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Subject Positions, Subject Extraction, EPP and the Subject Criterion

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The idea that the EPP reduces to the criterial freezing of the clausal subject is shown to have empirical consequences beyond those discussed in Rizzi & Shlonsky (2006, 2007). In particular, it bears upon the Highest Subject Restriction on resumptive pronouns in Hebrew relative clauses, the Anti-Agreement Effect in Berber and on the conditions for Quantifier Raising and Lowering. The status of the clausal subject as an 'aboutness' topic is also examined in the context of a discussion of a particular brand of negative sentences in Hebrew. It is further argued that the relevant probing feature on the Subj head is [person] and this leads to an implementation of the idea that [person] and [number] are not only distinct features, but distinct probes, associated with different heads: [Number] is a feature of T and [person] a feature of SUBJ.

1 The Subject Criterion

By and large, the movement of clausal subjects is more stringently constrained than the displacement of other arguments. The restrictions on subject movement are structural, in the sense that they are indifferent to the thematic role of the subject but sensitive to its take-off position in the clause.

Luigi Rizzi's work on chain delimitation, in particular, the criterial approach to chains, (Rizzi (2006, 2007)), provided the framework in which some of the constraints on subject movement were investigated in Rizzi & Shlonsky (2007) and related work. The present contribution seeks both to expand the empirical coverage of this approach and fine-tune its

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implementation.

Underlying the *riterial* approach to chains is the working hypothesis of mainstream generative grammar that scope (of *wh* and of kindred operators - in the sense of Chomsky (1977)) as well as discourse-related properties such as focus and topic, are represented as symbols in a syntactic representation. These symbols are manipulated by a computational device which outputs representations accessible to semantic interpretation.

In particular, substantive or semantically-interpretable properties of clauses such as aspect, tense, negation, mood, modality, focus, topic, Q and many others are encoded as features on syntactic heads. Rizzi argues that a subset of these heads (or features) – notably, those which encode scope/discourse/informational properties – must meet a formal criterion called *riterial satisfaction*: They must be immediately c-commanded by a category (or a head, see ahead) which bears like features. Categories which satisfy criteria are structurally identified at the interface as *wh* operators, foci, topics, etc.

Perhaps in order to keep interface computation to a minimum, a category satisfying a criterion is frozen as soon as it reaches its *riterial* position in that it cannot move further to satisfy another criterion. *riterial freezing*, as Rizzi labels this constraint, thus ensures a three-way mapping between a syntactic phrase, a particular syntactic position and a particular scope/discourse interpretation.

Rizzi 2006 further suggests that the canonical subject position is *riterial* and, following Cardinaletti (2004), that a substantive head, labeled SUBJ, is merged above T. If SUBJ is a *riterial* head then its specifier, namely the clausal subject, is the *riterial* goal. It immediately c-commands SUBJ and thus satisfies the Subject Criterion. The subject *qua* *riterial* goal is constrained by *riterial Freezing*. The asymmetries in extraction between subjects and other arguments, topics of intensive study in the ECP approaches of the '80s, are

basically reduced to the claim that there is a subject criterion but no object criteria.

2 Strategies of subject extraction

Subjects, however, *do* move: They can be questioned, focused, topicalized, relativized, clefted, etc. The study of the strategies which enable subjects to escape criterial freezing is, by its very nature, a comparative, cross linguistic exploration of the formal options that grammars deploy and the conditions under which these options arise. Rizzi & Shlonsky (2006, 2007) study a number of strategies that grammars exploit to enable the movement of subjects. They group them under two descriptive labels, *fixed subject strategies* and *skipping strategies*.

(1) Fixed subject strategies

The subject doesn't move, it remains in its freezing position in Spec/Subj and a well-formed A'-construction involving the subject is obtained

(a) with no movement at all (resumption),

or

(b) with movement of a larger constituent including the "frozen" subject (clausal pied-piping).

Skipping strategies

The subject moves, but it is allowed to skip the freezing position and is extracted directly from its thematic position or from some other predicate-internal position.

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The mere fact that subjects move and in particular, the fact that they are allowed to skip Spec/Subj, place in relief an important difference between the subject criterion and the other criteria proposed by Rizzi, which cannot be circumvented by skipping.

3 Subjects and *aboutness* topicality

This fact is intimately tied up with another, namely, that the Subject Criterion has a formal existence which, in many cases, is independent of a positionally-specific discourse property. Rizzi argues that the core interpretive property of clausal subjects is *aboutness* topicality, but neither is *aboutness* confined to clausal subjects (the topicalized object in e.g., *this movie, I saw last night*, is both a D(iscourse)-linked and an *aboutness* topic), nor do all subjects express *aboutness*, (e.g., expletives.)

Indeed, the existence of expletives suggests that the Subject Criterion is a formal requirement enforced by the computational system even in the absence of its semantic correlates. In this respect, SUBJ is similar to focus in languages which, like Somali, require a focus particle or head in every main clause, (Lecarme 1999). Lecarme explicitly argues that the focus position in Somali does not have a fixed discourse function and "[...] in most cases, does not trigger any special pragmatic effect" (though see Frascarelli & Puglielli (2007) for a different view.) Movement of I to C in, e.g., German, might be a similar case: The mechanism providing a head for the Topic Criterion, is extended or eroded and becomes a formal requirement in its own right.

Constrained flexibility is to be expected of a formal criterion partially divorced from an interface role. Thus, circumstances might arise in which SUBJ is unprojected, its absence having no impact on the interface. My (1997, 2000) analysis of *eyn* negation in Hebrew can

arguably be reinterpreted in these terms (other examples of SUBJ-less clauses are discussed in §7.)

.3.1 Subjects of Hebrew *eyn* sentences

The relevant property of the negative head *eyn* is that it appears in two guises, with or without agreement. The presence/absence of agreement suffixes correlates with the position of the subject: It must appear above agreeing *eyn* and it must appear below bare *eyn*. Crucially, though, when (agreeing) *eyn* is preceded by a subject, the subject must be interpreted as an aboutness topic. I argue that the presence or absence of agreement on *eyn* is a function of the presence or absence of the SUBJ phrase. Since SUBJ is not formally required in the *eyn* environment, its appearance or projection must have an impact on the interpretive interface.

Consider the contrast in (2).

- (2) a. Hu *eyn*-o (*hu) dofeq ba-delet.
he NEG- (he) knock on-the-door
'He isn't knocking on the door.'
- b. (*Hu) *eyn* hu dofeq ba-delet.
(he) NEG he knock on-the-door
'He isn't knocking on the door.'

Shlonsky (1997, 2000) argues that in (2b), *eyn* splices the IP system above TP. We can interpret this to mean that SUBJ is not projected and the subject, a third person pronoun in

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this example, occupies a lower position (perhaps Spec/T). This is possible here because *eyn* is only compatible with present-tense verbal forms, which manifest number and gender features, but no person features. The person feature, I argue in §8, is associated with SUBJ.¹

In (2a), SUBJ is projected and houses the person suffix, a manifestation or, perhaps, one of several possible manifestations of the criterial subject feature. NEG is then adjoined to SUBJ. Movement of the subject above *eyn* to Spec/SUBJ should be interpreted as movement for the satisfaction of the Subject Criterion.

A clear generalization holds of the subjects that appear in agreeing *eyn* constructions like (2a): They must qualify as aboutness topics. Thus, non-referential subjects, whether overt, (3), or null, (4), are unacceptable in that position.²

(3) *Ze *eyn-o* kaše le-daber rusit.

it NEG-3MS difficult to-speak Russian

'It isn't difficult to speak Russian.'

(4) a. **Eyn-o* kar

NEG-3MS cold

'It isn't cold'

b. **Eyn-am* dofqim ba-delet.

NEG-3MPL knock-PRES-MPL on-the-door

'Someone is not knocking on the door'

1 Present-tense sentences without *eyn* implicate a null auxiliary with the full gamut of ϕ features and SUBJ is projected. This auxiliary is blocked in *eyn* sentences. See Shlonsky (1997) for detailed discussion.

2 The sentences in (3) and (4) are perfect with regular clausal negation, involving the preverbal negation head *lo*. See Shlonsky (1997, 2000) for further discussion.

- c. *Eyn-am ma'arixim et ha truma šel-a.
neg-3MPL appreciate-PRES-MPL ACC the contribution of-3FS
'People (in general) don't appreciate her contribution.'

The subject position preceding *eyn* is restricted to *aboutness* topics but not to left-dislocated ones (which are typically D-linked). One of the characteristic properties of left-dislocated topics is that they must be referential. Quantifiers, in particular, cannot be topics. This is illustrated by French Clitic Left Dislocation in (5a). Left-dislocated topics in Hebrew are similarly constrained, (5b), but subjects to the left of *eyn* are not. A quantificational subject is fine to the left of *eyn*, (5c).³

- (5) a. *Personne il ne frappe pas à la porte.

noone he NEG knocks NEG at the door

'Noone, he is(n't) knocking on the door.'

- b. *'iš hu eyn-o dofeq ba-delet.

noone he NEG-3MS knock on-the-door

'Noone, he is(n't) knocking on the door.'

- c. 'iš eyn-o dofeq ba-delet.

3 A reviewer wonders why (5c) is acceptable while (4b,c) are not. The subjects of the latter are usually classed as 'arbitrary', but there is something misleading in the translation of (4b) with an existential quantifier as subject. Rather, the examples in (4) illustrate what Kuroda (1972) called *thetic judgments*. (4b), for example, affirms the absence of an eventuality of door-knocking. It is not a statement about a set of individuals. (5c), on the other hand, is a *categorical* judgment about 'no one', that is, about a set of people, albeit empty. Reading Ladusaw (2000) helped me clarify this point.

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noone NEG-3MS knock on-the-door

'Noone is knocking on the door.'

In other words, the subjects of agreeing *eyn* satisfy the precise semantic requirements which accrue to SUBJ, namely *aboutness* but not D-linking.⁴

The case of *eyn* is of interest precisely because the Subject Criterion here is not a purely formal requirement, given that SUBJ may fail to be projected. When SUBJ is projected, it imposes its characteristic semantics on the subject.⁵

4 'Nominal' FIN as a quasi-expletive

Satisfaction of the Subject Criterion by an expletive is cross-linguistically very common and, if Rizzi & Shlonsky (2007) are right, extends beyond the merge of expletive phrases in Spec/SUBJ to encompass a quasi-expletive use of FIN. The syntax of French *qui* illustrates the workings of a nominal FIN satisfying the Subject Criterion. Its use is subsequently extended in Rizzi & Shlonsky (2007) to short subject questions in English. Yet another implementation of this strategy is illustrated by Hebrew, as follows.

.4.1 Long relativization of subjects in Hebrew

Long subject relativization across an overt complementizer is perfectly grammatical in Hebrew, as shown in (6), contrasting with English relativization across *that*, as in (7).

4 Alexopolulou, Doron & Heycock's (2004) *broad subjects* are potential candidates for "pure" subjects in the sense in which the subject of agreeing *eyn* is. The criticism leveled against these authors by Landau (2009) might be answered if broad subjects occupy Spec/SUBJ without prior movement through Spec/T and hence lacking nominative Case.

5 The present account is superior to that of Shlonsky (2000), who identified the projection housing pre-*eyn* subjects as AgrSP, in that it provides a principled reason for the semantic restrictions on these subjects.

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(6) Ha xayal še siparta li še 'aqar mata zeitim...

the soldier that (you) told me that uprooted grove olives

(7) *The soldier that you told me that uprooted an olive grove...

Shlonsky (1988) attributes the grammaticality of (6) to the alleged clitic properties of the complementizer *še*. It can move downwards, adjoining to some category to its right and in so doing, empty CP of its head and circumvent a Complementizer-Trace effect.

The implementation of this idea is problematic under current assumptions not only because it entails movement to a non-c-commanding position, but also because it isn't clear why movement out of C would empty this head of its content. More pertinent to our current discussion, however, is the fact that my (1988) explanation of the contrast between (6) and (7) was rooted in the ECP approach to Complementizer-Trace effects, virtually unworkable under present-day assumptions. An additional weakness of that analysis lies in attributing Hebrew's circumvention of Complementizer-Trace effects to a language-particular strategy, (but see Henry (1992) and McCloskey (1996) for evidence that a similar process is at work in Belfast English and Irish, respectively.)

A more promising direction is to assume that Hebrew possesses a Fin head, endowed with nominal features and thus capable of satisfying the Subject Criterion in a manner akin to French *qui*, as analyzed in Rizzi & Shlonsky (2007). The subject nominal can then exploit the "skipping" strategy, moving directly from VP and bypassing Spec/Subj in its movement to Comp to avoid criterial freezing.⁶

6 That the mechanism for circumventing criterial freezing of the subject is tied in with properties of FIN and not, for example, with the introduction of a null expletive in Spec/SUBJ, is supported by the observation that subject extraction is highly marginal in Hebrew indirect questions (as in English ones), from which nominal

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The relevant parts of the derivation, mimicking that of subject extraction under *qui*, is schematized in Figure 1.

FIGURE 1 GOES HERE

French *qui*, however, is a FIN head, while the Hebrew nominal FIN is not realized phonologically; the complementizer *še* heads a higher projection in the left periphery.

5 Hebrew short relativization, the *Highest Subject Restriction* and proxy satisfaction of the Subject Criterion

Short relativization of a subject, exemplified in (8), appears to operate exactly like long relativization, as described in the preceding paragraphs: The subject criterion can be satisfied by nominal FIN and movement of the subject phrase can proceed from a lower subject position.

- (8) Ha xayal še 'aqar mata zeitim...
the soldier that uprooted grove olives
'the soldier who uprooted an olive grove...'

FIN is excluded. If a null expletive were licensed in Spec/SUBJ, subject extraction would be expected to be fully grammatical, as it is, for example, in Italian; compare (i) and (ii) (and see Shlonsky (1990) for a somewhat dated- discussion).

- (i) ??Mi ata lo yod'ea 'im metaken mexoniyot?
who you neg know if repairs cars
'Who don't you know if he repairs cars?'

(ii) qui non sai se ripara automobili?
who NEG you(know) if repairs cars

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There is, however, an important difference between long and short relativization in Hebrew which suggests that the latter instantiates a somewhat different skipping strategy for subject movement.

Hayon (1973) observed that resumptive pronouns, which are, observationally-speaking, in free variation with gaps in direct object and embedded subject positions of Hebrew relative clauses, (though see Doron (1982) and Sharvit (1999) for discussion of some differences between gaps and resumptives with regards to scope,) are ruled out in the highest subject position of the relative clause.⁷

(9a,b) illustrate the optional occurrence of a resumptive pronoun in embedded subject position and direct object position, respectively. (9c) shows that a resumptive pronoun is impossible in the highest subject position.

(9) a. Ze ha-baxur še Dani amar še (hu) lo ohev le-daber ‘al politika.
this the-guy that Dani said that (he) neg likes to-talk about politics
‘This is the guy that Dani said that (he) doesn’t like to talk about politics.’

b. Ze ha-baxur še pagašti (oto) etmol.
this the-guy that (I) met (him) yesterday
‘This is the guy that I met yesterday.’

c. Ze ha-baxur še *(hu) lo ohev le-daber ‘al politika.
this the-guy that (he) neg likes to-talk about politics
‘This is the guy that doesn’t like to talk about politics.’

⁷ Many languages with a productive resumptive strategy in A’ constructions manifest this restriction, called the *Highest Subject Restriction* (HSR) by McCloskey (1990). See also Ouhalla (1993), McCloskey (2002) and Shlonsky (1992), among others.

In terms of the discussion in 4.1, the optionality of the resumptive in (9a) means that the mobilization of nominal FIN is optional. If the option is taken, the subject nominal (or relative operator) can skip Spec/SUBJ on its way up to the matrix Spec/REL. If this quasi-expletive strategy is not exploited, a resumptive fills Spec/SUBJ, satisfying the Subject Criterion.⁸

Mutatis mutandis, the impossibility of a resumptive in (9c) argues that nominal FIN *must* be mobilized here, so that the resumptive strategy cannot be resorted to. But why is nominal FIN obligatory in short relativization of subjects and not in long relativization and, more generally, why should a typically optional expletive strategy all of a sudden become obligatory?

The answers to these questions draw on the fact that in long relativization, the criterial relative position is separated from the embedded SUBJ head by a full clausal structure. In short relatives like (9c), the criterial relative head is a clause-mate of SUBJ. My suggestion is that it is merged close enough to SUBJ to permit a proxy satisfaction of the Subject Criterion.

Suppose that that the left-periphery in short relatives such as (9c) has a single head and not an expanded left periphery. In particular, suppose, with Rizzi (1997), that in the absence of topical or focal material, FIN and FORCE are not fissioned into two heads but constitute a single syncretic head. This is not implausible in relative clauses, given the fact that the relative head is the highest head in the clausal left periphery and can hence be considered to replace FORCE in such structures.⁹ This syncretic head, containing both REL and FIN

8 That the resumptive sits in the criterial Spec/Subj position and not in some other position is argued-for extensively in Rizzi & Shlonsky (2007). The optionality of the resumptive pronoun in (9b) does not reflect optional strategies for criterial satisfaction, because there is no 'object criterion' similar to the subject criterion. for discussion of this optionality, see Shlonsky (1992).

9 If Force is taken to be the 'clausal typing' head – in the sense of Cheng (1991, 1997) –, then perhaps Rel is a type of Force and there is no independent Force projection. That this might be the case is suggested by the fact that in relative clauses, Rel appears to be the highest head in CP. Unlike the (lower) CP heads, Rel cannot be preceded by Top (see Rizzi 2001).

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features, would then be in the right structural configuration to satisfy the Subject Criterion. Unlike nominal FIN, however, REL is not an (optional) expletive head but an obligatory criterial head.

The relationship between the relative head and the clause with which it is associated is very similar to the subject-predicate articulation established at the level of SUBJ. Both articulations involve predication (in the formal sense of Rothstein (1985)), both are mediated by a head (REL for relativization, SUBJ for the subject-predicate articulation) and both are criterial. It is plausible that this similarity is exploited by the grammar in order to reduce the two criterial relations to a single one, if the appropriate structural condition, namely, local c-command, is met.

The deviation from the standard cases of criterial satisfaction is not so much that a head and not a category is the satisfier (this is precisely what happens with FIN), but rather that a *criterial* as opposed to a quasi-expletive head, can be mobilized for the task. Note, though, that criterial heads (as opposed to their specifiers - the criterial goals,) are not subject to criterial freezing. If they were, movement of I to C, for example, would be ruled out, if the relevant moving head were SUBJ (which seems to be inevitable if SUBJ is merged above T). In many languages, REL has nominal features and agrees in phi features with the relativized phrase (e.g., Standard Arabic). Thus, REL can be taken to possess the set of features capable of satisfying the Subject Criterion under (10b) (adapted from Rizzi & Shlonsky).

- (10) For [+F] a criterial feature, X+F is locally c-commanded by A+F, where A is
- a. a phrase
 - or
 - b. a head.

REL is a required component of relative clauses. If merging it eliminates the need to provide an independent satisfier for the Subject Criterion, then on grounds of economy, the resumptive strategy cannot be invoked and (9c) with a resumptive pronoun is ruled out.

Givón (1985) was the first to observe that subject resumptives become optional in short relatives when a topicalized or a focalized phrase follows the relativized phrase. The ungrammatical (9c) should be compared with the acceptable examples in (11) (see also Borer 1984.)

(11) a. Ze baxur še 'al politika (hu) lo ohev le-daber.

this guy that about politics he NEG likes to talk

'this is a guy who about politics doesn't like to talk.'

b. Ze baxur še le-daber 'al politika (hu) lo ohev.

this guy that to talk about politics he NEG likes

'This is a guy who to talk about politics, he doesn't like.'

The appearance of left-peripheral material in (11) precludes the merge of a syncretic head in CP. FIN and REL/FORCE are split by the intervening topic or Focus phrases and REL no longer locally c-commands SUBJ. Two options now present themselves: A nominal Fin may appear in (11) or, if nominal FIN is not merged, the resumptive strategy is mobilized.

Note that while a resumptive is always possible in structures resembling (11), the status of the gap varies from acceptability to marginality, depending on factors such as the heaviness of the topic (as noted in Givón 1975). Moreover, the status of nominal FIN is

marginal in embedded interrogatives (see note 6) and is completely ruled-out in English, a fact attributed by Rizzi & Shlonsky (1997) to its incompatibility with operator material in the left periphery. Whatever the nature of these subsidiary constraints, it is clear that they impact the preference accorded to the resumptive strategy.¹⁰

6 Nominal FIN in interrogatives

In Rizzi & Shlonsky (2007), nominal FIN, lacking a phonetic matrix, appears in short English and French interrogatives. Presumably, it also appears in short Hebrew interrogatives as in (12c).

(12) a. Who FIN left?

who left

'who left?'

b. Qui FIN est left?

who has left

'who left?'

c. Mi FIN'azav?

who left

'who left?'

¹⁰ This approach to the HSR maintains the spirit but not the implementation of the economy-based analysis developed in Shlonsky 1992. Other approaches have been proposed in the literature, notably (an extension of) Condition B of the binding theory. See, in particular, Aoun & LI (1990), McCloskey (1990, 2002) and Ouhalla (1993).

These three languages observe the multiply-filled Comp filter in that an (overt) wh word in Comp is incompatible with an overt FIN. In Quebec French, where multiply-filled Comps are allowed, nominal FIN is overtly realized as *qui*:

(13) Qui qui est left?

who FIN has left

'Who left?'

Padouan also has multiply-filled comps, as illustrated by the indirect subject questions in (14), (data here and below graciously provided by Paola Benincà, pers. comm. See Benincà 1994.)

(14) a. No so chi che zé rivà.

neg (I) know who fin has left

'I don't know who came.'

b. No so chi che ga magnà (la torta)

neg (I) know who fin has eaten (the cake)

'I don't know who ate (the cake).'

Direct questions targeting the subject, however, are not formed exactly as in Quebec French. Rather, only a cleft structure is possible, illustrated by (15b).

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(15) a. *Chi ga magnà la torta?

who has eaten the cake

'Who ate the cake?'

b. Chi zé che ga magnà (la torta)?

who is fin has eaten (the cake)

'Who ate the cake?'

Lit: 'Who is it that ate the cake?'

The following statements formally characterize the situation in Padouan:

(16) a. Nominal FIN must be activated to enable subject extraction.

b. Nominal FIN is realized by *che*.

c. An overt FIN is only possible in embedded contexts.

Thus, subject questions in embedded interrogatives require *che*, (16a,b). Since they involve subordination - under a copula- clefts constitute a formal solution to the joint requirements of (16b) and (16c), by providing a suitable context for *che*. Predictably, long extraction of a subject is also possible, because the overt head *che* is present.

(17) Chi gheto dito che ga magnà la torta?

who (you) have said that has eaten the cake?

'Who did you say that ate the cake?'

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Interestingly, short extraction of the subject of an unaccusative verb is marginally possible without a cleft and without an overt complementizer. The sentences in (18) minimally contrast with (15b).

(18) a. *Chi zé rivà?*

who is arrived?

'Who arrived?'

b. *Chi vien stasera?*

who comes tonight?

'Who is coming tonight?'

Unaccusative verbs are also the only ones that allow free inversion (in the sense of Burzio 1986) in Padouan.

(19) a. *Riva un uomo.*

arrives a man

'A man is arriving.'

b. *?*Dorme un uomo.*

sleeps a man

'A man is sleeping.'

Presumably, an expletive *pro* fills Spec/SUBJ in (18), allowing the subject to skip the

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riterial position on its way to the left periphery, as in Italian. Unlike Italian, Padouan expletive *pro* is only possible in unaccusative clauses and nominal FIN must be merged in unergative and transitive clauses, subject to the conditions in (16).

The difference between unaccusative and unergative/transitive clauses is neutralized in indirect questions, (14) and *che* must appear. Given the grammaticality of e.g., (18a) - with *pro* – the ungrammaticality of (20) is surprising.

(20) a. *No so chi zé rivà.

NEG (I) know who has left

'I don't know who came.'

There appears to be a formal contradiction here: *Pro* takes precedence and blocks FIN in (18) but cedes its role as satisfier of the subject criterion to FIN (realized by *che*) in (20). This contradiction is only apparent, however. *Che* is obligatory in embedded clauses independently of subject-criterion satisfaction. (16c) should thus be amended and enriched to (16c').

(16) c'. When FIN is required by the grammar (e.g., as a marker of finiteness in embedded contexts where it introduces a new tense domain independent from matrix tense), it is coopted to satisfy the Subject Criterion, rendering expletive *pro* redundant.¹¹

Imagine, now, a language which lacks both nominal expletives and the nominal FIN

11 To satisfy the Subject Criterion, FIN must be endowed with nominal features. These are presumably available in the numeration and are merely bundled into an independently-projected FIN. Merge of expletive *pro* requires that the category *pro* be available in addition.

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strategy. In such a language, “skipping” the subject position would only be possible if SUBJ were simply not there. Rizzi & Shlonsky suggest that such a situation arises in English long subject movement when *that* and any other left-peripheral material is absent. They propose that the absence of *that* in long subject extraction signals truncation of the embedded CP down to and including the SUBJ projection.

A plausible case can be made for treating *anti-agreement* effects in some languages in a similar vein.

7 The Anti-Agreement Effect: Truncation of SUBJ

The *Anti-Agreement Effect* (AA) describes a situation in which local extraction of the subject requires a special form of the verb. This form’s main characteristic is that it fails to manifest canonical agreement with the subject.

Compare the verbal forms in the Berber sentences in (21) and (22). (unless otherwise stated, the data comes from Ouhalla (1993, 2005).)

(21) a. Tamɣart t-zra Mohand?

woman 3FS-saw Mohand

‘The woman saw Mohand?’

b. Tafruxt t-sqad tabratt.

girl 3FS-send letter

‘The girl sent the letter.’

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(22) a. Man tamɣart ay yzri-n /*t-zra Mohand?

which woman C_{FOC} see-PART /3FS-saw Mohand

‘Which woman saw Mohand?’

b. TAFRUXT ay sqad-n /*t-sqad tabratt.

girl C_{FOC} see-PART /3FS-send letter

‘It was the girl who sent the letter.’

The verb in (21) agrees with the subject in person, number and gender while the verb in (22) displays an invariant discontinuous affix, [y...n] in (22a) or simply the suffix [n] in (22b). The form which appears with A'-moved subjects (illustrated here with wh-movement and focalization,) is called a participle in traditional Berber studies, although the only thing it has in common with Indo-European participles is the absence of person agreement with the subject.

Person morphology is absent on participles in all varieties of Berber. The manifestation of number and/or gender morphology, however, varies across dialects, see Kossmann (2003). Thus, Tarifit (Rif Moroccan) participles lack number distinctions, as can be witnessed by comparing (22b) with (23), while Tachelhit (South Moroccan) participles optionally manifest plural agreement. This is shown in (24) (from Ouhalla 2005.)

(23) TIFRUXIN ay sqadn /*sqad-n-t tabratt.

girls C_{FOC} see-PART /see-PART-PF letter

‘It was the girls who sent the letter.’

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- (24) Irgazn nna iffgh-n /iffgh-n-in
men C_{REL} left-PART left-PART-PL
'The men who left'

The participial form is *restricted* to subject extraction. Contrast local subject movement in (22a), repeated below in (25a) and local object movement in (25b). When a subject is locally moved, the verb appears in the participial form. When an object is moved, (25b), the agreeing verbal form appears.

- (25) a. Man tamyart ay yzri-n /*t-zra Mohand?
which woman C_{FOC} see-PART /3FS-saw Mohand
'Which woman saw Mohand?'

b. Man tamyart ay y-zra /*yzri-n Mohand?
which woman C_{FOC} 3MS-see /see-PART Mohand
'Which woman did Mohand see?'

The participial form is, moreover, restricted to *short* subject A' movement in Berber. Full agreement is manifested when the subject is extracted across a clausal boundary and the participial form is impossible. Compare (25a) and (26).

- (26) Man tamyart ay nna-n qa *yzri-n /t-zra Mohand?
which woman C_{FOC} said-3PL that see-PART 3FS-saw Mohand
'Which woman did they say that saw Mohand?'

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A similar state of affairs has been described for Somali by Lecarme (1995) (see also Frascarelli 1999 and Frascarelli and Puglielli 2007), building on traditional work. When the subject is relativized or focused, as in (27a), or wh-moved as in (27b), it cannot be associated with a subject clitic (which is obligatory in other contexts; see the references,) and a reduced (though not invariable) form of agreement appears on the verb, termed by somalists the ‘restricted paradigm’ (glossed here as *REST.*), viz. Andrzejewski (1978).

(27) a. Hilib nimankaas baa cunayá

meat men-those FM eat-PRES.PROG(*REST.*)

‘Those men are eating meat.’

b. Naagtee baa Cali sugaysá?

woman-which FM Cali wait-PRES.PROG(*REST.*)

‘Which woman is waiting for Cali?’

When the subject is long-relativized, long-focused or long wh-moved, a subject clitic must be present in the lower clause (it shows up encliticized to the complementizer) and the verb manifests rich or ‘extensive’ agreement with the extracted subject, (glossed here as *EXT.*):

(28) a. Nimankaas baan sheegay inay hilib cunayaan

men-those FM-1S say-PAST that-3PL meat eat-PRES.PROG(*EXT.*)

‘Those men, I said are eating the meat.’

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b. Naagtee bay sheegeen inay Cali sugayso?

woman-which FM-3PL say-PAST that-3SF Cali wait-PRES.PROG(EXT.)

'Which woman did they say that Ali is waiting for?'

The AA Effect is not unique to Berber or Somali. A number of typologically unrelated languages are reputed to manifest it, although its conditioning factors vary, sometimes considerably, from language to language. A general theory of Anti-Agreement lies well beyond the purview of this paper. Moreover, it may very well be the case that there is no syntactically uniform AA effect but rather a family of different strategies to cope with the freezing effect on subject movement, all characterized by an impoverishment of overt agreement.

Our discussion in what follows is restricted to Berber and to the relevance of the Anti-Agreement Effect to strategies of subject extraction.

Consider first nonlocal subject movement, Ouhalla (1993:479). Full agreement appears on the embedded verb (i.e., no AA.)

(29) Man tamghart ay nna-n qa t-zra Mohand?

Which woman C_{FOC} said-3PL that 3FS-saw Mohand

'Which woman did they say saw Mohand?'

The grammaticality of (29) might suggest that Berber utilizes the expletive pro stratagem characteristic of null subject languages. Under this view, Spec/ SUBJ is filled with a phonetically-null expletive, while the *wh* subject itself is moved directly from a lower, postverbal position. Berber however, lacks the hallmark uses of null expletives (e.g., in

Raising constructions,) and there is no evidence to suggest that VS word orders in Berber involve an expletive in the canonical subject position, associated with a postverbal subject.

Movement of subjects is not only possible from embedded clauses, it is island-insensitive. In (30) and (31), wh-movement freely crosses a weak (wh) and a strong (CNP) island (Ait Waryaghl Tarifit Berber; J. Ouhalla, pers. comm.)

(30) Man tafruxt ay t-ttu-t mani t-zdegh?

which girl C_{FOC} 2P-forgot-2P where 3PF-live

‘Which girl have you(PL) forgotten where she lives?’

(31) Man tafruxt ay t-ttu-t amkhan mani t-zdegh?

which girl C_{FOC} 2P-forgot-2P place where 3PF-lives

‘Which girl have you(PL) forgotten the place where she lives?’

Neither the nominal expletive strategy nor the quasi-expletive nominal FIN one are directly relevant to an explanation of the absence of Island constraints on movement. Ouhalla’s very reasonable suggestion is that the embedded subject position in Berber in (30) and (31), and by extension, in (29), is occupied by a phonetically-null resumptive pronoun (Ouhalla 1993). Movement does not take place in (30) and (31) and Islands effects are hence not manifested. The resumptive pronoun, let us assume, satisfies the Subject Criterion in the embedded clause.¹²

Let us further assume (also following Ouhalla 1993), that resumptive pronouns in

¹² To answer a reviewer’s query, Berber is a null subject language and may, therefore, unproblematically display a resumptive subject pro. I leave open the question of whether resumptive pronoun structures involve base-generated operator-variable chains or whether the wh-expression is sub-extracted from a ‘big DP’, stranding the resumptive pronoun. For some discussion, see Bianchi (2004) and Boeckx (2003). Note that if the sub-extraction approach is adopted, resumption should be reclassified as a ‘skipping strategy’ in (1).

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Berber, like those of Hebrew, are subject to the *Highest Subject Restriction*. The Anti-agreement effect kicks in precisely where a resumptive pronoun is barred. My proposed implementation of this idea builds on the preceding discussion of the HSR and differs from Ouhalla's 1993 proposal.

Recall that in Hebrew, resumptive pronouns are restricted to relative clauses and are banned precisely when REL, the criterial relative head, can satisfy the Subject Criterion under local c-command. One might then argue that the capacity of REL to satisfy the subject criterion is simply extended in Berber to all the quantificational/discourse heads of the left periphery.

There are differences, however, between Berber Anti-Agreement and the Hebrew 'proxy' REL which outweigh their similarities and suggest that a different (though related) syntactic mechanism is at work in short subject extraction in Berber.

Hebrew REL substitutes for FORCE and can appear fused with FIN. Berber AA is not restricted to relative clauses and extends to focalization (the focus head appears both with *wh* words and with contrastively-focused material). AA doesn't therefore depend on the presence of a syncretic C head. The criterial feature borne by REL is relatively close to that of SUBJ (both involve predication, for example), while that of FOC is not. There is, moreover, a tension between a head with quantificational features and subject criterion licensing by a left-peripheral head, which Rizzi & Shlonsky (2007) attribute to the incompatibility of nominal FIN and quantificational heads in the left periphery. The most outstanding difference is, however, that AA provokes a suppression of phi features on the main verb while nothing of the sort occurs in Hebrew.

We can interpret this suppression of agreement to mean that the SUBJ layer is unprojected in such cases and hence the features which are associated with this head, in

particular, person features (see ahead), cannot appear. The Berber participle is a verbal head which is morphologically well-formed without person morphology. In the absence of a SUBJ projection, resumptive pronouns are barred from the highest subject position in Berber. There simply is no position to host them.

Berber AA is intimately linked to subject extraction. The question is why this should be so, why AA is not manifested when no extraction of the subject takes place, for example. AA occurs in all cases of local extraction. It is insensitive to the specific type of extraction (focalization, relativization, etc.) I suggest that the mere fact that the clausal subject heads a criterial chain (i.e., it is a *wh* expression, a focus, or a relative head/operator) functionally compensates for the absence of SUBJ. (22a) is a question *concerning* some woman and (22b) is *about* a girl. The suppression of the formal device for marking subjects for the interface is compensated for by locally targeting the subject for satisfaction of some left-peripheral criterion.

Functional compensation is to be distinguished from proxy satisfaction, proposed for Hebrew REL. In the latter case, SUBJ is projected and the Subject Criterion is satisfied, albeit not by the subject or an expletive. In the former case, there is no SUBJ and hence no need to formally satisfy the Subject Criterion. Targeting the subject by another criterion provides it with quasi-aboutness prominence which is functionally sufficient for the subject to qualify as 'what the sentence is about.'¹³

8 Person and number as distinct probes

13 One cannot rule out that in the case of short subject relativization, e.g., in (24), REL is fused with FIN and satisfies the Subject Criterion like in Hebrew relative clauses. The fact that *anti-agreement* is displayed in this case as well suggests, however, that the nominal FIN strategy is unavailable in Berber. If the options for criterial satisfaction in (10), namely local c-command of the criterial head by (a) a phrase in its specifier or (b) a higher head, are governed by a parameter, it is not implausible that Berber lacks the (b) option.

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In some Berber dialects, to recall, the participial form is not 'bare', but manifests grammatical number. Coupled with the idea that [person] is associated with SUBJ, the claim defended in the previous section, namely, that SUBJ is unprojected in AA environments, yields the hypothesis that [number] and [person] are associated with different, although perhaps adjacent heads. Let us assume that [number] is a phi-feature of T. Both T and SUBJ have a D feature (that is to say, they probe for a nominal category), but the attributes of D are different in each case: The attribute of D on T is [number] whereas the attribute of D on SUBJ is [person]:



Full agreement (number and person) arises when both T and SUBJ are projected. When only number agreement is displayed, SUBJ is unprojected.

(32) expresses the idea that D_[person] and D_[number] are separate probes.¹⁴ Let us consider some of the implications of this hypothesis for the mechanism of AGREE and the position(s) of subjects. Chomsky's view, articulated in much of his work over the last ten years, is that the subject moves to Spec/T because T not only probes the phi features of the subject and agrees with them, but has an EPP or edge feature provoking movement of the subject nominal to Spec/T. If the canonical subject position is not Spec/T but rather Spec/SUBJ, where the subject moves to satisfy the Subject Criterion, the EPP feature of T becomes redundant. Indeed, the criterial approach suggests that the EPP/edge property is a property of criterial heads alone, built into the configuration of criterial satisfaction.

If T is not a criterial head, it follows that attraction of a nominal to its specifier may only serve to facilitate movement to Spec/SUBJ, the criterial position. In more general terms,

¹⁴ The idea goes back to Shlonsky (1989) and has gained some currency in recent years, see e.g., Holmberg and Sigurðsson (2008).

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the following generalization can be derived:

(33) XP Movement through Spec/T is only possible *en route* to some criterial position.

(33) is basically the same condition that holds of past participle agreement in Romance: Objects can move through the specifier of the participial head - AGRPART in Belletti's (2001) terminology -, but they do not stop there. AGRPART, like T, is not a criterial position.

In what sense does movement through Spec/T facilitate satisfaction of the subject criterion? Given (32), SUBJ is not just a criterial head but also participates in the phi-Case system. In particular, it probes for $D_{[person]}$. Let us assume that the D feature on T acts an intervenor, blocking probe by SUBJ. In order to circumvent this intervention effect, the subject must be moved to a position outside the c-command domain of T. In this way, movement through Spec/T is forced. A derivation whereby T agrees with the subject without attracting it, and then the subject moves directly to Spec/Subj is not allowed under these assumptions. Note that the subject should be able to bypass T and move directly to Spec/Subj when it is not probed by any phi features on T.

SUBJ has hybrid properties: It embodies a criterion and is a member of the class including WH, FOC, REL etc. But is also participates in the phi-Case system. Some variation may be expected here. In particular, we might expect cases in which SUBJ is stripped of phi features altogether and encodes only a more generalized D feature. Such a situation can arise when the Subject Criterion is satisfied by a nominal FIN head, lacking in any phi-specification. Rizzi & Shlonsky (2006) argue that this case is exemplified by locative inversion.

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Consider, in this context, what happens when the movement occurs directly to SUBJ, bypassing T. As noted, this can arise when T do does not probe the subject (and correlatively, when the subject does not depend on features of T for Case).

9. Movement of subjects to Spec/SUBJ, skipping T

A potentially revealing case of this sort is discussed in Nevins & Anand (2003). They observe that Hindi ergative subjects, which do not trigger agreement on the verb, (which agrees with the nominative object), always take wide scope with respect to an object, whereas nominative subjects, which trigger agreement on the verb, may be out-scoped by the object.

(34) a. Kisii šaayer-ne har ghazal lik^{hi}

Some poet-ERG every song-F write.F-PERF

‘Some poet wrote every song’ (some > every; *every > some)

b. Kisii šaayer-f har ghazal lik^{hta} hai

Some poet-NOM every song-F write.M-IMPF be-PRES

‘Some poet writes every song’ (some > every; every > some)

They take the inverse scope option in (34b) to involve scope-lowering or reconstruction of the subject to a position c-commanded by the (perhaps vP-adjoined) scope position of the object (see Hornstein (1995) and Johnson & Tomioka (1998).) Their point is that ergative subjects (as in (34a)) fail to reconstruct and attribute this fact to the following generalization:

(35) PEPPER: Pure EPP Eliminates Reconstruction

A-movement only for EPP does not reconstruct.

Reconstruction in (34b) must be total, in that both the quantifier and its restriction must be interpreted in a position below the object's scope position. The subject presumably occupies Spec/SUBJ in both (34a) and (34b). In the second example, though, there must also be a copy of the subject in Spec/T, given probe by T for phi/Case. Thus, reconstruction can be launched, as it were, from Spec/T. (34a), on the other hand, does not involve a copy in Spec/T and reconstruction can only be launched from Spec/SUBJ. If reconstruction is movement, then the contrast in (34) simply illustrates the effects of criterial freezing (on a lowering operation in LF): Movement of a category from Spec/T is possible while movement from Spec/SUBJ is constrained by Criterial Freezing.

Although there are good reasons to believe that reconstruction is not literally movement (for example, it violates the Extension Condition), the movement metaphor is useful, if only because reconstruction affects both the higher link in the chain - dis-activating it for certain processes - as well as the lower link - activating it for certain processes. Criterial freezing is an economy condition ensuring a unique correlation of heads of chains, syntactic positions and specific interpretative properties. It is natural, from this perspective, to consider reconstruction to fall under its purview. Seen in this way, (34a) involves a single criterial chain rooted in the subject's theta-position and headed by the ergative-marked subject in Spec/SUBJ. What Criterial Freezing rules out in (34a) is scope-activation of the root of the chain.

The head of the subject chain in (34a) does take scope, in fact, it takes wide scope over

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the object. Assuming, as do Nevins & Anand, that quantifier scope is mediated through QR, it must be the case that QR is possible from the head of a criterial chain. Why does this case of movement fail to violate criterial freezing?

Quantifier raising involves sub-extraction of the quantifier and stranding of the lexical restriction. In this respect, QR resembles the overt movement of *combien* in (36a) which, as Obenauer (1976) noted, is substantially more acceptable than (36b), which involves a clear violation of criterial freezing.

(36) a. ?Combien veux-tu [que [[____ de personnes] SUBJ viennent à la réunion]]?

How many want-you that of people come to the meeting?'

'How many people do you want to come to the meeting?'

b. *Combien de personnes veux-tu [que [[____ SUBJ] viennent à la réunion]]?

How many of people want-you that come to the meeting?'

'How many people do you want to come to the meeting?'

Criterial freezing affects the criterial goal, namely, the phi-bearing quantified nominal expression and not the quantifier itself. As Rizzi (2010) argues, extraction of Q from a structure such as (37) does not violate criterial freezing.

(37) [Q [nominal expression]] SUBJ ...

Quantifier-Raising is permitted in (34a) from Spec/SUBJ but quantifier lowering is not. The reason is that quantifier lowering must involve total reconstruction, i.e., it is not only

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the bare quantifier which is affected, but the entire lower copy must be activated so as to provide a lexical restriction for the quantifier. Hence, quantifier lowering in (34a) is not the reconstructed analogue of subextraction, but rather of pied piping, wherein the entire DP, that is, the entire chain link is activated, in violation of criterial freezing, extended above to cover chains and not only categories.

(34b) differs from (34a) in that it includes an extra chain link, a copy of the subject in Spec/T. In a sense, there are two chains in this example, one connecting the subject's theta position to Spec/T and the other connecting Spec/T to Spec/Subj. The first chain does not terminate in a criterial position and therefore criterial freezing does not constrain it. Not only can the subject nominal in Spec/T continue to move to Spec/SUBJ, thus forming the root of a new chain, but reconstruction can take place and the subject may take lower scope with respect to the object.

9 Summary and Conclusion

Criterial Freezing bars movement of a criterial goal once it has reached its criterial position. Criterial freezing of the subject is, however, more easily skirted than the freezing of other criterial goals. This is due to two factors which distinguish the Subject Criterion from the other criteria discussed in Luigi Rizzi's work. First, SUBJ possesses properties characteristic of both the scope/discourse domain and the phi/Case system. Second, perhaps as a consequence of the first difference, SUBJ has a formal existence which is loosely related to its semantic features.

Grammars deploy a variety of strategies to circumvent criterial freezing of subjects. Languages with resumptive pronouns can use a resumptive strategy to avoid Criterial

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Freezing. Local relativization of subjects, however, yields to the less costly cooptation of REL – an independently necessary and locally merged criterial probe – to satisfy the Subject Criterion.

Expletives can be merged in Spec/SUBJ or appear as nominal features on FIN, thus satisfying the formal requirements of the Subject Criterion.

under conditions of formal or functional recoverability, SUBJ can be unprojected, or truncated, giving rise to at least some anti-agreement effects.

The EPP or the requirement that clauses have subjects in a canonical ‘edge’ position is not coded for as a feature of T, but falls out from the configuration of criterial satisfaction. In particular, it is a property of SUBJ, not T. Consequently, movement of subjects to Spec/T cannot be construed as EPP-driven. Our proposal is that T intervenes for probe by SUBJ, requiring the subject nominal to raise above it in order to be in a position accessible to probe by SUBJ.

Finally, quantifier lowering from subject position is compared to quantifier raising and the notion of criterial freezing is extended to cover chains and their links.

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