

PIED-PIPING, ABSTRACT AGREEMENT, AND
FUNCTIONAL PROJECTIONS IN TZOTZIL*

This paper investigates the role of (abstract) Agreement within functional projections in Tzotzil, as revealed through *wh*-Movement and constraints on Pied Piping. After establishing an s-structure condition which requires that elements Agree with C[+WH] to be interpreted as interrogative, we go on to consider how this requirement interacts with the internal structure of Tzotzil noun and prepositional phrases to permit internal elements access to interrogative interpretations. The discussion is extended to two further domains of fact: the licensing of focus interpretations and the licensing of subjunctive verbs in Tzotzil “free-choice” *wh* constructions. In both cases, abstract Agreement at s-structure within the Infl projection is the determining condition. The “free-choice” construction provides visible evidence that the abstract relations which form the basis for the overall analysis are indeed significant.

0. INTRODUCTION

This paper investigates the role of (abstract) Agreement within the system of functional projections in Tzotzil. The term “(abstract) Agreement” refers to the relation between heads and specifiers, a relation I assume is transitive. We will start with the structural conditions which must be met at s-structure for *wh*-elements to be interpreted as interrogative, and the observation that no interrogative *wh*-element may occur in situ in Tzotzil (section 2). All must front to a position which I take to be “close” to specifier of Comp ([Spec, C]). As we shall see, even *wh*-elements within pied piped constituents must reorder so that they are “closer” to [Spec, C] than they would have been without reordering. I will argue that these movements are motivated in Tzotzil by an s-structure Agreement condition: a *wh*-element must Agree with a C[+WH] to be interpreted as interrogative. One goal of this paper is to distinguish two approaches to the licensing of interrogative *wh*-elements: one which requires “occupancy” of

* The dialect of Tzotzil documented here is spoken in the municipality of Zinacantán, Chiapas, Mexico. This analysis is based on work over a number of years with several speakers, notably Maryan Lopis Chiku', Manvel Peres, Maruch Gomez Sanchez, Xun Peres, (a second) Xun Peres, and especially Chep Kontzares Hernantis. I am indebted to them for their help. I am also grateful to Sandra Chung and three anonymous reviewers for their insightful comments on an earlier draft, to Giuseppi Longobardi and William Ladusaw for useful discussion of some of the issues in section 7, and to Donka Farkas for help with the Hungarian data. This research was supported by the Linguistic Research Center and the Academic Senate of the University of California, Santa Cruz. I would like to dedicate this paper to Paul Postal on the occasion of his 60th birthday, in recognition of his extraordinary accomplishments and with appreciation for his collegiality over the years.

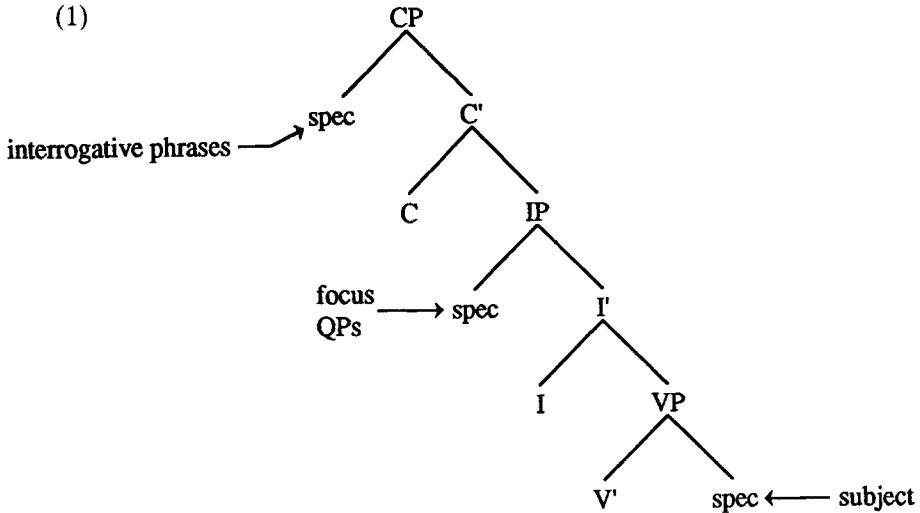
[Spec, C[+WH]], versus one which requires Agreement between C[+WH] and the *wh*-element. The occupancy approach is exemplified in Rizzi (1991) and, earlier, May (1985); the Agreement approach is more in line with work by Fukui (1986) and Kuroda (1988), who see the *wh*-Criterion in terms of Agreement.¹

This conclusion leads us to consider how the s-structure Agreement requirement interacts with the internal structure of Tzotzil noun phrases and prepositional phrases to allow internal elements access to interrogative interpretations (sections 3 and 4). Here, functional specifier positions within noun and prepositional phrases play a crucial role and confirm proposals of Longobardi (1991) and van Riemsdijk (1982). The discussion is extended to focus interpretations and how these are licensed (section 5); I argue again for the relevance of abstract Agreement within functional projections. Abstract Agreement will be brought to bear on another problem in Tzotzil, the licensing of subjunctive verbs in "free-choice" *wh* constructions (section 6). Again, abstract Agreement at s-structure within the Infl projection is the determining condition. This construction provides visible evidence that the abstract relations which form the basis for the overall analysis are in fact significant. Finally, section 7 discusses certain problems for the Agreement approach and suggests that they can be resolved in a satisfying way through the Consistency Principle (Longobardi, 1991).

1. BASIC CLAUSE STRUCTURE AND RESTRICTIONS ON SPECIFIERS

Following Aissen (1992), I assume that the basic clause in Tzotzil is structured as in (1):

¹ Kayne (1994: 24ff) develops a different approach, which requires asymmetric c-command between an interrogative and C[+WH]. Because specifiers and adjuncts are structurally non-distinct in this account, the c-command condition is satisfied not only by [Spec, C] but by certain elements embedded within [Spec, C]. The Tzotzil material discussed here appears to fit nicely into Kayne's account, realizing in visible form some of the movements he hypothesizes.



Important here is the fact that each head (V, I, C) defines a specifier position. Following much work of the mid-80s and since (e.g., Zagona, 1982; Koopman and Sportiche, 1991; Kuroda, 1988), I take VP as the domain within which semantic roles are assigned, i.e., the deep subject originates in [Spec, V]. I assume further that Case is assigned to positions within VP so that there is no Case-motivated movement of the subject to [Spec, I]. Assuming that A-positions are those in which Case or semantic relations are assigned, these assumptions have the consequence that all clausal A-positions are internal to VP and all A-bar-positions external to it. Exactly how Case is assigned is not crucial for present concerns. Its morphological realization involves an ergative agreement system: the predicate carries one set of affixes ("Set B" affixes) which cross-reference intransitive subjects and transitive objects (absolutives) and another set ("Set A" affixes) which cross-reference transitive subjects (ergatives). Agreement with ergatives can be seen as a manifestation of Spec-Head Agreement.

Tzotzil is a VOS language:²

² See Appendix for abbreviations used in glosses. Tzotzil orthography is standard, except that *x* = voiceless alveopalatal spirant, *j* = voiceless velar spirant, ' = glottal stop, and *tz* = voiceless alveolar affricate. Sequences of words which correspond to a single gloss are connected with "="; material in brackets is phonologically null. Third person absolutive markers are null and systematically omitted from glosses.

- (2) I-s-pas mantal li vinik-e
CP-A3-do order the man-ENC
 The man gave the order.
- (3) I-y-il tz'i' li Xun-e
CP-A3-see dog the Xun-ENC
 Xun saw a/the dog.

Noun phrases can occur preverbally but must be interpreted there with quantificational force. I analyze such orders as involving movement to the specifier position of a functional head.³

I(nfl) and C(omp) head functional projections above V. I is associated with aspect. In Zinacantec Tzotzil, incompletive aspect is expressed by the particle *ta*, which I assume occupies I. Other aspects are expressed through verbal affixation, represented by features in I. I assume that V raises to I. Since [Spec, I] is not a Case position, it is free to function as an A-bar-position, which it does (cf. Mahajan, 1990). Aissen (1992) argues that focussed phrases, which precede the asp-verb complex, occupy [Spec, I]:

- (4) Vo'ot nan ch-a-k-ik'. (OCK 360)
you CL ICP-B2-A1-marry
 Maybe it's you that I'll marry.
- (5) Vo'on ta = x-k-al mantal. (OCK 114)
I ICP-A1-say order
 It's me who will give the order.
- (6) Vaj no la s-k'an s-ve' li Xun-e
tortilla CL CL A3-want A3-eat the Xun-ENC
 It's only tortillas that Xun wants to eat.

Example (6) shows that focus movement is not clause-bounded. Comp is filled by the interrogative particle *mi*, which introduces both main clause and embedded yes/no questions:

³ Noun phrases can also occur preverbally and outside the intonational phrase, where they function as topics. Following earlier work (Aissen 1992), I assume that topics are base-generated, adjoined to the root CP.

- (7) Mi ch-a-sut tal?
Q ICP-B2-return DIR
 Are you returning here?
- (8) Mu j-na' mi ch-i-sut tal.
NEG A1-know Q ICP-B1-return DIR
 I don't know if I'm coming back.

The structure in (1) predicts, correctly, that *mi* precedes the focus, (9).

- (9) Mi vo'ot batz'i x-a-pas mantal? (OCK 82)
Q you very NT-A2-do order
 Are you the one who gives all the orders.

Interrogative phrases also precede the verb, in a position I take to be [Spec, C]:

- (10) Buch'u s-pas mantal? (OCK 83)
who A3-do order
 Who's giving the orders?
- (11) K'usi av-il?
what [CP]-A2-see
 What did you see?

Declarative CP complements are generally introduced by the particle *ti*, which may also be a complementizer.

Given these assumptions, a principle for ordering specifiers emerges. Both focussed phrases and interrogative phrases precede the main verb; by hypothesis, they occupy [Spec, I] and [Spec, C], respectively. Hence, the specifier of a functional category precedes its head. The subject, on the other hand, follows V, suggesting that the specifier of a lexical category follows its head. These principles are stated in (12):

- (12) Specifier ordering principle for Tzotzil
 For [Spec, X]:
 If X is lexical, Spec follows X.
 If X is functional, Spec precedes X.

The fact that (clausal) functional specifier positions are occupied only by focussed and interrogative elements further suggests that these positions

are restricted to phrases interpreted quantificationally. The observation is stated in (13):

- (13) In Tzotzil, only phrases interpreted quantificationally (or their traces) can occupy functional specifier positions at s-structure.

There is a further class of noun phrases which may occur preverbally, within the clause. These are noun phrases with cardinal determiners, as in (14)–(15) (with some relevant context included). Cardinal determiners in Tzotzil are generally prefixed to a numeral classifier (NC) which restricts the domain of the determiner; context may further restrict the domain, as in these examples:

- (14) [My wife has sisters]
 Cha'-vo' to te xokolik. (OCK 362)
 2-NC[human] CL there free
 Two of them are still free.
- (15) Li ka'-e, balun-kot laj ta bala
 the horse-ENC 9-NC[4-legged] died by bullets
 The horses, nine of them were killed by the bullets.

I assume that these preposed noun phrases occupy [Spec, I]. If so, this case falls squarely under (13).

2. INTERROGATIVE WH AND THE WH-CRITERION

There are four *wh* roots in Tzotzil, distinguished sortally: *buch'u/much'u* for persons, *k'u(si)* for things, *bu(y)* for locations and situations, and *jay-* for quantities. The following discussion focuses on the first three elements.

In simple cases, *wh*-expressions appear subject to the requirement that they occur in [Spec, C[+WH]] to be interpreted as interrogative (in other syntactic configurations, *wh*-expressions are interpreted with other sorts of quantificational force). No LF mechanism is utilized in Tzotzil to move *wh* to this position, hence all movement must be overt. This is observed in single *wh*-questions, where *wh* may not occur in situ. Thus, versions of (10)–(11), cited above, in which *wh* fails to front are completely ungrammatical (**Spas mantal buch'u*) 'Who's giving the orders?', **Avil k'usi?* 'What did you see?'

Fronting of *wh* is also required in echo questions, with (16b) impossible:

- (16)a. K'usi a-man?
what A2-buy
 WHAT did you buy?
- b. *A-man k'usi?

Although multiple *wh*-questions are marginal in Tzotzil (probably ungrammatical and marked here as ??), speakers distinguish sharply between cases in which both *wh*-expressions are fronted and cases in which one remains in situ. The latter are far worse.

- (17) ??Mu j-na' buch'u k'usi jchepukal s-man-oj.
NEG A1-know who which NC A3-buy-PF
 I don't know who bought which [package]?
 cf. **Mu jna' buch'u smanoj k'usi jchepukal?

- (18) ??Buch'u k'usi ve'ililal ch-[y]-ich' tal?
who which food ICP-A3-bring DIR
 Who is going to bring which food?
 cf. **Buch'u chich' tal k'usi ve'ililal?

Apparently, any phrase in Tzotzil which is interpreted as interrogative must undergo syntactic *wh*-movement, including those which are D-linked in the sense of Pesetsky (1987). I propose the following two licensing conditions for Tzotzil, both of which hold at s-structure:

- (19) *wh*-Criterion for Tzotzil
- C[+WH] must Agree with a [+WH] phrase.
 - A [+WH] phrase must Agree with C[+WH] (to be interpreted as interrogative).

Per the earlier discussion, (19) requires Agreement between *wh*-phrases and C[+WH], not occupancy of [Spec, C[+WH]] by the *wh*-phrase. Naturally then, we will be interested in *wh*-phrases which Agree with C[+WH] without occupying [Spec, C]. I assume that there are exactly two configurations in Tzotzil which satisfy Agreement: one, the relation between a head and its specifier; the other, the relation between a head and its projections. I assume further, and crucially, that Agreement is transitive (Rizzi, 1990; Chung, 1991). The Agreement relation can be represented through coindexation but must be distinguished from coreference.

3. NOUN PHRASE SPECIFIERS

3.1. *Extraction from Noun Phrase*

Longobardi (1991) argues, principally from Italian, that *wh*-movement from noun phrase crucially involves passage of *wh* through a noun phrase-internal specifier position. The derivation of (20) is sketched in (21) where the intermediate trace occupies the specifier position within noun phrase:

- (20) Maria, di cui ha conosciuto una
 Maria of whom he has met a
 sorella. (Longobardi, 1991, p. 81)
 sister

- (21) . . . [di cui_i ha conosciuto [*t_i* una sorella *t_i*]]

Evidence for the special role played by the noun phrase specifier in extraction comes from several sources but notably from the fact that such extraction is restricted in Italian to that (unique) element in the noun phrase which can be realized (in non-interrogative cases) in specifier position through a pronominal possessor (see Longobardi, 1991 for discussion). What forces this movement, for Longobardi, is the Empty Category Principle (ECP). The initial trace cannot be properly governed by N unless N is coindexed with it through Spec-Head Agreement. This forces movement of the possessor to [Spec, N] resulting in the necessary co-indexing. [Spec, N] is an escape hatch out of the noun phrase if a trace in that position is itself properly governed.

The internal structure of Tzotzil nominals is less elaborated than that of Italian or English. It appears that only one argument, the genitive, may be realized within the noun phrase, and the head agrees with it through the same set of ergative markers used to cross-reference transitive subjects (Haviland, 1981; Aissen, 1987). The genitive is strictly post-nominal and is often covert when pronominal:

- (22) s-p'in li Maruch-e
 A3-pot the Maruch-ENC
 Maruch's pot

- (23) j-malal (li vo'on-e)
 A1-husband the I-ENC
 my husband

- (24) a-jol (li vo'ot-e)
A2-head the you-ENC
 your head

Positioning the possessor before the head noun, either with or without a definite marker,⁴ results in ungrammaticality:⁵

- (25)a. *Maruch s-p'in
Maruch A3-pot
- b. *li Maruch s-p'in . . .-e
the Maruch A3-pot . . .-ENC

I assume that the postnominal genitive in Tzotzil occupies [Spec, N]. The fact that possessors follow the noun in Tzotzil then follows from the same principle which positions subjects after the verb, the principle of specifier ordering stated in (12). This is one of the parallelisms between clauses and noun phrases in Tzotzil. Genitive agreement, like ergative agreement, is a manifestation of Spec-Head Agreement. It is unclear whether nouns ever have internal arguments. Many of the relations expressed in English by internal arguments are expressed in Tzotzil through the genitive relation:⁶

- (26) s-lo'il-al li Xun-e
A3-story-SUF the Xun-ENC
 story about Xun
- (27) s-be-lel li Palenke
A3-road-SUF the Palenque
 the road to Palenque

⁴ The enclitic *-e*, which generally co-occurs with the definite markers, attaches to the right edge of the intonational phrase containing the definite marker (Aissen 1992). Example (25b) is intended to show that a determined possessor cannot precede the head noun regardless of where this enclitic occurs.

⁵ 1st and 2nd person possessors can precede the head noun, though this entails a focus interpretation. See section 5.

⁶ The head nouns in (26)–(28) carry a suffix which determines the relation of the possessor to the head noun (Haviland 1981, Chap. 7.6). Without the suffix, *y-abtel* (A3-work) would mean 'his work' i.e., the work that he has/does; cf. (28).

- (28) y-abtel-al chobtik
A3-work-SUF cornfield
 work in/on the cornfield

I will not address here the question whether these arguments originate in specifier position or move there.

It is possible in Tzotzil to extract a *wh*-genitive. Examples (29b) and (30b) show extraction from an unaccusative; (31b) from an accusative.⁷

- (29)a. I-cham x-ch'amal li Xun-e.
CP-died A3-child the Xun-ENC
 Xun's child died.
- b. Buch' u_i i-cham [x-cha'amal t_i]?
who CP-die A3-child
 Whose child died?
- (30)a. Ch-toy s-tojol li ixim-e.
CP-rise A3-price the corn-ENC
 The price of corn is going up.
- b. K'usi_i ch-toy [s-tojol t_i]?
what ICP-rise A3-price
 The price of what is rising?
- (31)a. I-k-il-be s-tot li Xun-e.
CP-A1-see-IO A3-father the Xun-ENC
 I saw Xun's father.
- b. Buch' u_i av-il-be [s-tot t_i]?
who A2-see-IO A3-father
 Whose father did you see?

⁷ It is not obvious that (31b) involves genitive extraction from a direct object. The source, (31a), is analyzed in Aissen (1987) as an example of Possessor Ascension (PA), signalled by the suffix *-be* on the verb. Under the PA analysis, the possessor functions as clausal indirect object, and (31b) could then be an example of indirect object extraction, rather than genitive extraction. However, there is evidence that in PA, the possessed noun and possessor can make up a surface constituent, moving, for example, as a constituent (see (34) below and Aissen (1987, pp. 164–165)). An account in Arc Pair Grammar terms is offered in Aissen (1987, Chap. 9). Here I assume an analysis like that of Baker (1988) where the verb + *be* governs and assigns Case to the possessor of the direct object in situ.

In the context of Longobardi's results, the question is whether the genitive moves just once in these examples, resulting in the single trace indicated, or whether there is an intermediate stop-off point which serves as an escape hatch for extraction. If the maximal node dominating the subject/object in these examples is NP, then the initial trace, in [Spec, N], is properly governed by V (assuming the intransitive verbs in (29) and (30) are unaccusative and that extraction is from object position) and no additional movement is motivated. However, there are pied piped versions of (29b)–(31b), and these suggest that there is in fact secondary movement of the *wh*-genitive within the noun phrase. In the pied piped examples (32)–(34), the genitive is visibly preposed within the preposed noun phrase, surfacing to the *left* of the head noun and not to the right:

- (32) [Buch'u x-ch'amal]_i i-cham t_i?
who A3-child CP-died
 Whose child died?
- (33) [K'usi s-tojol]_i ch-toy t_i?
what A3-price ICP-rise
 The price of what is rising?
- (34) [Buch'u s-tot]_i av-il-be t_i?
who A3-father A2-see-IO
 Whose father did you see?

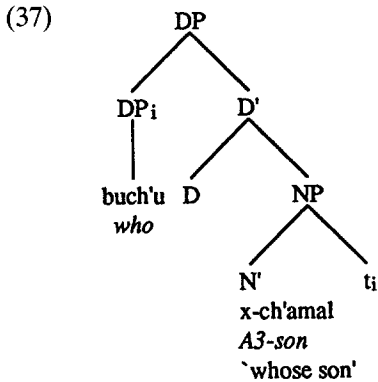
What is most striking about these examples, when compared with (29a)–(31a), is the visible difference in the relative order of genitive and head noun, depending on whether the genitive is interrogative or not.⁸ Interrogative genitives cannot occur in canonical post-head position under pied piping:

- (35) *[X-ch'amal buch'u]_i i-cham t_i?
A3-child who CP-died
 (Whose child died?)

⁸ Reverse ordering of interrogative genitives is well-attested in Mayan. Though most descriptions do not discuss the order of interrogative genitives in examples like 'John's hat', many mention it in connection with adverbials or obliques, which are often expressed in Mayan through possessed noun structures. See, for example, Craig (1977, pp. 14–15) on Jakaltek; Dayley (1985, pp. 333–335) on Tz'utujil; England (1983, pp. 251–253) on Mam; Berinstein (1985, pp. 199–200) on Q'eqchi'. Smith (1976, p. 55) hypothesizes that preposing the questioned element within NPs (and PPs – see below) was a feature of Proto-Mayan. Black (1994) discusses similar reordering in Quiégolani Zapotec. Smith Stark (1988) is an extended discussion of this phenomenon in Mayan and other Meso-American languages.

- (36) * $[\text{S-tot } \text{buch'u}]_i; \text{av-il-be } t_i?$
A3-father who CP/A2-see-IO
 (Whose father did you see?)

There are two questions then: where do the preposed *wh*-genitives in (32)–(34) sit? and why do they obligatorily move? We will exploit the idea that the noun phrase contains two projections: a lexical projection, headed by N, and a functional projection, headed by D (Abney, 1987). This makes available two specifier positions as well, one of which follows the head ([Spec, N]) and one of which precedes ([Spec, D]), in accord with the principle of specifier ordering in (12). The idea then is that under pied piping, the interrogative genitive surfaces in [Spec, D], hence noun phrase initial (cf. the very similar analysis for Hungarian developed by Szabolcsi, 1983, 1994).⁹ This yields (37) as the structure of the noun phrase in (32):



The functions of the nominal projections, N and D, closely parallel those of the clausal projections V and I: like [Spec, V], [Spec, N] is an A-position, one in which both theta roles and Case are assigned and like [Spec, V], it follows the head. [Spec, D], like [Spec, I] and [Spec, C], is an A-bar-position. It is not a Case position, and it precedes the head. The DP analysis then not only provides a structural position for the preposed interrogative genitive, it also provides the basis for representing what

⁹ The idea that the reordering of interrogative genitives within noun phrase might involve movement to a functional specifier position was suggested to me by Michele Hart (personal communication).

appear to be strong structural parallelisms between clause and noun phrase.^{10,11}

Before dealing with the question of why reordering (interpreted as movement to [Spec, D]) is required in pied piping cases, let us ask what bearing this proposal has on the question of whether, in direct extraction of an interrogative genitive (i.e., extraction not involving pied piping), the genitive passes through [Spec, D]. Our reasoning here depends entirely on how the ECP is formulated. The definitions which follow entail that a trace in [Spec, N] be properly governed within the immediately dominating DP. The ECP I assume is disjunctive, requiring either lexical government or antecedent government. Lexical governors are limited to [+V] heads (i.e., V, I).¹² The following definitions follow Lasnik and Saito (1992, Chap. 3) closely, particularly with respect to the role of subjacency in proper government:

- (38) ECP
A non-pronominal empty category must be lexically governed or antecedent governed.
- (39) α lexically governs β if
- (i) α is a zero-level category, non-distinct from [+V],
 - (ii) α c-commands β , and
 - (iii) β is subjacent to α .
- (40) α antecedent governs β if
- (i) α binds β , and
 - (ii) β is subjacent to α .
- (41) α is subjacent to β iff for every γ , γ a barrier for α , the maximal projection immediately dominating γ dominates β .

Barrier is defined in (42), following Cinque (1990:42), where *direct selection* entails sisterhood. I take VP to be directly selected by I, hence not a barrier.

¹⁰ Rosen (1987) was the first, to my knowledge, to observe that the preposing of the interrogative within the Tzotzil noun phrase parallels the preposing of interrogatives within the clause.

¹¹ This analysis raises the question of which elements in the language, if any, occupy D. The most likely candidates appear to be the cardinal determiners, which form compounds with a set of numeral classifiers: *j-kot ka'* (1-NC horse) 'one (four-legged) horse', *cha'-vo' vinik* (2-NC man) 'two (biped) men'.

¹² It may be that non-[+V] heads (e.g., D, N, P) can be enabled as proper (lexical) governors when coindexed with the governed trace as a result of Spec-Head Agreement (Rizzi 1990, Longobardi 1991), but this will play no role here.

- (42) Every maximal projection that fails to be directly selected by a category non-distinct from [+V] is a barrier for government.

Since NP is selected by D, a [-V] category, it is always a barrier, and a trace within NP must be properly governed by an element within the dominating DP. These assumptions force the conclusion for Tzotzil that the *wh*-genitive does indeed move through the lefthand (functional) specifier position, as represented in (43), in order to yield proper government of the initial trace:

- (43) $WH_i \dots V [_{DP} t_i [_{D'} D [_{NP} [_{N'} N] t_i]]]$

N cannot properly govern its specifier because it is both too low and [-V]. Movement through [Spec, D] provides a proper governor for the trace, namely the antecedent itself. The intermediate trace is governed in turn by the c-commanding V. Under this analysis, then, the order visible in pied piping cases simply shows the result of movement from [Spec, N] to [Spec, D], essentially the movement hypothesized by Longobardi as an intermediate stage in genitive extraction but not generally visible in Italian.

3.2. Barriers to Extraction

The need for proper government of intermediate traces makes further predictions concerning genitive extraction. Specifically, extraction should be impossible across a barrier unless there is a proper governor within the lowest maximal projection which dominates the barrier. Consider first subjects, barriers by (42) since they are not directly selected. In transitive clauses, direct extraction of the genitive from the subject is ungrammatical ((44b) and (45b)), leaving pied piping ((44a) and (45a)) as the only option:

- (44)a. Buch'u x-ch'amal y-elk'an chij?
who A3-child A3-steal sheep
 Whose child stole sheep?
- b. *Buch'u_i y-elk'an chij [t_i [x-ch'amal t_i]]?
- (45)a. Buch'u y-oltak ay s-vula'an-ot?
who A3-children went A3-visit-B2SG
 Whose children went to visit you?
- b. *Buch'u_i ay svula'anot [t_i [yoltak t_i]]?

Since the lowest maximal projection dominating the subject is VP, the

ECP in (38) predicts the ungrammaticality of (44b) and (45b), for the intermediate trace in [Spec, D] is not properly governed by an element contained within VP. The same reasoning applies to extraction from unergative subjects, which patterns roughly with extraction from ergatives (transitive subjects). Though such cases are not rejected quite as categorically as is extraction from ergatives (Longobardi 1991, p. 80, makes the same observation for Italian), there is still a clear and systematic difference between extraction from unergative subjects ((46a,b)) and extraction from unaccusatives (cf. (29b) and (30b), repeated below as (47a,b)):

(46)a. ??Buch'u ta = x-chonolaj y-ajnil?

who ICP-sell A3-wife

Whose wife is selling?

cf. Ta xchonolaj yajnil li Xune. 'Xun's wife is selling'.

b. ??Buch'u te ta = x-jalav s-tzeb?

who there ICP-weave A3-daughter

Whose daughter is weaving there?

cf. Te ta xjalav stzeb li Maruche. 'Maruch's daughter is weaving there'.

(47)a. Buch'u i-cham x-ch'amal?

who CP-die A3-child

Whose child died?

b. K'usi ch-toy s-tojol?

what ICP-rise A3-price

The price of what is rising?

Again, the *wh*-genitive can be questioned by pied piping the entire unergative argument:

(48)a. Buch'u yajnil ta xchonolaj?

Whose wife is selling?

b. Buch'u stzeb te ta xjalav?

Whose daughter is weaving there?

Under the definition of *barrier*, genitive extraction from an adjunct should also be impossible since adjuncts are, by definition, not (directly) selected. We can test this in Tzotzil because there are a number of adjunct expressions whose syntax is the genitive construction (this is a typically Mayan pattern), e.g., *k'u y-u'un* 'why', literally something like, 'what its-

cause', *k'u s-jalil* 'how long (a time)', literally, 'what its-length (of time)', *k'usi s-natil* 'how far', literally 'what its-distance'. In all three cases, the head noun carries the 3rd person genitive prefix *y-* or *s-*, with the phrase-initial interrogative functioning as possessor. Pied piping should then be an option, which it is (the (a) examples below). However, extraction of the genitive alone yields a strong degree of ungrammaticality (the (b, c) examples):

(49)a. *K'u y-u'un ch-a-bat ta Tuxta?*
what A3-cause ICP-B2-go P Tuxtla
 Why are you going to Tuxtla?

b. **K'u_i chabat ta Tuxta [yu'un t_i]?*

c. **K'u_i chabat [yu'un t_i] ta Tuxta?*

(50)a. *K'u s-jalil l-a-tal?*
what A3-length CP-B2-come
 How long are you going to be here?

b. **K'u_i latal sjalil t_i?*

(51)a. *K'usi s-natil l-a-'och ta ch'en?*
what A3-distance CP-B2-enter P cave
 How far did you go into the cave?

b. **K'usi_i la'och [snatil t_i] ta ch'en?*

c. **K'usi_i la'och ta ch'en [snatil t_i]?*

How these are blocked by the ECP depends on what structure is assumed. If the adjuncts are adjoined to VP, with the higher VP node itself a maximal projection, then a trace within the adjunct would have to find a proper governor within that higher VP. Since there is no such proper governor, the examples would be blocked. If the higher VP were not a maximal projection, extraction would not be blocked since the domain for the proper governor would then be IP, and I should qualify as a lexical governor. Following Lasnik and Saito (1992, p. 84ff), I assume that the two facsimile nodes in an adjunction structure are each full-

fledged categories.¹³ These patterns confirm, then, the relevance of direct selection by a [+V] element to proper government.¹⁴

3.3. Movement to [Spec, D] and the *wh*-Criterion

While the ECP can explain the extraction patterns discussed above, it does not explain why Tzotzil *requires* movement of the *wh*-genitive to the lefthand specifier position when the mode of extraction involves pied piping, i.e., it does not explain the ungrammaticality of (35)–(36). In these cases, the genitive is not in fact extracted from the nominal, and retention of the *wh*-genitive in situ in [Spec, N] creates no trace and no reason to invoke the ECP. The conclusion that we are dealing with some other principle is reinforced by the observation that Italian does not require movement to functional specifier in pied piping cases; in fact, it disallows it.¹⁵

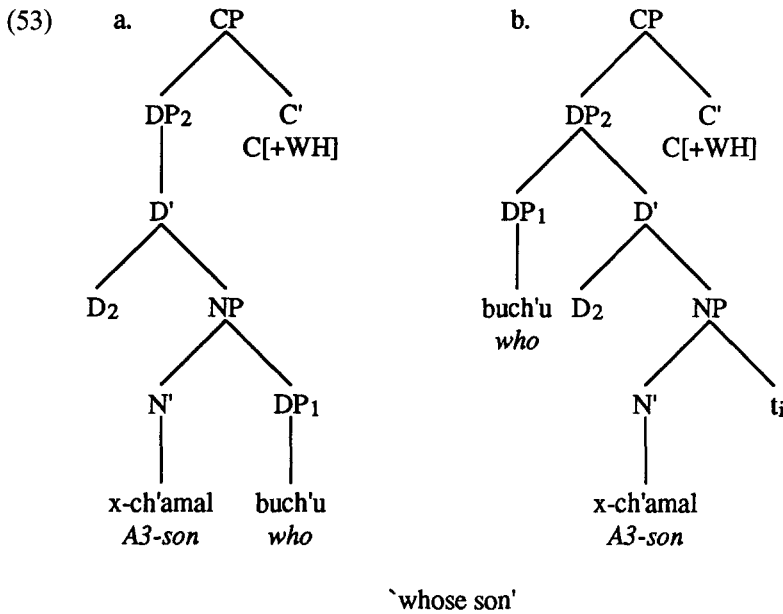
(52) *Maria, di cui una sorella ha conosciuta . . .

We can relate the required movement to [Spec, D] in Tzotzil under pied piping to the *wh*-Criterion (19). If we are right in positing that nominals contain projections both of N and D, then, as (53a) shows, a *wh*-genitive which remains in situ under pied piping is too low to satisfy the *wh*-Criterion for Tzotzil: although DP₁ in [Spec, N] will Agree with N and thus with NP, Agreement can go no higher since the relation between D₂ and NP is not an Agreement relation. Thus *buch'u* cannot Agree with C[+WH].

¹³ Alternatively, it may be that adjunct interrogatives are base-generated in [Spec, C]. This too would account for the very strong deviance of (49b,c), (50b), and (51b,c).

¹⁴ An alternative to moving *wh*-genitives to a left-hand specifier position would be left-adjunction of the genitive to the dominating nominal phrase (whether labelled NP or DP is irrelevant). Under the segmental conception of adjunction in which neither of the two facsimile nodes involved in adjunction is itself a maximal projection (May 1985), adjunction provides a means for voiding the barrierhood of a constituent, as in Chomsky (1986). Under this conception, we might expect, contrary to fact, that there would be no constraints on genitive extraction in Tzotzil. Appeal to independent constraints on adjunction might be made (e.g., the adjunction prohibition of Chomsky 1986, p. 6), but if adjunction to all barriers must be excluded by stipulation, it is unclear that adjunction is a genuine alternative to the movement-to-specifier analysis.

¹⁵ The ungrammaticality of (52) is attributed by Longobardi (1991, p. 98) to phrase structural constraints, and in particular to the impossibility of a right-branching phrase (the PP) on a left branch. See section 7.2 below.



However, movement of the *wh*-genitive to [Spec D₂], as in (53b), yields Agreement of the genitive with C[+WH] as long as it is coupled with pied piping of the outer nominal. For, as (53b) makes clear, the *wh*-genitive Agrees with DP₂ (by Spec-Head Agreement and Head-Projection Agreement), and DP₂ Agrees with C[+WH]. By transitivity of Agreement, the *wh*-genitive agrees with C[+WH], licensing an interrogative interpretation for *buch'u*. This predicts, correctly, that simple movement of *wh* to [Spec, D₂] *without* movement of the outer DP to [Spec, C] will result in ungrammaticality. Compare (54)–(55) with the earlier (32)–(33):

- (54) *I-cham [buch'u_i [x-ch'amal t_i]]?
CP-died who A3-child
 Whose child died?

- (55) *Ch-toy [k'usi_i [s-tojol t_i]]?
ICP-rise what A3-price
 The price of what is rising?

This case then realizes the situation previewed at the start where C[+WH] licenses, via Agreement, an interrogative interpretation for a *wh* which itself occupies an intermediate specifier position, not [Spec, C[+WH]]. Likewise, C[+WH] is licensed, via Agreement, by a *wh* which does not

itself occupy [Spec, C[+WH]]. Obligatory movement of the *wh*-element to a functional specifier within the pied piped constituent is motivated then by the *wh*-Criterion.

3.4 Multiple *wh*

Before proceeding, let us return to the ill-formedness of multiple *wh*-interrogation in Tzotzil. Given the account developed so far, it makes sense to look for an explanation based on Agreement, in particular, on the impossibility of Agreement between C[+WH] and more than one *wh*-phrase (an approach taken in Kuroda, 1988; Speas, 1990). Two possibilities suggest themselves, depending on what structure is assumed for multiple fronting of *wh*-elements. In her discussion of multiple interrogation in Slavic and Romanian, Rudin (1988) proposes two structures: for some languages, she proposes adjunction of the second *wh*-phrase to the first within [Spec, C]. For others, she proposes a single *wh*-phrase within [Spec, C], with the second adjoined to IP. The question is whether either of these structures would yield the Agreement required in Tzotzil. Clearly the second structure, with adjunction to IP, will not, since there is no Agreement from this position.¹⁶ As for the first, the question is whether an element adjoined to [Spec, X] will enter into Spec-Head Agreement with X. If the index on an adjoined structure inherits the index of its head, then a *wh*-phrase adjoined to a *wh*-phrase should fail to be licensed as an interrogative. That is, if DP₂ adjoins to DP₁ in [Spec, C], the index associated with [Spec, C] will be "1", and it is the constituent with this index which figures in Agreement with C[+WH]. If so, with respect then at least to these two structures (and the one mentioned in fn. 16), we predict the impossibility of multiple interrogation in Tzotzil. The configurations which yield Agreement with C[+WH] do not include those which result from multiple fronting of *wh*-phrases.¹⁷

¹⁶ The same holds for the structure of multiple interrogation proposed by Kiss (1992) for Hungarian. She assumes that only one *wh*-phrase can be licensed as interrogative in [Spec, Focus], with additional *wh*-phrases adjoined to S'. Translated into our terms, additional *wh*-phrases would adjoin to CP, but this is not an Agreement position.

¹⁷ Recall that speakers find examples in which several interrogatives are fronted less degraded than ones in which an interrogative remains in situ (section 2). Since in either case Agreement fails, this distinction does not follow from the reasoning just sketched. However, there is an obvious structural difference between the two cases. An in situ *wh*-expression bears no s-structure relation to C[+WH] (at least not one of linguistic interest), and its position to the right of V immediately identifies it as ineligible for Agreement with C[+WH]. A *wh*-expression adjoined to [Spec, C[+WH]] is much closer to C[+WH] structurally, it is on the appropriate side of V, and definitions of Spec-Head Agreement are conceivable under which an element adjoined to [Spec, X] would agree with X. Hence, the computation

This leads to the further conclusion that in languages which do permit multiple interrogation, Agreement (as construed here) is not crucial to the licensing of interrogatives. We should ask then why Tzotzil relies on this relatively restrictive device. We might relate it to the fact that the roots which function as interrogatives in Tzotzil are not lexically distinct from those which function as indefinites, i.e., they are underspecified for quantificational force. The force found in particular sentences is determined by the syntactic configuration in which the element occurs, and for interrogatives, Agreement with [C[+WH]] defines the relevant syntactic configuration. In Hungarian and the Slavic languages, interrogative elements are lexically distinct from other quantificational elements (Hungarian *ki* 'who', *valaki* 'someone', *senki* 'nobody', *bárki* 'anybody'; Russian *kto* 'who', *kto-to* 'somebody', *kto-nibud'* 'anybody', *nikto* 'nobody'; cf. Tzotzil *buch'u* 'who, someone, no one, anyone' (depending on syntactic context)). Hence, the configurations which license interrogative interpretations can perhaps afford to be less rigid.

3.5. Licensing Functional Specifiers

As noted above, the analysis proposed here involving movement through a functional specifier within noun phrase has a close antecedent in Szabolcsi's (1983) analysis of Hungarian, brought into line with current X-bar theory in Szabolcsi (1994). Szabolcsi shows that possessors can occur in either of two cases in Hungarian, nominative or dative, with a correlated difference in order with respect to the determiner: nominative possessors follow the determiner, dative possessors precede (all examples are from Szabolcsi 1983).

- (56)a. az én- \emptyset vendég-e-m
 the I-NOM guest-POSS-1SG
 my guest
- b. én-nek-em a vendég-e-m
 I-DAT-1SG the guest-POSS-1SG
 my guest

Szabolcsi (1994) proposes a functional position within the nominal ([Spec, D]) to which possessors can move, where they are marked dative. Cru-

required by the speaker to judge the two cases is different in character, and this may be sufficient to explain the perceived difference.

cially, interrogative possessors only occur in the dative case, i.e., they must move to [Spec, D].

- (57)a. *(a) ki- \emptyset vendég-e- \emptyset
 the who-NOM guest-POSS-3SG
 whose guest
- b. ki-nek a vendég-e- \emptyset
 who-DAT the guest-POSS-3SG
 whose guest

An important difference between Hungarian and Tzotzil is that Hungarian allows non-interrogative possessors in the external position. The ungrammaticality of (25b), where the possessor is pre-nominal, suggests that [Spec, D] is limited in Tzotzil in ways it is not in Hungarian. Recall (13), the observation that functional specifiers are filled in Tzotzil only by phrases interpreted quantificationally. This apparently extends to functional specifiers within the noun phrase, i.e., to [Spec, D], and reinforces the parallelism between the clause and the noun phrase.

4. PP SPECIFIERS

Van Riemsdijk (1982) anticipates several important ideas now part of the theory of “barriers”, particularly with respect to prepositional phrases. He argued that “PPs behave like syntactic islands in many constructions” (p. 4) and, further, that “the more closely a prepositional phrase is connected with the verb, the easier it is to extract elements from such a prepositional phrase” (p. 26). For van Riemsdijk, licit movement from PP crucially proceeds via an escape hatch within PP, [COMP, P], analogous to movement from a clause. In this section, we will show first that Tzotzil conforms closely to van Riemsdijk’s predictions regarding the barrierhood of PP. Second, we will show that PPs, much like noun phrases, provide visible confirmation of the functional escape hatch posited by van Riemsdijk for PP. Finally, we will show that the Agreement required to license interrogative interpretations within DPs operates in exactly parallel fashion within PPs.

4.1. *PP as Barrier*

In order to see that Tzotzil PPs are generally barriers, we need to get past some initial data which seem to suggest that this claim is untestable. There

are very few prepositions in Tzotzil. The most common and least specified semantically is *ta*, used to express relations of location, both spatial (a) and temporal (b), as well as instrument (c), and agent (d):

- (58)a. I-kom ta s-na.
CP-remain P A3-house
 He remained at his house.
- b. Ta = x-lok' ech'el ta lunex.
ICP-leave DIR P Monday
 S/he is leaving on Monday.
- c. I-s-tuch' ta machita.
CP-A3-cut P machete
 S/he cut it with a machete.
- d. Lap-bil ta soltero.
wear-PSV P soldier
 It was worn by a soldier.

Extraction of *ta*'s object is absolutely impossible:

- (59)a. *K'usi nail_i i-kom ta t_i?
what house CP-remain P
 In which house did he remain?
- b. *K'usi k'ak'alil_i ch-a-lok' ta t_i?
what day ICP-B2-leave P
 On which day are you leaving?
- c. *K'usi_i a-tuch' a-si' ta t_i?
what A2-cut A2-wood P
 What did you cut your wood with?
- d. *Buch'u_i lap-bil ta t_i?
what wear-PSV P
 By whom was it worn?

Examples (59a–d) do not, however, point unambiguously to the barrierhood of PP since their ungrammaticality could be equally attributed to inherent properties of *ta* (e.g., that it is not a proper governor (cf.

Kayne 1981) or that it must cliticize to its object (impossible if the object is null)).¹⁸ If so, we will not find evidence regarding the barrierhood of PP by simply moving the object. A more promising route involves movement of some element from within the object of the preposition to a position outside the PP. In examples (60)–(62), the possessor from within the object of the preposition is extracted, with strongly ungrammatical results:

- (60) *Buch'u_i ch-a-bat [ta s-na t_i]?
who ICP-B2-go P A3-house
 Whose house are you going to?
 cf. Chibat ta sna li Xune. 'I'm going to Xun's house'.
- (61) *Buch'u_i av-ik'ta komel a-bolsa [ta s-na t_i]?
who A2-leave DIR A2-bag P A3-house
 Whose house did you leave your bag at?
 cf. Ikik'ta komel jbolsa ta sna li Xune. 'I left my bag at Xun's house'.
- (62) *Buch'u_i ch-a-tuch' si' [ta y-ek'el t_i]?
who ICP-A2-cut wood P A3-ax
 With whose axe are you going to cut wood?
 cf. Ta jtuch' si' ta yek'el li Xune. 'I'll cut wood with Xun's axe'.

In these examples, there is no prosodic problem: *ta* can cliticize to its object. (Nor, following up fn. 18, is there a violation of the Oblique Case Filter since the trace is not assigned Case by P.) However, the ungrammaticality of (60)–(62) does follow from the definition of *barrier* (42) and the ECP (38), as there is no reason to think the PP is directly selected in any of (60)–(62).¹⁹ If there were cases in which PP were directly selected, extraction analogous to that in (60)–(62) should be licit. However it is unclear that PP is ever directly selected in Tzotzil (but see fn. 20). I know of no predicates which require a PP complement. Ditransitive predicates never express the third argument via a PP but instead use a verbal affix (*-be*) to augment the valence of the predicate (cf. Haviland

¹⁸ Another approach to (59) might be the Oblique Case Filter of Hornstein and Weinberg (1981), which excludes sentences containing an Oblique Case-marked trace. This assumes the P assigns Oblique Case to its object.

¹⁹ Under (42), the DP object of P is also a barrier (if P is [-V]), but (63)–(64) show that extraction from that DP is possible as long as the ECP is satisfied, as discussed below.

1981; Aissen 1987). Intransitive predicates which in, say, English or French take oblique complements (e.g., *talk to*, *laugh at*, *spit at*, German *helfen*, French *téléphoner*) are all transitive in Tzotzil. At this point, I hypothesize that *ta* is a purely functional element in Tzotzil, one which converts an individual term into a modifier. As such, PP is never selected and thus predicted to be a consistent barrier.²⁰

4.2. PP Pied Piping and Movement to [Spec, P]

There is, however, a way to question the possessor from within a PP, one which involves pied piping the entire PP. Thus, (63)–(64) are well-formed analogues of (60)–(61).²¹

- (63) Buch'u ta s-na ch-a-bat?
who P A3-house ICP-B2-go
 To whose house are you going?

- (64) Buch'u ta s-na av-ik'ta komel l-a-bolsa-e?
who P A3-house A2-leave DIR the-A2-bag-ENC
 In whose house did you leave your bag?

What is most striking about (63)–(64) is the visible reordering of the possessor within PP, over and above the preposing of the PP itself. The possessor of the object of the preposition comes to *precede* the preposition and cannot remain in situ, following the possessed noun:

- (65) *Ta s-na buch'u ch-a-bat?
P A3-house who ICP-B2-go
 Whose house are you going to?

²⁰ One exception is that extraction from PP appears to be possible with the existential predicate *oy*, glossed 'BE' below, but perhaps better translated with 'have'. Speakers routinely accept examples like (i), cited in Haviland (1981, p. 58):

- (i) Buch'u oy ixim ta s-na?
who BE corn P A3-house

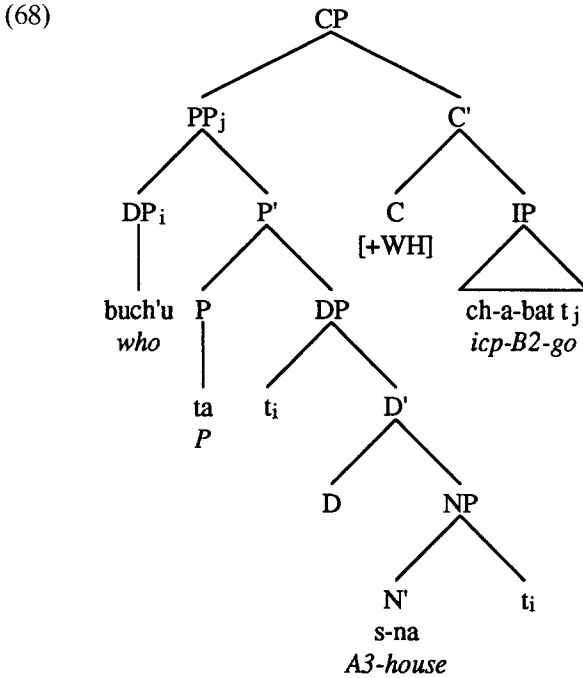
In whose house is there corn? (or who has corn in their house?)

²¹ The well-formed analogue of (59c) with an instrumental PP does not allow PP-pied piping. When instrumentals undergo *wh*-movement in Tzotzil, only the DP object moves, and *o* cliticizes to the verb. This yields (i) as the analogue of (59c):

- (i) Buch'u y-ek'el ch-a-tuch' o si'?'
who A3-ax ICP-A2-cut CL wood
 With whose axe did you cut your wood?

- (66) **Ta s-na buch'u av-ik'ta komel l-a-bolsa-e?*
P A3-house who A2-leave DIR the-A2-bag-ENC
 In whose house did you leave your bag?
- (67) **Ta s-machita buch'u a-tuch' a-si'?*
P A3-machete who A2-cut A2-firewood
 With whose machete did you cut your firewood?

Several questions arise: (i) where exactly does *buch'u* sit in examples like (63)–(64)? (ii) why is reordering of the possessor required, i.e., why are (65)–(67) ungrammatical? With respect to the first question, the obvious answer, given our assumptions, is that *buch'u* occupies a specifier position within PP,²² yielding (68) as the structure of (63):



The lefthand position for [Spec, P] suggests that *ta* is a functional element, rather than lexical, a suggestion which is fully consistent with all its proper-

²² Again, if adjunction voids barrierhood by creating a single, multisegment projection, we have reason to reject the adjunction option. Without additional conditions, that analysis would incorrectly permit extraction of the possessor out of the PP, as in (60)–(62).

ties: the fact that it is phonologically minimal.²³ the fact that it is semantically underspecified, and the fact that its semantic value appears to be entirely functional, that of mapping terms into modifiers.

Under structure (68), we can explain the obligatory movement of the possessor to [Spec, P] in terms of the *wh*-Criterion (19): only by occupying [Spec, P] in (68) can *buch'u* Agree with C[+WH]. As before, the transitivity of Agreement is crucial: *buch'u* Agrees with P and hence with PP; PP is in [Spec, C] and Agrees with C[+WH]. By transitivity, *buch'u* Agrees with C[+WH], licensing its interrogative interpretation. Again, this is a case in which an element which occupies an intermediate specifier position satisfies the *wh*-Criterion in a higher clause. The *wh*-Criterion also forces movement of interrogative *buch'u* beyond [Spec, D], assuming the D projection to be present, correctly predicting the impossibility of (69)–(70), where *buch'u* is stranded in [Spec, D].²⁴ These examples provide crucial evidence, not seen up to now, that *wh*-elements must do more than move to *some* functional specifier position; they must move to one in which they Agree with C[+WH].

- (69) *Ta buch'u s-na ch-a-bat?
P who A3-house ICP-B2-go
 Whose house are you going to?

- (70) *Ta buch'u s-na av-ik'ta komel l-a-bolsa-e?
P who A3-house A2-leave DIR the-A2-bag-ENC
 In whose house did you leave your bag?

On the other hand, *buch'u* must pass through [Spec, D] in order to provide its initial trace with a proper governor, namely [Spec, D] (or D). The intermediate trace in [Spec, D] is antecedent governed by the moved phrase itself (and perhaps also by P, if P can be enabled as a proper governor through Spec-Head Agreement).

These patterns are exactly what we should expect in Tzotzil given the fact that Agreement with C[+WH] at s-structure is a prerequisite for interrogative interpretation, plus the assumption that both noun phrases

²³ Almost all the functional elements in Tzotzil are (C)V, while this is relatively rare for lexical elements, e.g., the definite markers *li*, *ti*; the negative marker *mu*; the topic marker *a*; the auxiliaries *ba* and *a*; the interrogative complementizer *mi*; the modal-aspectual clitics *to*, *xa*, *me*, *la*.

²⁴ One of the speakers I worked with accepted examples like (69) and (70). At present, I do not know whether this is true of substantial numbers of speakers. It is perhaps relevant that this speaker is fully fluent in Spanish.

and prepositional phrases contain a lefthand specifier position. The parallelism between DP and PP is very strong here.²⁵

5. FOCUS WITHIN DP AND PP

We have attributed the possibility of interpreting *wh*-genitives in [Spec, D] and [Spec, P] with interrogative force (and clausal scope) to the fact that interrogative force in Tzotzil depends on Agreement with C [+WH], a relation to which elements in [Spec, D] and [Spec, P] have access. However, C [+WH] is not the only functional head associated in Tzotzil with quantificational force, the other being I(nfl). As noted earlier, elements in [Spec, I] are interpreted as contrastively focussed (Aissen 1992); some examples were given in (4)–(6). For concreteness, let us suppose that I(nfl) can carry the feature F (for Focus) and that the focus interpretation for a phrase depends on Agreement with I[+F]. This leads us to expect that it might be possible in Tzotzil to prepose the genitive *within* [Spec, I], yielding a focus interpretation for the genitive. This prediction appears to be correct,²⁶ as indicated by examples like (71)–(72), which illustrate movement within DP:

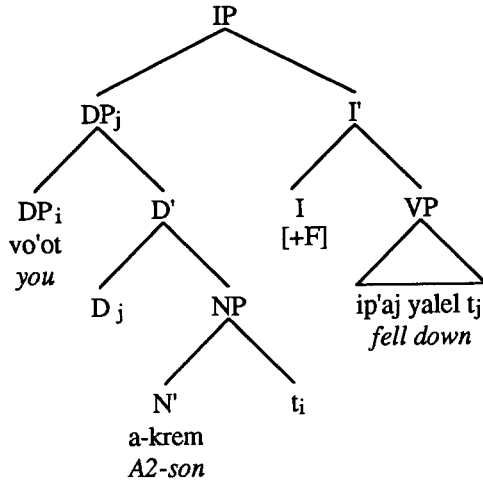
- (71) Vo'ot a-krem i-p'aj yalel.
you A2-son CP-fall down
 It's *your* son that fell down.
- (72) Vo'on j-malal i-y-ik'-ik ech'el.
I A1-husband CP-A3-take-3PL away
 It's *my* husband that they took away.

Again, what is striking about these examples is the prenominal position of the genitive. The structure proposed for (71) is given in (73):

²⁵ Movement to [Spec, P] in Tzotzil makes visible the LF-movement hypothesized in Kayne (1994, p. 24ff) for languages which allow pied piping of PPs. As here, Kayne's movement is motivated by a version of the *wh*-Criterion (see fn. 1). Also related is the LF movement to [Spec, P] hypothesized in Moritz and Valois (1994), movement motivated by the need for Agreement with a functional head (Neg).

²⁶ I say "appears" because there are some analytical issues which await resolution. The principal one is that the patterns in (71)–(72) seem to be restricted to 1st and 2nd person pronouns. While most examples of (simple) preposed focus in Tzotzil are also 1st and 2nd person pronouns, non-pronominal foci are also attested and accepted by speakers, cf. (12).

(73)



`It was *your* son that fell down.'

The focus interpretation is licensed for *vo'ot* because it Agrees with I [+F]: it agrees with D_j by Spec-Head Agreement, hence with DP_j, and DP_j Agrees with I. Again, by the transitivity of Agreement, DP_i Agrees with I.

In view of the parallelisms between PP and DP, the possibility of focus interpretation for an element in [Spec, P], parallel to elements in [Spec, D], (74)–(75), comes as no surprise:²⁷

- (74) Mu vo'on-ik-on ta j-na i-vay-ik.
NEG I-SUBJ-B1SG P A1-house CP-sleep-3PL

It wasn't in *my* house that they slept.

- (75) Tz-mantal kajvaltik, mu vo'[o]n-ik-on
PIA3-order our.lord NEG I-SUBJ-B1SG
 ta j-mantal. (OCK 247)
P A1-order

It's by *Our Lord's* order, it's not by *my* order.

The example in (75), a text example, involves two juxtaposed PPs with contrasted possessors. The second PP shows the possessor preposed,

²⁷ The form of the focus in (74) and (75), *vo'on-ik-on*, contains several morphemes beyond the personal pronoun *vo'on* 'I'. The subjunctive suffix *-ik-*, (*-uk* word-finally) attaches to any focussed element in the scope of negation. The presence of the (seemingly redundant) agreement suffix *-on* (B1SG) remains unexplained.

thereby gaining access to the focus interpretation via Agreement with I[+F].

The focus data show then that the availability of wide-scope quantification to an embedded specifier is not a property of interrogatives per se but a consequence of the way interrogative force is licensed, via Agreement. Accordingly, [Spec, X] should have access to any quantificational force that X has access to via Agreement.

6. VISIBLE AGREEMENT WITH INTERMEDIATE SPECIFIERS

As documented above, the Agreement relation plays a crucial role in licensing interrogative and focus interpretations for nominals, allowing elements in intermediate functional specifier positions access to these interpretations. While the Agreement relation is an abstract one, not implying any necessary morphological correlate, it is nonetheless reassuring, as Chung (1991) observes, to find visible correlates of Agreement, as these provide evidence that the relation is linguistically significant. I turn now to a construction in Tzotzil where Agreement involving I(nfl) finds morphological expression. This construction also involves the *wh* roots, interpreted not as interrogatives but with the force of “free-choice *any*”. What exactly this force is (e.g., whether existential or universal (Carlson 1981, Kadmon and Landman 1990)), need not be resolved here.

Each of the *wh*-roots can be suffixed with *-uk* (glossed ANY below) and interpreted as free-choice *any*. The clitic *nox* ‘just’ (contracted from *no ox*) often immediately follows *wh*-ANY:

- (76) Much'u-[u]k nox och-uk.
who-ANY just enter-SUBJ
 Anyone can come in.
- (77) K'us[i]-uk nox k-uch'.
what-ANY just A1-drink
 I'll drink anything.
- (78) Buy-uk nox bat-an.
where-ANY just go-SUBJ/B2
 You can go anywhere.

As is evident from these examples, some kind of *wh*-movement appears to be involved, as the *wh*-elements all occur preverbally (cf. also fn. 31). One striking difference in Tzotzil between interrogative *wh* and free-

choice *wh* is that *wh*-movement of the latter is not always obligatory. There is some speaker variation in this domain, but there are conditions under which all speakers allow free-choice *wh* to remain in situ, some of which we will see below. This means that whatever quantificational force is associated with free-choice *wh* in Tzotzil, Agreement with a functional head at s-structure is not required to license it. This might be because the interpretation of free-choice *wh* is identified overtly through the suffix *-uk*, distinguishing it from interrogative and indefinite *wh*. The other property relevant here is the verb form found in (76)–(78), glossed *subjunctive*, a form with restricted distribution. How the subjunctive is realized depends on the transitivity of the stem. Transitive stems use the bare verb stem (cf. (77)); intransitive stems suffix *-uk* (*-ik*-word-internally) (cf. (76)),²⁸ Subjunctive verbs, which carry no aspect marking, are found in several Tzotzil constructions including causative constructions (Aissen 1987, Chap. 11) and in certain auxiliary constructions (Haviland 1991, 1993, Aissen 1994). The subjunctive is optional in free-choice *wh* structures, alternating usually with “neutral” aspect (and sometimes with incomplete aspect). Neutral aspect is formed by prefixing *x-* (NT) to the (inflected) verb stem. Thus, (76)–(78) have neutral aspect analogues, illustrated in (79)–(81):

- (79) Buch'u-[u]k nox x-'och.
who-ANY just NT-enter
 Anyone can enter.
- (80) K'us[i]-uk nox x-k-uch'.
what-ANY just NT-A1-drink
 I'll drink anything.
- (81) Buy-uk nox x-a-bat.
where-ANY just NT-B2-go
 You can go anywhere.

Neutral aspect is less restricted in distribution than the subjunctive. It forms the basis for incomplete aspect in Zinacantec Tzotzil (*ta* + neutral), occurs in the complements to several verbs, and occurs in various independent clauses not explicitly marked for any other aspect. It might be considered a kind of default aspect.

²⁸ The suffix *-an* in (78) is a portmanteau which conflates the 2nd person absolutive and subjunctive.

I will assume in the following discussion that free-choice *wh* occupies [Spec, I] in examples like (76)–(81), rather than [Spec, C]. The reason is that free-choice *wh* can prepose within the complements of predicates which I take to select IP complements, notably *xu* ‘can’, *stak* ‘can’, *ak* ‘let’, *k’an* ‘want’:

- (82) *Stak’ buch’u-[u]k nox och-uk/x-’och.*
can who-ANY just enter-SUBJ/NT-enter
 Anyone can come in.
- (83) *Mu xu’ k’us[i]-uk nox a-lajes/x-a-lajes.*
NEG can what-ANY just A2-eat/NT-A2-eat
 You can’t eat just anything.
- (84) *Mu x-[y]-ak’ buy-uk nox x-i-bat/bat-ik-on.*
NEG NT-A3-let where-ANY just NT-B1-go/go-SUBJ-B1SG
 S/he won’t let me go just anywhere.
- (85) *Li jchanvunetik-e, mu s-k’an-ik k’us[i]-uk*
the students-ENC, NEG A3-want-3PL what-ANY
nox k’u’ilal s-lap-ik.
just clothing 3-wear-3PL
 The students don’t want to wear just any clothing.

As these examples indicate, the choice between subjunctive and neutral aspect extends to cases in which free-choice *wh* is fronted within an embedded clause. What I propose is that the subjunctive is licensed in this construction only through s-structure Agreement between I(nfl) and free-choice *wh*, i.e., that it is a manifestation of the sort of Spec-Head Agreement discussed at length by Rizzi (1990, section 2.5). To facilitate this account, I assume that V raises to I (generally). Morphological agreement must be optional, allowing for the possibility of the neutral aspect (or incomplete aspect) alternative.

Evidence that the subjunctive is licensed through Spec-Head Agreement with free-choice *wh* comes from cases in which free-choice *wh* remains in situ at s-structure. In such cases, only neutral (or incomplete) aspect is possible. Free-choice *wh* can occur in situ (at least sometimes) under negation. Thus, (86) is like (83) but without *wh*-movement; (87) also exemplifies this pattern:

- (86) Mu xu' x-a-lajes/*a-lajes k'us[i]-uk nox.
NEG can NT-A2-eat/A2-eat what-ANY just
 You can't eat just anything.
- (87) Mu j-k'an x-k-ich'/*k-ich' ech'el k'us[i]-uk nox.
NEG A1-want NT-A1-take/A1-take DIR what-ANY just
 I don't want to take just any [old] thing.

The subjunctive versions are ungrammatical because free-choice *wh* cannot license the subjunctive except through Spec-Head Agreement with I at s-structure. Free-choice *wh* also occurs in situ sometimes when it originates within a PP. In these cases too, the subjunctive is ruled out:

- (88) Ch-i-bat/*Bat-ik-on ta k'us[i]-uk nox k'ox = karoal.
ICP-B1-go/go-SUBJ-B1SG P what-ANY just car
 I'll go in any car.

In contrast, when free-choice *wh* preposes, both the neutral form and the subjunctive are possible.²⁹

- (89) K'us[i]-uk nox k'ox = karoal ch-i-bat/bat-ik-on o.
what-ANY just car ICP-B1-go/go-SUBJ-B1SG CL
 I'll go in any car.

Finally, individual speakers sporadically accept in situ free-choice *wh*. In such cases, the subjunctive is again impossible.

- (90) Stak' x-'och/*och-uk buch'u-[u]k nox.
can NT-enter/lenter-SUBJ who-ANY just
 Anyone can come in.

While I am not claiming that examples like (90) are grammatical, there is a clear correlation between the possibility of the subjunctive and preposing of free-choice *wh*. That this correlation is explained through s-structure Agreement between I(nfl) and free-choice *wh* gains further support from "successive" cyclic effects of the sort discussed for Modern Irish in McCloskey (1990). In complex structures, verbs which lie between the base position and the s-structure position of free-choice *wh* may also be in the

²⁹ The instrumental clitic *o* in (89) is required whenever a DP interpreted as instrumental is extracted, cf fn. 21.

subjunctive, as we would expect if free-choice *wh* can pass through [Spec, I].³⁰

- (91) Much'u-[u]k nox xu' x-'och/och-uk.
who-ANY just can NT-enter/enter-SUBJ
 Anyone can come in.
- (92) A li Xun-e, buy-uk nox y-ak'
TOP the Xun-ENC where-ANY just A3-let(SUBJ)
 bat-ik-on.
go-SUBJ-B1sg
 Xun lets me go anywhere.

The analysis of “free-choice” subjunctive as a manifestation of Spec-Head Agreement seems quite plausible then.

The analysis of extraction from DP and PP developed earlier generates several expectations when applied to free-choice *wh* and the distribution of the subjunctive: first, that free-choice *wh*, when a possessor, might prepose into [Spec, D]/[Spec, P]; and second, that if it does, it should license the subjunctive from this position as long as DP/PP itself occupies [Spec, I]. These predictions are correct. The following examples show (a) preposing of free-choice *wh* within DP (93)–(94) and PP (95); and (b) the possibility of the subjunctive (as well as neutral aspect).³¹

³⁰ The main predicate in (91), *xu'*, is defective, occurring only in neutral aspect.

³¹ Transitive subjects and PPs function as barriers to extraction of the possessor, evidence that the fronting of free-choice *wh* involves *wh*-movement. Thus, (93) and (95) contrast with the ungrammatical (i) and (ii):

- (i) *Much'u-[u]k nox sk'oPONON jajnil.
 Anyone's wife can speak to me.
- (ii) *Mu much'u-[u]k nox ve'ikon ta sna.
 I won't eat in just anyone's house.

The judgments on extraction from intransitive subjects are inconsistent (cf. the discussion around (46) in the text), but extraction from objects is fully grammatical. Thus, (iii) and (iv) coexist:

- (iii) Buch'u-[u]k nox y-abtel j-lajes-be.
who-ANY just A3-work A1-finish-IO
 I'll finish anyone's work.
- (iv) Buch'u-[u]k nox j-lajes-be y-abtel.
who-ANY just A1-finish-IO A3-work.
 I'll finish anyone's work.

- (93) [Much'u-[u]k nox y-ajnil]_{DP} x-i-s-k'opon/s-k'opon-on.
who-ANY just A3-wife NT-B1-A3-speak/A3-speak-B1SG
 Anyone's wife can speak to me.
- (94) Buch'u-[u]k nox y-ol xu' x-tajin/tajin-uk li'-e.
who-ANY just A3-child can NT-play/play-SUBJ here-ENC
 Anyone's child can play here.
- (95) Mu [much'u-[u]k nox ta s-na]_{PP}
NEG who-ANY just P A3-house
 ch-i-ve'/ve'-ik-on.
ICP-B1-eat/eat-SUBJ-B1SG
 I'm not going to eat in just anyone's house.

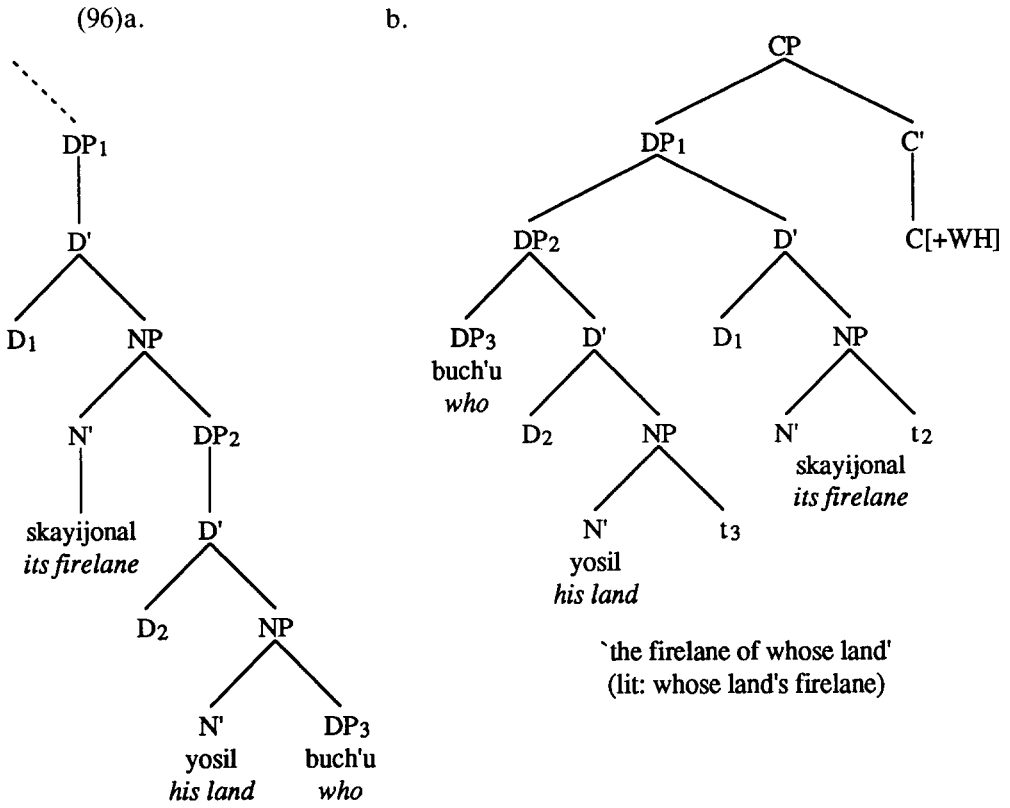
The parallelism of [Spec, D] and [Spec, P] observed earlier is fully maintained in this domain, with both licensing the subjunctive in I(nfl) when DP/PP itself occupies [Spec, I]. Example (94) shows “successive cyclic” effects; the verb of the lower clause can alternate between neutral aspect and subjunctive, by hypothesis because the DP containing free-choice *wh* passed through [Spec, I] in that clause.

As noted earlier, Agreement does not apparently play a role in licensing the free-choice interpretation for *wh*-elements (at least, not at s-structure). However, it plays a crucial role in licensing the subjunctive in I(nfl), and here, elements which Agree with I(nfl) by virtue of the transitivity of Agreement license the subjunctive as robustly as those which Agree with I by virtue of themselves occupying [Spec, I]. Here then we have a case where the role of abstract Agreement is visibly documented.

7. EMBEDDED SPECIFIERS

7.1. *Limitations of Abstract Agreement*

Since interrogative and focus interpretations are licensed through abstract Agreement, and Agreement is transitive, such interpretations should be licensed for elements embedded yet more deeply than the cases discussed so far, e.g., as specifier of specifier of [Spec, C] or [Spec, I]. To illustrate with interrogatives, the relevant examples would transform the complex postnominal genitive in a structure like (96a) (‘the firelane of the land of who’ into the English-type prenominal genitive structure in (96b) (‘whose land’s firelane’), by movement of each genitive to [Spec, D].



‘the firelane of whose land’

By transitivity of Agreement, DP₃ in (96b) should Agree with C[+WH], enabling an interrogative interpretation for *buch’u*. In fact, sentences which realize the s-structure in (96b) are systematically and unequivocally rejected by speakers. The example in (97b) is representative:

- (97)a. I-’ixtalaj s-kayijonal y-osil li j-tot-e.
CP-ruin A3-firelane A3-land the A1-father-ENC
 The firelane around my father’s land was ruined.

- b. *Buch’u y-osil s-kayijonal i-’ixtalaj?
who A3-land A3-firelane CP-ruin
 The firelane of whose land was ruined?

The same is true for focus interpretations. The specifier of [Spec, I] can be interpreted as focussed, but the specifier of [Spec, [Spec,I]] cannot

be. Thus, the derivation from (98a) which yields (98b) at s-structure via successive movements to [Spec, D] is ill-formed. Again, these movements turn a complex post-nominal genitive into a complex prenominal one:

(98)a. I-p'aj yalel s-krem j-tzeb li vo'on-e.
CP-fall DIR A3-son A1-daughter the I-ENC
 My daughter's son fell.

b. *[[Vo'on_k j-tzeb t_k]_i s-krem t_i] i-p'aj.
I A1-daughter A3-son CP-fall
 It was *my* daughter's son who fell.

The same pattern is found in the free-choice *wh* construction. Consider (99a), in which the genitive is embedded within a genitive, and the version in (99b) where the lower genitive is replaced by free-choice *wh*. Example (99b), the result of successive movements to [Spec,D], is ungrammatical.

(99)a. I-laj [y-osil [s-tot li Xun-e]_i]_k.
CP-end A3-land A3-father the Xun-ENC
 Xun's father's land wore out/was eliminated.

b. *[[Buch'u-[u]k_j nox s-tot t_j]_i y-osil t_i] laj-uk.
who-ANY just A3-father A3-land end-SUBJ
 Anyone's father's land can wear out/be eliminated.

Clearly, the Agreement approach does not help in understanding the ungrammaticality of (97b), (98b) and (99b). However, there is no reason to think that s-structure Agreement with an appropriate functional head should be the only condition operative in these structures.

One approach, pursued in an earlier version of this paper, would be to bring these facts under the purview of the ECP by assuming obligatory LF *wh*-movement. The idea would be that interrogative, focus, and free-choice interpretations would, in addition to the s-structure Agreement condition, also be subject to an LF condition requiring (or entailing) that the various operators occupy positions at LF corresponding to their scope. In this view, structural occupancy of the relevant scopal position would be required at LF, not simply Agreement with a phrase in this position. In structures involving pied piping, satisfaction of this condition would require that the operator raise out of the constituent containing it (cf. Safir 1985, p. 678ff. for a proposal with the same effect, operative in relative clauses; also Chomsky 1993) and essentially replace it in the

relevant functional specifier position. The strategy, then, would be to show that the ECP licenses this movement for examples like (32)–(34), (71)–(72), and (93)–(94) but not for more complex cases like (97b), (98b) and (99b). The ECP assumed above comes close to making the required distinctions, though various technical issues arise. I will not work through the ECP account here,³² however, because any technically adequate account will need to confront an important non-technical problem, namely, the fact that surface structures which are apparently identical to the ill-formed Tzotzil (96b) are associated with perfectly well-formed interpretations in languages as familiar as English and Hungarian. Hungarian constitutes a kind of minimal pair with Tzotzil, being also a language in which interrogative genitives move obligatorily from [Spec, N] to [Spec, D]:

(100) [[[Whose] father]'s company] went bankrupt?

(101) [[[Ki-nek] a gyerek-é-nek] az
who-DAT the child-POSS.3SG-DAT the
iskolá-ja] a legjobb?
school-POSS.3SG the best
 Whose child's school is the best?

It is usually assumed that LF representations do not differ significantly between languages, so unless we can motivate different ECPs for Tzotzil and English/Hungarian, the LF/ECP account will be hard pressed to reconcile the ill-formedness of Tzotzil (97b), (98b) and (99b) with the well-formedness of English (100) and Hungarian (101). The contrast between the two types of languages suggests that the problem with (96b) is not an LF problem but should be traced to some property independent of LF. Accordingly, I will pursue an approach which attributes the ill-formedness of the structure in (96b) to the complex left-branching structures contained within [Spec, DP₂].

7.2. The Consistency Principle

This problem is reminiscent of one discussed by Longobardi (1991, pp. 95ff), who develops the idea that a phrase which expands a lexical category

³² The basic idea is that LF *wh*-movement of *buch'u* in a structure like (96b) would involve adjunction of *buch'u* to DP₁. The trace of this movement would be separated from its antecedent by two barriers, DP₁ and DP₂ and therefore not be properly governed. In simple cases like (32), the corresponding LF movement crosses only one barrier, allowing proper government of the trace.

on its non-recursive side can branch only in that non-recursive direction. By “recursive side” is meant the side of the head on which internal arguments occur. Longobardi (1991, p. 96) invokes what he terms the “Consistency Principle”³³ to explain the ill-formedness of (102), in which a (right-branching) PP (*di mio*) occurs on the left-branch (i.e., the non-recursive side) of NP:

- (102) *Ho visto (il) di mio fratello libro.
I saw (the) of my brother book.
 cf. Ho visto il libro di mio fratello.

Longobardi restricts the Consistency Principle to lexical categories because the (left-hand) specifiers of I and C (in Italian) can contain complex, right-branching structures. However, his proposal was framed in pre-DP assumptions, and if we update it, we will want DP to be subject to the Consistency Principle. I suggest that we restrict it to [+N] categories.

Tzotzil is a right-branching language within all projections, so the Consistency Principle will rule out expansions of [+N] heads which occur on left branches, yet branch rightwards. But this is exactly what we have in structures like (96b). In that structure, DP₂ expands the phrase DP₁ on its non-recursive side, yet contains a right-branching structure (the branch formed by D₂ and its NP complement). To be well-formed, the Consistency Principle would require the order [NP D].³⁴ Examples (98b) and (99b), involving focus and free-choice *wh*, will be excluded in exactly the same way.

The d-structure in (96a) can be realized by three other s-structures, all

³³ Consistency Principle: An XP immediately expanding a lexical category on the non-recursive side is directionally consistent in every projection (Longobardi 1991, p. 98).

³⁴ Since D is null in (96b), we cannot actually see the relative order between D and NP. If we take the numeral classifiers to occupy D (per fn. 11), then examples like (i) show that D does precede NP in [Spec, C].

- (i) K'usi j-kot-ukal ka' ch-a-man?
what 1-NC-SUF horse ICP-A2-buy
 Which horse are you going to buy?

I assume that in *k'usi* occupies [Spec, D] in (a). This predicts, correctly, that it should precede P in examples like (b):

- (ii) K'usi ta j-set-ukal balamil ch-a-'abtej?
what in 1-NC-SUF land ICP-B2-work
 On which land are you going to work?

of which have in common the fact that *wh* is not doubly embedded within [Spec, C].³⁵

- (103)a. Buch'u i-'ixtalaj s-kayijonal y-osil?
who CP-ruin A3-firelane A3-land
- b. Buch'u s-kayijonal y-osil i-'ixtalaj?
who A3-firelane A3-land CP-ruin
- c. Buch'u y-osil i-'ixtalaj s-kayijonal?
who A3-land CP-ruin A3-firelane
 The firelane of whose land was ruined?

(103a) involves solitary extraction of *wh*, presumably through intermediate specifier positions, as in (104a).³⁶

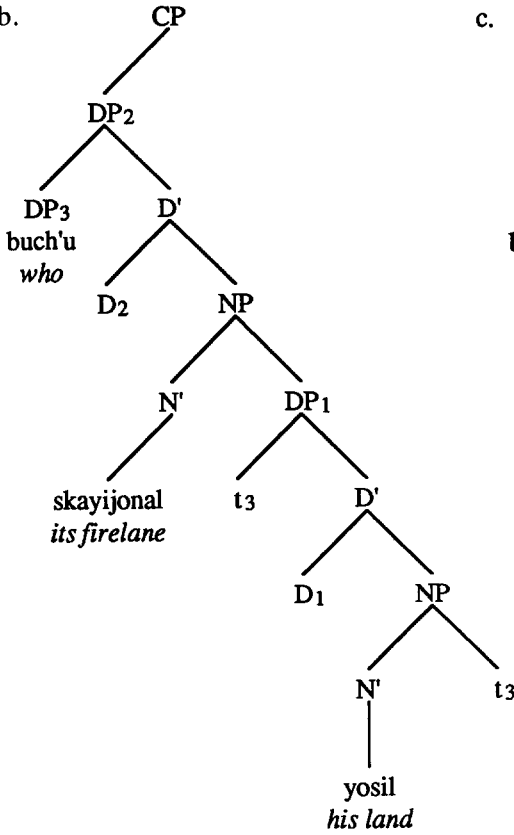
- (104)a. [_{CP} buch'u₃ [_{i'}ixtalaj [_{DP₂} t₃ [skayijonal [_{DP₁} t₃ [_{NP} yosil t₃]]]]]]]

Only *buch'u* occupies [Spec, C], and the Consistency Principle is irrelevant. The derivation of (103b), shown in (104b), involves movement of the *wh*-genitive to [Spec, DP₂], presumably through [Spec, DP₁] and then movement of DP₂ to [Spec, C]. Here, we are interested in the structure of [Spec, DP₂], namely DP₃, but DP₃ is non-branching, hence not a problem for the Consistency Principle. And (103c), with the structure shown in (104c), involves movement of the *wh*-genitive to [Spec, DP₁], and then movement of DP₁ to [Spec, C]. In this case, we are interested in the internal structure of [Spec, DP₁], which again is simply DP₃, a non-branching structure.

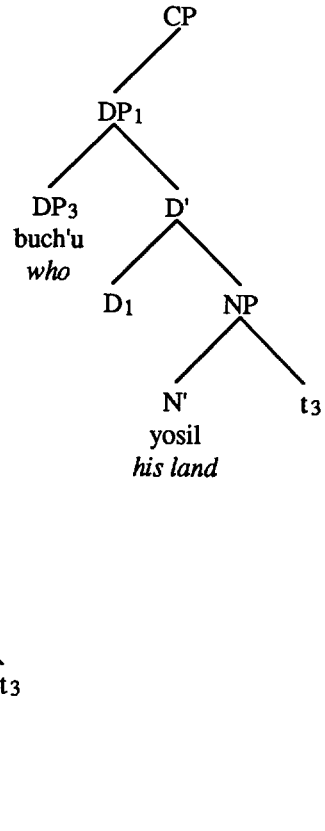
³⁵ The outcome exemplified by (103a) appears to be generally available for a wide range of examples. The outcomes in (103b,c) are more constrained, but each is accepted by speakers for some examples.

³⁶ The structure in (104a) raises a problem for proper government of the intermediate trace in DP₁. DP₁ should be a barrier for extraction, as it is not directly selected by N (see (96a)). Exactly the same problem arises in (104b). I leave this problem for further investigation.

(104)b.



c.



The Consistency Principle then correctly isolates (97b) as ill-formed.³⁷

We find similar blockages in structures where [Spec, C] is occupied by PP. [Spec, P] can contain a simple *wh*-expression (cf. (63) and (64)), but not a DP which itself contains a preposed *wh*-genitive:

³⁷ The Consistency Principle will also correctly exclude examples like (i), in which the offending structure sits not in [Spec, C] but in its base position. In (i), two movements to [Spec, D] produce a right-branching structure on a left branch within DP. *Wh* then moves by itself to [Spec, C]:

- (i) *Buch'u i-'ixtalaj y-osil s-kayijonal?
who CP-ruin A3-land A3-firelane
 Whose land's firelane was ruined?
- (ii) [CP buch'u₃ [IP i-'ixtalaj [DP₁ [DP₂ t₃ [y-osil t₃][D' [NP s-kayijonal t₂]]]]]]]]

- (105)a. Ch-i-'abtej [ta [x-chob [s-tot li
ICP-B1-work P A3-cornfield A3-father the
 Xun-e]<sub>DP₁DP₂]_{PP}.
Xun-ENC</sub>

I'm going to work in Xun's father's cornfield.

- b. *_{PP}[_{DP₁} Buch'u_k [s-tot t_k]] ta [t₁ [x-chob t₁]<sub>DP₂]]
who A3-father P A3-cornfield
 ch-a-'abtej t_{PP}?
ICP-B2-work</sub>

In whose father's cornfield are you going to work?

The Consistency Principle will correctly exclude (105), as long as P is [+N]. The non-recursive side of P is the left side, so DP, which expands P on the left, cannot contain a right-branching sub-tree (the structure formed by null D and its NP sister [stot t_k]).

Although we have not worked through the ECP account, let us assume for the sake of discussion that its empirical coverage and that of the Consistency Principle are the same. Based on Tzotzil alone, it would be hard to choose between them. Assuming that technical problems could be resolved, the ECP account is attractive because it would subsume all the facts discussed here under a single principle. However, unlike the ECP, the Consistency Principle provides insight into the difference between Tzotzil and English/Hungarian. The Hungarian case is simplest: Hungarian is a left-branching language, and lexical specifiers and functional specifiers occur on the same side: left. Thus, the complex structure formed by double movement to [Spec, D] in Hungarian ((101)) does not involve expansion of D on its non-recursive side, and such structures are not subject to the Consistency Principle. On this account, the difference between Hungarian and Tzotzil, languages which seem quite similar in their structural organization, follows from a more basic difference: Tzotzil is right-branching, while Hungarian is left-branching. Complex structures within the lefthand functional specifiers in Tzotzil induce violations of the Consistency Principle, while those of Hungarian do not. English is less straightforward, because it is generally right-branching too. Longobardi (1991, p. 99) suggests that English structures like (100) conform to the Consistency Principle because 's is a postposition. If so, the prenominal structure is itself left-branching. From the point of

view, then, of language typology, the Consistency Principle is clearly preferable to the ECP account.

8. CONCLUSION

A common assumption in current X-bar theory is that every projection, whether lexical or functional, defines a (potential) specifier position. This fundamental isomorphism in the phrase structures associated with the two classes of heads does not, however, preclude significant differences. In Tzotzil, the differences are deep and systematic: lexical specifiers are licensed through theta assignment, occur to the right of their heads, and show morphological agreement with their heads. Functional specifiers occur to the left of their heads, generally do not show morphological agreement with their heads, and, given their quantificational character, are presumably licensed at LF. The cross-categorial nature of the functional/lexical divide in Tzotzil is equally striking, with specifiers of both Ns and Vs contrasting systematically in their behavior to specifiers of I, C, D and P. These sharp differences must be due, at least in part, to the fact that the lexical/functional distinction parallels exactly in Tzotzil the A/Abar distinction.

It is difficult to identify a role for abstract Agreement in the lexical system, distinct from the structural relation between heads and specifiers. Its chief manifestations are morphological (ergative) agreement and word order, both of which can be defined directly in terms of the Spec-Head relation. It is in the functional system that abstract Agreement plays a more significant role. This relation is involved in the licensing of interrogative and focus interpretations, and in the licensing of the subjunctive in "free-choice" *wh*-constructions. In both domains, the (functional) specifier of a (functional) specifier is treated on a par with the functional specifier itself, as expected if the required relation is Agreement with the functional head.

APPENDIX

- A1/2/3: Set A affixes, 1st, 2nd and 3rd person
- B1/2: Set B affixes, 1st and 2nd person
- CL: clitic
- CP: completive aspect
- DAT: dative
- DIR: directional
- ENC: enclitic

ICP:	incompletive aspect
IO:	indirect object (see fn. 7)
NC:	numeral classifier
NOM:	nominative
NEG:	negation
NT:	neutral aspect
OCK:	Laughlin (1977)
P:	preposition
PF:	perfect aspect
PL(exc):	plural exclusive
POSS:	possessive
PSV:	passive
Q:	interrogative particle
SG:	singular
SSS:	Laughlin (1980)
SUBJ:	subjunctive
SUF:	suffix
TOP:	topic

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