Chapter 1
Linking without grammatical relations in Yucatec: Alignment, extraction, and control[*]

Abstract

It is argued that the linking between semantic roles and syntactic argu-
ments is not governed by grammatical relations in Yucatec. Intraclausally,
alignment (or "obviation") constraints disambiguate arguments for linking:
the "actor" argument of transitive active verb forms must outrank the un-
dergoer on a "prominence" hierarchy if both are third-person. Interclaus-
ally, linking is regulated by construction-specific rules: in the case of ex-
traction, one that mandates use of a special voice form in case the target of
extraction thematically outranks another argument; in the case of control,
one that requires the highest-ranking thematic role to be linked to the target
of control.

1. The problem

Yucatec Maya has a typologically exotic cross-reference system which
treats the single argument of intransitive clauses on a par with the "actor"
argument of transitive clauses in some inflectional categories and with the
"undergoer" in others, while argument marking in transitive clauses is in-
variable. What organization of grammatical relations – if any – co-occurs
with such an unusual argument marking pattern?

   Grammatical relations (GRs) or "grammatical functions" – subject,
direct object, indirect object, primary/secondary object, etc. – serve to
regulate the "linking" between thematic relations and syntactic arguments
(e.g., Culicover and Jackendoff 2005: 187-232; Van Valin and LaPolla
1997: 242-316, and references therein). I assume the Role-and-Reference
Grammar (RRG) framework, in which GRs are considered language-
specific. The hallmark of GRs is "restricted neutralization" (Van Valin and
LaPolla 1997: 274-285): syntactic processes – or properties of syntactic

representations – that are restricted to a particular "privileged" argument thematically neutralized in the sense that a range of different thematic relations is linked to it. In this paper, I examine evidence from clause-internal linking and from linking in two families of inter-clausal constructions in Yucatec, extraction and control constructions.[1] I show that clause-internal linking is subject to "alignment" constraints of a nature similar to what has been described for other Mayan languages (Aissen 1997, 1999; Zavala Maldonado 1997, 2007): in active transitive clauses with two third-person arguments, the "actor" argument must outrank the "undergoer" argument on a prominence hierarchy. Left-dislocation, passivization, and clefting are used as means to resolve alignment violations. However, none of these constructions can be said to be restricted to inverse alignment, and so none can be said to express inversion. I argue that the Yucatec alignment system serves to disambiguate linking between two third-person arguments, and I take this as evidence that GRs are not involved in regulating intra-clausal linking in Yucatec. Disambiguation is an issue with 3rd-person arguments only, for obvious reasons. 3rd-person arguments are realized by bare agreement or cross-reference markers and optionally in addition by noun phrases. Direct evidence that the interpretation of these noun phrases is not governed by GRs comes from the regular repair interpretations triggered by sentences with alignment violations. These repair interpretations appear to override the otherwise rigid constituent order of the Yucatecan clause. Constituent order, instead of discriminating GRs, directly determines the linking between syntactic arguments and semantic roles - but only under "harmonic alignment," i.e., in case the highest-ranking argument on the thematic hierarchy - the actor - corresponds to the highest-ranking argument on the prominence hierarchy.

Extraction constructions include relativization, clefting, and content questions in Yucatec. These show an organization that has been considered ergative in work on Mayan syntax (e.g., Dayley 1981 on Tz'utujil; Larsen 1981 on Awakatek; Van Valin 1981 on Jakaltek): all arguments and obliques are extracted without restriction except for the "actor-" (i.e., highest-ranking on a thematic hierarchy) argument/oblique of active transitive and passive clauses. Extraction of the passive actor is barred completely, while extraction of the active actor requires the so-called "agent-focus" (or "A-focus") form, a special voice form of the Mayan verb. Both restrictions can be accounted for in terms of a single linking rule that mandates the use of the A-focus form in case the target of extraction outranks another argument of the same verb. In RRG terms, extraction operates on an "invariable

syntactic pivot" in Yucatec which includes arbitrary arguments and obliques except for the transitive A-argument. However, this pivot has no uniform morphological expression. Control constructions in turn operate on a nominative invariable syntactic pivot: they require the target of control to be either the actor argument of a transitive verb or the single argument of an intransitive verb, but disallow passivization of the controlled core. Again, the relevant generalization cannot be stated in terms of a uniformly marked grammatical relation of Yucatec. The simplest alternative is a linking rule that requires the highest-ranking thematic role in a controlled verbal projection to be linked to the target of control.

In sum, in line with an argument marking system that fairly transparently reflects the "macro-roles" of actor and undergoer, linking between semantic roles and syntactic arguments is governed, not by GRs, but clause-internally by alignment constraints and in inter-clausal syntax by construction-specific linking rules.

2. Argument marking

Yucatec lacks nominal case marking. There are two paradigms of cross-reference markers, customarily called "set A" and "set B" in Mayan linguistics. These behave like agreement markers in the presence of a co-indexed nominal in the same clause and like bound pronominal arguments in its absence; they do not co-occur with free pronouns inside the clause unless the latter are used deictically.[2] Their forms and distribution are summarized in Table 1. The set-B markers are suffixes. The singular set-A markers are clitics; they either procliticize to the (verb or noun) stem or form a phonological word with a preceding host, in particular, the preverbal "aspect-mood markers" (see below). The plural set-A markers are complex, combining a clitic with the set-B plural marker of the requisite person category.

Example (1) shows nominal predicates that carry the A1SG clitic marking the speaker as possessor and the B2SG suffix marking the addressee as theme:

(1) *Síi   in=ìiho-ech,   in=pàal-ech,   ko'x!*
      yes   A1SG=son-B2SG   A1SG=child-B2SG   EXHORT
      'You ARE my son alright, you ARE my child; let's go!'

Table 1. The two sets of cross-reference markers

	SET A		SET B	
Form	Singular	Plural	Singular	Plural
1st	*in(w)=*	*k=...(-o'n)*	*-en*	*-o'n*
1st inclusive	N/A	*k=...-o'n-e'x*	N/A	*-o'n-e'x*
2nd	*a(w)=*	*a(w)=...-e'x*	*-ech*	*-e'x*
3rd	*u(y)=*	*u(y)=...-o'b*	*-Ø*	*-o'b*
Distribution	nominal possessor; "actor" of transitive verbs; single argument of intransitive verbs in incompletive status		theme of stative predicates; "undergoer" of transitive clauses; single argument of intransitive verbs in completive, subjunctive, and extra-focal status	

The single argument of intransitive verbs (henceforth "S") is cross-referenced by the set-A markers in incompletive "status", but by the set-B markers in completive, subjunctive, and extra-focal "status". In contrast, cross-referencing of the actor (the higher-ranking argument; "A") and undergoer (the lower-ranking argument; "U") of transitive verbs is not sensitive to status. Status is an inflectional category specific to and common among Mayan languages (Kaufman 1990). The architecture of the status system varies from language to language. The Yucatecan system is represented in Table 2. The analysis of the aspectual and modal components of the status system is presented in Bohnemeyer (2002: 216-242). All verb forms are morphologically specified for one of the five status subcategories in all syntactic environments; there is no finiteness contrast with respect to status inflection. Status selection is strictly syntactically controlled; status assigners are the preverbal aspect-mood markers in finite clauses (e.g., imperfective *k-* in (2) and perfective *h-/t-* in (3) below) and the matrix predicate in non-finite complements (i.e., embedded "verbal cores"); sentence type governs status selection, and special status patterns occur in focus constructions, under negation, and in subordinate clauses. Examples (2a) and (3a) illustrate the argument marking contrast between incompletive (2a) and completive (3a) intransitive forms of *hàats'* 'bat'. For comparison, (2b) and (3b) show the corresponding transitive forms (*hàats'* is the antipassive of *hats'* 'hit'). No more than two arguments are marked on the verb, and there are neither primary nor indirect objects; recipients of transfer events are encoded by obliques.

Table 2. Status categories and argument marking patterns

	sentence type	modal meaning	aspectual meaning	argument-marking pattern
imperative incompletive completive extra-focal	imperative declarative, interrogative	N/A assertive	perfective imperfective perfective	S=A S=U
subjunctive		non-assertive		

(2) a. Intransitive incompletive
    *k-**in**=hàats'-∅*
    IMPF-**A1SG=**hit\ATP-**INC**
    'I bat'

    b. Transitive incompletive
    *k-**u**=hats'-**ik-en***
    IMPF-**A3=**hit-**INC-B1SG**
    'he hits me'

(3) a. Intransitive completive
    *h=hàats'-**nah-en***
    PRV=hit\ATP-**CMP-B1SG**
    'I batted'

    b. Transitive completive
    *t-**u**=hats'-**ah-en***
    PRV-**A3=**hit-**CMP-B1SG**
    'he hit me'

A number of different classifications and analyses of the Yucatec argument marking pattern have been proposed; cf. Bohnemeyer 2004 for an overview. Bohnemeyer 2004, building on DeLancey 1985, and rejecting in particular an ergative feature-based linking mechanism proposed by Krämer and Wunderlich 1999, describes the system as split-intransitive, with linking organized as follows: where there is a ranking of thematic roles, the higher role is linked to the set-A-marked argument and the lower to the set-B-marked one. In intransitive clauses, where there is no ranking, linking depends on viewpoint aspect: incompletive forms are semantically imperfective, and so their single argument patterns with the transitive A-argument. In contrast, completive, subjunctive, and extra-focal forms are semantically perfective; their single argument patterns with the U-argument of transitive clauses.[3]

The linking rules proposed in Bohnemeyer 2004 do not refer to GRs, but operate directly on the arguments cross-referenced by the set-A and set-B markers. The aim of the present paper is to demonstrate that the facts of linking in Yucatec are best accounted for in terms of the interaction of argument marking, constituent order, and a system of constraints on the alignment between thematic roles and relative "prominence" of referents in

active transitive clauses, without reference to GRs. Constituent order and the alignment system are the topics of the following two sections.

3.   Constituent order

Yucatec, like all Mayan languages, is verb-initial. This fact is obscured in connected discourse – above all, in narratives - due to the high frequency of left-dislocations. The conditions under which left-dislocation occurs are discussed in some detail in section 4. In brief, left-dislocation is used to make the discourse topic of a sentence explicit. In addition, there is a tendency to avoid multiplicity of clause-internal noun phrases. One way to achieve this is to left-dislocate the A of transitive clauses, the "figure" or theme of locative descriptions, and so on. The pervasiveness of this pattern has led some researchers to conclude an SVO order for Yucatec (e.g., Durbin and Ojeda 1978; Gutiérrez Bravo ms.).[4] Consider (4)-(5):

(4) ***Juan=e'***   *túun*   *lúub-s-ik*   *le=che'=o'*
     Juan=TOP PROG:A3   fall-CAUS-INC(B3SG) DET=tree=D2
     'Juan, he's felling the tree.'
(5) ***Le=ìik'=o'***   *túun*   *péek-s-ik*
     DET-wind=D2 PROG:A3   move-CAUS-INC(B3SG)
     le=che'-o'b=o'
     DET=tree-PL=D2
     'The wind, it's moving the trees.'

The question is whether the preverbal nominal preceding the progressive marker in (4)-(5) is clause-internal, and thus bears the A-argument relation to the verb. Crucial evidence against the clause-internal analysis comes from the particles =*e'* and =*o'* following the nominals in question. These belong to a paradigm of four indexical particles which are in complementary distribution. They only occur pre-verbally and clause-finally. Their use is triggered by a variety of expressions.[5] For instance, definite descriptions must be followed by either the exophoric (and, by implicature, proximal) particle =*a'* or the indexical (and, by implicature, distal) particle =*o'* (Bohnemeyer ms.). In contrast, proper nouns and indefinite NPs are optionally followed by the text-deictic particle =*e'*. Many adverbials trigger one of the aforementioned particles, and negation and locative predication trigger the particle =*i'* under certain conditions. A fixed hierarchy

governs selection in clauses with multiple triggers: *=a' > =o' > =e' > =i'*. Crucially, the only elements that can intervene between the particle and the preverbal aspect-mood marker (in (4)-(5), the progressive marker) are adverbial particles and focused constituents. In short, the particle preceding the verb (or the preverbal AM marker) marks the right edge of a phrase that contains the trigger of the particle. The question is, then, whether this phrase is the S/A argument of the verb. The answer is clearly negative. In (6)-(7), the particle follows a prepositional phrase which would be a locative oblique if it were part of the clause; in (8)-(9), the particle phrase would be a possessor; and (10) shows a particle-marked phrase that could not possibly be any constituent of the clause but stands in a superset relation to the object of the clause:

(6) ***Te'l   y=óok'ol le=he'   túun=o',***
      there   A3=on   DET=egg   so.then=D2
      k-a=ts'a'-ik   *ka'-p'éel   mehen   che'-o'b*
      IMPF-A2=put-INC(B3SG)   two-CL.IN   small   wood-PL
      'There on top of the egg then, you place two small peaces of wood'

(7) ***T-u=pùunta-il   le=pìino=o',***
      PREP-A3=tip-REL DET=pine=D2
      ti'=yàan   le=estrèeya=o'
      PREP=EXIST(B3SG)   DET=star=D2
      'At the top of the pine tree, there is the star'

(8) ***Pedro=e',   u=k'áat   t'àan***
      Pedro=TOP A3=wish(B3SG)   call\ATP
      y=éetel   hun-túul   yùum+k'ìin
      A3=COM   one-CL.AN   master+sun
      'As for Pedro, his wish is to talk to a priest'

(9) ***U=nah-il   Pedro=e',   nohol yàan   u=ho'l***
      A3=house-REL Pedro=TOP south EXIST(B3SG) A3=hole
      'As for Pedro's house, its door is (facing) south'

(10) ***Le=wolis   túun=o',   tu'x   kéen   in=ts'a'***
      DET=circle so.then=D2 where   SR.IRR A1SG=put(B3SG)
      le=t-a=ya'x   a'l-eh?
      DET=PRV-A2=first   say-SUBJ(B3SG)
      'As for the circles then, where am I going to put the one you men tioned first?'

What these examples – none of which has properties that are unusual or infrequent in Yucatec discourse – show is that the particle-marked sentence-initial phrase (a) is not restricted to A, S, or any other particular syntactic function inside the clause, (b) in some cases could not possibly have any syntactic function inside the clause, and (c) always defines a topic of the following clause (cf. section 4). I conclude that this phrase is adjoined, i.e., not a constituent of the clause. In RRG terms, it is in the "left-detached position" (Van Valin and LaPolla 1997: 36-37). It follows that it can't be the A argument in (4)-(5); the sentences do not have nominal A-arguments. Hence, (4)-(5) do not have SVO order.

In transitive clauses in which both arguments are realized by nominals, the U argument canonically precedes the A argument (but see Skopeteas and Verhoeven 2005!), as in (11)-(12).

(11)   *T-u=p'at-ah*   *uy=atan Pedro*
       PRV-A3=abandon-CMP(B3SG)   A3=wife Pedro
       'Pedro left his wife'
(12)   *T-u=chi'-ah*   *hun-túul   pèek'*
       PRV-A3=mouth-CMP(B3SG)   one-CL.AN   dog
       le=síina'n=o'
       DET=scorpion=D2
       'The scorpion stung (lit. bit) a dog'

However, transitive clauses that on a "VOS" (i.e., VUA) parse violate constraints on the alignment between the A > U ranking and the ranking of the referents in terms of a "prominence" or "accessibility" hierarchy are readily reinterpreted to the effect of a "VSO" (i.e., VAU) ordering. Alignment constraints are discussed next.

4.   Alignment constraints

Transitive clauses with two third-person arguments are subject to alignment restrictions similar to those documented for other Mayan languages (cf. in particular Aissen 1997, 1999 for Tzotzil; Zavala Maldonado 1997 for Akatek; and Zavala Maldonado 2007 for Chol and Huastec). The A-argument must outrank the U-argument on a semantic-pragmatic hierarchy determined in particular by topicality, definiteness, humanness, animacy, and referentiality (Aissen's "individuation"), and the U-argument

cannot be coreferential with the possessor of the A-argument. Like other Mayan languages, Yucatec lacks proximate/obviative marking on nominals and inverse marking on the verb[6] as known from the Algonquian languages in which grammatical alignment constraint systems have first been studied. The most common means to avoid alignment violations are left-dislocation, passivization, and focussation. Consider, first, the constraint barring the U-argument from coreference with the possessor of the A-argument, illustrated in (13):

(13)　　*??T-u=p'at-ah*　　　　　　*Pedro*　　*uy=atan*
　　　　PRV-A3=abandon-CMP(B3SG)　Pedro　A3=wife
　　　　intended: 'His wife left Pedro'

Under the interpretation that *Pedro* is the U- and *uyatan* 'his wife' the A-argument, consultants reject (13) unanimously. However, consultants volunteer that (13) is marginally acceptable if interpreted as synonymous with (11) above. Such repair interpretations in which alignment patterns appear to override canonical constituent order are readily available with all sentences that trigger alignment violations on canonical-order interpretations.[7] This suggests that the role grammatical functions play in the linking of thematic roles to arguments is at best malleable.

Two common strategies for expressing the intended meaning of (13) are the passive in (14a) and the "agent focus" construction in (14b):

(14)　a.　*Pedro=e'*　　　*h-p'at-a'b*
　　　　　Pedro=TOP　　PRV-abandon-PASS.CMP(B3SG)
　　　　　tumèen　uy=atan
　　　　　CAUSE　A3=wife
　　　　　'Pedro, he was left by his wife'
　　　b.　*Pedro=e'*　　　*uy=atan*　　　*p'at-eh*
　　　　　Pedro=TOP　A3=wife(B3SG)　　abandon-SUBJ(B3SG)
　　　　　'Pedro, his wife (was the one who) left him'

The so-called agent focus form is a special voice form of the Mayan verb that occurs under "extraction" – focussation or relativization – of the transitive A-argument.[8] In Yucatec, the A-focus form is characterized by deletion of the set-A marker and the AM marker. As Tonhauser 2007 points out, the form is nevertheless easily identified as transitive since it retains the transitive series of status suffixes. Aspect-mood marking in the

A-focus form is reduced to a three-way contrast between bare incompletive status for imperfective reference, bare subjunctive status for past perfective reference, as in (14b), and the irrealis subordinator keen plus subjunctive status for future time reference, habitual reference, and generic reference. Aissen 1999 argues that the A-focus form in Tzotzil is a special "inverse" verb form restricted to the A-extraction context. However, as shown in section 6, Aissen's analysis does not apply to Yucatec. In Yucatec, the use of the A-focus form is a strategy of avoiding alignment violations, not an expression of inverse alignment. The same holds for passivization and left-dislocation; cf. section 5. Each of the three constructions has its own semantics (to be briefly analyzed below and in the following sections) of which alignment is not a part; they are tied into the alignment system by pragmatics.

Next, consider humanness as a factor. Example (15) again triggers a repair interpretation under which it was in fact the child who bit the spider; otherwise, (15) is rejected. To express the proposition intended in (15), either left-dislocation (16a) or passivization (16b) is chosen.[9]

(15) *??T-u=chi'-ah*   *le=pàal*
     PRV-A3=mouth-CMP(B3SG) DET=child
     hun-túul x-chìiwol=o'
     one-CL.AN F=tarantula=D2
     intended: 'A tarantula bit the child'

(16) a. *Hun-túul x-chìiwol=e',*
     one-CL.AN F-tarantula=TOP
     t-u=chi'-ah   *le=pàal=o'*
     PRV-A3=mouth-CMP(B3SG) DET=child=D2
     'A tarantula, it bit the child'

   b. *H-chi'-b*   *le=pàal*
     PRV-mouth-PASS.CMP(B3SG) DET=child
     tumèen hun-túul x-chìiwol=o'
     CAUSE one-CL.AN F-tarantula=D2
     'The child was bitten by a tarantula'

In (15), the U outranks the A not just in humanness, but also in definiteness. When both arguments are definite, the distribution is the same. In (17), the strategy selected to avoid the alignment violation is left-dislocation; in (18), it is passivization, and in (19), it is the A-focus construction.

(17) a. ??*T-u=chi'-ah*   *Pedro le=kàan=o'*
         PRV-A3=mouth-CMP(B3SG)   Pedro DET=snake=D2
         intended: 'The snake bit Pedro'

     b. *Le=kàan=o',   t-u=chi'-ah   Pedro*
        DET=snake=D2   PRV-A3=mouth-CMP(B3SG)   Pedro
        'The snake, it bit Pedro'

(18) a. ??*T-u=kins-ah*   *Pablo le=kàan=o'*
         PRV-A3=die:CAUS-CMP(B3SG) Pablo DET=scorpion=D2
         intended: 'The scorpion killed Pablo'

     b. *H-kins-a'b*   *Pablo*
        PRV-die:CAUS-PASS:CMP(B3SG)   Pablo
        tumèen   le=síina'n=o'
        CAUSE   DET=scorpion=D2
        'Pablo was killed by the scorpion'

(19) a. ??*T-u=kins-ah*   *Pedro le=tsíimin=o'*
        PRV-A3=die:CAUS-CMP(B3SG)   Pedro DET=horse=D2
        intended: 'The horse killed Pedro'

     b. *Lete=tsíimin   he'l=o'   leti'   kins   Pedro*
        it:DET=horse   PRSV=D2   it   die:CAUS(B3SG) Pedro
        'That horse, it was the one that killed Pedro'

If the A-argument outranks the U-argument in definiteness, the active transitive form with two clause-internal nominal arguments is perfectly acceptable even if the U is human and the A is not:

(20)   *T-u=kins-ah*
         PRV-A3=die:CAUSE-CMP(B3SG)
         hun-túul   nohoch   máak le=x-chìiwol=o'
         one-CL.AN big   person DET=F-tarantula=D2
         'The tarantula killed an elderly person'

(21)   *T-u=nes-ah*   *hun-túul   pàal*
         PRV-A3=gnaw-CMP(B3SG)   one-CL.AN child
         le=xoh=o'
         DET=cockroach=D2
         'The cockroach bit a child'

Definiteness appears to be the second-most powerful factor governing alignment in Yucatec – it dominates humanness and animacy. An indefinite

NP in A combined with a definite in U is rejected even when the former outranks the latter in humanness:

(22) a. *T-u=pech'-ah   le=xoh*
        PRV-A3=squash-CMP(B3SG)   DET=cockroach
        hun-túul   x-ch'úupal=o'
        one-CL.AN F-female:child=D2
        intended: 'A girl squashed the cockroach'

    b. *H-pech'-a'b   le=xoh*
        PRV-squash-PASS:CMP(B3SG)   DET=cockroach
        tumèen   hun-túul   x-ch'úupal=o'
        CAUSE one-CL.AN F-female:child=D2
        'The cockroach was squashed by a girl'

    c. *Hun-túul   x-ch'úupal=e',*
        one-CL.AN F-female:child=TOP
        t-u=pech'-ah   le=xoh=o'
        PRV-A3=squash-CMP(B3SG)   DET=cockroach=D2
        'A girl, she squashed the cockroach'

I assume that left-dislocation of a nominal coreferential with an argument marks the referent as topic. Then (22c) may be taken to suggest that topicality outweighs even definiteness as a factor determining alignment prominence. Interpreted along the same lines, (16a) and (17b) suggest that topicality outranks humanness and (14b) that it outranks possession. In the absence of left-dislocation, topicality is most commonly expressed by pronominalization (Givón 1983, 1994). In Yucatec, this means that the topical argument is not realized by a nominal at all, but represented by the cross-reference marker only. (However, a referent tracked by a bare cross-reference marker is not necessarily topical; it may not even necessarily be "old" – see below.) The following excerpt from a "Frog Story" narrative[10] illustrates that a transitive active voice form may be used with a U outranking the A in humanness if the A's referent is topical and traced from preceding discourse, represented in the clause by the set-A marker only. The excerpt describes the cliff scene; the protagonists of this episode are the boy, his dog, and the deer. The deer is marked as a topic in the first line and again in the sixth. In the seventh line, a plain transitive active verb form is used to describe the deer throwing the boy off the cliff from its antlers. The boy is referred to by the sole nominal of the clause, the U argument. Neither left-dislocation nor passivization or A-extraction is needed

to avoid an alignment violation in (22) – none occurs because the deer is already understood to be topical in this context.

(22)   *Pwes, **le=kéeh=o'**,   túun   bin*
              well   DET=deer=D2 PROG:A3   go
              'Well, the deer, it is going...'
              u=kuch-mah   *le=pàal*   *y=éetel*
              A3=carry.on.back-PERF(B3SG)   DET=child A3=COM
              '...having shouldered ("backed") the child with …'
              u=ho'l=o'   *táan*   *u=bin.*
              A3=head=D2   PROG   A3=go
              '…its head as it is going.'
              Pwes, káa=h   [new start] le=pèek'   xan=e'   te'l
              well   CON=PRV   DET=dog   also=TOP   there
              'Well, (when/and then) [new start] the dog as well, there...'
              ts'ay-a'n   tu'x   yàan   t-u=pàach
              hit-RES(B3SG) where   EXIST(B3SG) PREP-A3=back
              '…it was hit[11] where it was behind...'
              u=yùumil=o', táan   xan   u=tohol-t-ik
              A3=master=D2 PROG   also   A3=bark-APP-INC(B3SG)
              '...its master, the dog was also barking at…'
              ***le=kéeh**   xan=o'; pwes, **le=kéeh=o'**,*
              DET=deer   also=D2 well   DET=deer=D2
              '…the deer; well, as for the deer, …'
              chich u=bin túun=e'.
              hard   A3=go so.then=D3
              '...fast was how it went.'
              Le=káa=t-u=pik+ch'ìin-t-ah
              DET=CON=PRV-A3=fling+pelt\ATP-APP-CMP(B3SG)
              '(When/and then) it threw off…''
              ***le=pàal=o'**,   káa=h-lúub   le=pàal=e'*,
              DET=child=D2 CON=PRV=fall(B3SG) DET=child=D3
              '...the child, (when/and then) the child fell, …'
              tak   le=pèek'   túun=o'   h-lúub-ih.
              as.far.as DET=dog   so.then=D2 PRV-fall-CMP(B3SG)
              '…and even the dog, it fell.'

    The correlation between argument realization and "preferred argument structure" (in the sense of Du Bois 1987), accessibility, and topicality en-

sures a preference for "harmonic alignment" between thematic structure and the relative prominence of referents in transitive clauses in which one or both arguments are realized by a bare cross-reference marker: the referent of the A-argument tends to be topical in line with the prominence hierarchy in (26) below. The passage also illustrates the use of left-dislocation to select one of several entities all of which are accessible in the discourse as the topic of the sentence. In contrast, clause-internal nominal arguments are used in reference to entities that are accessible, but do not constitute the topic of the sentence in which they occur. Table 3 summarizes the functions of the various realization options in the introduction and tracking of argument referents and the marking of topics.[12]

Table 3. Argument realization, discourse referents, and topicality in Yucatec

referent realization	new	previously introduced
clause-internal nominal (plus cross-reference marker)	introduction of new, inaccessible referent	tracking of old, accessible but non-topical referent
left-dislocated nominal (plus clause-internal cross-reference marker)	introduction of new, inaccessible referent as sentence topic	selection of old, accessible referent as sentence topic (to mark topic switch or disambiguate topic)
bare cross-reference marker	(N/A?)	continuation of topic from preceding discourse

Table 3 leaves open the question of accessibility in clauses with multiple clause-internal argument nominals. This is the proper domain of of the strategies for avoiding alignment violations illustrated in (15), (17a), (18a), and (19a) above.[13]

Animacy, as opposed to humanness, is perhaps the weakest factor in alignment constraints. The preference for the passive over the active is comparatively weak in the following examples featuring inanimate A- and animate but non-human U-arguments:

(23) a. ?*T-u=kins-ah*   *le=kàan*
          PRV-A3=die:CAUS-CMP(B3SG) DET=snake
          le=k'áak'=o'
          DET=fire=D2
          intended: 'The fire killed the snake'

b. *H-kins-a'b*   *le=kàan*
   PRV-die:CAUS-PASS:CMP DET=snake
   tumèen   *le=k'áak'=o'*
   CAUSE   DET=fire=D2
   'The snake was killed by the fire'

(24) a. *?T-u=kins-ah*   *le=pèek'*
   PRV-A3=die:CAUS-CMP(B3SG)   DET=dog
   le=ka'nkach   *ìik'=o'*
   DET=RED:intense wind=D2
   intended: 'The storm killed the dog'

b. *H-kins-a'b*   *le=pèek'*
   PRV-die:CAUS-PASS.CMP(B3SG)   DET=dog
   tumèen   *le=ka'nkach*   *ìik'=o'*
   CAUSE   DET=RED:intense wind=D2
   'The dog was killed by the storm'

However, there may be an interaction between animacy and the final factor to be considered here, referentiality or "individuation". Thus, versions of (23a) and (24a) in which the determiner of the A argument is dropped are rejected more strongly by most speakers. Such bare-nominal As are, however, acceptable in the A-focus construction (25a) and as oblique actors in the passive (25b). As (25a) illustrates, the nonreferential As are fine even with human Us in the A-focus construction.

(25) a. *Wi'h*   *kinsik*   *Pablo*
   hunger   die:CAUS-INC(B3SG)   Pablo
   'Hunger is what kills/is killing Pablo'

b. *H-kins-a'b*   *le=kàan*
   PRV-die:CAUS-PASS.CMP(B3SG)   DET=snake
   tumèen   *ke'l*
   CAUSE   cold
   'The snake was killed by cold (weather)'

The prominence hierarchy in (26) captures the ranking of some of the factors evidenced above:

(26)   topicality > definiteness > humanness > animacy

The highest property on this scale that applies to a given A-argument must outrank the highest property that applies to its co-argument. I ignore referentiality for (26) in view of insufficient data. Furthermore, I follow Aissen (1999) in that I do not consider possession (coreferentiality of the U with the possessor of the A) part of the semantic-pragmatic hierarchy in (26).[14] Counterparts of (26) are known in the literature on alignment constraint systems under labels such as "topicality hierarchy", "prominence hierarchy", or "saliency hierarchy".

Finally, there are no alignment restrictions on clauses with 1st- or 2nd – person U-arguments. The examples in (27) feature a non-human and in (b) in addition indefinite A- and a 1st-person U-argument:

(27) a. *T-u=nes-ah-en*   *le=xoh=o'*
          PRV-A3=gnaw-CMP-B1SG DET=cockroach=D2
          'The cockroach bit me'
      b. *T-u=nes-ah-en*   *hun-túul   xoh*
          PRV-A3=gnaw-CMP-B1SG one-CL.AN cockroach
          'A cockroach bit me'

The absence of restrictions on clauses with speech-act-participant arguments, combined with the role of left-dislocation and the interaction between left-dislocation and argument realization as discussed above, strongly suggest that the alignment constraints serve to control the interpretation of clauses or verbal cores with multiple third-person arguments. I suggest below that alignment constraints may be necessitated as a disambiguation mechanism because of the absence of grammatical functions governing linking. I take the repair interpretations triggered by clauses that violate alignment constraints when parsed according to canonical constituent order as direct evidence of the absence of grammatical functions mediating between arguments and thematic relations.

5. Passive and prominence

Passivization is one strategy used to avoid alignment violations. But passivization is not restricted to inverse configurations and thus cannot be considered an expression of inversion. Thus, the passives in (28) were accepted by all consultants without hesitation, even though the oblique actor

phrase outranks the S argument (corresponding to the U of the active form) in humanness in (a) and in humanness and definiteness in (b):

(28) a. *H-kins-a'b*   *le=kàan*
      PRV-die:CAUS-PASS.CMP(B3SG)   DET=snake
      tumèen Pedro=o'
      CAUSE Pedro=D2
      'The snake was killed by Pedro'
   b. *H-kins-a'b*   *hun-túul   kàan*
      PRV-die:CAUS-PASS.CMP(B3SG)   one-CL.AN snake
      tumèen   le=máak=o'
      CAUSE DET=person=D2
      'A snake was killed by the person'

    It is thus not necessary for the passive undergoer to outrank the actor on the alignment hierarchy postulated in (26) above. This fact further supports the hypothesis that the function of the Yucatec alignment system is simply to disambiguate linking in clauses with two 3rd-person arguments. The semantic function of the passive is to block the actor role of transitive verbs from argument linking, relegating it to oblique status (Bohnemeyer 2004). Since the passive has only a single argument, it is not itself subject to alignment restrictions and therefore becomes a pragmatic option for the encoding of configurations that would trigger alignment violations in the active form. This is not to say that actor and undergoer are equally likely to be topical in a passive clause. Sentences such as (28) are at best rare in connected speech. Even less likely are passive sentences in which a nominal coreferential with the actor is left-dislocated. Such configurations seem of limited use pragmatically – but, unlike the alignment violations described in the previous section, they are not excluded by the grammar of the language.

    The passive is, however, subject to a syntactic constraint that bears a certain resemblance to the alignment restrictions. The complement of the causal preposition that "flags" the actor in passive clauses may be a free 3rd-person pronoun (29c), but cannot be a 1st- or 2nd-person pronoun – consultants unanimously reject (29a-b):

(28) a. **Juan=e'   h-ha'ts'*   *tumèen tèen*
      Juan=TOP   PRV-hit\PASS(B3SG)CAUSE me
      intended: 'Juan, he was hit by me'

    b. **Juan=e'   h-ha'ts'   tumèen   tèech*
        Juan=TOP   PRV-hit\PASS(B3SG)CAUSE you
        intended: 'Juan, he was hit by you'

    c. *Juan=e'   h-ha'ts'   tumèen   (leti')*
        Juan=TOP   PRV-hit\PASS(B3SG)CAUSE it
        'Juan, he was hit by her/him/it'

Aissen 1997 reports a parallel restriction on the passive in Tzotzil. Future research will have to clarify what is responsible for the pattern in (28) and how, if at all, it is related to the alignment restrictions on 3rd-person arguments in active transitive clauses.[15]

6.   Extraction

The extraction of arguments may be restricted by grammatical relations. This is not the case in English and other Indo-European languages; but the phenomenon is well-known from Austronesian languages (e.g., Keenan 1976 on Malagasy). In Yucatec, there is a restriction on the extraction of the A-argument of transitive verbs, which strictly requires the A-focus form introduced above, and on the oblique actor phrase of passives, which is excluded. Other than that, extraction is unrestricted. The following discussion is confined to relativization, but the relevant phenomena are the same in clefts and content questions.[16]

The syntax of Yucatec relative clauses is illustrated in (30)-(33). In these examples, the relative clause is introduced by the irrealis subordinator *kéen*, which occurs with future, habitual, and generic reference. *Kéen* is in complementary distribution with the preverbal AM markers (see section 2), which in relative clauses and other extraction contexts are restricted to realis reference. The preverbal AM markers do not co-occur with a subordinator. If the head of the relative construction is a noun, the relative clause follows it immediately:

(30)   *Wáah   kex   yàan*
        ALT   though   EXIST(B3SG)
        u=láak'   meyah   kéen   u=mèet   máak,…
        A3=other   work   [SR.IRR A3=make(B3SG)   person]
        'Or perhaps there is other work the person is going to do,…'

No special resumptive pronoun occurs in the relative clause; extracted S- or U-arguments are realized by the cross-reference marker alone (other extraction targets are discussed below). The head of the relative construction may be an indefinite pronoun, as in (31); in such cases, the placement vis-à-vis the subordinator and the fact that the pronominal form is in complementary distribution with a nominal head make it clear that the pro-form is not a constituent of the relative clause.[17]

(31)   *Ha'w=u'y-ik-e'x*
ASS:A2=perceive-INC(B3SG)-2.PL
le=ba'x   kéen   inw=a'l=e'?
DET=what [SR.IRR A1SG=say(B3SG)]=D3
'Will you all hear what I am going to say?'

Example (32) illustrates a left-dislocated relative construction with a nominal head:

(32)   *Le=kàarta   kéen   a=ts'íib-t   bèey=o'*
DET=letter [SR.IRR A2=write-APP(B3SG)   thus]=D2
hay-p'éel   tyèempo k-a=tukul-ik
how.many-CL.IN time   IMPF-A2=think-INC(B3SG)
u=xàan-tal?
A3=take.time-INCH.INC
'The letter you are going to write thus, how much time do you think it will take?'

Finally, the relative clause in (33) is headless and syntactically nominalized as marked by the determiner. Headless relatives are particularly frequent in left-detached position. The structure of (33) can be thought of as derived from the one in (32) by deletion of the head:

(33)   *Le=kéen   k=ts'a'   túun   he'l=a',*
DET=[SR.IRR A1PL=put(B3SG) so.then   PRSV]=D1
u=k'àaba'=e',   ka'nal+pàach+nah
A3=name=TOP   high+back+house
'So then the (one) we put here, as for its name, (it is) *ka'nal pàach nah*'

The relative clauses in (30)-(33) are all transitive and it is in all cases the U-argument that is relativized. Example (34) shows relativization of the S-argument of an intransitive verb marked for imperfective aspect:

(34)　　*T-inw=il-ah*
　　　　PRV-A1SG=see-CMP(B3SG)
　　　　le=máax k-u=bin　　　　Ho'　　sáan-sáamal=o'
　　　　DET=who　[IMPF-A3=go　Mérida　RED-tomorrow]=D2
　　　　'I saw the (one) who goes to Mérida every day' (Bricker, Po'ot Yah, and Dzul de Po'ot 1998: 181)

In (35), the U-argument of a transitive verb is extracted out of a perfective clause:

(35)　　*K'àas*
　　　　bad(B3SG)
　　　　le=wàah　　　t-a=hàan-t-ah=o'
　　　　DET=tortilla　PRV-A2=eat-APP-CMP(B3SG)=D2
　　　　'The tortilla you ate was bad'

Now compare (35) to (36), featuring A-relativization in a perfective clause. In (36a), the A-focus form is used: the transitive verb appears in the bare subjunctive[18] and the set-A clitic is deleted. In contrast, (36b) is an attempt to use a regular transitive active form under A-extraction. This sentence is perfectly unambiguous: the set-B suffix identifies the addressee as the U; so only the 3rd-person set-A clitic, linked, as always, to the actor role, can be coreferential with the head of the relative construction. Nevertheless, participants generally respond to this sentence with puzzlement: out of six speakers with whom I tested (36b), three straightforwardly rejected it, one found it hard to understand, and one rated it as acceptable but prefers (36a) for expressing the same meaning and only one speaker considered (36a) and (b) equally good. In a sentence completion task I conducted before eliciting judgments about (36b), all six speakers spontaneously produced the form in (36a).[19]

(36)　a. *K'àas　　　le=máak　　　òokol-ech=o'*
　　　　　bad(B3SG)　DET=person　　steal-B2SG=D2
　　　　　'The person (who) robbed you is bad'

b. ??*K'àas   le=máak   t-uy=òokol-ah-ech=o'*
   bad(B3SG) DET=person   PRV-A3=steal-CMP-B2SG=D2
   intended: 'The person (who) robbed you is bad'

   I conclude that the A-focus form is generally preferred in A-extraction contexts in Yucatec. As mentioned above, Aissen 1999 analyzes the A-focus form in Tzotzil as a special "inverse" verb form restricted to the A-extraction context: it is used with third-person A and U arguments only and even then competes with the active voice form, being preferred over the latter the more clearly U outranks A on the prominence hierarchy. The Yucatec A-focus form differs from its Tzotzil counterpart in that it is not restricted to third-person arguments – A, U, or both can refer to speech act participants (U does in (36)). It remains to be determined whether the use of the A-focus form is sensitive to the relative prominence of the target of extraction compared to that of a third-person (co-)argument. I tentatively assume that the Yucatec A-focus form marks A-extraction regardless of alignment type. Therefore, I assume that it is not an expression of inverse alignment, but merely a pragmatic strategy of avoiding it, along with passivization and left-dislocation.

     Recipients are expressed by oblique prepositional phrases headed by the generic preposition *ti'*. Under relativization of recipients, normal transitive active verb forms can be used, and all argument markers are retained. The preposition *ti'* either remains in place in the relative clause, as in (37a), or follows the head of the relative construction, as in (37b). Both constructions are judged equally good by the consultants. Alternatives with indefinite-pronouns heads are shown in (37c-d); again the two variants are considered equally acceptable.[20]

(37) a. *K'àas   le=máak*
       bad(B3SG) DET=person
       t-*a=ts'a'-ah*   *le=ta'kin*
       [PRV-A2=put-CMP(B3SG) DET=money
       ti'=o'
       PREP(B3SG)]=D2
       'The person you gave the money to is bad'
     b. *K'àas   le=máak   ti'*
       bad(B3SG) DET=person   PREP

      t-a=ts'a'-ah   *le=ta'kin=o'*
      [PRV-A2=put-CMP(B3SG)   DET=money]=D2
      'The person to (whom) you gave the money is bad'

  c. *K'àas*   *le=máax*
      bad(B3SG)   DET=who
      t-a=ts'a'-ah   *le=ta'kin*
      [PRV-A2=put-CMP(B3SG)   DET=money
      ti'=o'
      PREP(B3SG)]=D2
      'The (one) who you gave the money to is bad'

  d. *K'àas*   *le=máax*   *ti'*
      bad(B3SG)   DET=who   PREP
      t-a=ts'a'-ah   *le=ta'kin=o'*
      [PRV-A2=put-CMP(B3SG)   DET=money]=D2
      'The (one) to whom (lit. whom to) you gave the money is bad'

The examples in (38) illustrate relativization of a "comitative" oblique. Again, the relational noun *éetel* flagging the comitative can either remain "stranded" in the relative clause, as in (38a), or "moved" up to the position immediately following the head, as in (38b); consultants appear to produce both variants interchangeably and consider them equally acceptable and unconspicuous.

(38)   a. *K'àas*   *le=máak*   *k-a=tsikbal*   *y=éetel=o'*
          bad(B3SG)   DET=person[IMPF-A2=talk A3=COM]=D2
          'The person you talk to (lit. with) is bad'

      b. *K'àas*   *le=máak*   *y=éetel*   *k-a=tsikbal=o'*
          bad(B3SG)   DET=personA3=COM   [IMPF-A2=talk]=D2
          'The person to (lit. with) (whom) you talk is bad'

Instrumental obliques are likewise flagged by the comitative *éetel*. In striking contrast to the comitative case in (38), with one exception all consultants rejected the rendition with the "stranded" *éetel* in (39a), leaving the (pseudo-)"pied-piping" variant as the only option. I cannot at present offer any explanation for the difference in acceptability between (38a) and (39a).

(39)   a. ??*K'as=ma'+lo'b*   *le=motosyèera*
          rather=NEG+bad(B3SG)   DET=chainsaw

       k-a=xot'-ik   *le=che'*   *y=éetel=o'*
       IMPF-A2=cut-INC(B3SG)   DET=wood A3=COM=D2
       intended: 'The chainsaw you cut the tree with is pretty good'

   b. *K'as=ma'+lo'b*   *le=motosyèera*
       rather=NEG+bad(B3SG) DET=chainsaw
       y=éetel   *k-a=xot'-ik*   *le=che'=o'*
       A3=COM   [IMPF-A2=cut-INC(B3SG) DET=wood]=D2
       'The chainsaw with (which) you cut (down) the tree is pretty good'

As the content question in (40) demonstrates, it is possible to extract the "ground phrase" in locative and motion descriptions.[21] However, in general, speakers prefer adverbial clauses over relative clauses in reference to ground objects and the places they project. In (41a), a place-denoting adverbial clause headed by *tu'x* 'where' modifies the noun *káantìina* 'bar'. The bar is understood as the source of the motion event described by the adverbial clause. Alternative descriptions of the same state of affairs with the preposition *ich(il)* 'in(side)' marking the place function and the complement of *ich(il)* relativized are rejected by the consultants, regardless of whether the preposition is "stranded" inside the relative clause (41b) or "moved" up to the head (41c):

(40)   *Máax iknal ken-o'n   yáax bin?*
         who   at   SR.IRR-B1PL first   go
         'Who's place are we going to go to first?'

(41) a. *K'àas   le=káantìina   tu'x   h-hóok'-ech=o'*
         bad(B3SG) DET=bar   [where   PRV-exit-B2SG]=D2
         'The bar where you came out is bad'

      b. **K'àas   le=káantìina*
         bad(B3SG) DET=bar
         h-hóok'-ech   ich(-il)=o'
         [PRV-exit-B2SG in-REL(B3SG)]=D2
         intended: 'The bar you came out of is bad'

      c. **K'àas   le=káantìina   ich(-il)   h-hóok'-ech=o'*
         bad(B3SG) DET=bar   in-REL   [PRV-exit-B2SG]=D2
         intended: 'The bar out of (which) you came is bad'

Interestingly, relativization of the oblique actor phrase of a passive appears to be rejected. Even English equivalents of (42) are pragmatically

odd and certainly far less common than their active counterparts;[22] however, all consultants rejected the sentences in (42) without hesitation:

(42) a. **T-inw=il-ah*   *le=máax*
     PRV-A1SG=see-CMP(B3SG)   DET=who
     h-òokol-t-a'b-ech   *tumèen=o'*
     [PRV-rob-APP-PASS.CMP-B2SG CAUSE(B3SG)]=D2
     intended: 'I saw the (one) who you were robbed by'

   b. **T-inw=il-ah*
     PRV-A1SG=see-CMP(B33SG)
     le=máax   *tumèen*   *h-òokol-t-a'b-ech=o'*
     DET=who   CAUSE   [PRV=rob-APP-CMP-B2SG]=D2
     intended: 'I saw the (one) by whom you were robbed'

It is possible to relativize the complement of the causal preposition tumèen in active sentences, as (43) illustrates; however, only the (pseudo-) "pied-piping" variant (43b) is acceptable in this case.

(43) a. **T-inw=il-ah*
     PRV-A1SG=see-CMP(B3SG)
     ba'x   *t-a=hats'-ah*
     what   [PRV-A2=hit-CMP
     le=máak   *tumèen=o'*
     DET=person   CAUSE(B3SG)]=D2
     intended: 'I saw why you hit the person'

   b. *T-inw=il-ah*
     PRV-A1SG=see-CMP(B3SG)
     ba'x   *tumèen*   *t-a=hats'-ah*   *le=máak=o'*
     what   CAUSE   [PRV-A2=hit-CMP   DET=person]=D2
     'I saw why you hit the person'

To summarize, extraction is expressed by the realization of the extracted argument inside the target clause by cross-reference markers only. The only clear constraints on the target of extraction concerns the A-argument of transitive verbs and the oblique actor phrase of passives: the former requires or favors the A-focus form, while the latter appears to be simply unavailable. The triggering of a special voice form under A-extraction as opposed to S- and U-extraction has been traditionally considered an ergative trait of Mayan syntax (e.g., Dayley 1981 on Tz'utujil;

Larsen 1981 on Awakatek; Van Valin 1981 on Jakaltek). On an RRG account, extraction operates on an "invariable syntactic pivot" – a syntactic pivot since it involves restricted neutralization and an invariable one since it excludes the "derived" single argument of passives (Van Valin and LaPolla 1997: 281-282).[23] However, this pivot is not uniformly marked in Yucatec: arguments in this pivot are cross-referenced by the set-A clitics with intransitive verbs in incompletive status and by the set-B suffixes elsewhere. In addition, as shown in the following section, control constructions likewise operate on an invariable syntactic pivot in Yucatec – but on a nominative (i.e., S=A) pivot. I conclude that linking in extraction is most parsimoniously described as being governed, not by GRs, but by a construction-specific linking rule:

(43) *Linking under extraction*: If the target of extraction thematically outranks another argument or oblique of the same verb, the verb must appear in the A-focus form.

The rule in (43) takes care of both the extraction of the transitive A-argument and the oblique actor of the passive, requiring the A-focus form in both cases. This effectively excludes extraction of the passive actor, since the passive and the A-focus form are mutually incompatible voice forms of the Yucatec verb.

7.   Control

The term "control construction" is adapted here to the conditions of Yucatec morphosyntax as follows: a construction is considered a control construction if and only if it involves obligatory coreference between an argument of a matrix predicate and an argument of an embedded verbal core such that the two coreferential arguments combined can be realized by a nominal maximally once in either the lower core or the matrix. This definition covers both constructions in which both the "controller" (the antecedent of control, i.e., the higher argument) and the "target" (the lower argument) are cross-referenced in their respective cores and constructions in which the cross-reference marker indexing the target is deleted. Control constructions in Yucatec involve embedded verbal cores that function as arguments or obliques of their matrix predicates.[24]

There are two types of control constructions in Yucatec – henceforth "type-I" and "type-II" constructions. Type-I constructions include complements of predicates of desire, fear, and attempt and the so-called "motion cum purpose" construction. Predicates of attempt exhibit the least complex range of possibilities within type-I: one argument of the lower verbal core must be controlled by the A-argument of the matrix. This is illustrated in (45). The matrix verb is *ts'a'* 'put'; the argument structure frame that gives the attempt reading requires this verb to be reflexive, with the embedded core expressing the attempted action. Reflexivity is expressed by realizing the U-argument as a possessed nominal headed by *báah* 'self', the possessor coreferential with the A-argument. In (45a), the lower core is intransitive, the antipassive form of the transitive root *k'ay* 'sing'. The verb appears in the incompletive, which is zero-marked for this class of verbs. The set-A clitic which marks the S-argument of intransitive verbs in the incompletive in main clauses is deleted. Example (45b) shows a transitive lower verb; it appears in the subjunctive, which is unmarked on transitives except in clause-final position (cf. fn18). The target of control is the A-argument; the set-A clitic is retained.

(45) a. *Le=pàal=o',   t-u=ts'a'-ah   u=báah*
          DET=child=D2 PRV-A3=put-CMP(B3SG)   A3=self
          *(*u=)k'àay*
          [A3=sing\ATP]
          'The child, (s)he tried to sing'

      b. *Le=doktòor=o',   t-u=ts'a'-ah   u=báah*
          DET=doctor=D2   PRV-A3=put-CMP(B3SG)   A3=self
          u=ts'ak   le=pàal=o'
          [A3=cure(B3SG)   DET=child]=D2
          'The doctor, (s)he tried to cure the child'

      c. *Le=pàal=o',   t-u=ts'a'-ah   u=báah*
          DET=child=D2 PRV-A3=put-CMP(B3SG)   A3=self
          u=ts'ak   le=doktòor=o'
          [A3=cure(B3SG)   DET=doctor]=D2
          'The child, (s)he tried to cure the doctor'
          Not: 'The child, (s)he attempted for the doctor to cure her/him'

      d. *Le=pàal=o',   t-u=ts'a'-ah   u=báah*
          DET=child=D2 PRV-A3=put-CMP(B3SG)   A3=self

      (u=)ts'a'k-al   *tumèen*   *le=doctòor=o'*
      [A3=cure\PASS-INC   CAUSE DET=doctor]=D2
      intended: 'The child, (s)he tried to be/get cured by the doctor'

e. *Le=pàal=o',   t-u=ts'a'-ah*   *u=báah*
    DET=child=D2 PRV-A3=put-CMP(B3SG) A3=self
    (*uy=)uts-tal
    [A3=good-INCH.INC]
    'The child, (s)he tried to recover'

The target cannot be the U-argument of a lower transitive verb; thus, (45c) can only be interpreted to the effect that the child tried to cure the doctor, not to the effect that the child tried to bring about an event in which the doctor cured her/him. Crucially, control is incompatible with passivization of the lower core, as (45d) illustrates. This restriction cannot be explained in purely semantic terms; as (45e) demonstrates, syntactic control does not always require the antecedent to have control over the eventuality expressed by the lower core in the semantic/conceptual sense. Neither is the restriction the result of more general syntactic constraint barring passivization in embedded verbal cores. In verbal cores embedded under causative predicates, which do not involve control, passivization is natural and in fact often preferred over the transitive active form. In (46), where the causative light verb is *mèet* 'make', the passive in (46b) is preferred over the active in (46a), whereas in (47), with *ch'a'* 'let', active and passive are judged equally acceptable by the consultants.

(46) a. ?*Pedro=e' t-u=mèet-ah*
       Pedro=TOP PRV-A3=make-CMP(B3SG)
       u=ts'ak-ik   *le=pàal*   *le=doktòor=o'*
       [A3=cure-INC(B3SG)   DET=child DET=doctor]=D2
       'Pedro, he made the doctor cure the child'

      b. *Pedro=e'   t-u=mèet-ah*
       Pedro=TOP PRV-A3=make-CMP(B3SG)
       u=ts'a'k-al   *le=pàal*
       [A3=cure\PASS-INC DET=child
       tumèen   le=dokòor=o'
       CAUSE DET=doctor]=D2
       'Pedro, he made the doctor cure the child (lit. he made the child's being cured by the doctor)'

(47)   a. *Pedro=e'   t-u=cha'-ah*
          Pedro=TOP PRV-A3=let-CMP(B3SG)
          u=ts'ak-ik   le=pàal   le=doktòor=o'
          [A3=cure-INC(B3SG)   DET=child   DET=doctor]=D2
          'Pedro, he let the doctor cure the child'
       b. *Pedro=e'   t-u=cha'-ah*
          Pedro=TOP PRV-A3=make-CMP(B3SG)
          u=ts'a'k-al   le=pàal
          [A3=cure\PASS-INC   DET=child
          tumèen   le=doktòor=o'
          CAUSE DET=doctor]=D2
          'Pedro, he let the doctor cure the child (lit. he allowed the
          child's being cured by the doctor)'

Thus, the restriction barring passivization in the lower core is a syntactic constraint that is specific to control constructions. The target of control can be an S- or A-argument, but it can neither be the U-argument of a transitive active verb form nor the S-argument of a passive form. In RRG terms, control, like extraction, operates on a invariable syntactic pivot – but on a nominative (S=A), rather than a "quasi-absolutive" (S=U, plus obliques; see fn 23), pivot. The same distribution can straightforwardly be captured in terms of a construction-specific linking rule as in (48):

(48)   *Linking under control*: The highest-ranking thematic role in a
          controlled verbal core must be linked to the target of control.

All type-I constructions share the following properties: if the lower core is intransitive, it appears in the incompletive and the set-A marker that would otherwise cross-reference the target is deleted; if the lower core is transitive, it appears in the subjunctive and the set-A marker cross-referencing the A-argument is retained; the A-argument is the only possible target of control in transitive cores. These two properties are illustrated with the stative matrix predicate sahak 'be afraid' in (49a-b). Passivization of the lower core is again not permissible (49c). One difference to the attempt case in (45) is that instead of a controlled embedded core, sahak also licenses a subjunctive subordinative clause introduced by the subordinator káa; this clause does not contain a controlled argument (49d).

(49) a. *Sahak-en   (*in=)tsikbal*
        afraid-B1SG [A1SG=talk]
        'I am afraid to talk'
    b. *Sahak-en   in=tsikbat   le=kwèento=o'*
        afraid-B1SG [A1SG=talk:APP(B3SG)   DET=tale]=D2
        'I am afraid to tell the story'
    c. **Sahak-en   (in=)lox-a'l*
        afraid-B1SG [A1SG=box-PASS.INC
        tumèen   le=máak=o'
        CAUSE DET=person]=D2
        intended: 'I am afraid to be/get beaten up by the person'
    d. *Sahak-en   káa   u=lox-en   le=máak=o'*
        afraid-B1SG [SR   A3=box-B1SG DET=person]=D2
        'I am afraid that the person (may/might) beat me up'

Matrix predicates of desire follow the same pattern as those of fear, but introduce another twist. Passivization of the embedded core is again incompatible with control (50a); it requires realization of the complement as an uncontrolled subordinate clause in the subjunctive (50b). However, there is an alternative expression of the same meaning – in (50), the desire to be cured – that involves realization of the complement with a structure headed by the "gerundive" form of the lower verb, a derived stative form with prospective aspectual reference (50c). Like the passive, the gerundive links the undergoer of the base to its sole argument and the actor to an optional oblique. Thus, if the sole argument of the gerundive is controlled in (50c), this construction violates (48). However, on closer inspection it turns out that the sole argument of the gerundive is not controlled at all. This is shown in (50d), where the S-argument of the gerundive is not coreferential with any argument of the matrix.[25]

(50) a. **Le=pàal=o',   t-y=óot-ah*
        DET=child=D2 PRV-A3=want-CMP(B3SG)
        (u=)ts'a'k-al   tumèen   le=doktòor=o'
        [A3=cure\PASS-INC CAUSE DET=doctor]=D2
        intended: 'The child, (s)he wanted to be cured by the doctor'
    b. *Le=pàal=o',   t-y=óot-ah*
        DET=child=D2 PRV-A3=want-CMP(B3SG)

      káa   ts'a'k-ak   tumèen   le=doktòor=o'
      [SR   cure\PASS-SUBJ(B3SG) CAUSE   DET=doctor]=D2
      'The child, (s)he wanted that (s)he be cured by the doctor'

  c. *Le=pàal=o',   t-y=óot-ah*
      DET=child=D2 PRV-A3=want-CMP(B3SG)
      ts'ak-bil   tumèen   le=doktòor=o'
      [A3=cure-GIV(B3SG)   CAUSE DET=doctor]=D2
      'The child, (s)he wanted to be cured by the doctor'

  d. *Pedro=e',   t-y=óot-ah*
      Pedro=TOP PRV-A3=want-CMP(B3SG)
      ts'ak-bil   le=pàal   tumèen   le=doktòor=o'
      [cure-GIV(B3SG) DET=child CAUSE DET=doctor]=D2
      'Pedro, he wanted that the child be cured by the doctor'

The so-called motion-cum-purpose construction (cf. Aissen 1987 for Tzotzil, and Zavala Maldonado 1993 for an overview including other members of the Mayan language family) combines a verb of change of position or change of location (a verb of "inherently directed motion", in Levin's (1993) terminology; a "path verb" in Talmy's (2000)) with a lower core that describes an eventuality understood to occur – if realized, which is not entailed – at the end point of the motion event. The lower verb is intransitive in (51a) – the result of incorporation – and transitive in (51b), exhibiting the familiar transitivity-dependent pattern. The controller is always the theme of the matrix verb; it is linked to the S-argument if the verb is intransitive (51a-b) and to the U-argument if the verb is transitive (50c-d). Together with the examples above, in which the controller is the A- ((45); (50)) or S-argument (49) of the matrix, this shows that there are no verb-independent syntactic constraints on the controller.[26]

(51) a. *Le=pàal=o',   h-tàal   ch'a'+ta'kin*
         DET=child=D2 PRV-come(B3SG) [take+money]
         'The child, (s)he came to collect/withdraw/take money'

      b. *Le=pàal=o',   h-tàal*
         DET=child=D2 PRV-come(B3SG)
         u=ch'a'   le=ta'kin=o'
         [A3=take(B3SG)   DET=money=D2]
         'The child, (s)he came to collect/withdraw/take the money'

      c. *Pablo=e',   t-u=túuxt-ah   le=pàal*
         Pablo=TOP PRV-A3=send-CMP(B3SG) DET=child

   u=ch'a'   *le=ta'kin=o'*
   [A3=take(B3SG) DET=money]=D2
   'Pablo, he sent the child to collect/withdraw/take the money'
  d. *Pablo=e', t-u=túuxt-ah*
   Pablo=TOP PRV-A3=send-CMP(B3SG)
   u=ch'a'   *le=ta'kin* *le=pàal=o'*
   [A3=take(B3SG) DET=money DET=child]=D2
   'Pablo, he sent the child to collect/withdraw/take the money'

Once again, passive in the lower core is excluded by control (52a). Alternatives are an uncontrolled subjunctive clause (52b) or an equally uncontrolled (see above) gerundive form (52c).

(52) a. **Le=prisyonèero=o', h-tàal*
   DET=prisoner=D2 PRV-come(B3SG)
   kins-a'l
   [die:CAUS-PASS.INC]
   intended: 'The prisoner, (s)he came to be/get killed'
  b. *Le=prisyonèero=o', h-tàal*
   DET=prisoner=D2 PRV-come(B3SG)
   káa kins-a'k
   [SR die:CAUS-PASS.SUBJ(B3SG)]
   'The prisoner, (s)he came so that (s)he be/get killed'
  c. *Le=prisyonèero=o', h-tàal*
   DET=prisoner=D2 PRV-come(B3SG)
   kins-bil
   [die:CAUS-GIV(B3SG)]
   'The prisoner, (s)he came to be killed'

The fact that the gerundive, like the passive, demotes the actor to oblique, but is not controlled by the matrix, makes it possible to leave the actor of the action described by the lower core unspecified, leading to examples such as (52), which seem quite puzzling from an English point of view, but are judged acceptable in Yucatec.

(52) *Le=prisyonèero=o', h-túuxt-a'b*
   DET=prisoner=D2 PRV-send-PASS.CMP(B3SG)

> *kins-bil*   *tumèen*   *le=kapitàan=o'*
> die:CAUS-GIV(B3SG)   CAUSE   DET=captain=D2
> 'The prisoner, (s)he was sent by the captain to be killed'
> OR: 'The prisoner, (s)he was sent (by somebody) to be killed by the captain'
> OR: 'The prisoner, (somebody) was sent by the captain to kill him/her'
> OR: 'The prisoner, (somebody) was sent to kill him/her by the captain'

The most salient interpretation of (53) is the third one: the captain sent an unspecified agent to kill the prisoner.

      Type-II constructions occur with complements of aspectual verbs, cognition verbs, and in the "gerundial" construction.[27] In these constructions, the lower core uniformly appears in the incompletive and the target of control is invariably cross-referenced by a set-A marker on the lower verb. With cognition verb complements and in the gerundial construction, control is obligatory; with aspectual verbs, control depends on the transitivity of the matrix. If the aspectual verb is intransitive, the lower core itself constitutes its sole argument; if it is transitive, its A-argument obligatorily controls the S-/A-argument of the lower core. As (54a) shows, passivization of the embedded core is fine if the aspectual verb is intransitive, since no control is involved in this case. The same sentence with a transitive form of the aspectual verb is ill-formed (54b). In contrast, (54c), where the matrix verb is passivized, is fine again.

(54) a. *Pedro=e',   táantik   u=chúun-ul*
             Pedro=TOP IMM   A3=start\ACAUS-INC
             u=hats'-a'l   *tumèen*   *le=òokol-o'b=o'*
             [A3=hit-PASS.INC   CAUSE DET=rob-PL]=D2
             'Pedro, he just started to be hit by the robbers
             (lit. his being hit by the robbers just started)'
      b. **Pedro=e',   táantik   u=chun-ik*
             Pedro=TOP IMM   A3=start-INC(B3SG)
             u=hats'-a'l   *tumèen*   *le=òokol-o'b=o'*
             [A3=hit-PASS.INC   CAUSE DET=rob-PL]=D2
             intended: 'Pedro, he just started to be hit by the robbers'
      c. *Pedro=e'   h-chun-a'b*
             Pedro=TOP PRV-start-PASS.CMP(B3SG)

u=hats'-a'l   tumèen   le=òokol-o'b=o'
[A3=hit-PASS.INC   CAUSE   DET=rob-PL]=D2
'Pedro, he was started to be hit by the robbers
(lit. his being hit by the robbers was started)'

   The actors of the two passives in (54c) are likely understood to be coreferential. In fact, this interpretation may be inevitable, since aspectual verbs are not causative verbs (this remains to be tested, however). If so, (54c) represents a case of control that calls for a refinement of principle (48) towards a formulation that takes into account not just the thematic ranking of the target, but also the linking properties of the controller. Given the unclear status of (54c), no such reformulation is attempted here.
   Cognition verbs that take embedded cores deserve mention because the controller in this case is an oblique "experiencer" phrase. In the following examples, the lower core is intransitive (a), transitive (b), and passive (c), the last-mentioned case again resulting in ill-formedness.

(55)   a.   *H-tu'b*   *tèen*
           PRV-forget(B3SG)   me
           in=tsikbal   y=éetel   le=máak=o'
           [A1SG=talk A3=COM   DET=person]=D2
           'I forgot to talk to the person
           (lit. my talking to the person forgot on me)'
       b.   *H-tu'b*   *tèen*
           PRV-forget(B3SG)   me
           in=túuxt-ik   *le=kàarta=o'*
           [A1SG=send-INC(B3SG)   DET=letter]=D2
           'I forgot to send the letter
           (lit. my sending the letter forgot on me)'
       c.   **H-tu'b*   *tèen*
           PRV-forget(B3SG)   me
           in=ka'n-s-a'l
           [A1SG=learn:PASS-CAUS-PASS.INC
           tumèen   le=màaystro=o'
           CAUSE   DET=teacher]=D2
           intended: 'I forgot to be taught by the teacher'
           (my being taught by the teacher forgot on me)'

To summarize, with the possible exception of the double-passive case with aspectual matrix verbs illustrated in (54c), the generalization expressed in (48) holds for all Yucatec control constructions: the target of control thematically outranks all other arguments and obliques of the controlled core. This explains both the exclusion of passivization in controlled cores and, given the language-specific linking principles outlined in section 2, the restriction of the target to set-A-marked arguments.

8. Conclusions

The starting point of this paper was the question what kind of organization of grammatical relations (GRs) might co-occur with an argument marking system that expresses the macro-roles of actor and undergoer, rather than any grammatical functions defined in terms of thematic neutralization, as argued for Yucatec in Bohnemeyer 2004. I have considered evidence from three domains of syntactic structure. Alignment restrictions constrain the realization of clause-mate co-arguments. They require the actor (A) argument in transitive active-voice clauses to outrank the undergoer (U) on a semanto-pragmatic hierarchy determined by topicality, definiteness, humanness, animacy, and other factors. A set of facts together suggest that the alignment constraints function to disambiguate 3rd-person arguments for linking: the absence of alignment restrictions on clauses with 1st- or 2nd-person arguments; the use of left-dislocation, passivization, and clefting to avoid alignment violations (each of these constructions has its unique function; none of them is restricted to inverse configurations, and so none can be said to mark inverse alignment; but all three constructions leave a maximum of one argument realized by a clause-internal nominal); the fact that topicality trumps all other properties on the alignment hierarchy; and the fact that the most accessible argument of a clause is clause-internally realized by a cross-reference marker only. These findings suggest that intra-clausal linking is not controlled by GRs in Yucatec. This conclusion is further supported by the characteristic repair re-interpretations of clauses that when parsed according to the canonical order of constituents trigger alignment violations. These re-interpretations simply ignore constituent order, suggesting that the linking between thematic relations and arguments as per their configurational properties is mutable.

Linking in inter-clausal constructions likewise is regulated independently of GRs. "Extraction" in relative clauses, clefts, and content

questions is unrestricted except in case the target is the A-argument of a transitive verb – which triggers the so-called A-focus form – or the oblique actor phrase of a passive, which is barred from extraction altogether. In control constructions, the target of control has to be the A-argument of a transitive verb or the S-argument of an intransitive verb; but passive voice is excluded from controlled verbal cores. In the Role-and-Reference-Grammar framework, extraction and control may be characterized as operating on invariable syntactic pivots in Yucatec – extraction on a "quasi-absolutive" pivot, control on a nominative one.[28] Cross-reference marking, however, is not sensitive to either pivot, as Yucatec is morphologically neither nominative-accusative nor ergative-absolutive, but rather split-intransitive. Hence, inter-clausal linking is described most parsimoniously in terms of construction-specific linking rules: in the case of extraction, one that mandates use of the A-focus form in case the target of extraction thematically outranks another argument; in the case of control, one that requires the highest-ranking thematic role to be linked to the target of control.

Key to morpheme glosses

1/2/3 - 1st/2nd/3rd person; A - cross-reference set A; ACAUS - anticausative; ALT - alternative (interrogative/conditional/disjunctive); AN - animate; APP - applicative; ASS - assurative; ATP - antipassive; B - cross-reference set B; CAUS - causative; CAUSE - causal; CL - classifier; CMP - completive; COM - comitative; D2 - indexical (distal/anaphoric); D3 - text-deictic; DET - determiner; EXHORT - exhortative; EXIST - locative/existential/possessive predicate; F - feminine; GIV - gerundive; IMM - immediate past; IMPF - imperfective; - IN - inanimate; INC - incompletive; INCH - inchoative; IRR - irrealis; NEG - negation; PASS - passive; PERF - perfect; PL - plural; PREP - generic preposition; PROG - progressive; PRSV - presentative; PRV - perfective; RED - reduplication; REL - relational; RES - resultative; SG - singular; SR - subordinator; SUBJ - subjunctive; TOP - topic

Notes

1. As far as I am aware, these are the only types of constructions that involve special linking patterns in Yucatec. There are no "matrix coding" or "raising" constructions in this language.
2. For examples of the free pronouns, see section 5.
3. This generalization does not account for argument marking in imperatives. These are semantically perfective, but have an S=A ("nominative-accusative") pattern. This pattern is defined, however, not by S and A being cross-referenced by the set-A markers, as with incompletive forms, but by S and A, as opposed to U, not being cross-referenced at all (nor realized by nominals). However, the suffixal component of the 2nd-person plural set-A marker (see Table 1) is retained in plural imperatives.
4. For the following, see also the parallel argumentation in Skopeteas and Verhoeven ms.
5. Consultants disprefer omission of the particle in sentences that contain a trigger.
6. In fact, at least one Mayan language, Huastec, does appear to have developed inverse marking; cf. Zavala Maldonado 2007.
7. In the optimality-theoretic account of Skopeteas and Verhoeven 2005, what I present here as the "canonical" VOS = VUA order is optimal given harmonic alignment between thematic and topicality hierarchy, and what I treat as repair interpretations are analyzed as alternative orders favored by non-harmonic alignment. These views are equivalent except that I assume a categorical framework; however, I do so primarily for the sake of ease of exposition.
8. The term "extraction" is used henceforth as shorthand for constructions involving relativization or focussation by clefting – put differently, for the for-

    mation of an open sentence that semantically functions as a predicate. I consider the term "extraction" a metaphor – I do not assume a movement account.

9.   There appears to be a strong discrepancy here between my data and those of Skopeteas and Verhoeven 2005, who did not find humanness, as opposed to animacy, to be a factor influencing topicality ranking. The source of this discrepancy will have to remain the subject of future research.

10.   This story was recorded by Christel Stolz in 1992 with the picture book by Mayer 1969.

11.   The dog is being chased by a swarm of wasps.

12.   A topic, in the broad sense in which the term is understood here, does not need to correspond to an argument of the clause; cf. section 3. Traditionally, a sentence that has a topic is viewed as asserting or questioning a proposition (or instructing an addressee to realize a proposition, etc.) that stands in a relation of "aboutness" to the entity, time, place, etc., that is the topic of the sentence (e.g., Chafe 1976; Gundel 1988; Lambrecht 1994). Buring (1997, 1999) has proposed a formalization of this intuition modeled after Rooth's (1985) approach to focus. Informally, suppose the focus of a sentence provides new information by selecting an entity, time, place, etc., from a set of alternatives introduced implicitly or explicitly (e.g., by a question) in context. Then the topic serves to constrain this set of alternatives by eliminating all those that involve some entity, time, place, etc., other than the topical entity (etc.) in the same role. A sentence can have more than one topic; however, no more than one argument referent can be topical. Topicality thus understood differs from, but is closely related to, accessibility. A referent is accessible to the extent that it is available, or can be inferred from, context or the speech situation (Lambrecht 1994). The topic of a sentence must be accessible; however, both co-arguments of a transitive clause may be accessible, whereas only one of them can be topical. My hypothesis is that the topical referent is the most accessible referent, and that arguments with topical referents are proximate in languages with proximate/obviative marking. The question of whether it is possible in certain contexts to introduce a new discourse referent with a bare cross-reference marker – as per the central cell of the bottom row of Table 3 – has to remain open here. One occasionally encounters examples that suggest as much; however, I have yet to probe the properties of such examples with consultants in the field.

13.   Table 3 stipulates that the referents of clause-internal nominal arguments can never be topical. This may be an oversimplification. A key question here is whether examples such as (15), (17a), (18a), and (19a) become acceptable in case the A-argument is understood to be the topic in contexts where left-dislocation is not employed to mark its status. I have not tested this in elicitation and am unaware of examples.

14. The possession constraint presumably derives from the semantics of the possessive construction making it impossible for the possessum to outrank the possessor in topicality or prominence. The constraint thus has a semantic motivation; but that does not make it a semantic constraint. In any case, possession would be difficult to place on (26) since A and U cannot be independent in topicality, definiteness, and, with certain exceptions, humanness and animacy if they stand in a possessive relation.

15. The preposition *tumèen* 'because of' is – at least etymologically – analyzable as a combination of the generic preposition *ti'* and some form of the root *mèen* 'do', 'action', 'deed' carrying the third-person set-A clitic *u=*. When interpreted thus compositionally, the complement of *tumèen* is actually the argument of *mèen* cross-referenced by the set-A clitic. (Like all Yucatec prepositions, *tumèen* cross-references its complement – whether by the set-A clitic or, if the preposition is no longer interpreted compositionally by native speakers, by the inaudible 3rd-person singular set-B suffix. Hence, the free 3rd-person pronoun *leti'* is merely used for emphasis in (29c). If it is omitted, the sentence retains its wellformedness and has the same truth conditions.) If *tumèen tèen* 'because of me' in (29a) is replaced by *t-in=méen*, with the 1st-person clitic *in=* instead of the 3rd-person clitic *u=*, consultants still reject the sentence, but now offer *t-inw=o'l-al* 'on my behalf' as a repair – which, however, entails or strongly implicates that the speaker is not the actor of the event. The analogous applies to *tumèen tèech* 'because of you' in (29b).

16. The common denominator across the various constructions that feature "extraction" in Yucatec has been argued to be that focus constructions, including content questions, are clefts and that the subordinate clause in Yucatec clefts is a headless relative clause (Bricker 1979; Bohnemeyer 2002: 116-129). An alternative account is suggested in Tonhauser (2003, 2007): perhaps all Yucatec clauses are equipped with an external focus position, and relative clause constructions really are embedded focus constructions. While I appreciate the elegance of this proposal, I have reservations concerning the notion of subordinate or embedded focus constructions. In the RRG framework, the position in question is the "precore slot" (Van Valin and LaPolla 1997: 36-39). In Yucatec, the precore slot is a "potential focus domain" (Van Valin and LaPolla 1997: 212-214), but not necessarily an actual one. Furthermore, Tonhauser assumes that extraction alone does not explain the distribution of the A-focus form, since the latter does not occur under left-dislocation of the A-argument (cf. (4)-(5) above). But nominals are syntactically strictly optional in Yucatec and arguments are always minimally represented by the cross-reference markers. Hence, I do not see any reason to assume that left-dislocation involves extraction in Yucatec. Even the formation of open sentences in relativization and clefting involves, not a "gap" in the syntactic structure, but (a) the realization of the extracted argument by cross-reference markers only, (b) in the case of

oblique arguments extracted in content questions and relative clauses with in-definite heads, the (optional but usually preferred) formation of a complex in-definite incorporating the preposition or relational noun (see section 4), and (c) the use of the A-focus form for disambiguation in case the target of extraction is an argument of the verb.

17. Gutiérrez Bravo ms. argues that the indefinite pronoun may in fact co-occur with a nominal head, on the basis of the structure exemplified in (39a) below. However, the subordinate clause in this construction is a spatial adverbial clause, not a relative clause. It denotes a property of places, not of entities.

18. The transitive subjunctive suffix *–eh* only appears in absolute clause-final position. While the transitive completive suffix *–ah* is subject to an optional contraction rule that syncopates central syllables and so is usually inaudible in colloquial realizations of examples such as (35), realization of the subjunctive suffix in (36a) is actually rejected.

19. The participants were given a scenario in which the fictional speaker had seen the person who robbed the addressee. They were then prompted with various sentence fragments which they had to complete with relative clauses referring to the robber. These scenarios and stimuli were interspersed with others targeting other arguments, obliques, and adjuncts. In all instances involving A-extraction, all of the participants produced the A-focus form. It is thus clear that the A-focus form is usually preferred with A-extraction – but is it obligatory? Gutiérrez Bravo (ms.) and Elisabeth Norcliffe (p.c.) argue otherwise. Future research will have to show what factors, if any, may influence the relative acceptability of the A-focus and the transitive active voice form under A-extraction.

20. I assume that *máax ti'* 'to whom' in (37d) forms a complex lexical entry, following the analysis of English "sluice-stranding" constructions proposed in Culicover and Jackendoff 2005: 29-31, 266-272. *Máax ti'* also functions as the interrogative pro-form for recipients. Consider (i):

   (i)   "(…)k'abéet in=túuxt-ik   hun-p'éel   kàartah."
              NEC   A1SG=send-INC(B3SG)   one-CL.IN   letter
    - "*Máax ti'?*"
       who   PREP
    '"(…)I need to send a letter." – "To whom?" (Blair and Vermont-Salas 1965-1967: 10.1.18-19)

Analogous forms are *máax yéetel* 'with whom', *máax iknal* 'at whose place', *máax ti'a'l* 'whose' (lit. whose property), etc. Notice, again, that the indefinite element is the head of the relative construction. The order of the preposition or relational noun following the indefinite element is probably explained with reference to the fact that the syntactic function it marks is the one of the recipient phrase in the relative clause, not the one of the head in the matrix clause. This analysis can be extended to the case in (37b) assuming a separate

lexical entry for *ti'* without an indefinite element preceding it that follows the nominal head of the relative construction to mark the function of the recipient phrase in the relative clause. This entails that *ti'* is not a constituent of the relative clause in (37b), just as it is not a constituent of the relative clause in (37d). This conjecture awaits evaluation through independent evidence.

21. Example (40) features a variant of the irrealis subordinator *kéen* which cross-references the S-argument of the main verb, the latter appearing in the incompletive instead of the subjunctive.

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23. In keeping with the traditional ergative analysis of extraction in Mayan, this pivot might be considered absolutive (S=U). However, as mentioned above, obliques can likewise be extracted without a special voice form; these extractions would have to be analyzed as involving special constructions if extraction is indeed restricted to an absolutive pivot. For the remainder of this chapter, I use the make-shift term "quasi-absolutive" for the Yucatec extraction pattern.

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26. In (51c), the "shared" argument is realized by a nominal that is a constituent of the matrix. In (51d), which is judged equally acceptable by consultants, the nominal is either a matrix constituent as well, in which case the lower core is centrally embedded, or the nominal is a constituent of the lower core, as indicated by the tagging. I do not think that either analysis should be excluded a priori; hence, I assume that both are compatible with the known facts.

27. Like the motion-cum-purpose construction, the gerundial construction occurs with matrix verbs of change of position and change of location. In contrast to the motion-cum-purpose construction, the lower core appears always in the incompletive and the set-A marker is always retained. Whereas the motion-cum-purpose construction entails that the location change precedes the event de-

scribed by the lower core (if the latter is realized at all), the gerundial con-struction encodes overlap between the two events. Cf. Bohnemeyer 2002: 100-101 for examples.

28. Construction-specific syntactic pivots have also been reported for other Mayan languages; e.g., Jakaltek (Van Valin 1981) and Tz'utujil (Van Valin and La-Polla 1997: 282-284).

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Roberto Zavala Maldonado, and the editors of the volume for extremely helpful comments.

1. As far as I am aware, these are the only types of constructions that involve special linking patterns in Yucatec. There are no "matrix coding" or "raising" constructions in this language.
2. For examples of the free pronouns, see section 5.
3. This generalization does not account for argument marking in imperatives. These are semantically perfective, but have an S=A ("nominative-accusative") pattern. This pattern is defined, however, not by S and A being cross-referenced by the set-A markers, as with incompletive forms, but by S and A, as opposed to U, not being cross-referenced at all (nor realized by nominals). However, the suffixal component of the 2nd-person plural set-A marker (see Table 1) is retained in plural imperatives.
4. For the following, see also the parallel argumentation in Skopeteas and Verhoeven ms.
5. Consultants disprefer omission of the particle in sentences that contain a trigger.
6. In fact, at least one Mayan language, Huastec, does appear to have developed inverse marking; cf. Zavala Maldonado 2007.
7. In the optimality-theoretic account of Skopeteas and Verhoeven 2005, what I present here as the "canonical" VOS = VUA order is optimal given harmonic alignment between thematic and topicality hierarchy, and what I treat as repair interpretations are analyzed as alternative orders favored by non-harmonic alignment. These views are equivalent except that I assume a categorical framework; however, I do so primarily for the sake of ease of exposition.
8. The term "extraction" is used henceforth as shorthand for constructions involving relativization or focussation by clefting – put differently, for the formation of an open sentence that semantically functions as a predicate. I consider the term "extraction" a metaphor – I do not assume a movement account.
9. There appears to be a strong discrepancy here between my data and those of Skopeteas and Verhoeven 2005, who did not find humanness, as opposed to animacy, to be a factor influencing topicality ranking. The source of this discrepancy will have to remain the subject of future research.
10. This story was recorded by Christel Stolz in 1992 with the picture book by Mayer 1969.
11. The dog is being chased by a swarm of wasps.
12. A topic, in the broad sense in which the term is understood here, does not need to correspond to an argument of the clause; cf. section 3. Traditionally, a sentence that has a topic is viewed as asserting or questioning a proposition (or instructing an addressee to realize a proposition, etc.) that stands in a relation of "aboutness" to the entity, time, place, etc., that is the topic of the sentence

(e.g., Chafe 1976; Gundel 1988; Lambrecht 1994). Buring (1997, 1999) has proposed a formalization of this intuition modeled after Rooth's (1985) approach to focus. Informally, suppose the focus of a sentence provides new information by selecting an entity, time, place, etc., from a set of alternatives introduced implicitly or explicitly (e.g., by a question) in context. Then the topic serves to constrain this set of alternatives by eliminating all those that involve some entity, time, place, etc., other than the topical entity (etc.) in the same role. A sentence can have more than one topic; however, no more than one argument referent can be topical. Topicality thus understood differs from, but is closely related to, accessibility. A referent is accessible to the extent that it is available, or can be inferred from, context or the speech situation (Lambrecht 1994). The topic of a sentence must be accessible; however, both co-arguments of a transitive clause may be accessible, whereas only one of them can be topical. My hypothesis is that the topical referent is the most accessible referent, and that arguments with topical referents are proximate in languages with proximate/obviative marking. The question of whether it is possible in certain contexts to introduce a new discourse referent with a bare cross-reference marker – as per the central cell of the bottom row of Table 3 – has to remain open here. One occasionally encounters examples that suggest as much; however, I have yet to probe the properties of such examples with consultants in the field.

13. Table 3 stipulates that the referents of clause-internal nominal arguments can never be topical. This may be an oversimplification. A key question here is whether examples such as (15), (17a), (18a), and (19a) become acceptable in case the A-argument is understood to be the discourse topic in contexts where left-dislocation is not employed to mark its status. I have not tested this in elicitation and am unaware of examples.

14. The possession constraint presumably derives from the semantics of the possessive construction making it impossible for the possessum to outrank the possessor in topicality or prominence. The constraint thus has a semantic motivation; but that does not make it a semantic constraint. In any case, possession would be difficult to place on (26) since A and U cannot be independent in topicality, definiteness, and, with certain exceptions, humanness and animacy if they stand in a possessive relation.

15. The preposition *tumèen* 'because of' is – at least etymologically – analyzable as a combination of the generic preposition *ti'* and some form of the root *mèen* 'do', 'action', 'deed' carrying the third-person set-A clitic *u=*. When interpreted thus compositionally, the complement of *tumèen* is actually the argument of *mèen* cross-referenced by the set-A clitic. (Like all Yucatec prepositions, *tumèen* cross-references its complement – whether by the set-A clitic or, if the preposition is no longer interpreted compositionally by native speakers,

by the inaudible 3rd-person singular set-B suffix. Hence, the free 3rd-person pronoun *leti'* is merely used for emphasis in (29c). If it is omitted, the sentence retains its wellformedness and has the same truth conditions.) If *tumèen tèen* 'because of me' in (29a) is replaced by *t-in=méen*, with the 1st-person clitic *in=* instead of the 3rd-person clitic *u=*, consultants still reject the sentence, but now offer *t-inw=o'l-al* 'on my behalf' as a repair – which, however, entails or strongly implicates that the speaker is not the actor of the event. The analogous applies to *tumèen tèech* 'because of you' in (29b).

16. The common denominator across the various constructions that feature "extraction" in Yucatec has been argued to be that focus constructions, including content questions, are clefts and that the subordinate clause in Yucatec clefts is a headless relative clause (Bricker 1979; Bohnemeyer 2002: 116-129). An alternative account is suggested in Tonhauser (2003, 2007): perhaps all Yucatec clauses are equipped with an external focus position, and relative clause constructions really are embedded focus constructions. While I appreciate the elegance of this proposal, I have reservations concerning the notion of subordinate or embedded focus constructions. In the RRG framework, the position in question is the "precore slot" (Van Valin and LaPolla 1997: 36-39). In Yucatec, the precore slot is a "potential focus domain" (Van Valin and LaPolla 1997: 212-214), but not necessarily an actual one. Furthermore, Tonhauser assumes that extraction alone does not explain the distribution of the A-focus form, since the latter does not occur under left-dislocation of the A-argument (cf. (4)-(5) above). But nominals are syntactically strictly optional in Yucatec and arguments are always minimally represented by the cross-reference markers. Hence, I do not see any reason to assume that left-dislocation involves extraction in Yucatec. Even the formation of open sentences in relativization and clefting involves, not a "gap" in the syntactic structure, but (a) the realization of the extracted argument by cross-reference markers only, (b) in the case of oblique arguments extracted in content questions and relative clauses with indefinite heads, the (optional but usually preferred) formation of a complex indefinite incorporating the preposition or relational noun (see section 4), and (c) the use of the A-focus form for disambiguation in case the target of extraction is an argument of the verb.

17. Gutiérrez Bravo ms. argues that the indefinite pronoun may in fact co-occur with a nominal head, on the basis of the structure exemplified in (39a) below. However, the subordinate clause in this construction is a spatial adverbial clause, not a relative clause. It denotes a property of places, not of entities.

18. The transitive subjunctive suffix *–eh* only appears in absolute clause-final position. While the transitive completive suffix *–ah* is subject to an optional contraction rule that syncopates central syllables and so is usually inaudible in

colloquial realizations of examples such as (35), realization of the subjunctive suffix in (36a) is actually rejected.

19. The participants were given a scenario in which the fictional speaker had seen the person who robbed the addressee. They were then prompted with various sentence fragments which they had to complete with relative clauses referring to the robber. These scenarios and stimuli were interspersed with others targeting other arguments, obliques, and adjuncts. In all instances involving A-extraction, all of the participants produced the A-focus form. It is thus clear that the A-focus form is usually preferred with A-extraction – but is it obligatory? Gutiérrez Bravo (ms.) and Elisabeth Norcliffe (p.c.) argue otherwise. Future research will have to show what factors, if any, may influence the relative acceptability of the A-focus and the transitive active voice form under A-extraction.

20. I assume that *máax ti'* 'to whom' in (37d) forms a complex lexical entry, following the analysis of English "sluice-stranding" constructions proposed in Culicover and Jackendoff 2006: 29-31, 266-272. *Máax ti'* also functions as the interrogative pro-form for recipients. Consider (i):

(i) "(…)*k'abéet in=túuxt-ik   hun-p'éel   kàartah.*"
     NEC   A1SG=send-INC(B3SG)   one-CL.IN   letter

   - "*Máax ti'?*"
     who   PREP
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