

# Building and interpreting nonthematic A-positions: A-resumption in English and Breton\*

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On recent views of movement and resumption, both Merge a DP in a nonthematic position and interpret it through a free variable. This predicts their symmetric distribution and the existence of resumption on the 'core' A-position of [Spec, TP], or *A-resumption*. It is argued that the prediction is correct, and mechanics are developed to build both movement and resumption by Merge, Agree, and the interpretation of nonthematic positions. A-resumption on [Spec, TP] falls into two types. When T participates in  $\phi$ -Agree, the DP Merged in [Spec, TP] must be interpretively linked to the variable identified by  $\phi$ -Agree. Locality tends to limit the goal to a domain where it must be a copy/gap for Case reasons, so the composition of Agree and Merge results in movement. However, when a finite TP boundary is penetrable to  $\phi$ -Agree, there surfaces an A-resumption pattern constrained by the locality of  $\phi$ -Agree, including the copy-raising of English *The cat<sub>i</sub> seems like it<sub>i</sub>'s got Spiro's tongue*. When T does not  $\phi$ -Agree with a DP goal, the location of the variable interpreting [Spec, TP] is unconstrained. This is the situation in Breton, which allows A-resumption structures of the type *The boat<sub>i</sub> was shot at it<sub>i</sub>*. The patterns of A-resumption restricted and unrestricted by  $\phi$ -Agree match parallel patterns found in A'-resumption in recent work.

## 1 A-resumption

Natural language arguments may occur in *thematic* positions local to the predicate through which they are interpreted, or in *nonthematic* positions remotely linked to thematic ones. One way to establish the link is by *movement*: The thematic and nonthematic positions are copies of the same syntactico-semantic content, and typically one surfaces as a phonological gap. Another is by *resumption*: The thematic position is a

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pronoun bound by a DP in the nonthematic position, apparently in the same manner as a regular pronoun may be bound by a thematically distinct antecedent (McCloskey 2005).

Both mechanisms are common for nonthematic A'-positions, as in Breton (1)a-(1)b.

- (1) an nor<sub>i</sub> a vo ret prenañ     <sub>i</sub> / anezhi<sub>i</sub>  
 the door R will-be necessary to-shut *t* it
- Relative clause: the door that it will be necessary to shut
  - Independent clause, focus/topic reading: The door, it will be necessary to shut.
  - Independent clause, neutral reading: The door will have to be shut.
- (Breton, cf. Stephens 1982: 194)

For nonthematic A-positions, movement often prevails. English permits filling the nonthematic [Spec, TP] position by movement or by an expletive, but not by a DP linked to a resumptive, (2). However, limited resumption on [Spec, TP] appears in the copy-raising construction (3)b. In Breton, resumption on [Spec, TP] turns out to be general and gives (1c). A-resumption and its relation to A-movement is the subject of this article.

- (2) a. **There** was [a story about Hild] known to Deor.  
 b. Hild<sub>i</sub>, [**a story about her<sub>i</sub>**]<sub>k</sub> was known *t<sub>k</sub>* to Deor.  
 c. \***Hild<sub>i</sub>** was a story about her<sub>i</sub> known to Deor.  
 d. Deor<sub>i</sub>, [**a story about Hild**]<sub>k</sub> was known *t<sub>k</sub>* to him<sub>i</sub>.  
 e. \***Deor<sub>i</sub>** was a story about Hild known to him<sub>i</sub>.  
 f. \***[A story about Hild]**<sub>i</sub> was known *it<sub>i</sub>* to Deor.
- (English, [Spec, TP] in bold)
- (3) a. **It** seems like/that Hild was known to Deor.  
 b. **Hild<sub>i</sub>** seems like/\*that she<sub>i</sub> was known to Deor.  
 c. \***Hild<sub>i</sub>** seems like Deor knew her<sub>i</sub> story.
- (English, [Spec, TP] in bold)

The interest of A-resumption depends on the existence of nonthematic A-positions or relationships that differ in an interesting way from A' ones. This is clearest for the A-position or relationship conventionally identified as [Spec, TP]. A convergence of properties sets it apart from both the A' and thematic systems:

- Unlike thematic and A'-positions, [Spec, TP] imposes no interpretive restrictions. Thus it may host those expletives (4b) and idiom chunks (4c) that lack the interpretive content to participate in control, binding, coreference, and relativization (q.v. Chomsky 1986, Horn 2003, Rezac forthc: 6.4, and note 7 here).
- Like thematic, but unlike A'-positions, [Spec, TP] may host binders for anaphora and for thematically distinct pronouns, without weak cross-over, both illustrated in (4)a.
- [Spec, TP] is the sole nonthematic position of the left-periphery of certain minimal nonfinite structures: the overt subject of *for-to* infinitives (4), the PRO of control infinitives, the subject gap of raising/ECM infinitives, the accusative and genitive subject of gerunds. No other left-peripheral positions are available in these structures, so that locative inversion for instance is excluded (4d) (q.v. Bresnan 1994).

- (4) a. It is necessary for **every performer**<sub>i</sub> to seem to herself<sub>i</sub> to have her<sub>i</sub> place here.  
 b. For **there** to be a grammar of Karelian in the library would be extraordinary.  
 c. It is easy for **too much** to be made of similarity of *Caelic* and *Kaleva*.  
 d. \*For **in the library** to be a grammar of Karelian would be extraordinary.

A full explanation of these properties of [Spec, TP] is still wanting. They might relate to the bipartition of clauses into thematic layers around the predicate and quantificational or discourse-oriented layers at the periphery - T belongs to neither -, to the mysterious EPP requirement that enforces [Spec, TP] even when filled by elements not interpreted there such as expletives and idioms, and to the localization on T of  $\phi$ -Agreement, which may play a role in anaphora licensing and pronoun binding (see respectively Chomsky 2000: 120-1, 2008: 140-1, 148; Chomsky 1986, 2000, Sauerland and Elbourne 2002; Reuland 2001, 2005, Chomsky 2008: 148, Kratzer 2009).

In the special properties of [Spec, TP] should also lie the explanation for any asymmetries between it and A'-positions with respect to resumption. On one minimal view of A-resumption, epitomized by McCloskey (2002), it has the ingredients in (5):

- (5) Ingredients of resumption (McCloskey 2002):  
 a. a nonthematic position to base-generate a DP;  
 b. a mechanism to interpretively link the DP to a pronoun;  
 c. satisfiability of the featural requirements of the structure.

None of these ingredients refers to A'-status and so might be expected to permit A-resumption, as in McCloskey and Sells (1988) and Doron and Heycock (1999). Even English and French might qualify. Their [Spec, TP] is a nonthematic position available to expletive base-generation, as well as to DP movement. A DP in [Spec, TP] can bind a pronoun. Finally, all featural requirements seem satisfiable at least in those constructions where there is otherwise no agreeing, nominative DP, that is those where an expletive suffices to satisfy T's Agree/Case/EPP requirements. Examples are the French impersonal passive (6), the anomalous unaccusative (7), and the English impersonal passive (9), while (8) has an agreeing nominative. Yet in none of these constructions is it possible to replace the expletive with a DP to give A-resumption on [Spec, TP].<sup>1</sup>

- (6) a. Väinämöinen<sub>i</sub>, [<sub>TP</sub> il a [<sub>VP</sub> été tiré sur son<sub>i</sub> cheval]].  
           there has been shot at his horse  
       "Väinämöinen, his horse was shot at." (Lit. It was shot at his horse.)  
 b. \*<sub>TP</sub> Väinämöinen<sub>i</sub> a [<sub>VP</sub> été tiré sur son<sub>i</sub> cheval]].

- (7) a. Pauline<sub>i</sub>, [<sub>TP</sub> il me le faut pour ses<sub>i</sub> amies]  
           it me.DAT it.ACC needs for her friends

<sup>1</sup> If there is more to the binding of resumptives than the binding of regular pronouns, varieties of French do have unrestricted A'-resumption (Guilliot 2006b), while in English the situation is unclear for both intrusive or last-resort resumption (Safir 1986 vs. Ferreira and Swets 2005, Alexopoulou and Keller 2007) and *such that* relatives (Heim and Kratzer 1998: 5.3.1, but see Asudeh 2004: 405-7).

"Pauline, I need it for her friends."

- b. \*[<sub>TP</sub> Pauline<sub>i</sub> me le faut [<sub>VP</sub> pour ses<sub>i</sub> amies]].
- (8) a. Väinämöinen<sub>i</sub>, it has been said that he<sub>i</sub> invented the Kantele.  
b. Väinämöinen<sub>i</sub> has been said *t*<sub>i</sub> to have invented the Kantele.  
c. \*Väinämöinen<sub>i</sub> has been said that he<sub>i</sub> invented the Kantele.
- (9) a. Väinämöinen<sub>i</sub>, there seemed to have been arrows shot at his<sub>i</sub> horse.  
b. Väinämöinen<sub>i</sub>, arrows seemed to have been shot at his<sub>i</sub> horse.  
c. \*Väinämöinen<sub>i</sub> seemed to have been (arrows) shot at his<sub>i</sub> horse.

Consider the mechanics of these structures in Chomsky (2000 et seq.). T has a phi-probe that Agrees with a DP goal and assigns it Case, if there is one. T also has the EPP (OCC, EF) property that requires [Spec, TP]. The EPP may be satisfied by Merge of an expletive, (9a): this is base-generation. Alternatively, the EPP may be satisfied by re-Merge the goal of the  $\phi$ -Agree of T, (9b): this is movement. Both Merge [Spec, TP]. Yet the EPP may not be satisfied by the base-generation of a non-expletive, (9c). The option is explicitly banned by (10), which restricts base-generation in nonthematic positions to expletives. As formulated, (10) is a syntactic principle beyond the Minimalist guideline that principles of realization and interpretation belong to the systems interfacing with syntax, rather than within it (Chomsky 1995: 3.3, but cf. 2000: 111). Alternatively, (10) is equivalent having a special operation Move introduce the elements (indices) that are translated as the derived predicates needed to interpret nonthematic positions (section 2). Both proposals are a departure from the elementary construal of movement introduced in Chomsky (2000): movement is the composition of Agree and Merge, not a distinct unitary operation Move and not sensitive to the interpretation of what is Merged. Both proposals would also bar A'-resumption along with A-resumption.

- (10) a. "Pure Merge in  $\theta$ -position is required of (and restricted to) arguments."  
(Chomsky 2000: 103, (6))  
b. "A problem throughout the whole account [of the Merge over Move preference] is why raising is *ever* possible, if Agree and Merge preempt Move. The question is answered in part by the  $\theta$ -theoretic principle (6), which bars pure Merge of arguments in non- $\theta$ -positions, and correspondingly restricts Move to such positions."  
(Chomsky 2000: 106)

The proposal in this article is that A-resumption does exist, alongside A-movement, in the same way as A'-resumption alongside A'-movement, and that movement and resumption both make use of the same operations in the same way:

- (11) Merge, (phi-)Agree, and interpretation play the same role in movement and resumption (to A-positions). Differences reside in independent constraints that cross-cut the movement-resumption divide: the occurrence of (phi-)Agree and the Case status of its goal that impacts copy deletion/conversion.

This proposal is articulated on the view of resumption in (5) and the decomposition of movement into Agree and Merge in Chomsky (2000) and has the elements in (12).

- (12) A-resumption and A-movement
- a. *Base-generation*: A nonthematic position permits the base-generation of expletives, and so also of DPs provided they can be interpreted.
  - b. *Interpretation*: A nonthematic position is interpreted through an unbound variable in its sister.
  - c. *(Phi-)Agree restriction*: The (phi-)Agree of a head H with a goal  $\Gamma$  restricts the variable for interpreting [Spec, HP] to  $\Gamma$  if  $\Gamma$  has a variable name (index).

First, a nonthematic position is needed to Merge a DP, (12a). Second, the DP needs interpretation through an expression that ultimately receives a thematic interpretation, pronoun or copy converted to (contain) a pronoun, (12b). These elementary conditions are symmetric for movement and resumption. To them, a third is added, (12c): if Agree transmits the variable index (name) to the head that projects the nonthematic position, the latter is predicated of that variable rather than of another. The same role is played by Agree in movement and in resumption, completing their symmetry. In contexts that end up, descriptively, as movement, that goal of  $\varphi$ -Agree is a DP in the same Case domain as the nonthematic position, and undergoes copy deletion and conversion. However, when the goal of  $\varphi$ -Agree is an independently Case-marked pronoun, it is inaccessible to these mechanisms, and restricted A-resumption of the type (3) results: the lower element is restricted by the locality of  $\varphi$ -Agree but overt and pronominal. These two cases are examined in section 3. If T receives no index by  $\varphi$ -Agree, the choice of the variable for [Spec, TP] is free, and unrestricted A-resumption results. Section 4 examines it in Breton and section 5 elsewhere. Thus  $\varphi$ -Agree restricts the syntax-semantics mapping by limiting the variable that derived predicates can be built on. This is natural insofar as variable indices are related to phi-features, and insofar as predication is local. An extension would hold Agree in the A'-system to the same effect, converging with the proposals for restricted A'-resumption of Rouveret (2002, 2008) and Adger and Ramchand (2005) discussed in the concluding section 6.

## 2 Background

For the syntax-semantics mapping of nonthematic positions, Heim and Kratzer's (1998) model is adopted. A lexical predicate composes with an argument sister through Function Application, (13), because the lexical entry of the predicate comes with a  $\lambda$ -operator binding a variable for the argument, (14). To interpret a nonthematic DP, its sister must become a derived predicate by the introduction of a  $\lambda$ -operator, and the operator binds a free variable. Predicate Abstraction (15) creates derived predicates. It applies to a syntactic object dominated by a terminal that is a numerical index  $i$ . At the syntax-semantics mapping, the terminal triggers Predicate Abstraction, which supplies a  $\lambda$ -operator binding the variable named by the index.

- (13) Functional Application: If  $\alpha$  is a branching node and  $\{\beta, \gamma\}$  the set of its daughters, then, for any assignment  $g$ ,  $\alpha$  is in the domain of  $\llbracket \ ]^g$  if both  $\alpha$  and  $\beta$  are, and  $\llbracket \beta \rrbracket^g$  is a function whose domain contains  $\llbracket \gamma \rrbracket^g$ . In this case,  $\llbracket \alpha \rrbracket^g = \llbracket \beta \rrbracket^g(\llbracket \gamma \rrbracket^g)$ .

(Heim and Kratzer 1998: 105)

- (14)  $\llbracket \llbracket_{VP} \text{ see her}_1 \rrbracket \rrbracket = \llbracket \llbracket \text{see} \rrbracket^{g[1 \rightarrow \text{Kay}]}(\llbracket \llbracket \text{her}_1 \rrbracket^{g[1 \rightarrow \text{Kay}]} \rrbracket) = \lambda x. \lambda y. y \text{ see } x \text{ (Kay)} = \lambda y. y \text{ see Kay}$

- (15) Predicate Abstraction (PA): Let  $\alpha$  be a branching node with daughters  $\beta$  and  $\gamma$ , where  $\beta$  dominates only a numerical index  $i$ . Then, for any variable assignment,  $g$ ,  $\llbracket \alpha \rrbracket^g = \lambda x \in D_e. \llbracket \gamma \rrbracket^{g[i \rightarrow x]}$ .

(Heim and Kratzer 1998: 186)

The key to interpreting nonthematic positions then rests in the introduction of the indices. Heim and Kratzer propose one mechanism for resumption and one for movement. In resumption (16a), a constituent Merges with a lexical item like *such*, whose translation is a freely chosen numerical index. If there is a lower variable, pronoun, with the same index, it is bound through Predicate Abstraction to yield (16c). In movement (16b), the syntactic operation Move (17) replaces the moving element by a variable (trace) in its original position, and adds the corresponding numerical index at the target of movement. It too is translated by Predicate Abstraction as (16c). On the copy-theory of movement, the story is the same, save that Move replaces the moving element at its original position by a definite description with a bound pronoun rather than by a pronominal variable, changing *the/a book* to *the book (identical to) x* (Fox 2002).

- (16) a. Syntax: [the book [<sub>XP</sub> such<sub>1</sub> that [Kay read it<sub>1</sub>]]]  
 b. Syntax: [the book [<sub>XP</sub> 1 [Kay read t<sub>1</sub>]]]  
 c. Interpretation:  $\llbracket \llbracket \text{XP} \rrbracket^g = \lambda x. \llbracket \llbracket \text{Kay read } x_1 \rrbracket^{g[1 \rightarrow x]}$

- (17) Move maps  $[\beta \dots \alpha_i \dots]$  to  $[\alpha [\gamma \ i \ [\beta' \dots t_i \dots]]]$

(cf. Heim and Kratzer 1998: 7.3)

Between resumption and movement, the difference is in the machinery that adds the index. An index base-generated as a lexical item gets to freely bind any variable in its scope, (18a); one introduced by movement is constrained by the conditions on movement, (18b). The choice of resumption and movement depends on the head that introduces the nonthematic position, as a lexically specified numerical index or as a trigger for Move. The two options should be symmetric for head of the A and A'-systems, C and T.

- (18) a. List every tribe<sub>i</sub> such that [Widsith named [it<sub>i</sub> and/along with its<sub>i</sub> lord]].  
 b. List every tribe<sub>i</sub> that [Widsith named [t<sub>i</sub> \*and/along with its<sub>i</sub> lord]].

If movement did not introduce indices (variable names, links, etc.) to establish interpretive dependencies, the highest *she* in (19) would have to receive its thematic interpretation in some other way. The necessary interpretive link might be forged at interpretation independently of movement simply by binding a lower pronoun, but then it should be subject to constraints on pronoun binding (or ellipsis, etc.), rather than to



This *cross-clausal agreement* (20h) and *copy-raising* (20g) have been studied by Rogers (1974), Postal (1974, 2003: 124), Lappin (1984), Heycock (1994: 272ff.), Potsdam and Runner (2001), Asudeh (2004), and strikingly similar phenomena by Joseph (1976) and Perlmutter and Soames (1979: 154-171) for Modern Greek, Déprez (1992) on Haitian Creole, Moore (1998) for Turkish, Ura (1998) for Igbo, Artiagoitia (2001ab) for Basque. Cross-clausal agreement has studied in its own right, including recently Bruening (2001), Branigan and MacKenzie (2001), Polinsky and Potsdam (2001, 2006), Polinsky (2003). Among essays at synthesis are Massam (1985), Ura (1995), Rezac (2004a).

The analysis here seeks to unify the A-movement, limited A-resumption, and expletive + local and cross-clausal agreement of English through the elements in (11). In all three,  $\phi$ -Agree occurs between T and a lower goal, and Merge builds a nonthematic [Spec, TP]. In A-movement and A-resumption, the Merged specifier is a DP that needs interpretation through a lower pronoun, and  $\phi$ -Agree will constrain its location. The distinction between A-movement and A-resumption will depend on the algorithm that deletes and converts copies. It will be sensitive to Case, and so to Case domains, which in English correlate with finite clause boundaries. The sole difference with the unrestricted A-resumption seen later in Breton is that  $\phi$ -Agree is irrelevant to the latter.

The literature on English copy-raising establishes that it is A-resumption in the sense of relating a nonthematic DP in the matrix clause to a pronoun in the embedded clause, rather than a thematic use of *seem* that assigns the matrix subject a theta-role, or an unusual spell-out of foot of cross-clausal A-movement by a pronoun. English does permit a thematic use of *seem* + CP 'have/give visual appearance' for some speakers, seen in (21). The matrix subject is introduced by the matrix verb and receives a theta-role from it. As a result,  $DP_i + seem\ like + [CP \dots pronoun_i \dots]$  is thematically distinct from  $it + seem\ like + [CP \dots DP_i \dots]$ , and the matrix subject can bind any lower pronoun, or none.

- (21) a. Her apartment sounds like there must be a wonderful view (from  $it_i$ ).  
 b.  $He_i$  seems like Kim just dumped  $him_i$  = He is acting / giving the impression that Kim just dumped him  $\neq$  It seems like Kim just dumped him.  
 (Heycock 1994: 292, Potsdam and Runner 2001: ex. 19 resp.)

Rogers (1974) and subsequent work demonstrates that copy-raising is a distinct construction available when and only when the matrix subject links to the pronominal subject of the next lower clause. Then  $DP_i + seem\ like + [CP\ pronoun_i \dots]$  can be thematically synonymous with  $it + seem\ like + [CP\ DP_i \dots]$ , and the matrix subject need not have the content necessary for theta-role assignment, pronoun binding or coreference, or for A'-relations such as relativization and topicalization:

- Copy-raising allows thematic identity with *it + seem*:

- (22)  $He_i$  seems like  $he_i$ 's ill = It seems like he is ill *or*  $He_i$  acts like  $he_i$ 's ill.  
 (Potsdam and Runner 2001: ex. 18)

- The matrix subject can be the *there* expletive if the embedded subject is; the matrix verb then agrees with the embedded associate/verb, (23).<sup>3</sup>

- (23) a. There looks like there is gonna be a riot.  
 b. \*There looks to me like Bill considers there to be no chance that Nixon will resign.  
 (Rogers 1974: 81, 96)  
 c. There look/\*looks like/as if there are/\*is going to be problems with the dean  
 d. \*There sounds like Bob believes there to be no chance of her winning.  
 (Postal 2003: 124)

- The matrix subject can be the subject chunk of an idiom, (24), including idioms that resist A'-movement, control, and cannot antecede pronouns (see note 7).

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<sup>3</sup> Expletives constructions generally pattern in the same way whether or not a CP/TP boundary intervenes. Among speakers that accept matrix expletives, some have obligatory agreement with the remote goal (Groat 1997: 122 and note 53, Postal 2003: 124); some require singular here and in all expletive constructions (Schütze 1999, Den Dikken 2001, Chomsky 2000: 128, 148 note 88); many allow remote agreement and prefer (or require) if *there* is postverbal, as in questions (Rezac 2004a: 121 note 132), again as in other expletive constructions (Rupp 2005 and the literature there). The present analysis assumes that *There T+seems {to be / like there are} books on the shelf* involves index-transmitting  $\phi$ -Agree from *books* to T (Chomsky 2000: 149 note 90, Rezac 2004a: 266ff.); otherwise they should have analogues with unrestricted A-resumption, false for *seem* + INF, though perhaps not *seem like* along the lines of note 6.

Likewise, whatever bars (i-a) beside (i-b) is parallel to the familiar (i-c). The pattern is apparently not to be attributed to the Merge over Move preference of Chomsky (2000: 104) (Manzini 2008: 556, Bošković 2002: 196f., Brody 2002: 37). (i-a,c) might simply impose incompatible interpretations on the associate DP as the in-situ associate of an expletive vs. a subject in [Spec, TP], since the two constructions differ in information structure (Ward and Birner 1995) and existential assertion (*There is snow (falling) outside* vs. *Snow is \*(falling) outside*). If *there* had a token index like idioms are supposed to in note 7 (cf. Chomsky 2000: 149 note 93, the theory developed below would only allow another *there* to raise/copy-raise in (i).

Presentational *there* seems fine in copy-raising (ii), controlling for level clash and the constraints of Chomsky (2001: 20). Locative inversion is excluded, (iii-a) (Postal 2003: 46), as in plain raising: the PP is in an A'-position from which it cannot raise (Culicover and Levine 2001) and blocks access to a lower DP (iii-b,c). Independently, non-DPs resist resumption for unclear reasons (McCloskey 2002).

- (i) a. \*There seem(s) like [Niflungs are \_\_\_ at the gates].  
 (cf. It seems like Niflungs are at the gates).  
 b. There seem like there are Niflungs at the gates.  
 c. There seem (\*Niflungs) to be (Niflungs) at the gates.
- (ii) There seem like there have already been three separate letters sent out to the participants.  
 (but contrast Postal 2003: 46)
- (iii) a. \*To Ruth looks like (there) fell the task of cleaning the pots.  
 b. (?)I expect on the shelf to be grammars of Karelian  
 c. \*Grammars of Karelian are expected on the shelf to be.  
 ((a) Postal 2003: 46, for (b) cf. Branigan 1997)

- (24) a. The shit looks (to me) like it's gonna hit the fan.  
 b. \*Then fan looks (to me) like the shit's gonna hit it.  
 c. ?The cat looks (to me) like it got Spiro's tongue.  
 d. \*Spiro's tongue looks (to me) like the cat got it. (Rogers 1974: 82-3, 97)  
 e. %The shoe looks like it's on the other foot.  
 f. \*The other foot appears as if the shoe is on it. (Potsdam and Runner 2001: ex. 6, 15)  
 g. The wolf looks like it is at the door.  
 h. \*The wolf sounds like Bob believes it to be at the door. (Postal 2003: 124)
- The matrix subject can be an object like a gerund that may undergo A-movement but cannot participate in the thematic use of *seem*, (25).

- (25) a. Doing linguistics looks to me like it will destroy Max.  
 b. \*Doing linguistics looks to me like Max enjoys it. (Rogers 1974: 97)

An alternative analysis is that copy-raising involves regular A-movement whose foot is spelled out as a pronoun. It is suggested by the availability of idiom chunks, if idiom chunks were to require reconstruction into copies (see note 7). However, other reconstruction facts robustly indicate that the embedded pronoun is semantically a pronoun rather than a copy, and that the matrix subject is base-generated high in the matrix clause. Pronouns *qua* definite descriptions permit apparent reconstruction of the NP content of their antecedent, both in and out of resumptive constructions, but only copies permit reconstruction of quantifier scope (Sauerland 2004, Elbourne 2005, Guillot 2006b, Sharvit 1999). Scope reconstruction is possible in English A-movement (Boeckx 2001, Sauerland 2004, von Stechow and Iatridou 2002), but not A-resumption (Lappin 1984, Heycock 1994: 293f., Potsdam and Runner 2001, Asudeh 2004: 367).<sup>4</sup> Raising in (26a) permits *two* to be interpreted below *seem*, unless it is trapped upstairs as by binding a variable in the experiencer in (26b) (Fox 2000). Copy-raising in (26c) forces unambiguous scope above matrix *seem* (Potsdam and Runner 2001, Rezac 2004a: 123f.).

- (26) a. Two people<sub>i</sub> seem *t*<sub>i</sub> to have won the lottery. *seem* > 2, 2 > *seem*  
 =Two people are such that they seem to have won the lottery. / It seems that (there are) two people (who) have won the lottery.  
 b. Two people<sub>i</sub> seem to each other<sub>i</sub> / a different investigator each<sub>i</sub> to have won the lottery. *seem* > 2, \**seem* > 2  
 =Two people are such that they seem to (...) to have won the lottery. / ≠It seems to (...) like (there are) two people (who) have won the lottery.  
 c. Two people<sub>i</sub> seem like they<sub>i</sub> have won the lottery. 2 > *seem*, \**seem* > 2

<sup>4</sup> But see Déprez (1992: 3.1) on Haitian Creole, suggesting a scope within embedded negation (for some speakers), and Artiagoitia (2001a) on Basque, perhaps within the modal scope of *seem*.

- = Two people are such that they seem like they have won the lottery /  
 ≠ It seems like (there are) two people (who) have won the lottery.

Similarly, the matrix subject of A-resumption, unlike the subject of A-movement, cannot be a bare plural in the nuclear scope of adverbs like *rarely*, (27), a weak determiner with an existential rather than proportional reading (Potsdam and Runner 2001), or a bare noun with an existential rather than generic interpretation (Heycock 1994: 293-4, Rezac 2004a: 125). It lacks a reconstruction site within the embedded clause at the position of the pronoun, and up to fairly high within the matrix clause, so that it cannot scope below *seem* and get an existential reading in it. It is base-generated around matrix [Spec, TP], and links to a pronoun that is a pronoun rather than a movement copy. In A-movement the banned readings are available even if the moved DP additionally binds a pronoun, as in *Cows<sub>i</sub> rarely seem to be intelligent in their<sub>i</sub> natural environment*.

- (27) a. Cows (*rarely*<sub>2</sub>) seem (*rarely*<sub>1</sub>) to be intelligent. *rarely*<sub>1/2</sub> > cows  
 b. Cows (\**rarely*<sub>2</sub>) seem like they are (*rarely*<sub>1</sub>) intelligent. *rarely*<sub>1/\*2</sub> > cows  
 (Potsdam and Runner 2001)

Copy-raising is thus A-resumption: the separate base-generation of the matrix DP and the embedded pronoun that interprets it. Yet Potsdam and Runner (2001) observe that the requirement for A-resumption to link to the subject of the next lower clause, as in (22) and (24), is simply the locality of A-chains, embodied in Roger's (1974) analysis as raising with a pronominal copy. The same result is reached by work on the similar copy-raising in Haitian Creole by Déprez (1992) and in Turkish by Moore (1998). Similarly, copy-raising alternates with expletive + cross-clausal  $\phi$ -Agreement that is subject to A-chain locality, just as raising and expletive + local  $\phi$ -Agreement are both subject to the same locality. This is the locality of A-chains that restricts them to the closest DP not in an island, as in (28) and (29).

- (28) a. Readers<sub>i</sub> were shown *t<sub>i</sub>* [that apoptosis has been found in prokaryotes].  
 b. Apoptosis<sub>k</sub> was shown [*t<sub>k</sub>* to have been found in prokaryotes] to readers.  
 c. Apoptosis<sub>k</sub> was shown (\***readers**) [*t<sub>k</sub>* to have been found in prokaryotes].  
 d. There was shown (\***readers**) [to have been apoptosis found in prokaryotes].  
 (raising/agreement blocked by *readers*)
- (29) a. There is<sub>SG</sub>/\*are<sub>PL</sub> [**one**<sub>SG</sub> [of its leaves<sub>PL</sub> / of the leaves<sub>PL</sub> on it]] falling.  
 b. \*Its leaves<sub>i</sub> is/are [**one** [of *t<sub>i</sub>* / of the leaves on *t<sub>i</sub>*]] falling.  
 c. \*The tree<sub>i</sub> is/are [**one** [of its<sub>i</sub> leaves<sub>i</sub> / of the leaves on it<sub>i</sub>]] falling.  
 (raising/agreement blocked by *one*)

Chomsky (2000) and subsequent work attributes the locality constraints on A-movement to the locality of  $\phi$ -Agree, since  $\phi$ -Agree is constrained by them even if it occurs without A-movement, while A-movement arguably entails  $\phi$ -Agree as a component. The characterization of the relevant locality principle(s) is not essential here. A promising one is feature-relativized minimality that restricts  $\phi$ -Agree to the closest phi-bearer, the closest DP in (28) and (29). It may be extended to explain why *seem like* complements are transparent to cross-clausal agreement while those of *seem that, be said that, be*

*wondered how* are not, if the latter but not the former are headed by an element with 3SG phi-features like *that<sub>C</sub>* or a covert *it<sub>D</sub>* (Rezac 2005).<sup>5</sup> It may be supplemented by other principles like phase-theory for constraints common to A/A'-relations, such as the opacity of adjuncts, be supplanted by them, or inversely (Chomsky 2000: 108, 2008: 143). However that may be, the locality of  $\phi$ -Agree unifies the parallel locality constraints on remote agreement, A-movement, and A-resumption. In the theory of movement and resumption where both involve the Merger of a DP in a nonthematic position, this comes out to say that the interpretive link of the nonthematic DP, the copy or pronoun through which it is interpreted, is determined by  $\phi$ -Agree.

### 3.2 Interpreting through copies and pronouns: The role of Agree

To allow  $\phi$ -Agree to restrict the interpretation of A-resumption in the same way as it restricts A-movement, a modification of the syntax-interpretation mapping in section 2 is required. In Heim and Kratzer's (1998) (17), the unitary Move operation is responsible for interpretively linking the pre-movement and post-movement position of a DP. The pre-movement position is replaced by a silent indexed pronoun (a trace), and the post-movement one is linked to it by the insertion of a numerical index immediately below it, translated as the  $\lambda$ -binder of the pronoun. This formulation is unavailable when movement is decomposed into Merge and Agree, and it is unavailable for A-resumption where the matrix subject and the linked pronoun are separately base-generated. Something else must ensure that in both A-movement and A-resumption, the DP Merged in [Spec, TP] interpretively links to the goal of the  $\phi$ -Agree of T.

Agree can be used to fix the variable names for Predicate Abstraction in the same way as Move does in (17), as Rouveret (2002) and Adger and Ramchand (2005) propose for A'-resumption (section 6) and Kratzer (2009) for variable binding. Agree transmits features from the goal to the head that hosts the probe for those features, (30):

(30) Agree maps  $[_{HP} H_{[u\phi, uID]}] \dots DP_{[\phi=x, ID=i]} \dots]$  to  $[_{HP} H_{[u\phi=x, uID=i]}] \dots DP_{[\phi=x, ID=i]} \dots]$

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<sup>5</sup> The D/3SG-analysis of *that* CPs in Rosenbaum (1967), Stroik (1996), Moro (1997:173ff.), Anagnostopoulou (2003: 187), Picallo (2002) is to be squared with the Case Resistance paradigm (i) of Stowell (1981), Pesetsky (1982), although (ii) fits if *it* reflects the moved 3SG phi-set of the CP. The prepositional nature of *like* might be another (relatable) reason for the transparency of *seem like* (Heycock 1994: 295-8). The complement of *seem like* is transparent to non-d-linked A'-extraction, (iii), so it is not an adjunct (cf. Asudeh 2004: 372), and does not have the agreement controller trace at its A'-edge.

- (i) a Gunnar hoped \*(for) her success, wondered \*(about) her success  
     b Gunnar hoped \*(for) that she would succeed, wondered \*(about) if she would succeed.
- (ii) a That Guthrun would succeed seemed likely.  
     b It seemed likely that Guthrun would succeed.
- (iii) There are no spaces [where<sub>i</sub> there look like [<sub>CP</sub> there should be spaces  $t_i$ ]].

Let us suppose that among the features that  $\phi$ -Agree transmits from the DP to H in (30) is the valued *index* feature [ID] of DP, perhaps simply because the phi-features of a DP are its index, as suggested at the end of this section. This index can do the work of the numerical index  $i$  introduced by Move (17) as the name of the pronominal variable (trace)  $t_i$  at the pre-movement position, and the name used by Predicate Abstraction to bind it when it translates the target of movement as the derived predicate  $\lambda x. [[\dots t_i \dots]]^{\beta[i \rightarrow x]}$ . The formulation of Predicate Abstraction (15) requires no change if Agree transmits features by moving them to the projection of the Agreeing head as terminals, and only a trivial change to refer to valued [ID] on the head of the future derived predicate if Agree transmits features by valuation as in (30) (cf. section 6). Thus  $[_H' H_{[ID=i]} \dots]$  is translatable as  $\lambda x. [[[_H' H \dots t_i \dots]]]^{\beta[i \rightarrow x]}$ , permitting the interpretation of a DP in [Spec, HP] by binding the goal of [ID]-Agree.

Unlike the introduction of indices by Move (17), their fixation by Agree (30) does not constrain the expression that interprets a nonthematic DP to being its copy. Any bindable expression will do: a pronoun, which is what occurs in copy-raising, or a copy provided there is a way to convert copies to bindable expressions like Fox's (2002) Trace Conversion, which is what happens in movement. At the same time, the location of the bound expression is constrained by the locality of the Agree that transmits the index. In A-movement and A-resumption, this is the  $\phi$ -Agree of T with its phi-probe.

If Agree does not transmit an index to the sister of a nonthematic DP as in (30), the location of the expression that interprets it is not constrained by Agree. The head of the sister of such as DP may have the option of coming with a freely specified index from the lexicon, as in Heim and Kratzer (1998) for the C of *such that* relatives, or alternatively Predicate Abstraction may translate [DP  $\alpha$ ] where DP is nonthematic by freely picking the index for  $\lambda x. [[\alpha]]^{\beta[i \rightarrow x]}$ , as in Doron and Heycock (1999). The result is unrestricted A-resumption explored in the section 3 for Breton. In English it is not an option because T always has valued [ID] from  $\phi$ -Agree.<sup>6</sup>

The ontological status of [ID] must be addressed in the context of the Minimalist Program where syntax conserves the interpretable content of lexical items. [ID] does not raise any issues if it is reducible to an interpretable property of DPs that already participates in syntactic dependencies. A natural candidate is phi-features, that is, the interpretive property of DPs of which morphological phi-feature distinctions are an

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<sup>6</sup> Predicate Abstraction may also be formulated to use the [ID] of the nonthematic DP in [Spec, HP] (McCloskey 2002, Rezac 2004a, Kratzer 2009, Heim 2008). This is attractive because the Agree-valued [ID] on H is expected to be uninterpretable and so might delete by the time Predicate Abstraction applies, while the [ID] of a DP is interpretable. It must then be ensured that the [ID] value transmitted by Agree to H constrain the [ID] value of the DP in [Spec, HP]. One possibility is to posit a syntactic *Match Condition* that Merge of [Spec, HP] not conflict with the Agree-valued feature of H (Rezac 2004a: 3.4.4, Kratzer 2009: 196). However, the effect of the Match Condition may be derivable on the story at the end of this section: the goal of Agree mostly requires copy deletion because the DP in [Spec, HP] takes up the only available Case and cannot be deleted, and copy deletion requires that the upper and lower DP involved have the same index. The exception is copy-raising, where the goal of matrix Agree is not deleted and so the [ID] of the matrix subject should be free, giving unrestricted A-resumption. However, it may be that beside the restricted A-resumption on the embedded subject, English has unrestricted A-resumption in this context that is difficult to detect because its results are similar to the thematic use of *seem* in (21).

expression in spoken languages, and referential loci in signed languages, following Aronoff, Meir and Sandler (2005: 316-9). If [ID] is phi-features, the  $\phi$ -Agree of T will naturally transmit it from its goal to T. The possession of valued [ID] may be parametrized on the goal, allowing expressions like infinitives without [ID], with or without a default 3SG [phi]-value. In English and French, [ID]/[phi]-Agree of T always finds a goal with an index to restrict the interpretation of a DP base-generated in [Spec, TP], including an A-moveable idiom chunk, or the *it/il* expletive, or the object *pro* of impersonal passive (Dobrovie-Sorin 1998). All these have valued [ID], correlating [ID] and thus A-chain formation with argumenthood, as in Chomsky (1986). The *there/il* expletive structures does not intervene and seems devoid of [ID] specifications, although not entirely of phi-specifications in grammars where it leads to 3SG. Parallel results seem achievable under other assumptions, for instance [ID] as a probe distinct from [phi] if a principle can ensure that they find the same goal of both are present (Maximize Agree, Rezac 2004b), or [ID] born valued on functional heads and transmitted by Agree to unvalued [ID] on goals (Rouveret 2002, Adger and Ramchand 2005).<sup>7</sup>

### 3.3 Distributing copies and pronouns: The role of Cases

This view of the syntax-semantics mapping replaces the role of unitary Move by Agree in the creation of derived predicates, and liberates the system to allow the interpretation of a nonthematic DP both by its copy and by a pronoun found by  $\phi$ -Agree, resulting in A-movement and A-resumption respectively. However, A-movement and A-resumption occur in complementary contexts. A nonthematic A-position relates to a gap if no finite, agreeing CP boundary intervenes, and to a pronoun otherwise:

- (31) a. The shoe T+seems [to be *t/\*it/\*the shoe* on the other foot now].  
 b. The shoe T+seems [like *it/\*t/\*the shoe* is on the other foot now].

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<sup>7</sup> Idiom chunks are variably acceptable in English copy-raising, in contrast to regular raising on the one hand and expletive + cross-clausal agreement on the other; Déprez (1992: 206 note 8) notes their variability in copy-raising in Haitian Creole. Since reconstruction into the embedded pronoun is impossible in copy-raising, these idioms chunks must not need reconstruction, contrary to Sauerland and Elbourne (2002). Yet in (i) they cannot antecede PRO and pronominal anaphora, even when part of the same idiom, save in tags. Plausibly, these idiom chunks have some kind of default content to be taken as arguments by their predicates (Chomsky 1981: 37, 1986: 212 note 71, Horn 2003). This would give them [ID] to participate in  $\lambda$ -binding, including tags and A-resumption. The inability to control PRO is consistent with restrictions on it discussed in Chomsky (1986). The failure to antecede non-tag pronouns remains curious, given that tag pronouns are fine yet cannot be reduced to PF repetition (Kay 2002), and that some of the idiom chunks involved look like definite descriptions, which pronouns may typically realize (*take the rap*). Perhaps it is attributable to insufficient content on accessibility or centering approaches to pronominal anaphora, such as that of Ariel (1990).

- (i) Much<sub>i</sub> seems to be made of her, doesn't it<sub>i</sub>, without much/\*PRO<sub>i</sub>/\*it<sub>i</sub> being made of her friends.

The complementary distribution is reducible to Case. In A-movement contexts (31)a), the goal of the  $\phi$ -Agree of T lacks Case, and T has Case it can assign. If the goal stays in-situ and an expletive Merges in [Spec, TP], the goal gets Case. If a copy of the goal is (re-)Merged in [Spec, TP], there are two content-identical DPs that must satisfy the Case Filter. The upper DP is licensed by the unique Case of T. The lower DP is treated by copy deletion and conversion operations. The PF consequence is to delete a DP under identity with a higher DP, rendering it invisible to the Case Filter. On the other hand, if the DP Merged in [Spec, TP] is not identical to the goal of the  $\phi$ -Agree of T, as when a lexical DP binds a pronoun, there are two distinct DPs neither of which can be eliminated by copy deletion, and one of them fails the Case Filter. Thus, the Case Filter forces identity between the goal of  $\phi$ -Agree of T and the DP Merged in [Spec, TP].

In the A-resumption context (31)b), the goal of the  $\phi$ -Agree of the matrix T is the subject of the next lower finite, agreeing clause. It Agrees with the T of its clause and gets Case from it. Next, matrix T Agrees with it. In the matrix [Spec, TP] is Merged either an expletive or a contentful DP. The latter requires linking to an expression through which it may be interpreted, a pronoun or a copy. If the goal of the  $\phi$ -Agree of matrix T is a pronoun, A-resumption occurs. If it is a copy of the matrix [Spec, TP], the copy deletion and conversion operations apparently cannot operate, since across finite clause boundaries in (31)b) only A-resumption and not A-movement surfaces. Let us suppose that the operations cannot apply to two DPs if each receives Case. This works out right for A and A'-movement, and prevents copy deletion and conversion in copy-raising contexts, as well as between identical DPs separate by a Case domain, such as nominative subject – accusative object, where reflexives express what copies would.<sup>8</sup>

This account paints a picture of copy deletion at PF and its interaction with Case that may be summarized as follows, returning shortly to copy conversion at LF:

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<sup>8</sup> Two technical issues arise in A-resumption and cross-clausal agreement. One is whether  $\phi$ -Agree of the matrix T should be allowed with a goal that has participated in  $\phi$ -Agree with the T of a separate clause and received Case, if  $\phi$ -Agree needs a goal with an unvalued Case feature (Chomsky 2000, 2001). Empirically, this does occur in A-resumption and cross-clausal agreement cross-linguistically. The controller in cross-clausal agreement has been argued to be overtly or covertly at the edge of its clause (Polinsky and Potsdam 2001, Branigan and MacKenzie 2001, Bruening 2001). This is not so in English, (20)h), but the controller does Agree with the T and thus perhaps C at the edge of its clause. Valued features at the edge of a phase remain undeleted until the spell-out at the next higher phase-head. This allows either the goal or the C/T that Agrees with it, at the edge of their phase, to value a phi-probe up to the next higher phase head; see respectively in Bruening (2001), Carstens (2005) and Rezac (2004a: 199ff.), Legate (2003). Potsdam and Polinsky (2001), Branigan and MacKenzie (2001), Bhatt (2005) propose alternatives.

The second issue is how Case is assigned by T to a DP base-generated in [Spec, TP] distinct from the goal of the  $\phi$ -Agree of T in the lower clause (Rezac 2004a: 3.4.4). The matrix nominative has not been assigned, so matrix T<sub>NOM</sub> could Agree with [Spec, TP] under the various options discussed in Rezac (2008: 4.2), Béjar and Rezac (2009: 48 note 7), provided it has a probe to establish the requisite relationship; the EPP would serve in the system of Rezac (2004b). The issue arises in A/A'-resumption generally.

The goal of copy-raising finds itself in a *that*-trace configuration, ruling out an A'-movement, but this does not seem to be what blocks its movement; for instance, there is no amelioration by 'adverbial oil'.

- (32) Copy deletion and Case:
- a. Copy-deletion: PF-deletes a DP under identity with a c-commanding DP, perhaps by a mechanism relatable to other deletions like ellipsis (Chomsky 1995: 3.5, 4.4.1).
  - b. Case Filter: A DP occurrence must receive Case, unless subject to copy-deletion. The bleeding of the Case Filter by copy-deletion hints at theories of Case based on PF needs (Rouveret and Vergnaud 1980: Appendix, Chomsky 2000: 123, 136) and the amelioration of other well-formed constraints by deletion (Lasnik 2009 and the literature cited there).
  - c. Copy-deletion and Case: Otherwise identical DPs are not subject to copy-deletion if each receives its own Case, perhaps because it renders them non-identical, perhaps because Case must be PF-realized once assigned.

### 3.4 Putting it together

A-resumption and A-movement thus make use of the same operations, Agree and Merge. A DP is Merged in nonthematic [Spec, TP] and the  $\varphi$ -Agree of T identifies the goal to which it links. Independent principles decide whether the goal can only be a deleted copy of the DP Merged in [Spec, TP], or only a distinct pronoun. Let us now go through this theory for A-movement, restricted A-resumption, and unrestricted A-resumption in (33), applying it and filling in missing pieces.

- (33) a. Expletive + agreement:  $[EX T_{[ID=i]} \dots \alpha_{[ID=i]} \rightarrow \text{indefinite DP}]$   
 *$\alpha$  is located by  $\varphi$ -Agree of T*
- b. A-movement:  $[DP^* T_{[ID=i]} \dots \alpha_{[ID=i]} \rightarrow *pronoun/*DP/\sqrt{DP}]$   
 *$\alpha$  is located by  $\varphi$ -Agree of T in the same Case domain as DP\**
- c. Restricted A-resumption:  $[DP^* T_{[ID=i]} \dots \alpha_{[ID=i]} \rightarrow \sqrt{pronoun/*DP/*DP}]$   
 *$\alpha$  is located by  $\varphi$ -Agree of T outside the Case domain of DP\**
- d. Unrestricted A-resumption:  $[DP^* T \dots \alpha_{[ID=i]} \rightarrow \sqrt{pronoun/*DP}/(*DP)]$   
 *$\alpha$  is c-commanded by DP\*;  $\alpha$  is fine as ~~DP~~ iff in Case domain of DP\**

In all cases, DP\* is freely base-generated in [Spec, TP] as a nonthematic A-position, in the same way an expletive can be freely base-generated there, (12)a). Unlike an expletive, DP\* must receive a thematic interpretation, (12)b). Let us suppose that T has a valued [ID] feature from Agree, [ID=i], as occurs in both A-movement and restricted A-resumption. Predicate Abstraction translates  $[DP^* T']$  as  $DP \lambda x. [[T']]^{g[i \rightarrow x]}$  in virtue of [ID=i] on the head T of T' (or on DP\*, see note 6). In English, the DP<sub>[ID=i]</sub> goal of  $\varphi$ -Agree typically lacks Case because it is in the Case domain of T, (33)b). DP\* and DP fall into the input of the copy deletion operation, which may delete of a Caseless DP under identity with a higher DP, and must do so since there is only one Case for DP and DP\*.

The deleted DP needs to be adjusted at interpretation, unless it is a pronoun, since DP\* cannot bind a non-pronominal DP to be interpreted through it. Let us adopt Fox's (2002) proposal that the adjustment consists in replacing the D of the copy by *the* and adding the predicate  $\lambda y.y=x$  to its NP restrictor, so that *the book* and *every book* are both translated as *the y such that [y is a book and y is identical to x]*. The choice of variable

name is given by [ID=i] on the copy, resulting in *the book identical to x<sub>i</sub>*. This procedure must be restricted to those DPs that undergo copy deletion, since it only interprets them, not more remote content-identical DPs.<sup>9</sup> One way to accomplish this is to view deletion and conversion as part of the same algorithm, operating at the PF and LF interfaces:

- (34) Copy deletion/conversion  $\Delta$ :<sup>10</sup>
- a. Delete DP at PF under identity with c-commanding DP', subject to (32).
  - b. Convert DP at LF to  $[_{DP} \text{ the } [_{NP} \& \lambda y(y=x)]]$ .

In English, there is only one configuration where the  $\phi$ -Agree of DP reaches a DP that does not need Case: in the copy-raising configuration (33)c) where its goal is the subject of a finite complement and Agree occurs with [ID] on it (directly or indirectly, see note 8). Copy deletion cannot apply because the goal already has Case, (32)c), and so neither can copy conversion. If DP is a pronoun, all goes well: the configuration  $[DP^* T_{[ID=i]} \dots [_{TP} \text{ pronoun}_{[ID=i]} T_{[ID=i]}]]$  resulting from Agree and Merge is interpreted by Predicate Abstraction as  $[[DP]] \lambda x. [[[_{T} \dots x_i \dots]]]^{g[i \rightarrow x]}$ . If DP is not a pronoun, it is ruled out by Condition C. To be more precise, let us suppose following Reinhart (2006) that Condition C is just the logical impossibility of a quantifier binding a variable outside its scope (*She said that every archaeologist will present* \*'Every archaeologist<sub>i</sub> said that she<sub>i</sub> will present'), and of a variable-less definite description being bound (*The archaeologist Kate said that the archaeologist left* as \*'The archaeologist Kate said that the archaeologist  $x=Kate$  left'), along with an economy condition to rule out coreference in the latter case. The copy conversion algorithm avoids this problem by introducing pronouns into definite descriptions, so that *The archaeologist Kate T ~~the archaeologist identical to x~~ said that...* is correctly interpreted as 'The archaeologist Kate such that the archaeologist identical to  $x=Kate$  said that...'. It seems to be a general property of deletion to avoid Condition C, giving Vehicle Change in ellipsis (Fiengo and May 1994) and bound pronouns in NP ellipsis for pronouns that realize definite descriptions (Elbourne 2005).

In systems like English or French, T always finds a goal with valued [ID], because  $\phi$ -Agree of T requires a phi-bearing goal, and all phi-bearers have valued [ID] in these languages. If Agree were not to transmit valued [ID] to T, the result would be A-resumption unrestricted by the locality of  $\phi$ -Agree, (33)d). Predicate Abstraction may

<sup>9</sup> That is, *No/the baker ~~no/the baker~~ talked to no/the baker* receives the interpretation *No/the baker  $x$  is such that **the baker  $x$**  talked to no/the baker* with conversion of the deleted DP and not *No/the baker  $x$  is such that **the baker  $x$**  talked to **the baker  $x$*** .

<sup>10</sup> Empirically, other deletions do not over-apply to yield DP copy-deletion: thus Elbourne's (2005) NP-deletion for pronouns gives *the archaeologist Kate said that  $[_{DP} \text{ she } [_{NP} \text{ archaeologist identical to her}]]$  left*, but there is no DP-deletion *the archaeologist Kate said that  $[\text{the archaeologist identical to her}]$  left*. If syntactic reconstruction exists, beside conversion there is also the possibility of deleting the upper copy at LF prior to Predicate Abstraction. The algorithm is assumed to be sensitive to all interpretable content of DPs, including choice of indices, as is VP ellipsis. Direct evidence comes from the unrestricted A-resumption of Breton, assuming the analysis of (33)d) below: *She<sub>1</sub> has<sub>T</sub> she<sub>2</sub> found her<sub>1/2</sub> dog* is fine, with unrestricted A-resumption of *she<sub>1</sub>* on a variable outside its Case domain, as is *She<sub>1</sub> has<sub>T</sub> ~~she<sub>1</sub>~~ found her<sub>1/2</sub> dog*, with a variable in its Case domain and subject to copy deletion/conversion, but there is no *She<sub>1</sub> has<sub>T</sub> ~~she<sub>2</sub>~~ found her<sub>1/2</sub> dog*, which would exist if copy deletion/conversion were insensitive to choice of indices.



anaphoric pronoun (both underlined), distinct from the thematic or raised subject in the postverbal position (in bold). It is a widely noted feature of the language and studied in depth by Urien (1989a, b) and Hendrick (1988). Below are developed arguments that the preverbal DP can or must be in the core A-position [Spec, TP], and that the resumptive pronoun can be any pronoun in its scope. The former is proposed by Hendrick (1988), who yet took the pronoun to realize the foot of an A-chain under A-chain locality, the latter by Urien (1989a, b), who reveals the systematic parallelism between the double subject construction and resumptive relatives. Following the terminology of Doron and Heycock (1999), a DP base-generated in a nonthematic A-position and freely linked to a resumptive pronoun will be called the *broad subject*, and the regular thematic or A-moved subject the *narrow subject*. In these terms, the proposal here is that one structure underlying the double subject construction (35) involves a broad subject, that is locality-unrestricted resumption on a non-thematic A-position, whether or not Breton also has resumption on preverbal A'-positions that surfaces as (35). The existence of unrestricted A-resumption has been proposed partly in McCloskey and Sells (1988), more generally in Doron and Heycock (1999), both discussed in section 5. Breton contributes by exhibiting unrestricted A-resumption on the core [Spec, TP] A-position and relating it to the absence of index transmission to T by  $\phi$ -Agree.

The relevant aspects of Breton must first be set out: resumption, agreement, and nonthematic positions. The resumption that occurs in the Breton double subject construction is parallel to resumption in Breton relative clauses, systematically leading to the ambiguity illustrated in (35). Both are studied by Urien (1989a, b), who reveals an unrestricted resumptive pattern of the type familiar from Irish (McCloskey 1990, 2002, 2005). Only the subject and object DP positions are accessible to fronting in independent or relative clauses. All DP positions are accessible to resumption, save the "highest subject". The resumptive must be a non-emphatic pronoun agreeing in phi-features with the antecedent; 'aboutness', adverbs, demonstratives, or definites do not suffice (Urien 1989a: 208-211, Stephens 1982: 252-5). The resumption is immune to islands, as in (36) (Urien 1989a, Guillot 2006a: 1891, borne out by the corpus in Rezac 2009).<sup>13</sup>

- (36) a. Ar bilhaouerien a dremene dre amañ a ouez**ed** mat [piv e oant].  
 the chifonniers that passed through here R one.knew well who R they.were  
 The chifonniers that passed through here, one knew well who they were  
 (MY-FB: 111)
- b. Ar ganevedenn, [...], a deu en eun taol-kont **kement liou** [<sub>RC</sub> a zo warni]

<sup>13</sup> On the highest subject restriction, see Urien (1989a: 209). On resumption on objects, see esp. Stephens (1982: 135, 145-6, 194, 247, 257), with variation in resumption on the local object, cf. Urien and Denez (1979/1980: 307f.), Stump (1984: 334-5), Urien (1989b: 200), on movement from nonlocal object positions Hendrick (1988: 212 note 40), and so perhaps also movement from nonlocal subjects Urien (1989a) vs. Hendrick (1988: 261 note 21 and text apposite), as well as some variation in what type of object pronouns can serve as resumptive, Urien and Denez (op.cit.), Stump (op.cit.) vs. Stephens (op. cit.), Fave (1998: 50). Hendrick (1988: 194-5, 204, 212 note 40) observes island-sensitivity in the resumption for some speakers, even in relative constructions; cf. Rouveret (1994, 2002), Willis (2000) for variation in Welsh. Morphological signals along the path of movement/resumption dependencies do in some dialects make distinctions comparable in interest to those of Irish, but not enough is known about them.

the rainbow                    R comes suddenly                    every colour                    R is on.it  
da veza    flamm kenañ [...]                     
to be            bright very  
Every colour that is on the rainbow ... becomes suddenly very bright  
(MY-FB: 28).

The theory developed in section 3 proposes that such resumption could occur on a nonthematic A-position if one is available, if it is not constrained by the transmission of an index feature through (phi-)Agree of the head that projects it, and if other conditions such as the Case-licensing of the narrow subject are met. The *Complementarity Effect* in Breton  $\phi$ -Agreement (38) suggests that no index is transmitted by it (see McCloskey and Hale 1983 for Irish, Stump 1984 for Breton, Rouveret 1991, 1994 for Welsh):

- (37) Complementarity Effect in Breton  $\phi$ -Agreement (Jouitteau and Rezac 2006):
- (i) Rich agreement: the  $\phi$ -features of a phonologically null potential agreement controller are coded by  $\phi$ -agreement morphology, (38)c).
  - (ii) Invariant agreement: the  $\phi$ -features of a phonologically overt potential agreement controller are not coded by  $\phi$ -agreement morphology. A verb then assumes the 3SG form, (38)a)-(38)b).
- (38) a. Bez e oar / \*ouzont ar chas.  
EXPL R know.3SG/\*PL the dogs  
The dogs know.
- b. Ar chas a oar / \*ouzont  
the dogs R know.3SG/\*PL  
The dogs know.
- c. Bez a ouzont/\*oar.  
EXPL R know.3PL/\*3SG  
They know. (*oar* ok for *He knows*)

Jouitteau and Rezac (2006) draw two conclusions from the Complementarity Effect. One is that  $\phi$ -Agreement with null subjects depends on the process that gives rise to them, such as cliticization or incorporation into the verb, (39)a). Henceforth, it is glossed by attached pronouns. The other is that in the presence of overt subjects,  $\phi$ -Agree occurs not with them, but with some closer 3SG element, (39)b) since the verb assumes a 3SG form, rather than agree with the overt subject. This intervener may be a nominal-like functional projection above the  $\nu$ P, an expletive between T and  $\nu$ P, a functional projection in the DP above its phi-core (Jouitteau and Rezac 2006, Jouitteau 2005, Rouveret 1991). Such interveners plausibly lack the index feature [ID], their 3SG being default phi-features in its absence. Alternatively, the 3SG form of the finite verb might be the default spell-out of finite (non-imperative) verbs, in which case there is no  $\phi$ -Agree at all. Under these options,  $\phi$ -Agree does not transmit the index feature [ID] in Breton to the extended functional heads of verbal clauses, such as T.<sup>14</sup>

<sup>14</sup> The analysis is bolstered by the sole exception to the Complementarity Effect, the verb *have*,

- (39) a.  $T_{\phi=3SG}$  *pro* ... 3SG intervener ...  $t_{pro}$  (null subject)  
 b.  $T_{\phi=3SG}$  ... 3SG intervener ... narrow subject (overt subject)

The absence of index transmission permits DPs base-generated in nonthematic A-positions to link to any pronoun in unrestricted A-resumption, if such positions exist. The situation in finite clauses is promising. Breton has the finite clause schema (40) (Rezac 2004b, Jouitteau 2005 and the literature cited there). The pre-R+V site is obligatory and controls the form of the pre-verbal particle R: *a* for DP arguments, *e* otherwise.<sup>15</sup> This site may be filled by the elements indicated.

- (40) Breton finite clause: \_\_ - R+V+T+AGR - (subj) - particip/pred - (subj) - obj  
 \_\_: complementizer, negation, wide focus expletive(?) *bez*  
*wh*, topic, focus, relative head (or perhaps null operator): moved or resumptive  
 wide focus: closest  $X^{\circ}/(XP?)$  under long head movement / stylistic fronting  
 wide focus: subject but not other arguments: moved or resumptive

As the schema indicates, transitive, intransitive, and raised narrow subjects (definite, indefinite, pronominal) may all remain very low, as in (38) and (41). This indicates low Case licensing positions, independent of the  $\phi$ -Agree of T that never reaches the narrow subject, and arguably independent of T (Jouitteau 2005). However, the narrow subject may also move to the obligatory pre-R+V site in wide-focus sentences, including an idiom chunk in (42). Other moved arguments can usually occur there only with an A'-relationship such as focus, *wh*, or relativization. This suggests the availability of a high

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where overt subject agreement occurs with a subject that originates higher than others. The verb *have* in the double subject construction might be expected to allow agreement with it, if T can Agree with [Spec, TP]. Hendrick (1988: chapter 3) presents evidence to this effect, but it is perilous for the reasons discussed in Rezac (2009). Agreement morphology reflecting null subjects might be analysed as the spell-out of the attached pronoun + 3SG  $\phi$ -Agree, or of  $\phi$ -Agree with the pronoun rather than a 3SG intervener; see Jouitteau and Rezac (2006, 2008). Null subject agreement morphology does not exist in those contexts that ensure the existence of the broad subject construction, infinitives and *be* alternations.

Beside verb agreement, Breton also has agreement on prepositions, (i). They are also subject to complementarity with overt DPs. Jouitteau and Rezac (2006) show that preposition agreement involves no  $\phi$ -Agree, since the preposition assumes its stem not 3SG or agreeing form in the presence of an overt DP (i-a), and that the agreement morphology reflects the postsyntactic incorporation of a pronoun rather than a syntactic one with verbs, since it incorporates left conjuncts (i-b) (cf. Ackema and Neeleman 2003).

- (i) a    *etre Yann hag ar gorrien*                      b    *etrez-añ*                      *hag ar gorrien*  
       between Yann and the dwarves                between-him                and the dwarves

<sup>15</sup> Better, between *a* with "lenition" of the following consonant and *e* with "mixed mutation", these terms describing changes such as *d* > *z* (lenition) vs. *t* (mixed mutation). Many dialects outside Leoneg have (*a*) + lenition in all contexts, rendering perilous their use; see Urien (1989a, 1999: 646, 671 note 3). On the particle, see Urien (1989a, 1999), Rezac (2004b), Jouitteau (2005); cf. Willis (1998: chapter 3) on Welsh.

nonthematic A-position for movement of the narrow subject. However, the nature of the position(s) and of movement(s) to them is unclear. The subject does not move there through  $\phi$ -Agree; it does not need to be Case-licensed there, although it is perhaps Case-licensed there when it does move there; and there may or may not be a relationship to the positions and movements of other elements with which the subject competes for filling the obligatory pre-R+V site, such as long head movement (Rezac 2004b, Jouitteau 2005, Rouveret 2010). In what follows, nonfinite clauses will lead to the conclusion that one the high nonthematic A-positions is the core A-position [Spec, TP] restricted to the narrow subject among all *moved* elements.

- (41) N'en deus ket (Yann) seblantet (Yann) karout ar vugale.  
 not has not Yann seemed Yann like.INF the children  
 Yann has not seemed to like the children.

(Hendrick 1988: 157, Jouitteau 2005: 3.3.2)

- (42) Ar bik<sub>i</sub> a zeuas da t<sub>i</sub> gregiñ en e skouarn.  
 the magpie R came to bite.INF in his ear  
 He decided to get married.

(Borsley & Stephens 1989:417)

In resumptive structures, the pre-R+V site is occupied by the DP that participates in resumption: the initial DP of double subject sentences and the relative head in sentences like (35). The initial DP of the double subject construction may have the full range of A'-readings, topic, focus, *wh*-word, but also a neutral reading in wide-focus sentences, (43)a). The availability of this option suggests it occupies the neutral preverbal position available to moved narrow subjects but not to other moved arguments. Nonfinite clauses will confirm that it may indeed occupy the same unique [Spec, TP] as narrow subjects. Before proceeding to them, it is possible to establish that the lower bound on the position of all the preverbal DPs of resumptive construction is outside the thematic layer of the clause. (43) contrasts the double subject construction built on the passive of *tailañ* 'cut' in (43)a) with a modification of it in (43)b) where the preverbal DP is the moved narrow subject of the active of *tailañ*. The broad subject precedes the narrow subject DP, if there one. The narrow but not the broad subject controls the *have/be* alternation of the perfect auxiliary, where *have* occurs if there is an external argument and *be* otherwise. The narrow but not the broad subject counts for Binding Conditions A/B, which require the anaphora *e unan* 'himself, lit. his one' and *an eil egile* 'each other, lit. the second other' to pick up coarguments (cf. Hendrick 1988: 98-101). The invisibility of the broad subject to these phenomena suggests its nonthematic placement.

- (43) a. Setu pep hini a veze taillet e lod dezañ.  
 voilà every one R was cut his part to.him  
 So everyone had his part (of sea-weed) cut.

(MM-M 8: 24)

- b. Setu pep hini<sub>i</sub> en deus taillet e<sub>i</sub> lod dezañ \*(e-unan<sub>i</sub>).  
 voilà every one has.3SGM cut his part to.himself  
 So everyone cut his own part.

(constructed)



- (47) Daoust da Yann / (daoust) dezhañ / evitañ da vezañ kozh e oa serzh bepred.  
 despite to Yann despite to.him for.him to be old R was fit always  
 Despite Y./him being old, he was still fit.

(Stephens 1990: 162, Kervella 1995: §278)

The constraints on the pre-infinitival position indicate it to be the core A-position [Spec, TP], as in English. A'-positions and the site of long head movement or stylistic fronting are distinct, and absent in infinitives.

When we turn to resumption, we find one other element that can fill the pre-infinitival position: the resumed DP of the double subject construction, shown in (47) for the prepositional and in (48) for the narrative infinitive. Though not mentioned in grammars, the corpus instances of this infinitival incarnation of the double subject construction are robust (all built on intransitives, which permit post-infinitival narrow subjects). Thus the resumed DP of the double subject construction shares a property available to the narrow subject but to no other argument: the potential to occur in [Spec, TP].<sup>17</sup>

- (48) a. Daoust d'ar vro-mañ da greskiñ **loened cheptel enni**  
 despite to the land-this to grow.INF cattle in.it  
 'Despite cattle growing in this land'  
 (D.L., p.c. to M. Joutteau, Quimperlé)
- b. daoust d'an tevinier beza enno **kalz a frankiz**.  
 despite to the dunes be.INF in.them lots of freedom  
 [So many horse-drawn carriages! It was difficult to find place for them,]  
 despite there being lots of space in the dunes.  
 (SV-MR: 30)
- c. daoust d'ezan beza hir **e ziouskouarn!**  
 despite to.him be.INF long his ears  
 [for he was a man of living faith,] despite having heard a lot of racy things!  
 (KI-ZM: 131; D.L., p.c. to M. Joutteau, Quimperlé)
- d. Evit-han da redek **he wad**.  
 despite-him to run.INF his blood  
 [He continues to do his duty] although his blood runs.  
 (BB-VH: 359)
- e. [Du-hont ... e vez gwelet tud gwisket kran ... ha teltennoù savet war ar sabl]  
 evit d'ar re a ya da neuial bezañ diwallet **o c'hroc'henn** deus an heol berv.  
 for to the ones that go to swim be guarded their skin from the sun hot

<sup>17</sup> In these examples in Breton *reded* 'run', *mont* 'go', *don't* 'come', *kreskiñ* 'grow', *sevel* 'rise' are intransitive, as is *treiñ* 'turn', cf. *Treiñ a reaz eur frouden enn he benn* 'turn did an idea in his head' = 'Il lui passa dans la tête une idée bizarre', Troude 1886 s.v. *passer*). *Beza(ñ)/bout* is likewise intransitive 'be' here. In the lexical use of 'be', 'have', *bezañ* is the infinitive of 'be' and in some dialects of 'have' (distinct in finite forms), but not in SV and KI, which use *kaout* 'have', and it cannot be used to express the analogue of English *The dunes have lots of space in them* where Breton must use 'be' (Joutteau and Rezac 2008). In its auxiliary use, *bezañ* is the infinitive of passive 'be' and perfect 'have/be' everywhere.

[There ... are seen finely clothed folks ... and tents raised on the sand] in order for those who go swimming to be their skins guarded from the burning sun.

(BY-AG: 357)

- (49) a. Ha me mond **eur zahad droug ennon**.  
 HA me go.INF a bag-ful anger in.me  
 I became angry.

(MM-M 1: 36; D.L.).

- b. Hag ar jeant ha dont da soñj dezhañ ez edo atav e zaou breizh  
 HA the giant HA come to thought to.him that was still his two preys  
 war e choug  
 on his back  
 And the giant realized that his two victims were still on his back.

(TA-LW: 76)

- c. (Setu) hag hen a trei **eur froudenn** enn he benn.  
 thus HA he HA turn a current en his head  
 A strange idea passed through his head.

(Troude 1886, sv. *bizarre, style, idée*)

A similar argument can be constructed from control infinitives. In English obligatory control, a matrix argument must control the phonologically silent highest DP, rather than some other DP, silent or pronominal, as in (50). This restriction derives from the requirement that PRO be in [Spec, TP], and from the locality of A-movement that permits only the highest, closest DP to move there, exactly as for specified subjects in (4).

- (50) a. Someone<sub>i</sub> asked PRO<sub>i/\*k</sub> to introduce several observers to us.  
 b. Someone<sub>i</sub> asked PRO<sub>i/\*k</sub> to be introduced  $t_i$  to us.  
 c. \*Someone<sub>i</sub> wanted PRO<sub>i/k</sub> to be several observers introduced to  $t_i$ /us<sub>i</sub>.  
 d. (cf. There were several observers introduced to us).

Breton has obligatory control constructions with this restriction. However, the obligatorily controlled element can be not only a silent narrow subject, but also a silent element linked to a pronoun. Thus Breton PRO may either be the narrow subject moved to [Spec, TP], or the nonthematic, resumptive-linked DP of the double subject construction. Two examples of the latter are in (51), to be compared to the double subject construction with the same verbs in finite clauses in (52). The telling character of the control examples is best brought out by trying it out in English: (51)c *\*he was about PRO to be finished a turn of the world by him for he was about PRO to finish a turn of the world*. English lacks the unrestricted A-resumption of Breton, and so its PRO can only be an A-moved DP. In Breton it may also be a broad subject in resumption.<sup>18</sup>

<sup>18</sup> The matrix clauses contain the locutions *dont da X V-INF* lit. 'come to X V-INF', meaning 'X happens to V-INF', and *bezañ tost da X V-INF*, lit. 'be close to X V-INF', meaning 'X almost Vs', with X obligatorily controlling into the infinitive; the embedded clauses contain the locutions *sevel c'hoant gant Y* lit. 'arise (intransitive) desire with Y', meaning 'Y wants', and *mond droug en Y* lit. 'go evil in Y', meaning 'become angry', all with a selectional (thematic and/or idiomatic) relationship between the predicate and the narrow subject. Rather than control, these

- (51) a. beza ma teu kentoh d'ar re-man [PRO sevel **c'hoant ganto**  
 although comes rather to these rise.INF desire with.them  
 da zrailla galleg genen]  
 to cut French with.me  
 although these ones happen rather to want to talk French with me  
 (MY-OH: 3)
- b. Me, neuze, o klevet anezañ a zo tost din; [PRO<sub>i</sub> mond **droug ennoni**] hag ...  
 me, then, hearing him R is near to.me to.go anger in.me and  
 I, then, hearing him, almost get angry and (say to him).  
 (MY-OH: 113)
- c. ha tost e oa dezhañ; [PRO<sub>i</sub> da vezañ graet **tro ar bed gantañ**]  
 and near R was to.him to have done turn the world by.him  
 and he had nearly done the turn of the world  
 (TA-LW-96)
- (52) a. He fried er hontrol a ya **droug ennañ**  
 her husband in opposite R goes anger in.him  
 Her husband on the other hand gets angry.  
 (MY-OH: 113)
- b. Yun a oa savet **c'hoant dezhañ** labourat!  
 Yun R was raised desire to.him work.INF  
 Desire arose in Yun to work!  
 (RJ-GW: 33)

A last variation on the argument comes from small clauses. Breton small clauses (53) occur as independent clauses in narration, as concessive adjuncts, and without *hag* under perception verbs and prepositional complementizers (cf. Chung and McCloskey 1987 for Irish parallels). They have a post-predicate position where their thematic subject may remain and a pre-predicate position where it may raise, (54). Alternatively, a nonthematic DP may fill the pre-predicate position, giving the double-subject construction, (55).

- (53) Breton small clause format: (HAG) (SUBJ) (HAG) PRED (SUBJ)  
 (NB: *hag* is independently 'and' and a relative complementizer; \**hag hag*)
- (54) a. Ha laouen **Bilzig**.  
 HAG happy Bilzig  
 Bilzig was happy.  
 (LF-B: 57)
- b. Labourat a ra c'hoazh, ha **hi** kozh.  
 work R does still HAG she old  
 She is still working, although she is old.  
 (Kervella 1995: §813)

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constructions might involve 'raising to the object of a preposition', where X raises from the subject position of the infinitive to the matrix prepositional object (see McCloskey 1983, McCloskey and Sells 1984: 175f. for Irish). Their significance remains the same, for just as PRO can only be a subject, so can a raisee. No restructuring seems involved, as the infinitives can host high adverbs and passive and perfect auxiliaries.

- (55) ar zelaouerien, hag int ken digor o diou-skouarn...  
 the listeners, HAG they so open their ears  
 The listeners, despite their ears [being] so open, ...

(Trépos 2001: §626)

Nonfinite clauses provide clear evidence that the DP in [Spec, TP] may link to a resumptive which is the possessor of the narrow subject, the complement of various prepositional arguments, or the possessor of such a complement.<sup>19</sup> The infinitival [Spec, TP] groups such broad subjects with moved narrow subjects against all other arguments as the *subject*, the core A-position to which limitation on specified subjects and control or raising refer. Thus the double subject constructions does not always involve resumption on a preverbal A'-position such as a topic. Likewise untenable is an analysis where the double subject construction predicates the preverbal DP of a hidden relative, *I am the one that runs his blood*; even if optional omission of the struck-out elements were possible in infinitives so that (48)d reflected *Despite me being the one that runs his blood*, the verb *runs* would be the finite verb of the relative, not an infinitive. Some instances of the double subject construction involve broad subjects: A-resumption on [Spec, TP].

### 4.3 The double subject construction and BE

Outside nonfinite clauses, several other corroborating lines of evidence for the broad subject analysis of the double subject construction are reviewed in Rezac (2009). Most presently lack sufficient substantiation. However, an argument due to Hendrick (1988) is more robust. It permits detecting broad subjects in finite clauses, and suggests that, in some dialects, all resumptive constructions use broad subject in [Spec, TP].

The argument depends on the forms of *be*. The non-*pro*-drop simple present of *be* assumes different forms according to various factors (Kervella 1995: §206, Fave 1998: 63ff., Hewitt 1988, 2002, Favereau 1997: §441-3, German 2007; see Rouveret 1996 for the Welsh analogue). The ones relevant here are illustrated in (56): an immediately preceding subject triggers (a) *zo*, a following one *ez eus*, *emañ*, or *eo* according to definiteness and the nature of the predication.

- (56) a. Ar/ur vag (A) ZO er porzh / gwenn. [SU \_\_\_]

<sup>19</sup> Resumption in the double subject construction in finite clauses parallels that of finite relatives, in nonfinite clauses that of infinitives (of the purpose type in *ur vaouezh PRO da gousket ganti* 'a woman to sleep with.her' (AF-M: 120)), and in small clauses that of plain adjectival modifiers (i) (Hingant 1868: §211, Le Clerc 1986 [1911]: §128b.1° rem, §129c, §147d rem, Hemon 1995: §23, §41). Similar small clause and modifier structures are studied for Welsh in Mittendorf and Sadler (2008), where as small clauses they may be the only instance of the double subject construction as opposed to A'-resumption. Phi-concord does not occur with the narrow subject in these structures in Breton or Welsh, and likely not with the broad subject; the details are discussed in Rezac (2009).

- (i) pa voe gwelet [ur vagig [he gouelioù digor]] o tont eus tu an enezenn  
 when was seen a little.boat her sails open coming from side the isle  
 When there was seen a little boat with her sails unfurled coming from the direction of the island

(RJ-GW: 107)



- (61) a. Petra EMA en e zoñj [ober \_\_\_]?  
 what is(it) in his thought do.INF  
 What is it in his thought to do?  
 (Fave 1998: 141, Leoneg)
- b. Ar steriou... A ZO mantruz [pegement a vuhez a vez enno]  
 the rivers R is stunning how.much of life R is in.them  
 It is stunning how much life is in the rivers.  
 (MY-OF: 95, cf. MY-MI: 122, Leoneg)

If these contrasts hold true, narrow subjects and the preverbal DP of the double subject construction form an exclusive group for the *be*-alternation, in contrast to other preverbal elements including A'-fronted objects. This group may be identified as the elements that occupy [Spec, TP], as subjects (cf. Hendrick 1988: 74-5, 85). Two consequences follow. First, whilst broad subjects in infinitives are rare, those followed by (*a*) *zo* in finite clauses are legion, and leave no doubt, for instance, that a broad subject can be indefinite or link to a deeply embedded resumptive, as in the above examples. Second, the preverbal DP of all double subject constructions and of all relatives in some dialects trigger (*a*) *zo*, in contrast to fronted objects and object relativization gaps. In them, the double subject construction and resumptive relatives always seem to involve A-resumption on [Spec, TP]: in the double subject construction on the preverbal DP that might move higher, in relatives (a copy of) the relative head or a null operator OP.

Taking stock, Breton has broad subjects, where [Spec, TP] relates to a resumptive pronoun unrestricted by the locality of  $\phi$ -Agree or by any locality at all, and at the same time its T does not  $\phi$ -Agree with an index-bearing goal. The theory of A-resumption proposed here predicts the correlation of these two properties. The argument has relied on the formation of an exclusive group by the moved narrow subject and the resumptive-linked DP of the double subject construction, a group identifiable as DPs in the core A-position [Spec, TP]. The mechanics of unrestricted A-resumption discussed for (33)d) predict precisely this grouping. In the absence of  $\phi$ -Agree on T, the DP base-generated in [Spec, TP] may freely link to any lower pronoun, save one too close by the Highest Subject Restriction; or it may link to the sole lower copy-identical DP that falls into the Case domain of T, the narrow subject, and so can undergo copy deletion/conversion.<sup>21</sup> The next section looks at other cases of unrestricted A-resumption in this perspective.

## 5 Unrestricted A-resumption elsewhere

The existence of unrestricted A-resumption is predicted and corroborated by McCloskey and Sells (1988) in Irish. Irish A-resumption in (62) looks very similar to Breton, save that it is a V1 language in matrix clauses, so that the broad subject is postverbal:

- (62) a. Beidh / tháinig / bhuaill                      na páistí              **ocras** orthu.  
 be.FUT / come.PAST / hit.PAST              the children              hunger on.them  
 The children will be / got / got hungry.

<sup>21</sup> The Breton narrow subject may thus get Case from T, or independently as in (41).

- b. Ba mhaith liom [na páisti seo Seán labhairt leo].  
 I-would-like the children these Sean to speak with.them  
 I would like John to speak to these children.

(Ó Baoill and Maki 2007, Irish)

McCloskey and Sells (1988) report that the Irish double subject construction is limited by a number of constraints not found in Breton, including a restriction to nonfinite clauses headed by *be* and to resumptives that are 'notional' external arguments such as an oblique experiencer. Ó Baoill and Maki (2007) examine an Irish system free of many of these constraints, as seen in (62).

The theory here spells out the conditions needed for unrestricted A-resumption and provides the tools for parametric variation: the availability of a nonthematic A-position and the absence of  $\phi$ -Agree on the head that projects it, T. Irish like Breton has the Complementarity Effect, in a somewhat more general form akin to that of Breton prepositions discussed in footnote 14, indicating an absence of  $\phi$ -Agree. The availability of nonthematic positions is more nuanced. Irish has a high postverbal Case-licensing position to which the highest DP without oblique Case must raise, (63)a), unlike Breton (41). McCloskey (1996) argues from this that Irish lacks the core nonthematic [Spec, TP] A-position, since if there were one, filling it by an expletive should permit the subject to remain in-situ as in French (63)b). However, English (63)c) shows that even when an expletive fills [Spec, TP], the subject may be required to raise for Case or other reasons (Holmberg 2002, Rezac 2006). The existence of the double subject construction in Irish infinitives indicates that they do provide both [Spec, TP] to base-generate the broad subject and a lower position to Case license the narrow subject, as McCloskey and Sells (1988) already conclude. In the dialect studied by McCloskey and Sells, nonfinite *be* is the sole verb to provide both positions; in those of Ó Baoill and Maki, they are available more generally, as in Breton. McCloskey and Sells (1988: 166-8) and Carnie (1995: 87 note 11) discuss how dialectal variation in the nonthematic positions available in Irish infinitives limits the double subject construction in this manner.<sup>22</sup>

- (63) a. Tá teach ceannaithe *t* agam. / \*Tá (sé) ceannaithe teach agam.  
 be.PRES a.house bought by.me it  
 I have bought a house.

(McCloskey 1996: 254, 259, Irish)

- b. Il a été acheté une maison. / \*Il a été une maison acheté.  
 it has been bought a house

(French)

- c. There was a house bought *t*. / \*There was bought a house.

<sup>22</sup> The same line of thought suggests some possibilities for English structures with obligatorily bound pronouns in thematic positions, particularly those based on *have*, such as *The shelf has a mongoose* \*(on it / on the books \*(in it)) (cf. Freeze 1992: 581ff.) or experiential *Kate has mosquitoes buzzing* \*(around her/\*the head) (Belvin and Den Dikken 1997). These are best expressed in Breton with a broad subject and a copula followed by a small clause, as if *The shelf is a mongoose on it* and one can imagine such a syntax underlying the English examples, as is also hinted at by McCloskey and Sells (1988: 178 note 11).

Among the neighbours of Irish and Breton in the UG parameter space, Modern Welsh does not appear to have broad subjects (outside the type in note 19). It does have A'-resumption and the Complementarity Effect, but neither in the same form as Breton; resumption in particular is island-sensitive and so depends on A'-Agree (Rouveret 1994, 2002, 2008) and the Complementarity Effect is not as thorough-going (Borsley, Tallerman and Willis 2007: chapter 6 and 9.3.3.1, Rouveret 1991, Jouitteau and Rezac 2006: 1940-1). However, Welsh would fall into place most simply if there were no nonthematic A-position for the broad subject. Preverbally, Welsh lacks an A-position of the type independently evidenced in Breton by wide-focus preverbal subjects, beside lacking Breton type long head movement or stylistic fronting (Jouitteau 2005); postverbally, the narrow subject raises higher than in Breton (Rouveret 1991: section 4, 1994: chapter 2, 2010). Earlier stages of the language differ on these points, and correspondingly seem to have broad subjects in the *abnormal sentence* (Willis 1998).

The broad subject construction in Arabic, (64), is studied in Doron and Heycock (1999, 2010), along with similar structures in Japanese and Hebrew (but see Landau 2009). They argue that the underlined broad subject is in an A-position, on the basis of its availability under ECM verbs and the auxiliary *ka:n*, lack of restrictions on its quantificational character, and occurrence as controlled PRO. As in Breton and Irish, the broad subject precedes the narrow subject. The verb can appear between them or follow them. If and only if the verb follows the narrow subject, the latter controls number agreement, whether or not there is a broad subject. The broad subject cannot agree.

- (64) a. hind-un            **'aT-Tulla:b-u**            yuqa:bilu-na-ha  
          hind.NOM        the-students(M)-NOM    meet.3M-PL-her  
          Hind, the students are meting her.
- b. hind-un            yuqa:bilu-ha    **T-Tulla:b-u**  
          hind.NOM        meet.3M-her    the-students(M)-NOM  
          Hind, the students are meting her.
- c. ka:na            l-bayt-u                            **?alwa:n-u-hu**            za:hiyat-un  
          was.3M        the-house(M)-NOM    colours-NOM-its    bright-NOM  
          The house was of bright colours.

(Doron and Heycock 1999, Arabic)

Doron and Heycock propose the analysis sketched in (65). The broad subject and the narrow subject are in a multiple specifier construction of T, the narrow subject lower in the inner specifier, the broad subject in the other specifier. Feature checking, including number agreement, is only available under movement, so number agreement requires movement by the narrow subject to [Spec, TP], when it precedes the verb, not in-situ, when it follows. The broad subject is base-generated in [Spec, TP] as an A-position, and predicated of the rest of the sentence through any unbound pronoun in its scope.

- (65) [TP broad subject [TP (narrow subject) [T<sub>φ</sub> ... (narrow subject (copy)) ...]]]

Under Doron and Heycock's analysis, the broad subject is never sister to a projection that immediately dominates an agreeing head.  $\Phi$ -Agree of T only occurs when the narrow subject is in the first specifier [Spec, TP], constraining it to link to its thematic position. The broad subject is then in an outer specifier and so not sister to T' immediately containing T°, but to TP immediately containing T', so not constrained by the index on T° (Rezac 2004a: 169ff.). Only if the narrow subject remains in-situ is the broad subject in the first specifier of T. In that case, there is empirically no  $\phi$ -Agreement with either the broad or narrow subject, leaving open the reasons (intervention of a 3SG expletive between T and the narrow subject, Jouitteau 2005). In both configurations, unrestricted A-resumption on [Spec, TP] occurs only if the sister of this specifier does no  $\phi$ -Agree with a lower DP.<sup>23</sup>

## 6 Resumption

The proposal made in this article is that the tools for building and interpreting A-movement, along with the existence of A'-resumption, give A-resumption. This is proposition (11). In both movement and resumption, the basic principles (12) combine to generate and interpret nonthematic positions.

- (11) Merge, (phi-)Agree, and interpretation play the same role in movement and resumption (to A-positions). Differences reside in independent constraints that cross-cut the movement-resumption divide: the occurrence of (phi-)Agree and the Case status of its goal that impacts copy deletion/conversion
- (12) A-resumption
- a. *Base-generation*: A nonthematic position permits the base-generation of expletives, and so also of DPs provided they can be interpreted.
  - b. *Interpretation*: A nonthematic position is interpreted through an unbound variable in its sister.
  - c. *(Phi-)Agree restriction*: The (phi-)Agree of a head H with a goal  $\Gamma$  restricts the variable for interpreting [Spec, HP] to  $\Gamma$  if  $\Gamma$  has a variable name (index).

A-resumption and A-movement are made of the same stuff, and their differences are almost incidental. This follows naturally as soon as movement is decomposed into goal-finding Agree, seen operating alone in remote agreement, and structure building Merge, operating seen alone in the base-generation of thematic and various nonthematic positions. The conclusion is contingent on assumptions about other nonthematic positions

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<sup>23</sup> Demirdache (1989) argues that number agreement in the context of a preverbal subject reflects a *pro* resumptive to it, so that all depends on how the linking between this *pro* and the preverbal subject is construed. Both postverbal and preverbal narrow subjects agree for gender, which arguably does not indicate  $\phi$ -Agree (Benmamoun 2000: chapter 8). In Arabic there exist also resumptive adjectival modifiers parallel to those of Breton and Welsh in note 19; the adjective optionally concords with the following narrow subject for number (and gender), attributable to the same structural variation as in finite clauses but without correlate word order differences (Doron and Heycock 1999, Doron and Reintges 2006).



predicts the automatic availability of Predicate Abstraction, while the alternative predicts the existence of positions that can only be filled by expletives because the heads that project them lack [ $\Lambda$ ], and others that can only be filled by expletives and Agree-restricted movement or resumption because their heads have [ $\Lambda$ ] only if they have a probe that seeks for an index [ID]. These predictions might be right in A'-systems argued to possess [Spec, CP] expletives but not unrestricted resumption, and similarly in A-systems where subjects stay low, but other factors might force these options as well.

Turning to the choice between using syntactic terminals or their features for Predicate Abstraction, A-resumption favours features. The copy-raising pattern of English is created by Merge + phi-Agree, not by movement. The view of phi-Agree in Chomsky (2000) is that it does not build syntactic structure but values sub-terminal features that are eventually deleted at their valuation site. The empirical reason comes from paradigms like (67) where  $\phi$ -Agree fails to license elements like anaphora, as it should if it moved a pronoun-like syntactic terminal to an A-position (Rezac 2010).

- (67) a. Some linguists<sub>i</sub>/they<sub>i</sub> seem to them(selves<sub>i</sub>) to have been given good job offers.  
 b. There seem to them(\*selves<sub>i</sub>)/\*each other<sub>i</sub> to have been some linguists<sub>i</sub> given good job offers.

(cf. Lasnik 1999: 138, den Dikken 1995: 348)

Indeed, in Heim and Kratzer's system, the usual translation of indices as pronouns must be superceded for the upper index in (66) by a special translation rule, and in (66)c the index is even introduced by a pronoun stipulated to be uninterpreted (Heim and Kratzer 1998: 8.5.2, Kratzer 2009: 198). Treating Predicate Abstraction triggers as Agree-transmitted features seems well suited to this behavior.

There is an important line of evidence that the trigger of Predicate Abstraction is a pronoun: McCloskey's (2002) analysis of the "mixed" pattern in Irish long-distance relatives:

- mixed / regular
- (68) a. [<sub>CP</sub> pro<sub>i</sub> aL / aN ... [<sub>CP</sub> t<sub>i</sub> aN ... pronoun<sub>i</sub> ...]]  
 b. [<sub>CP</sub> pro<sub>i</sub> aN / aL ... [<sub>CP</sub> pro<sub>i</sub> aL ... t<sub>i</sub> ...]]

- (69) Complementizer options: EPP and probe are freely added to C; parametric variation consists in whether C with one or both feature can be spelled out.
- a. Movement C<sup>o</sup> (aL) = [EPP, A'-probe]: Agree identifies a goal and by hypothesis it must be this goal that satisfies the EPP, leading to movement. The pronoun is translated as a  $\lambda$ -operator binding a pronoun with its own index, i.e. its trace.
- b. Resumptive C<sup>o</sup> (aN) = [EPP]: Merges a pronoun with any index in [Spec, CP], translated as  $\lambda$ -operator.
- c. Subordinator C<sup>o</sup> (go) = default.

(McCloskey 2002)

Consider the unmixed patterns of (68). A relative clause is headed by the "resumptive"  $C^\circ aN$  if it contains a resumptive, no matter how far down, and if the intervening  $C^\circ$  is  $aN$  or the simple subordinator *go*, giving the island insensitive  $aN...(go/aN...)pronoun$ . If the relative clause contains a gap, every  $C^\circ$  above the gap is the "movement"  $C^\circ aL$ , giving the island-constrained  $aL...(aL...)gap$ . McCloskey proposes that  $aL$  spells out  $C^\circ$  that has a probe to Agree with an indexed silent pronoun *pro* and move it to its specifier projected by the EPP, (69)a). Predicate Abstraction uses *pro* as Heim and Kratzer's numerical index: it is translated as an indexed variable at the bottom and as a  $\lambda$ -binder of the indexed variable, that is of its trace, in [Spec, CP]. *Pro* and pronouns generally thus have two translations: as variables and as Predicate Abstraction triggers, following Browning's (1989) proposal that the null operator OP is just *pro*. Resumption occurs when there is a  $C^\circ$  without a probe, spelled out as  $aN$ , (69)b). *Pro* with any index Merges in its specifier to satisfy the EPP, and is translated as the  $\lambda$ -binder of a pronoun with the same index in the CP. Here the mixed pattern of (68) enters: apparently, the *pro* base-generated in the specifier of resumptive  $C^\circ aN$  can participate in movement to a higher movement  $aL$ , and the moved *pro* in the specifier of  $aL$  can be bound as a resumptive by a higher  $aN$ . This confirms that the element that  $\lambda$ -binds resumptives is something that can move, and the  $\lambda$ -binder of gaps is an element that can act as a resumptive: in both cases, the silent pronoun *pro*, a syntactic terminal.

However, as Rouveret (2002) and Adger and Ramchand (2005) point out, there is no dead giveaway that the  $aL$  complementizer involves movement into its specifier of what is after all a silent *pro*. They replace movement by Agree. The probe of  $aL$ , called [ID] in latter work, Agrees for an index with either a pronominal goal, or with [ID] that has already been valued by Agree from a pronominal goal, namely another  $aL$ . A chain of [ID]'s with the same value is interpreted as the name of the variable bound by the  $\lambda$ -operator at the top and of the bound variable at the bottom. If there is no [ID] on a complementizer, the variable it binds is free, giving  $aN$ . This seems extensible to the mixed pattern. The topmost  $aN$  of (68)b) simply ignores any intervening  $aL$ 's and they are not interpreted, just like the intervening  $aL$ 's in an unmixed chain. The topmost  $aL$  of (68)a) can see the next lower  $aN$  as a complementizer containing the variable name [ID] because cyclic phase-by-phase interpretation has already let (optional) Predicate Abstraction at the lower CP level establish the name of the variable that  $aN$  binds.

Rouveret (2002, 2008) and Adger and Ramchand (2005) contribute an independent discovery to the typology of resumption: A'-resumption constrained by Agree, unlike the unconstrained resumption of the Irish type. Its locality conditions are not those of  $\phi$ -Agree in A-resumption, but those of the A'-system. They propose it to be constrained by Agree for the variable name [ID]. The evidence that reveals Agree in both A and A'-resumption is the same: locality and effects on the morphology of the target and goal. In both systems, Agree pre-empts unrestricted resumption on a nonthematic position by finding the variable for its interpretation, whether the position is an A or A'-position, and whether the Agree is for phi-features or for another feature. We should expect to find the same relationship between restricted A'-resumption and A'-movement as between the A-versions of these: the deployment of the Merge and Agree filtered by independent factors.

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