Wierzbicka (1988) for a discussion on the semantics of *to*-complements in English. Bresnan (1979) previously suggests that *to*- and *for*-complements show an inherent intentional meaning which interacts with contextual semantics factors such as main predicates, modality and time.

matrix unit. Cross-linguistically, actor and undergoer control predicates can make use of the same structure encoding purpose relations, and this association seems to be semantically motivated i.e. a clause linkage type evoking motivating activities, volition, intention, future expectation, participant's willingness and, crucially, the obligatory semantic control relations determined by the semantics of the whole structure and/or pragmatic factors.⁷

At least for the Taracahita sub-branch of the Uto-Aztecan family, actor control verbs (22) and undergoer control verbs (23) make use of the same purposive linkage, at least, as one of the alternative syntactic structures.

(22) Actor control matrix verbs

- a. *Maria-Ø bo'obicha-Ø [sim-bae-kai]*
 Mary-NOM hope-PRE go:SG-DES-CLM
 'Mary expects to leave.' (yaqui)
- b. *Maria-Ø bo'obicha-Ø [sim-betchi'ibo]*
 Mary-NOM hope-PRE go:SG-PURP
 'Mary expects to leave' / 'Mary hopes to leave.' (Yaqui)
- c. *Markó natahképa-re [neotoé-mia echitiame tapaná]*
 Mark forget-PFV water-PURP plants yesterday
 'Mark forgot to water the plants yesterday.' (Guarijío; Félix: 2006: 325)
- d. *Puyé-na-temé [tekihpána-mia encí semana-chi]*
 expect-PRE-1PL:S work-PURP again week-LOC
 'We expect to work next week.' (Guarijío; Félix: 2006: 327)

(23) Undergoer control matrix verbs

- a. *Gema-gá asá [mapuregá ke ruráre-ma]*
 blanket-GER sit.IMP CLM NEG cold-CAUSE-FUT
 'You stay under the blanket to keep warm.' (Tarahumara; Brambila 1953: 367)
- b. *Alué-ka nakí [napurigá nocha-ma ne]*
 3SG-EMPH want CLM work-FUT 1SG
 'He wants me to work.' (Tarahumara; Burgess 1984: 123)
- c. *Ne junuen'ea-Ø [enchi kari-ta tute-ne-betchi'ibo]*
 1SG:NOM thus.think-PRE 2SG:ACC house-ACC clean-POT-PURP
 'I wish that you would clean the house.' (Yaqui)
- d. *Rolando ki = nahki [ena-michio Pedro]*
 Rolando NEG=want come-PURP Pedro
 'Rolando doesn't want Peter to come.' (Guarijío; Félix: 2006: 198)

These constructions share four crucial aspects:

- i. they reflect an overtone of intention and subsequent events
- ii. they encode the participant's intention for a state of affairs to happen

⁷ English is unusual allowing to-complements with a large number of verbs including raising (e.g. *John appeared to leave*, *Pat believed John to have left*), and even relative clauses (e.g. *A man to talk to her would be John* (Jones 1991: 26)).

- iii. the dependent unit must be future-oriented, and
- iv. there must be a shared core argument which controls the identity of a dependent core argument: the actor for intentional purpose and psych-action predicates, and the undergoer for finality and manipulative meanings.⁸

To sum up, the semantic and syntactic properties of purpose relations and the tightness of the syntactic linkages they establish with the matrix clause (i.e. non-subordination), question the assumed freedom of purpose as peripheral adjuncts. Instead, purpose linkages exhibit a ‘mixed’ behavior between adjunct-like and argument-like functions: (a) as most adverbial clauses, the semantic content they encode may be optional, (b) as directed motion, the intended event can be seen as putting a term to an activity (Garey 1957: 106), and (c) as in complements, their syntax is determined by the matrix clause as a whole.

6. Final remarks

We may wonder whether complement structures have extended their functions to adverbials, or whether adverbial covers several instances of complementation, or whether there is a semantically and structurally compatible linkage type for the two semantic relations. My suggestion is that languages might make use of a single clause linkage type that, because of its very nature, easily combines with both adverbial and complement relations evoking certain semantic features, i.e. intention, future expectation, participant’s willingness and, crucially, the obligatory control relations, determined by the semantics of the whole structure and by pragmatic factors.

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⁸ English is unusual allowing to-complements with a large number of verbs including raising (e.g. *John appeared to leave, Pat believed John to have left*), and even relative clauses (e.g. *A man to talk to her would be John* (Jones 1991: 26)). In his paper on the historically evolution of infinitives to purpose markers, Haspelmath (1989) lists some languages where a purpose linkage serves to both, adverbial and complement clauses.

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