

## Lisbon Workshop on Agreement

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# Ways of Agreeing, Phases, and Interfaces\*

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## 1. Introduction and proposal:

1. **argue that Agree is a relation between sets of features**, and not between individual features. This approach allows for a unification of the two operations: agree and move.

2. **two types of Agree** can be distinguished:

- **Agree-Check**: a matching relation under which feature checking takes place

- **Agree-Concord**: a matching relation under which no feature checking takes place

➤ show that Agree-Check is similar to Move, but that Agree-Concord has different properties. Agree-check and Move can be 'collapsed' both from the point of view of the locality domains that are relevant for their application (phases), and from the point of view of their effect (i.e. they both lead to the checking of uninterpretable features). In contrast, agree-concord is subject to different locality restrictions, and it does not lead to the checking of uninterpretable features.

➤ illustrate with CP, vP and DP phases

3. **further investigate the differences between Agree-Check and Agree-Concord**

Show that a phase that has been remerged at the edge of the next higher phase cannot be accessed by Move and by Agree-Check, but can be accessed by Agree-Concord. Interestingly, this distinction applies not only to the non-edge of the phase, but to its edge, as well. In particular, Move and Agree-Check are blocked, even from the edge of the phase, whereas Agree-Concord is still possible.

4. **Consequences**: once the phase is 'closed', a version of the uniformity principle applies, that we call "**Uniformity of structure**" (vs uniformity of labels, i.e. categories, heads, XPs). A closed phase can further enter Agree relations only with an element that has/contains exactly the same structure.

Generalizing: Agree is a relation between structures/trees.

5. **Conclusions**:

Agree is not a relation between individual features. It is a relation between sets of features arranged in a particular configuration.

Maximize matching effects: avoiding derivational complexity, such as the presence of choice points in the derivation

## Overview:

Section 2: Agree. Definition. Constraints. Agree and Move.

Section 3: Agree concord

Section 4: Locality, Agree concord vs checking Agree with phases in situ

Agree concord vs checking Agree with moved phases

Section 5: Consequences, matching as structure identity, rather than as feature identity.

## 2. AGREE

➤ **AGREE** (Chomsky, 2000)

$\alpha > \beta$

AGREE( $\alpha, \beta$ ), where  $\alpha$  is a probe and  $\beta$  is a matching goal, and '>' is a c-command relation

**MATCH** (Chomsky 2000:122)

Matching is **feature identity**

the probe seeks a matching goal within the domain XP, generated by the probe.

Matching of probe-goal induces Agree.

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➤ Propose that AGREE is a **relation between sets of features**, (1) and not between **individual features**.

(1) given two sets of features  $\phi_1$  and  $\phi_2$ , AGREE ( $\phi_1$ ,  $\phi_2$ ) applies if and only if  $\phi_1$  properly includes  $\phi_2$   
(Di Sciullo 2003)

➤ show that AGREE is also a **relation between structures**.

## 2.1. Constraints on AGREE:

### 2.1.1. only ACTIVE elements enter agreement (i.e. elements that have uninterpretable features)

- probe and goal must **both** be active for Agree to apply
- an element that has an uninterpretable feature is active and it constitutes a probe that seeks a matching goal
- agreement leads to checking/deletion of uninterpretable features

### 2.1.2. *f*-completeness

$\alpha$  must have a complete set of *f*-features (it must be *f*-complete) to delete uninterpretable features of the paired matching element  $\beta$

(2) for Case agreement systems, the uninterpretable features are *f*-features of the probe (T or  $\nu$ ) and structural Case of the goal N. *f*-features of N are interpretable; hence N is active only when it has structural Case. Once the Case value is determined, N no longer enters into agreement relations and is “frozen” in place. Structural Case is not a feature of the probes (T,  $\nu$ ), but it deletes under agreement if the probe is appropriate, i.e. *f*-complete. Case itself is not matched, but deletes under matching of *f*-features.

(3) the *f*-features of tense are uninterpretable and agree with the interpretable *f*-features of a nominal, yielding the surface effect of noun verb agreement

[both elements must be active, i.e. they must have some uninterpretable features. However, matching is between an uninterpretable feature and an interpretable feature of the same type (the features that enter a matching relation are uninterpretable only in the probe and interpretable in the goal).]

### 2.1.3. The Defective Intervention Constraint (Chomsky 2000)

(4)  $\alpha > \beta > \gamma$

(\*AGREE ( $\alpha, \gamma$ ),  $\alpha$  is a probe and  $\beta$  is a matching goal, and  $\beta$  is inactive due to a prior AGREE with some other probe)

The Defective Intervention Constraint is a ‘representational’ locality condition, which prohibits an establishment of an AGREE relation when a closer but inactive goal intervenes between a probe and another goal in the configuration above

### 2.1.4. Locality (phases)

AGREE is not unbounded, but only possible if the probe and goal are in the same phase or if the goal is at the edge of the phase immediately contained in the phase which includes the probe.

**The Phase Impenetrability Condition:** the domain of H is not accessible to operations outside HP, but only H and its edge  
the edge is the residue of H-bar, either SPECS or elements adjoined to HP

(5)  $[_{ZP} Z \dots [_{HP} \alpha [H YP]]]$

the complement YP is immune to agreement with something in the next phase up. Only H and its edge are accessible to agreement with some element in ZP.

H and  $\alpha$  belong to ZP for the purposes of Spell Out. YP is spelled out at the level HP. H and  $\alpha$  are spelled out if they remain in situ. Otherwise their status is determined at the next strong phase ZP

## 2.2. AGREE and/ vs MOVE

two views:

### 2.2.1. MOVE implies AGREE

movement is possible only if a prior AGREE relation is established.

Chomsky (2000) : a theory of AGREE which eliminates ‘feature movement’ entirely in feature checking: feature checking does not necessitate a spec-head relation between the probe and the goal, but can be met via the operation AGREE.

Movement is not triggered by the need to check features, and unless there is another factor that requires an element to leave its base position (such as the EPP), movement will not occur.

### 2.2.2. AGREE and MOVE are distinct and independent operations, which are not parasitic upon each other.

Wurmbrandt 2002: A-movement does not display the same phase-boundedness effects as AGREE/A-reconstruction

Guasti and Rizzi 1999: raising tends to yield richer visible morphological realization than long distance agreement

Chung 1998: Spec-head agreement plays a decisive role

### 2.2.3. For our purposes, consider that AGREE and MOVE are the same. These two relations/operations share at least the following properties:

- (i) they both express relations between sets of features, and not between individual features.
  - (1) given two sets of features  $\phi_1$  and  $\phi_2$ , AGREE ( $\phi_1, \phi_2$ ) or MOVE ( $\phi_2, \phi_1$ ) apply if and only if  $\phi_1$  properly includes  $\phi_2$  (Di Sciullo 2003)
  - (6) a.  $\begin{matrix} [DP_1 & T & [DP_1 v [ \dots \\ [+D, +\phi, +phon] & [+D, +\phi] \end{matrix}$
  - b.  $\begin{matrix} [_{TP} DP_1 [ [_{T} T V] [DP_1 \bar{V} \\ [+T, +V, +D] & [+V, +T] \end{matrix}$
- (ii) MOVE and AGREE display the same phase-boundedness effects (PIC)
- (iii) both AGREE and MOVE take relate two ACTIVE elements and they lead to the checking/deletion of uninterpretable features
- (iv)  $\phi$ -completeness:  $\alpha$  must have a complete set of  $\phi$ -features (it must be  $\phi$ -complete) in order to be involved in AGREE or MOVE
- (v) both are subject to the Defective Intervention Constraint

## 3. AGREE-Concord

multiple feature checking/concord (multiple AGREE without MOVE) is **predicted to be impossible** under Chomsky’s mechanism of AGREE and DIC (Defective Intervention Constraint)

$$(4) \quad \alpha > \beta > \gamma$$

(\*AGREE ( $\alpha, \gamma$ ),  $\alpha$  is a probe and  $\beta$  is a matching goal, and  $\beta$  is inactive due to a prior AGREE with some other probe)

### 3.1. However: Examples of multiple AGREE/AGREE-Concord:

#### (a) Multiple ECM. Japanese. Hiraiwa 2001.

Japanese allows optional ECM across a CP boundary

- (7) a. #*John-ga* [CP [TP *Mary-wo me-wo waru-i*] *to*] *omoikondei-ta*  
 John-Nom Mary-Acc eyes -Acc bad-Pres C believe  
 ‘John believed Mary’s eye to be bad.’
- b. \**John-ga* [CP [TP *Mary-ga me-wo waru-i*] *to*] *omoikondei-ta*  
 John-Nom Mary-Nom eyes -Acc bad-Pres C believe-past  
 ‘John thinks that Mary has a bad eyesight.’  
 (Japanese; Hiraiwa 2001)

the  $\nu$  probe has uninterpretable  $f$ features and the goal DP has uninterpretable structural Case. Once the uninterpretable  $f$ features of the  $\nu$  probe are determined,  $\nu$  should no longer be able to enter into agreement relations and should be “frozen”. However, the second DP in the embedded CP also has uninterpretable Case features that need to be valued.

**b. Multiple Nom Hiraiwa 2001.**

Background: infinitives in Japanese cannot check structural nominative case. The nominative case of the embedded subject in (7) below is checked via AGREE with the matrix T.

multiple Nominative DPs can appear within an infinitival embedded clause. Note that the fact that the position of these DPs is lower than the embedded adverbial phrase indicates that there is no overt raising of these DPs out of the embedded clause

- (8) *John-ga* [*yosouijouni nihonjin-ga eigo-ga hido-ku*] *kanji-ta*.  
 John-Nom than-expected the-Japanese-Nom English Nom bad-inf think-past.  
 ‘It seemed to John that the Japanese are worse at speaking English than he expected.’  
 (Japanese; Hiraiwa 2001)

**c. Unselective quantifiers** (*always, sometimes, never, usually, mostly, generally, often, frequently, commonly, seldom, infrequently, rarely, ...*)

Lewis, 1975: unselective quantifiers like  $\forall$  and  $\exists$  bind all the variables in their scope indiscriminately

- (9) A man who owns a donkey always beats it now and then. (Lewis, 1975)  
 Always, if  $x$  is a man, if  $y$  is a donkey, and if  $x$  owns  $y$ ,  $x$  beats  $y$  now and then.

in contrast, selective quantifiers like  $\forall x$  and  $\exists x$  bind the variable ‘ $x$ ’ and stop there. Any other variables  $y, z, \dots$  that may occur free in its scope are left free, waiting to be bound by other quantifiers

- (10) Lewis, 1975: “[Unselective] quantifiers are quantifiers over cases; a case may be regarded as the ‘tuple of its participants; and these participants are values of the variables that occur free in the open sentence modified by the adverb. In other words, we are taking the cases to be the admissible assignments of values to these variables.”

**c. Negative concord:** distribution of the negative feature over any number of expressions within the scope of negation

- (11) *Nikt nigdy nikogo niczym nie uszczesliwil.* (Polish)  
 Nobody -nom never nobody-gen nothing-ins not made happy  
 ‘Nobody has ever made anyone happy with anything.’ (Przepiorkowski & Kupsc, 1997)
- (12) a. *Nimeni n-a facut pe nimeni fericit cu nimic.* (Romanian)  
 Nobody not-has made PE nobody happy with nothing.  
 ‘Nobody has ever made anyone happy with anything.’
- b. *Nessuno non ha mai reso nessuno felice con niente.* (Italian)  
 Nobody not-has never made nobody happy with nothing.  
 ‘Nobody has ever made anyone happy of anything.’

**d. Definiteness spread**

Borer 1999: in Semitic languages, definiteness is a feature base generated on the Noun stem, while the D itself is unspecified for such a feature, inheriting it from a moved N.

Definiteness spreading: The definite value of the rightmost branch of a Construct State nominal is associated with each N in the CSN and the CSN as a whole

If an adjective is present, it is marked for definiteness. If more than one adjective is present, the configuration is nested, and each adjective is marked for definiteness

- (13) [*delet* [*beit* [*morat* [*ha-kita*]]]] (Hazout 1991)  
 door house teacher the-class
- (14) *ha-na'ara ha-yafa* (Hazout 2000)  
 the-girl the-pretty  
 the pretty girl
- (15) *delet beit morat ha-kita ha-yafa* (Borer 1999)  
 door-f house-m teacher-f the-class-f the-beautiful-f  
 a. the beautiful door of the house of the teacher of the class  
 b. the door of the beautiful teacher of the class  
 c. the door of the house of the teacher of the beautiful class
- (16) *kis'ot ha-kita ha-xadaSa ha-civ'onim* (Borer 1999)  
 chairs-m-pl the-class-f the new-f the colorful-m-pl

**e. multiple Case and f-agreement**

- (17) *aspectul masinii mele vechi* (Romanian)  
 look-the-m.s car-the-Gen.f.s my-Gen.f.s old.Gen.f.s  
 'the look of my old car'
- (18)a. *des beaux yeux verts* (French)  
 of-the.pl. beautiful.M.pl. eyes.M.pl. green.M.pl.  
 'beautiful green eyes'
- b. *una bella donna alta* (Italian)  
 a.F.sg. nice.F.sg. woman.F.sg. tall.F.sg.  
 'a nice tall woman'

**f. Multiple Case: Clitic doubling**

Doubling in Albanian and Greek violates Kayne's generalization, which states that clitic doubling is possible whenever an object NP can get case by some other means; since object clitics arguably absorb the verb's objective case, the doubled structure must be saved by some other item which has case assigning properties (i.e. prepositions)

- (19) *\*(e<sub>i</sub>) pashe Jan-in<sub>i</sub>* (Albanian, Kalluli 1996)  
*\*(Ton<sub>i</sub>) idha ton Yanni<sub>i</sub>* (MG, Kalluli 1996)  
 him.M.3.sg.ACC saw-I the Yannis.M.3.sg.ACC  
 'I did see John'
- (20)a. *Vine el<sub>i</sub> tata<sub>i</sub>* (Romanian)  
 Comes he.M.3.Sg. NOM father.M.3.sg.NOM
- b. *Marie<sub>i</sub> sera-t- elle<sub>i</sub> là?* (French)  
 Marie.F.3.sg.NOM will-be-she.F.3.sg.NOM there  
 'Will Mary be there?'
- Pierre<sub>i</sub> sera-t- il<sub>i</sub> là?* (French)  
 Pierre.M.3.sg.NOM will-be-he.M.3.sg.NOM there  
 'Will Peter be there?'

In both cases above, Case is checked in both nominals against the same (active) functional head: the little *v* for Accusative Case and T for Nominative.

**g. Multiple wh questions**

- (21) Who showed what to whom?

**h. Compound-like (coordination) expressions**

Case is PF visible in compound-like expressions in Modern Greek:

- (22) a. *anthropos. NOM mihani. NOM* (MG) (Di Sciullo 1999)  
 man machine  
 'a man like a machine' / an entity which is a man and a machine
- b. *aftokinito. NOM privavlos. NOM*  
 car rocket  
 'a car like a rocket' / an entity which is a car and a rocket

There are reasons to believe that these constructs are not compounds. The constructs are neither genitive constructions, as it is the case for the expressions in (23), including the genitive Case, nor compounds, as they do not include a linking vowel.

- (23) a. *anthroupu*.GEN *mihani*.ACC (MG) (Di Sciullo 1999)  
           'a man's machine'  
       b. *aftokinitu*.GEN *piravlos*.ACC  
           'a car's rocket'

The constructs in (22) have the syntactic properties of conjuncts:

- they can be separated by other constituents
- (24) *O micos [anthropos misos mihani] perpatai aton thromo.* (MG)  
       The half.M man.M half machine.F is walking in the street  
       'The half-man half-machine is walking in the street.'

In (24), the adjective *micos* 'half' agrees with the masculine *anthropos* but not with the feminine *mihani*, indicating that they are separate constituents.

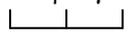
- the parts of the constructs have their own independent stress. These expressions clearly differ from deverbal compounds such as the ones in (25) with no morphological case, a linking vowel, and with a unique stress.

- (25) *katsik-o-kleftis* (MG, p.c. D. Gafos).  
       goat-LV-stealer  
       'goat-stealer'

Similar constructs can be found in Slavic languages, including Polish and Serbo-Croatian, as exemplified below. In these languages, the parts of the constructs also exhibit agreement in Case and number features, according to their syntactic position.

### 3.2. Hiraiwa 2000, 2001 analysis

Multiple AGREE (multiple feature checking) with a single probe is **a single simultaneous syntactic operation**. AGREE applies to all the matched goals at the same derivational point derivationally simultaneously. Multiple AGREE is not multiple instances of the syntactic operation AGREE, but rather it is a single syntactic operation.

- (26) MULTIPLE AGREE as a single simultaneous operation  
 $\alpha > \beta > \gamma$   
  
 AGREE ( $\alpha$ ,  $\beta$ ,  $\gamma$ ), where  $\alpha$  is a probe and both  $\beta$  and  $\gamma$  are matching goals for  $\alpha$

since AGREE between the probe feature  $\alpha$  and the multiple goal features  $\beta$  and  $\gamma$  is derivationally simultaneous, the intervening goal  $\beta$  is not yet inactive at the point of derivation where the probe  $\alpha$  enters into an AGREE relation with the lower goal  $\gamma$ . Consequently, no defective intervention effect is triggered

- (27) The Defective Intervention Constraint (derivationally revised)  
 A syntactic operation AGREE must obey a strict locality condition. AGREE ( $\alpha$ ,  $\gamma$ ) is prohibited if there is a closer matching goal that is already inactive at the point of the derivation where the probe is merged; thus the DIC is restricted to a case where a probe for  $\gamma$  and a probe for intervening  $\beta$  are derivationally distinct.

#### ➤ Problems with this approach:

- (i) **[+multiple] features on the probe**  
 Under the proposed theory of Multiple AGREE, at the point of the derivation where the probe P is merged, the probe feature starts to search down for a closest matching goal feature within its c-command domain and locates and matches with the closer goal  $\beta$ . However, this does not result in an immediate AGREE under (21) above; **rather, the probe feature, being [+multiple], continues to probe for a next closest goal, resulting in matching with  $\gamma$** . This continues until the probe locates all the matching goal within an 'accessible' domain.

**features have features** (features can be [+multiple] or [-multiple])

**two types of little  $\nu$ 's: The little  $\nu$  in Japanese ECM constructions has 'a double life', since ECM is optional in Japanese: it can be either [-multiple] or [+multiple].  
Unnecessary complexification of the lexicon**

(ii) **Check features as early as possible.**

(28) Interpretation/ evaluation for  $PH_1$  is at the next relevant phase  $PH_2$

(29) **The Earliness Principle (Pesetsky 1989):**  
if (P,G) match and are active, their uninterpretable features must be eliminated at once, and as fully as possible

How is (30a)=(6a) possible then? The two embedded DPs should check the Acc Case feature within the embedded CP, rather than 'wait' until the next phase.

- (30)a. #*John-ga* [CP [TP *Mary-wo me-wo waru-i*] *to*] *omoikondei-ta*  
John-Nom Mary-Acc eyes -Acc bad-Pres C believe  
'John believed Mary's eye to be bad.'
- b. \**John-ga* [CP [TP *Mary-ga me-wo waru-i*] *to*] *omoikondei-ta*  
John-Nom Mary-Nom eyes -Acc bad-Pres C believe-past  
'John thinks that Mary has a bad eyesight.'  
(Japanese; Hiraiwa, 2000)

(iii) **different locality restrictions**

**The Phase Impenetrability Condition:** the domain of H is not accessible to operations outside HP, but only H and its edge

• **ECM contexts**

- (31) #*John-ga* [CP [TP *Mary-wo me-wo waru-i*] *to*] *omoikondei-ta*  
John-Nom Mary-Acc eyes -Acc bad-Pres C believe  
'John believed Mary's eye to be bad.'  
(Japanese; Hiraiwa, 2000)

In this example, both DPs marked with Acc are within the TP, i.e. not part of the edge of the CP phase that contains them. According to PIC, these DPs should be unaccessible for AGREE from outside

• **N-words in syntactic islands** such as adjuncts and relative clauses

- (32)a. *No vindra* [ *perque vulgui ferres amb ningu*] (Catalan)  
not come.fut.3.sg because want.subj.3.sg do anything with anybody  
'He won't come because he wants to do anything with anybody'.
- b. \**Quei non vindra* [ *perque vulgui fer ti*]?  
who not come.fut.3 sg. because want.subj.3.sg. do.

- (33)a. *Dhen prodosa mistika* [ *pu eksethesan kanenan*] (MG)  
not betrayed.1.sg. secrets that exposed anybody  
'I didn't reveal secrets that exposed anybody'.
- b. \**Pjon i dhen prodosa mistika* [ *pu eksethesan ti*]?  
*whom not betrayed.1.sg secrets that exposed.3.pl*

(32a) and (33a) show that N-words can be licenced by matrix negation in a causal finite adjunct or in a relative clause. The (b) sentences show that overt wh-extraction is prohibited from these clauses.

◆ **To sum up:**

The difference between multiple agree and non multiple agree cannot be related simply to the simultaneity of checking of uninterpretable features at a certain derivational point.

- (i) AGREE-concord does not relate active elements and it does not lead to the checking/deletion of uninterpretable features
- (ii) AGREE-concord displays different locality restrictions

◆ **In what follows:**

we will not attempt an analysis of AGREE Concord. Rather, focus on locality restrictions for AGREE-Check/MOVE vs AGREE-Concord.

Then: come back to a more refined definition of AGREE-Check.

**4. Locality**

**4.1. Phases: CP;  $\nu$ P; DP**

**4.1.1. Diagnostics for phasehood: (Chomsky 1998, Legate 1998, Matushansky 2002 Svenonius 2003)**

- a. phases are configurations of the form **F-XP**, where XP is a substantive root projection, its category determined by F that selects it
- b. the Phase Impenetrability Condition
- c. a phase is a unit of syntactic computation that exhibits **independence at interfaces** (it can be sent to spell out and to LF) Phases are transferred to the interfaces when the next higher phase is completed (Chomsky 2000, 2001)

➤ **phonological independence:**

- i. phases can be isolated
- ii. phases can be moved and targeted by movement-like operations (successive cyclic wh-movement can target edges of phases)
- iii. phases are assigned phrasal stress through the Nuclear Stress Rule  
D. Adger, 2003: the Nuclear Stress Rule applies each time syntactic material is spelled out. This predicts that categories relevant to the syntactic and phonological cycles coincide

➤ **independence at LF:**

assume that syntactic constituents which are interpretable at LF translate as **saturated functions with bound variables** and that those which are uninterpretable are either unsaturated or contain unbound variables. Call the former type ‘complete’ and the latter ‘incomplete’ (subject to debate)  
only ‘complete’ constituents are visible after TRANSFER (Svenonius 2003)

**4.1.2. Applying these tests to DPs.**

- a. D-NP
- b. PIC
- c. NP movement is ‘local’, i.e. phase-bound movement within the DP: genitive XPs
- d. independence

➤ **PF independence:**

*DPs can be PF isolated*, just like  $\nu$ Ps (examples from Matushansky, 2002)

- (34) (Can you teach lexical semantics?) - Me teach lexical semantics?  
(transitive)

(How about arriving early for once?)- Me arrive early? (unaccusative)  
Lexical semantics? - Me? (DP)

**Movement**

- (35) a. Goneril said she would pluck Gloster’s eyes, and [ $\nu$ P pluck out his eyes] she did.
- b. Regan is called the villain of the play and [ $_{DP}$  the villain of the play] she is.

**Nuclear Stress Rule:** NSR is assigned to the rightmost stress bearing element in a cyclic fashion

- (36) Balthasar disliked the book about **Justine**.

the rightmost element in the object DP is assigned primary stress, so the NSR clearly applies to DPs

➤ **LF independence:**

at least definite DPs translate at LF as **saturated functions with bound variables**

**4.2. AGREE Concord sees inside the edge and the non-edge of a phase; AGREE Check and MOVE can only access the edge**

• **accessibility of the non-edge:**

➤ **non-edge of CP/ $\nu$ P**

- (37)a *No vindra* [*perque vulgui fer res amb ningú*] AGREE Concord OK  
 not come fut 3sg because want(subj.3.sg) do anything with anybody  
 He won't come because he wants to do anything with anybody.
- b. *\*Que; non vindra* [*perque vulgui fer t<sub>i</sub>*]? MOVE \*OK  
 who not come (fut.3 sg.) because want(subj.3.sg)do. (Catalan)
- (38)a *Dhen prodosa mistika* [*pu eksethesan kanenan*] AGREE Concord OK  
 not betrayed (1 sg) secrets that exposed anybody  
 I didn't reveal secrets that exposed anybody
- b. *\*Pjon; dhen prodosa mistika* [*pu eksethesan t<sub>i</sub>*]? MOVE \*OK  
 whom not betrayed (1 sg) secrets that exposed (3 pl) (MGreek)

• **non-edge of DP:**

- (39) *n-am căutat să fiu* [<sub>PP</sub> *pe* [<sub>DP</sub> *placul nimanui*]] AGREE concord OK  
 Neg-have-I tried to be PE liking-the nobody-GEN  
 I haven't tried to please anyone.
- (40) a. [<sub>PP</sub> *Pe placul cui*] (*n*)-*am căutat să fiu t<sub>PP</sub>*? MOVE of whole PP OK  
 PE liking-the whose (Neg)-have-I tried to be?
- b. *\*(Al) cui* (*n*)-*am căutat să fiu* [<sub>PP</sub> *pe* [<sub>DP</sub> *placul t*]]? MOVE from non-edge \*OK  
 (to) whose (Neg)-have-I tried to be PE liking-the?
- c. *\*Pe al cui* (*n*)-*am căutat să fiu t plac*? (Romanian)  
 PE to whose (Neg)-have-I tried to be liking-the  
 (assume a GenP below DmaxP; Cornilescu 2003)

• **accessibility of the edge**

➤ **by Agree-Check:** Case checking.

✓ **edge of DP:**

- (41) *cartea* [<sub>DP</sub> *unui student*] (Romanian)  
 book-the.Nom [a.Gen. student]  
 (Gen Case checking)

✓ **edge of CP**

- (42) a. I don't know [<sub>CP</sub> whether/ if/ \*that Mary will come].  
 b. Je suppose [<sub>CP</sub> que /\*si Marie sera là]. (French)  
 I suppose that/\*if Mary will be there
- c. Mi domando [<sub>CP</sub> se/ \*che Gianna arrivera in tempo]. (Italian)  
 I wonder if/\*that Gianni will arrive on time

✓ **edge of vP** Nom Case checking in situ, in Spec vP (to the extent that one believes that Spec,vP is a Case position in Romanian (Alboiu 2000))

- (43) *T citeste* [<sub>vP</sub> *copilul cartea*]. (Romanian)  
 T.Nom. reads [<sub>vP</sub> child-the.Nom. reads book-the]  
 'The child is reading the book.'

however, the assumption that Spec,vP is a Case position in Romanian is debated (Cornilescu 1997). Not take a stand here

other examples of the accessibility of the vP edge: selectional features of auxiliary verbs

- (44) Mary has graduated.  
 Mary is graduating.

on the assumption that the past and present participle verbs do not raise higher than *v*, the selectional feature of the auxiliary agrees with and checks against the participle verb in *v*.

➤ **by Move:**

✓ **from edge of DP**

- (45) a. *Jean a salue* [<sub>DP</sub> *beaucoup de sportifs*]. (French)  
 Jean has greeted many of sportsmen  
 b. *Jean a beaucoup salue* [<sub>DP</sub> ~~*beaucoup de sportifs*~~]. (edge) (French)  
 Jean has a lot greeted of sportsmen.  
 ‘Jean has greeted many sportmen.’  
 c. \**Jean a de sportifs salue* [<sub>DP</sub> ~~*beaucoup de sportifs*~~].(non-edge) (French)  
 Jean has of sportsmen greeted a lot.  
 ‘Jean has greeted many sportmen.’

✓ **from edge of CP**

- (46) [**What** do you think [<sub>CP</sub> ~~**what**~~ Mary wants [<sub>CP</sub> ~~**what**~~ to buy ~~**what**~~]?]

✓ **from edge of vP: subject movement in English type languages**

- (47) **Mary** often [<sub>vP</sub> ~~**Mary**~~ comes late]  
**Who** do you think [<sub>CP</sub> ~~**who**~~ will [<sub>vP</sub> ~~**who**~~-come]]?

➤ **by AGREE Concord**

✓ **with edge of CP**

- (48) a. I'll **reread** [<sub>FR</sub> **whatever** paper John has worked \*(on)] (Bresnan & Grimshaw '78) b.\*I'll  
**reread** [<sub>FR</sub> on **whatever** paper John has worked] (Bresnan & Grimshaw '78)  
 c. \*I **drank** [<sub>FR</sub> **with whatever** you tempted me]  
 d. I **drank** [<sub>FR</sub> **whatever** you tempted me with]

Matching effects in Free Relative Clauses:

the FR initial phrase has to match the matrix requirements. If the matrix verb requires an NP/DP, then the FR pronoun has to be of that category. In (48a,b) there is a conflict with respect to the forms required by the verbs – the matrix verb requires a direct object, i.e. an NP/DP, and the embedded verb a PP. A FR is possible, if the pronoun moves up alone and strands the preposition, as in (48a), but not if the whole PP moves up, as in (48b).

✓ **with edge of vP**

- (49) *Nu mai citeste* [<sub>vP</sub> *nimeni* ~~*citeste*~~ *nimic*] (Romanian)  
 Not more reads nobody nothing  
 ‘Nobody reads anything anymore.’

✓ **with edge of DP**

- (50) Peter wouldn't take [<sub>DP</sub> **anyone**'s word] for it.

**4.3. AGREE Check and MOVE cannot access a moved phase (edge or non-edge); AGREE Concord can;**

➤ **the non-edge of a remerged phase cannot be targeted by MOVE/ AGREE Check**

• **moved vPs**

**no QR out of a remerged phase (Scope freezing)**

Topicalized XPs are “frozen for scope” (Barss 1986, Sauerland 1997); quantifiers inside a topicalized XP cannot take scope outside the topicalized XP

- (51) a. ...and **a policeman** stood in front of **every bank** that day  $\exists \gg \forall; \forall \gg \exists$   
 b. ...and [<sub>vP</sub> stand in front of **every bank**] **a policeman** did that day  $\exists \gg \forall; * \forall \gg \exists$

Scope freezing: contexts in which covert movement (QR or reconstruction) is prohibited

In (51b), even if the VP reconstructs in its base position, the QP ‘every bank’ does not regain its initial scope properties (compare to (51a))

• **moved CPs**

- (52) \**weil* [<sub>CP</sub> *den Ball*]<sub>1</sub> *vergeblich* [<sub>CP</sub> *der Suzi* *t*<sub>1</sub> *zu geben*]<sub>2</sub> *die Kazuko* *t*<sub>2</sub> *versucht hat*  
 since the ball unsuccessfully the Suzi to give the Kazuko tried has  
 (Sauerland 1998)

- (53) \* $Ce_i$  [sã citeascã Paul  $t_i$  dimineata] e imposibil? (Romanian)  
 what Sã read Paul morning-the is impossible?  
 (54)  $Ce_i$  e imposibil [sã citeascã Paul  $t_i$  dimineata]? (Romanian)  
 what is impossible Sã read Paul morning-the (Di Sciullo, Paul, Somesfalean 2003)

Romanian is a VSO language. Romanian allows extraction out of the subject clause in VSO constructions, but not in SVO ones (Di Sciullo, Paul, Somesfalean 2003)

• **moved DPs**

- (55) \*weil gestern [von Chomsky]<sub>1</sub> in Frankfurt [das neue Buch  $t_1$ ]<sub>2</sub> niemand  $t_2$  gekauft hat  
 since yesterday of Chomsky in Frankfurt the new book nobody bought has  
 (Sauerland 1998)

➤ **the edge of a remerged phase cannot be targeted by MOVE/ AGREE Check**

• **moved CPs**

- (56) Cine<sub>i</sub> e imposibil [  $t_i$  sã citeascã  $t_i$  ziarul dimineata ]? (Romanian)  
 who is impossible Sã read paper-the morning-the  
 (57) \*Cine<sub>i</sub> [  $t_i$  sã citeascã  $t_i$  ziarul dimineata ] e imposibil? (Romanian)  
 who Sã read paper-the morning-the is impossible  
 (Di Sciullo, Paul, Somesfalean 2003)

• **moved DPs**

- (58) a. [Which do you think [~~which~~ Mary wants [~~which~~ to buy [~~which~~ of these houses]]]]  
 b. \*[Which do you think [~~which of these houses~~] Mary wants [~~which of these houses~~] to buy [~~which of these houses~~]]]  
 c. [Quale credi [~~quale~~ che Maria vuole [~~quale~~ comperare [~~quale~~ di questi libri]]]]  
 d. \*[Quale credi [~~quale di questi libri~~] che Maria vuole [~~quale di questi libri~~] comperare [~~quale di questi libri~~]]] (Italian)

➤ **the edge of a moved phase can be targetted by AGREE-Concord**

- (59) a. l'uomo [ <sub>DP</sub> la cui anima ] tutti ammirano [ <sub>DP</sub> ~~la cui anima~~ ] (Ital)  
 the man.M.sg. of.F.sg whose.M.sg soul.F.sg everybody admires  
 b. omul [ <sub>CP</sub> a cãrui minte ] toata lumea o admirã [ <sub>DP</sub> ~~a cãrui minte~~ ]  
 man-the.M.sg. [of.F.sg whose.M.sg. mind.F.sg everybody admires  
 'The man whose mind everybody admires'. (Rom)

➤ **the non-edge of a moved phase can be targetted by AGREE-Concord**

- (60) a. n-am cãutat sã fiu [ <sub>PP</sub> pe [ <sub>DP</sub> placul nimanui ] ] (Rom)  
 Neg-have-I tried to be PE liking-the nobody-GEN  
 'I haven't tried to please anyone'.  
 b. n-am cãutat [ <sub>PP</sub> pe [ <sub>DP</sub> placul nimanui ] ] sã fiu [ <sub>PP</sub> ~~pe~~ [ <sub>DP</sub> ~~placul nimanui~~ ] ] (Rom)  
 Neg-have-I tried PE liking-the nobody-GEN to be  
 'I haven't tried to please anyone'.

4.3.1. Counterexamples?

Sauerland 1999: extraction out of moved phases = "surfing paths"

Surfing paths are created by first moving the superphrase and then moving a subphrase out of the superphrase and further up. The starting position of one chain dominates that of the other



Problem for our view: surfing paths are sometimes possible:

- (62) ?[What student]<sub>1</sub> did Ann ask (Mary) [what picture of ~~what student~~]<sub>2</sub> to put up ~~what picture of what student~~]<sub>2</sub>? (Pesetsky 1982)

**Crucially,**

The interpretable/non-interpretable status of features has an effect on the availability of surfing paths. Uninterpretable features get checked and erased and hence they become invisible to the syntax after checking, whereas interpretable features remain visible even after entering AGREE relations. Movement across an intervening checked feature, if it's driven by the same feature, should only be possible if this feature is uninterpretable

➤ **Problems with this account:**

1. **The Cycle condition** enforces that the strong requirements of the subphrase be satisfied first, i.e. before the requirements of the superphrase (the earliness principle).

then, what is the motivation of the second step? i.e. why does the subphrase move out of the superphrase?

2. according to Sauerland's 1999 analysis, an interpretable feature of the superphrase (i.e. a feature that does not check out and still visible after movement to the intermediary position) should induce a violation of Shortest attract

Sauerland 1998: violation of Shortest attract where a checked but still accessible feature is crossed causes a smaller degree of markedness than violations where an unchecked feature is intervening

In the wh-example above, the wh-feature on wh-expressions is interpretable, so surfing gives rise to a violation of shortest attract. Sauerland adopts Kitahara 1994: one violation of shortest attract causes a slight markedness, whereas two violations cause complete ungrammaticality.

**Problem:** this assumption cannot consistently account for various cases of surfing. In the wh example above, the result of crossing an interpretable feature is slight markedness, whereas in the examples below, the same violation results in ungrammaticality

- (63) a. \*weil [den Ball]<sub>i</sub> vergeblich [der Suzi t<sub>1</sub> zu geben] die Kazuko t<sub>2</sub> versucht hat  
since the ball unsuccessfully the Suzi to give the Kazuko tried has
- b. \*weil gestern [von Chomsky]<sub>i</sub> in Frankfurt [das neue Buch t<sub>1</sub>]<sub>2</sub> niemand t<sub>2</sub> gekauft hat  
since yesterday of Chomsky in Frankfurt the new book nobody bought has  
(Sauerland 1999)

**surfing scrambling in German is always ill formed;** the [+scrambling] feature in German is interpretable (i.e. it affects the Topic, Focus Background structure of sentence meaning)

**wh surfing is slightly marked:** In (62), if we assume that the feature of wh-words is interpretable, surfing gives rise to one violation of shortest attract.

➤ **Alternative account of the wh sentence above:**

Move the subphrase to the high position and then the remnant superphrase to intermediary position

In the intermediary position: 'Tucking-in' (Richards 1997) of the superphrase below the specifier created by the moved subphrase. No special assumptions are needed for this account. Multiple specifiers and tucking in are needed for the account of multiple wh questions anyway

- (64) Cine; ce; ziceai [CP cã îsi închipuie t<sub>i</sub> t<sub>j</sub>]? (Romanian)  
Who what say.2.s.Past [CP that Refl imagines.3.s.Pres t<sub>i</sub> t<sub>j</sub> ]?  
'Who did you say imagines what?
- Cine; ce; ziceai [CP cã îsi închipuie t<sub>i</sub> [CP cã ai spus t<sub>j</sub> ]]? (Romanian)  
Who what say.2.s.Past [CP that Refl imagines.3.s.Pres t<sub>i</sub> [CP that Aux.2.s. said t<sub>j</sub> ]]  
'Who did you say imagines that you've said what?

No crossing of paths; no moving across the landing site of the\_subphrase.

- This analysis is confirmed by the fact that scrambling out of a nominal phrase is possible when the nominal phrase is in situ, but impossible when the nominal phrase is scrambled

- (65) a. \*weil gestern [von Chomsky]<sub>i</sub> in Frankfurt [das neue Buch t<sub>1</sub>]<sub>2</sub> niemand t<sub>2</sub> gekauft hat

- since yesterday of Chomsky in Frankfurt the new book nobody bought has  
 b. *weil gestern [von Chomsky]<sub>1</sub> in Frankfurt t<sub>1</sub> niemand [das neue Buch t<sub>1</sub>]<sub>2</sub> gekauft hat*  
 since yesterday of Chomsky in Frankfurt nobody the new book bought has  
 (adapted from Sauerland 1999)

- This account can explain the asymmetry between the wh-examples and the scrambling examples above. The [+scrambling] feature of the subphrase can be checked inside the superphrase. As a result, movement of the subphrase to the high position in order to check the scrambling feature of the (high) functional head is not necessary. In contrast, the wh-feature of the subphrase in (62) cannot be checked inside the superphrase.

- (66) *weil vergeblich [[den Ball]<sub>1</sub> der Suzi t<sub>1</sub> zu geben] die Kazuko t<sub>2</sub> versucht hat*  
 since unsuccessfully the ball the Suzi to give the Kazuko tried has  
 (adapted from Sauerland 1999)

## 5. Consequences: Uniformity

### According to Chomsky (1995:91)

A chain C of (67) is a legitimate LF object if C is uniform

$$(67) \quad C = (a_1, \dots, a_n)$$

Uniformity is a relational notion

A chain is *uniform with respect to P* (UN[P]) if each  $a_n$  has the property P or each  $a_n$  has the property non-P

Ex: an argument chain consists only of L-related positions, hence UN[L].

The basic types – heads, arguments, adjuncts – are uniform chains, legitimate LF objects

Uniformity: a chain is uniform with respect to phrasal structure

$$(68) \quad (XP, XP), (X^0, Y^0), \text{ but not } *(X^0, XP). \text{ Or } *(XP, X^0)$$

### We propose that uniformity actually applies to configurations

- (69) AGREE holds under Uniformity of structure.

Generalizing

- (70) A relation R is uniform if each element in R contains the same structure, i.e. the same asymmetric relations.

A theoretical consequence of uniformity of structure is that it reduces derivational complexity by reducing choice points in the derivation: a sub-structure of a remerged phase may not be itself remerged, only the full structure can.

A second theoretical consequence of our proposal is that it contributes to maximize matching effects, as Agree matches sub-sets of features in configurations, and not individual labels.

By reducing derivational complexity and by maximizing matching effects, our proposal contributes to make grammars legible by the external systems.

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