EXTENDING THE CHALLENGE OF CONTROL PHENOMENA

Lilián Guerrero
IIFL-Universidad Nacional Autónoma de México
lilianguerrero@yahoo.com

1. Introduction

In simple clauses, the semantic notion of goal can add information to the internal aspectual structure of the event, e.g. the telic use of activity verbs as in (1b). The notion of reaching a goal is also expressed within a purpose of motion (2a) and a purpose clause (2b) expressing the agent's motivations to do something with a particular purpose or resulting event in mind.

(1) a. motion — *Aurelia ran every morning*
b. motion + goal — *Aurelia ran to the store*

(2) a. motion + purpose — *Aurelia went to buy milk*
b. activity + purpose — *Aurelia bought milk to prepare a milkshake*

This paper investigates the syntactic and semantic properties of purpose relations, an intriguing but very much ignored clause in the literature of subordination.

- Syntactically, purpose clauses are considered as a type of adverbial subordination, i.e. argument-adjunct (Jones 1991), peripheral unit (VV&LP 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)

Based on data from Southern Uto-Aztecan languages, particularly Yaqui, as well as cross-linguistic observations, 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.
- 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).

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. In English, they can be expressed by an infinitive clause introduced by *to* (3a) or an adverbial clause introduced by *in order to* (3b). In Nupé (Kwa; Nigeria) purpose is expressed by a serialization (3c); in Triqui, the two unites are yuxtaposed and the intentional meaning is expressed by the anticipatory mood coded by tone (3d); in Modern Greek, the purpose is expressed by means of a subjunctive clause (3e); in Turkish (3f) it takes the form of an infinitival additionally introduced by a clause linkage marker; finally, in some Bantu languages a purpose clause is equally marked as the benefactive on the verb morphology (3g-h).[1]

(3) a. *I came* [*to help you with the cooking*]
b. *I came* [*in order to help you with the cooking*]

c. *Musa bé* [*lá èbi*]
Musa came took knife
'Musa came to take the knife.' (Nupé; George 1975)

d. *Ri*^{3}*ki*^{23} *i*^{3} *čha*^{3} [*ža*^{5}*h*]
gave he tortilla will.eat.I
'You gave me tortilla for me to eat.' (Chicahuaxtla Triqui; in Longacre 2007: 397)

e. *írɸame* [***na*** *se voiɸíso*]
come.PAST.1PL SBJV 2SG.ACC help.1PL
'We came (in order) to help you.'(Modern Greek; Joseph & Philippaki-Warburton 1987:31)

f. [*Çarşï-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)

g. *Abaantu bi-iig-**ir**-a* [***ku**-menya ubwéenge*]
people SUB.PRO-study-BEN-ASP INF-know knowledge
'People study in order to learn.'

h. *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)

[1]Abbreviations: 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.

Purposes are traditionally associated with cause and reason; 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 (4a) vs. more finite (4b)

(4) 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-dɵ-**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 purpose of motion clause type (5a), the intentional clause type (5b), and the finality clause type (5c). The first type is restricted to motion verbs, the intentional and finality types involve mostly any kind of activity predicate plus the purpose unit; in the former, there is an explicit volitional/desiderative verbal marker, while in the latter there is a clause linkage marker.

(5) **Purpose of motion type**

a. *Huma hihim* [*va'igiti ɨgai*]
together go:CONT bring DEM
'Together (they) went to bring (them).' (Pima; Estrada 1998: 34)

a'. *Lupe-Ø wakas-ta jinu-se-k*
Lupe-NOM meat-ACC buy-PURP.SG-PFV
'Lupe went to buy the meat.'

Intentional type

b. *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

c. *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)

Next, the syntactic characteristics of purpose types are examined based on the parameters used for complementation. The degree of semantic cohesion is explored in the following section.

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 (6a) and intentional clause types (6b).

(6) a. *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. ***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 scare, but at least in Yaqui and Guarijío, finality structures work well for both same subjects (7a) and different subjects (7b); notice that the dependent actor is marked accusative when different. The occurence of extra morphology like the adverbs *ruhka* and *olaga* 'like this' (7c) in Guarijío is not rare –but not obligatory– with different subjects.

(7) 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)

d. *Min-Ø$_i$ 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)

e. *Min-Ø$_i$* ***u-ka yoi-ta**$_j$* kaba'i-m$_k$ *reuwa-bae*
Min-NOM DET-ACC yori-ACC horse-PL lend-DES

[__$_j$ *am$_k$ wiria-ne-betchi'ibo*]
3PL.ACC feed-POT-PURP
'Fermín will lend the foreigner the horses in order for him to feed them.' (Yaqui)

When the two events share the actor, there is a higher degree of control of carrying out the dependent event. When the actors are different, other instances of semantic control take places, e.g. in (7b) the actor *u maso* 'the deer' controls the undergoer of 'kill', in (7c) the actor is part of the group who will drink. When the main clause is transitive, the treatment of coreferential NPs is somewhat more complicated. When the actor and the undergoer are both shared, the two nominal arguments are commonly absent in the dependent unit as in (7d) and (7e), although in the latter

there is a coreferential accusative pronoun *am* 'them' linked to the theme. One important consideration: syntactic control is generally associated to an absent controllee in the linked unit, but for exploring semantic control we may adopt Stiebels' definition (2007) when saying that the controllee may be also a pronominal argument in particular languages as long as there is a referential dependency among the two cores. Thus in Nahuatl and Corachol (i.e. head-marking languages), the dependent actor cannot be covert (8a), it cannot be an independent pronoun (or full NP) as in (8b), or a non-correferential pronoun (8c), i.e. agreement marker.

(8) a. *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 chili.' (Pajapan Nahuatl; Peralta 2007)

a'. *Ni-yawi* * [*Ø-k-tegi-ti* *tro:ha* *chi:hli*]
a". *Ni-yawi* * [newal *ni-k-tegi-ti* *tro:ha* *chi:hli*]
a"'. *Ni-yawi* * [*an-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 (9a) whereas purpose of motion and finality both allow future-like suffixes, except when the motion event is attached to the intended event forming a complex predication (9c).[2]

(9) a. *Goyo-Ø*$_i$ *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. *Pedró*$_i$ *moená-**re*** [___ $_i$ *potacé-**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 in (10) show the scope of the deontic modal *-maachi*, a core operator. It modifies the two cores in purpose of motion and intentional structures (10a-b); but for finality, the operator has scope only within the first core (10c). Additionally, only finality clauses allow a temporal adverb *yooko* 'tomorrow' inside the linked unit (10c) and, under certain conditions, the dependent verb can be affected by passivization (10d). Indeed, passive voice is very restricted in this kind of construction.

[2] 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* (6a) can be glossed as future, purpose or motion. This situation corroborates the strong correlation between purpose, desire, future-oriented events, goal and allative meanings (cf. Haspelmath 1988).

(10) a. *Lupe-Ø wakas-ta jinu-se-**maachi**.*
Lupe-NOM meat-ACC buy-PURP.SG-SHOULD
'Lupe should go to buy the meat.'

b. *Lupe-Ø$_i$ 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. *Lupe-Ø$_i$ wakas-ta jinu-**maachi** [___$_{i/j}$ wakabak-ta yooko ya'a-ne-betchi'ibo]*
Lupe-NOM meat-ACC buy-SHOULD wakabaki-ACC tomorrow 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$_i$ ya'a-na-**wa**-betchi'ibo]*
Lupe-NOM meat-ACC buy-PFV wakabaki-ACC 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 (11a), but negation can be allocated in both the main or linked units inside a finality clause (11b).

(11) a. *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. *Tiburcio henáa [**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 and marked by the sequence desiderative-same subject marker in Yaqui (12a). Importantly, finality structures all display an overt marker: it can be the same indicating benefactives (12b-b') in Pima, Yaqui and Guarijío; it can be the same marking instrumentals (12c-c') in Huichol, or a general connector which easily marks some adverbials, complements and coordinate units inside the Tepiman sub-branch (12d).

(12) 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)

b. *H~~i~~gai t~~i~~miti-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. *M~~ii~~ki yu-k~~i~~ye-**k~~i~~*** *me-pe-i-kuuwaaz~~i~~*
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* [*k~~i~~ye-xi ne-'ikata-m~~i~~-**k~~i~~***]
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-chioñ*$_i$ *bopa-m~~i~~t* [***na**-m~~i~~t* __$_i$ *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 juncture-nexus relations of purpose
The morpho-syntactic characteristics defining purpose clauses yield core non-subordinated relations. A brief summary of such properties is listed below.

a) Purpose of motion type
- the main actor controls the dependent actor
- the controllee is generally covert (argument dependency)
- the linked unit cannot be negated, it lacks CLMs, and it strongly follows the main action
- the linked event is future-oriented, and therefore it is unmarked or marked by a special set of morphemes (irrealis, potential) but not for tense and mood (operator dependency)
- Therefore, nuclear or core cosubordination & core coordination, depending on (i) the valence of the dependent verb, and (ii) whether the linked verb takes aspectual markers.

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

c) Finality clauses
- the matrix actor can but needs not be identical
- the controllee is preferably omitted within the linked unit (argument dependency)
- there is an overt clause linkage marker indicating the idea of 'purpose'
- the dependent verb can optionally be marked by aspectual-like morphemes
- the linked unit can be negated independently of the matrix clause, and follows the matrix clause
- Therefore, core coordination [3]

[3] Constructions like those in (12e) can be analyzed as clausal coordination.

The examples below illustrate typical cases of ad-clausal subordination in Yaqui. The closely related reason construction is introduced by *bweituk* 'because' (13a) and the sequential construction is marked by the general subordinator *–o* (13b), the linked verbs are fully marked by tempo-aspectual operators, and they allow the expression of linked subject. Notice that in (13a), the dependent actor is a nominative full pronoun even when it is identical to the main actor; this is impossible in purpose relations. The same-subject temporal construction in (13c) is also marked by *–kai* but, in contrast to the intentional clause, there is more freedom regarding the position of the linked unit.

(13) a. *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 dance.'

b. *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*] / [*jiba yepsa-kai*] *Joan-Ø kot-bae*
Joan-NOM sleep-want just arrive-CLM
'John$_i$ is going to sleep as soon as he$_i$ arrives.'

4. The semantics of purpose clauses

As regards the semantic side, a purpose linkage evokes volition, thoughts and intention, future expectation, and the participant's willingness for another state of affairs to take place (and this alone can be a reason & motivation to actually do something). The examination of the semantic sub-hierarchies in (14) yields, however, very much the same meaning relations among the three purpose clause types (Table 1). The only apparent exception is purpose of motion which can be conceived as two phases of a single event, while intention and finality are clearly sequential.

(14) Semantic sub-hierarchies

a. Temporal hierarchy:
Phase of a single event > simultaneous events > sequential events > unspecified

b. Causal hierarchy: physical > verbal > underspecified$_{[\text{non-defeasible}]}$, inferred $_{[\text{defeasible}]}$

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

	temporality	**causal**	**PMD**	**NSP**
purpose of motion	1st value	4th value	1st value	1st value
intentional	3rd value	4th value	1st value	1st value
finality	3rd value	4th value	1st value	1st value

Table 1. Degree of semantic cohesion of purpose clauses

Apparently, it is not possible to predict the morpho-syntactic differences between the three purpose clause types based on the juncture-nexus relationships (i.e. core non-subordination) or their degree of semantic cohesion. Still, there is a semantic feature distinguishing each purpose clause type. 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.

(15) 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 (15a) and (15c), sharing the undergoer (theme) is obligatory (15b) and (15d). This property distinguishes between 'pure' purpose clauses from 'rationale' purpose clauses in (15e), 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 (15e) correspond to clausal junctures.

Apart from purely syntactic definitions, control constructions are usually conceived as a "selectional restriction between a predicate and a state of affairs-argument and the referential dependency between an argument of the matrix predicate and an argument of the dependent predicate" (Stiebels 2007). That is, control as a property of complementation (Comrie 1984; Sag & Pollard 1991; Cutrer 1993; Landau 2000; Jackendoff & Culicover 2001, 2003).[4]

(16) 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

The essential point here is that, in the same way that certain complement-taking predicates, 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

[4] While some syntactic approaches to control acknowledge that semantics may play some role (cf. Bresnan 1982; Horstein 1999, Landau 2000), they do not specify which one. Beginning with Jackendoff (1972) and further works by Sag & Pollard (1991), Pollard & Sag (1994), Langacker (1995), Foley & Van Valin (1984), Culicover & Jackendoff (2001, 2003) emphasis is given to semantic factors, especially the lexical semantics of the matrix predicate.

event are different entities.[5] Hence, what purpose and rationale relations evoke are different controller-controllee relationships: (i) purpose of motion and intentional expressions show actor control; (ii) finality purpose may show actor or undergoer control; (iii) rationale expressions show undergoer and other control situations, e.g. theme, instruments. These correlations can be captured by another semantic sub-hierarchy as in (17) and the values are listed in Table 2. The degree of semantic cohesion and their syntactic manifestation are now fully captured.

(17) e. Semantic control
The matrix actor controls the dependent actor > the matrix undergoer controls the dependent actor > the matrix undergoer controls a dependent core argument

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

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

Considering Stiebel's patterns of control relation below, and the fact that the controllee can be either absent (i.e. a syntactic missing argument) or overt (i.e. a non-referential copied pronoun) in the linked unit, it is possible to account for syntactic and semantic correspondences in Uto-Aztecan purpose clauses.

(18) 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:[6] there is no local controller (*_$_{arb}$ to smoke around babies$_i$ is dangerous for them$_i$*)

(19) **Actor control:** obligatory (19a) and (19c), and split (19b)
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.'

b. *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).'

[5] An additional distinctive feature between purpose and reason/causal relations is the notion of obligatory control since the last two may but not need to have referentially identical arguments, e.g., *I went to the party because my sister wanted to meet that guy.*
[6] Rather than arbitrary, this last situation clearly involves pragmatic factors, i.e. the speaker has somebody in mind.

c. *Lili-Ø$_i$ Suichi-u yepsa-Ø* [*Jiak-nok-ta ne a$_i$ majta-ne-betchi'ibo*]
Lili-NOM Vicam-DIR arrive-PRES Yaqui-word-ACC 1SG:ACC 3sg:ACC teach-POT-CLM
'Lili comes to Vicam in order that I teach her Yaqui.'

(20) **Undergoer control**: obligatory (20a), (20b) and (20c)

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

b. *Tibu-Ø$_j$ tractor-ta$_k$ ne$_i$ mika-k* [*ne$_i$ (a$_k$) tekipanoa-ne-betchi'ibo*]
Tibu-NOM tractor-ACC 1SG.ACC give-PFV 1SG:ACC 3SG:ACC work-POT-PURP
'Tibu gave me a tractor in order for me to work with it.'

c. *Tibu-Ø$_i$ tractor-ta$_j$ jinu-bae* [*___$_{i+v/k}$ waasa-ta (a$_j$) tekipanoa-ne-betchi'ibo*]
Tibu-NOM tractor-ACC buy-DES field-ACC 3SG.ACC make-PURP
'Tibu will buy a tractor to work the field with it.'

(21) **Other control relations:** matrix theme-dependent undergoer (20b)
partial or pragmatically determined actor control (20c)

A first try for the logical structures of purposive linkages is presented below, based on the logical structure in (22e) presented in Van Valin (2005: 207).

(22) c. Modifying sub-events:
5. Purpose of motion: **want'** (x_i, LS_2) ∧ DO (x_i, [**motion'** (x_i)] ◊ CAUSE [$_{LS2}$… x_i…])

d. Psych-action: **want'** (x_i, [LS_2… x…] ∧ DO (x_i, [LS_1… x_i …] ◊ CAUSE [LS_2… x_i…])

e. Purposive: **want'** (x_i, LS_2) ∧ DO (x_i, [[LS_1… x_i…]] ◊ CAUSE [$LS_{2\ldots.}y_{\ldots.}$]]

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:

- As most adverbial clauses, the semantic content they encode may be optional
- As directed motion, the intended event can be seen as putting a term to an activity (Garey 1957: 106)
- As in complements, their syntax is determined by the matrix clause as a whole

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 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.[7] As said before, certain complement-taking predicates require one argument of the linked unit to be identified with an argument of the 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. [8]

At least for the Taracahita sub-branch of the Uto-Aztecan family, actor (23) and undergoer (24) control verbs make use of the purposive linkage, at least, as one of the alternative syntactic structures. For actor control, the same pattern is observed in some variants of Nahuatl (23c).

(23) **Actor control**

a. *Maria-Ø bo'obicha-Ø* [*sim-**bae-kai***]
Mary-NOM hope-PRE go:SG-DES-CLM
'Mary expects to leave.' (yaqui)

a'. *Maria-Ø bo'obicha-Ø* [*sim-**betchi'ibo***]
Mary-NOM hope-PRE go:SG-PURP
'Mary expects to leave' / 'Mary hopes to leave.' (Yaqui)

b. *Markó natahképa-re* [*neotoé-**mia** echitiame tapaná*]
Mark forget-PFV watter-PURP plants yesterday
'Mark forgot to water the plants yesterday.' (Guarijío; Félix: 2006: 325)

b'. *Puyé-na-temé* [*tekihpána-**mia** encí semána-chi*]
expect-PRE-1PL:S work-PURP again week-LOC
'We expect to work next week.' (Guarijío; Félix: 2006: 327)

c. *Ni-yawi-ni* [*ni-panu*]
1SG:S-go-REM:PAST 1SG-pass
'I was going to pass.'

c'. *Ni-k-neki* [*ni-panu*]
1SG:S-3SG:O-want 1SG.S-pass
'I want to pass.'(Michoacán Nahuatl; Sischo 1979: 329)

(24) **Undergoer control**

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)

[7] 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.

[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)).

a'. *Alué-ka nakí* [***napurigá*** *nocha-**ma** ne*]
3SG-EMPH want CLM work-FUT 1SG
'He wants me to work.' (Tarahumara; Burgess 1984: 123)

b. *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)

c. *Rolando ki = nahki [ena-**michio** Pedro]*
Rolando NEG=want come-PURP Pedro
'Rolando doesn't want Peter to come.' (Guarijío; Félix: 2006: 198)

In the languages of the world, this correspondence has been observed in Otomí (Palancar 2007), Old Irish (Jeffers 1976: 139), Bidjandjadjara (Australian; Blake 1976), Maori (Clarck 1973); few more examples:

(25) Jacaltec (Mayan; Craig 1977)
a. *X-to naj* [*way-oj*]
COMP-go CLS sleep-INF
'He went to sleep' (Craig 1977: 313)

b. *Ch-[y]-oche naj* [*kanhalw-oj*]
INCOMP-A3-want CLS dance-INF
'He wants to dance.' (Craig 1977: 314)

c. *Ch-onh s-chej ya'* [*way-oj*]
INCOMP-B1.PL A3-order CLS sleep-INF
'He ordered us to sleep.' (Craig 1977: 317)

(26) Guugu Yimidhir (Australian; Haviland 1979)
a. *Nyuly gaari yinil* [*dhada-nhu*]
3SG.NOM NEG afraid.ABS go-PURP
'He is not afraid to go.'

b. *Ngayu wawu-dhirr-gu* [*nyundu dhada-nhu*]
1SG.NOM want-COM-gu 2SG.NOM go-PURP
'I want you to go.'

c. *Guudyu yii ngayu daama-y* [*nyundu buda-nhu*]
fish.ABS this 1SG.NOM spear-PAST 2SG.NOM eat-PURP
'I speared this fish for you to eat (it).'

d. *Ngayu binnal-mul* [*wu-nay nyulu balga-adhi-ga*]
1SG.NOM know-PRIV lie-PAST 3SG.NOM make-REF-PFV(SUBOR)
'I didn't know that he was born [and he was]'

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. volition, 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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