| 966 'Kew |
| :---: |
|  |



A similar result is pursued with respect to agreement, which is derived by means of analysis also predicts the universal ban on overt expletives in null subject languages. (Prince \& Smolensky 1993, Grimshaw 1995, Grimshaw \& Samek-Lodovici 1995). The inventories can be derived by way of grammar, with no recourse to lexical stipulation INT, a constraint requiring that all constituents be interpreted. This shows that expletive to follow to a high degree from the interaction between the above constraints and FULL-
 independent pro-drop parameter (Grimshaw \& Samek-Lodovici 1995). of null subjects language-internally and crosslinguistically, eliminating the need for an and PARSE, favoring subjects in preverbal subject position, determines the distribution Alignfocus. The interaction between these constraints and the constraints SUBJECT inverted when focused, a result formalized through the constraints DrOPTOPIC and shows that subjects are null when referring to antecedents with topic status, and


the definition of the relevant syntactic modules.
constraints adds to the deductive structure of linguistic explanations while simplifying
 subject inversion, agreement and structural case assignment. It does so on the basis of



 Arabic and infinitivals with overt subjects in English and Portuguese, with no appeal to other constraints of UG. Once reranked, the same constraints derive declaratives in
 declaratives, gerundives and subjunctives are derived from the interaction between



 Schwarze and the whole Sprachwissenschaft group at Konstanz University for letting

 For their support in the production of this dissertation my thanks goes also to Bruce (Germany). Johns Hopkins University, CUNY, University of Venice (Italy), and Stuttgart University Calabrese, as well as audiences and students at the summer school of Girona (Spain), Giuseppe Longobardi, Anna Cardinaletti, Guglielmo Cinque, Giuliana Giusti, Andrea Geraldine Legendre, Luigi Burzio, Sten Vikner, Viviane Deprez, Alessandra Giorgi,
 Other linguists I feel particularly indebted to for their encouragement, comments, to Maria Bittner for all I learnt from her on the syntax and semantics of focusing. material for a second dissertation, and I am very grateful for this. I am also very grateful subjects, subject inversion, agreement and case assignment left me with enough
 meetings with Ken Safir, Richard Kayne and Maria Bittner were always highly I also greatly benefited from the advice of the members of my committee. The years, this dissertation would not have been possible. my OT analyses. And of course, without Alan's teaching and advice on OT during these countless hours spent helping me identifying anything good or problematic hidden in the intuition of the potential of an Optimality Theoretic approach to Syntax, and
 I often feel they taught me more than linguistics. always finding the time, the words, and the smiles, to encourage, help, and understand. ability to accompany their enthusiasm for linguistic research with much humanity, ג! minds, and attending their courses and doing research with them has always been brain



2. Topic-referring Subjects ..... L ............................................................................................................................. иoџŋnpoщuI !!ム…............................................................................................................sұиәұиоつ эо әqец !^ …......................................................................................................................... ио!̣еэ!̣əด


$!!!\Lambda$
ұиәuия!̣! 4.4.2. Agreement with Null Subjects

 4nstances of Mixed Agreement Configurations . 4.2.2 The constraints AGR ${ }_{\phi}$, LOOSEAGR $\phi$, and NO $\Phi$-FTS

4.1. Crosslinguistic Typology 3.4. Conclusions
 3.3. Parametrization Issues: OT vs. Principles and Parameters. 3.2.8. Focused Null Subjects.


 3.1.4.1. Location ..
3.1.4.2. A'-status ..
3.1.5. Summary ......... 3.1.4. Syntactic Properties of the Focus Position 3.1.3.1. Evidence from Question-Answer pairs.
3.1.3.2. Evidence from Focusing adverbs .......... 3.1.3. The Contrastive-Focus Status of the FP Position Structural Contrastive Focusing in Italian
3.1.1. Introduction ..................................... 2.5. Conclusions ..

 Topics and Pronouns .......................
2.4.1. Topichood vs. Subjecthood


N్య N
 $D$
苞
0
0
0
0
0
0
0 Appendix A. 6.4. Constraint Violability and Ranking in Minimal.....................................................
 uoissnos!a 9

 5.3.2. Subject Inversion
5.3.3. Transitives .......................... 5.3.1.1. Aux-to-comp in Subjunctives ....................... minative Case in Italian Clauses..
.1. The Aux-to-comp Alternation
5.2.3. Inputs with Non-finite Tense ......................
5.2.4. Constraints Conflicting with CASEGOV ....
5.3. Nominative Case in Italian Clauses................................... 5.2.2. Candidates with specVP Subjects and with Expletives
5.2.3. Inputs with Non-finite Tense .................................................................. 5.1. The Need of a Unified Analysis of Case Assignment ........................................................................................................... 5. Optimal Cas
 $\angle 9 L$
991
G9I
79I
E9L
Z9I
$69 L$







 developed OT analysis of agreement under c--command deriving the above generalization is then agreement features than agreement with subjects under a spec-head configuration. An observing that agreement under a c-command configuration is never richer in
 particular, which is brought forth as evidence for the universal status of UG constraints.

 observation, I develop an OT analysis of subject inversion in Italian and English contrastively focused constituents to occur in VP-adjoined position. On the basis of this
 Chapter 3 begins examining the distribution of inverted subjects in Italian, claiming the OT analysis with other relevant analyses of null subjecthood. distribution of expletives in the two languages. The last part of the chapter compares subjects in Italian and English. The analysis is then shown to predict aspects of the On the basis of this observation, I develop an OT analysis of the distribution of null showing that null subjects must be licensed by a discourse antecedent with topic status. Chapter 2 begins examining the distribution of null subjects in a variety of languages, underlying the OT model of syntax presented in this dissertation.

Chapter 1 provides a brief introduction to OT and lays out the main assumptions presentation can be found at the beginning of each chapter.


Principles and Parameters and Minimalism frameworks. support an OT perspective on syntax, and making the relevant comparisons with the Chapter 6 recapitulates the main results of this dissertation, discussing how they in the analysis of infinitivals with overt subjects
reranking is also shown to derive the contrast between Italian, Portuguese and English
 candidate is an extended projection, as defined in Grimshaw (1991). The function EVAL


(1) - GEN $^{\left(\text {input }_{i}\right)}=\left\{\right.$ cand $_{1}$, cand $\left._{2}, \ldots\right\}$

Smolensky (1993) and McCarthy and Prince (1993).

and Smolensky 1993) assessed in relation to $i$. All candidates which are suboptimal are ungrammatical (Prince hierarchy $G_{m}$ ), and an input $i$ is that candidate which satisfies $G_{m}$ optimally when 1995). The grammatical candidate with respect to a grammar $G_{m}$ (i.e. a constraintsupply the set of lexical items and the argument relations among them (Grimshaw 1993, in relation to a specific grammar and with respect to an input whose main function is to


highest ranked constraint, and violate the lowest ranked one. among two conflicting constraints a grammatical structure will always satisfy the solve conflicts between constraints: in absence of conflicts with other higher constraints, hierarchy is a total order on the constraints in UG. The hierarchy determines how to conflict with each other. Grammars are defined as hierarchies of UG constraints. Each universal constraints of grammaticality. The constraints are violable and potentially in


discussed in detail in the following chapters proposed in this dissertation. The motivation and evidence in favor of this model is


## 1. Basic Assumptions


 structural case, such as finite Tense assigning nominative case, or transitive verbs
 8u!̣ııəsəıd
 (iii) Move- $\alpha(\mathrm{Y})$ : any constituent, whether a maximal projection or a head, can be moved -(L66L) complement. The result is an extended verbal projection in the sense of Grimshaw For example, a TP headed by $\mathrm{T}^{\circ}$ could take the VP projected by run as its The operation Compose also composes together functional and lexical projections. V , or in VP adjoined position. VP headed by like. However, it could also be parsed into the complement position of adjuncts. For example, the DP John could be parsed into the specifier position of the adjoined, and maximal projections can only be parsed as complements, specifiers or structure-preserving (Chomsky 1986b, Emonds 1976), i.e. heads can only be head-
 providing zero or more potential adjunction sites. The maximal projection being built can have one or more XP segments at its top, element: for example, a determiner could be projected into a DP projection. of the verbal head run. The same operation can also be applied to a functional abiding projection. For example, a VP headed by the lexical head run can be built out

zero or more times (cf. Chomsky 1992's computational system). extended projections that can be constructed by applying the following five operations
 eliminating from $S$ any structure that violate them.


projections, like the XP in the specIP position of (3) below, are not possible. empty head. I assume that this kind of head and the implied totally contentless

(z) that in (2) below, lacking an overt structural representation of the specifier of IP. as having a pro, pro expl or $P R O$ in specIP position will turn out to have a structure like

 position that UG lacks such elements. I will maintain that structures that have been $(1981,1982)$ and hence onwards used in most generative linguistic analyses. I take the null but structurally present items, such as pro, pro expl and PRO proposed by Chomsky


features, displaying full agreement.




 coindexed with a nominal constituent, and match its agreement specification, i.e. that


projection would not rescue any of them this case, all projections violate Obligatory Content. For example, if the IP and VP in (6) where also
contentless they and the top XP would all violate Obligatory Content, and participating in an extended projection is contentful since there are no heads contributing features to the whole extended projection. In


(c) local head, the XP thus has content, and thus satisfies Obligatory Content. ${ }^{1}$ (1991) are available throughout the extended projection. Though not projected from its the features of the extended projection's lexical head, which according to Grimshaw Obligatory Content, because, by being part of an extended projection, the XP shares all though projected from a contentless empty head $\mathrm{X}^{\circ}$, does not fail the principle of is part of a contentful extended projection. For example, the XP projection in (5) below,

(4) Obligatory Content: candidate structures may not contain contentless XIs. out structures containing contentless projections. first of the filtering component of GEN, which applies to the output of $G_{f} n_{f}$ and filters The prohibition is formalized through the following input-independent principle, the



[ ] :әұер!риеэ әамэпияя пाии әч7 (८) thus a legitimate candidate. involved, the null structure candidate satisfies Obligatory Content vacuously, and is structure such as the null-structure candidate shown in (7). Since no projection is

Obligatory Content. those empty-headed projections that are licensed by feature-percolation under position taken in Bakovic (1995), where ObHd is an inviolable principle ruling out even also specifierless). For the same reason, Obligatory Content also differs from the Grimshaw's constraints would be violated in such cases (provided the projections were heads if their projections participate to a (contentful) extended projection, whereas rather than a violable constraint. Moreover, as we saw, it still allows for contentless projection with contentless heads. In fact, Obligatory Content is an inviolable principle and also from Grimshaw's $(1993,1995)$ constraint ObHd , which is violated by a which is violated by projections making no contribution to their extended projection, Obligatory Content diverges from Grimshaw's (1993) constraint Minimal Projection, structures fail Obligatory Content and are therefore excluded too. Since features cannot percolate across the boundary of extended projections, such

## DP


(6)
into the XP-node of the contentless projection; see (6) below. grant content to an otherwise contentless projections by having its features percolating


 I'(q'eg66L) ! !
 of expletives and agreement (chapters 2-4). involves $\Psi$ (Prince and Smolensky, 1993:186). I will make use of this idea in the analysis
 presence or absence of an item $\Psi$ in the lexical inventory of a grammar depends on

As Prince and Smolensky point out in their analysis of phonological inventories, the pursue the goal of making the lexicon as universal as it can be. been proposed in the literature to be the sources of different syntactic phenomena, I will constraints). While not coping with all the distinctions in lexical inventories which have derived from differences in the grammar (i.e. from distinct rankings of the UG The question is whether some or all of the non-trivial differences can actually be languages. assigner for the subject of an infinitival complement that is unavailable in other



Less trivially, the presence in one lexicon and absence in another of items with incorporate them. differ in their phonological form, and thus trivially differentiate the structures that

 candidate sets languagewise. There is a trivial and a less trivial sense in which this is
 1.2.2. The Role of the Lexicon
or whether it is inferable from a sentence's constituent- and argument-structure investigation on whether the explicit representation of functional relations is necessary,
 primitives are grammatical relations like subject, object, predicate. This component is syntax). However, LFG also postulates an additional f-structure component, whose


assignee is also independently determined in the way discussed in section 1.5 which case it assigns is determined by that head's lexical specification. The case-

¥ndu! complementizers with their own semantic import, and analyze them as part of the

 extended projections clause tense is finite or non-finite. This field is missing in inputs of non-verbal (iv) Tense, providing tense specification. In particular, this field specifies whether the focused.
(iii) A marking of the foci, optionally marking the thematic roles of L as contrastively corresponding argumental extended projections.
(ii) A thematic mapping, associating the theta-roles of L with the input-tuples of the associated extended projection and its argument structure.
(i) A lexical head L and its argument structure, identifying the lexical head heading the recursive tuples made of the following fields:
 the argument-relations between them (Grimshaw 1993, 1995; cf. Chomsky's satisfy Inputs provide the lexical items out of which extended projections are built, as well as grammatical status of each competing extended projection under a given grammar.


### 1.3. Inputs

 agreement features, and that whether they do so or not follows from their grammar,


 chapter 2.
(see Rothstein 1995 for a similar proposal). The analysis is developed in further detail in
input.

 referential lexical items with which they agree. restricted to their referential role, pronominals are compatible with inputs headed by
 are represented as intransitive D's freely generated by Genf, in accord to a proposal by
 Compatibility does not exclude the null structure, to which it applies vacuously, since candidate structure for an input like <John,-,-,->. Compatibility ensures that a structure headed by Mary will never be considered a structures for $\alpha$ are those whose head is interpretationally not distinct from L .
 Let us first consider the Compatibility principle Compatibility and Theta-Consistency, which belong to the filtering component of GEN. competing candidates is established through the two input dependent principles of
 (8c) <run( x ), $\mathrm{x}=$ John, $\mathrm{x}=$ focus, $\mathrm{T}=$ pres. perf.> ( 8 b ) <run( x ), $\mathrm{x}=$ John,,$-- \mathrm{T}=$ pres. perf.> (sәs!ue Kı!̣®!̣que
(8a) <John, -- , --, --> (henceforth simplified by convention to John when no -pəsnoof Input (8c) is analogous to input (8b), but it also specifies that the agent is contrastively external argument is the optimal extended projection for the input <John, --, --, $--x\rangle$.
 nominal extended projection headed by John. The one in (8b) is the input of a verbal



provided that neither Mary nor Bill be the assignee of the external theta-role. candidates '[he runs]', '[it runs John]', or even the structure '[Mary [John [runs Bill]]]', the null subject candidate ' $[r u n s]^{\prime}$ ', the inversion candidates ' $r$ runs John]', as well as the of (11) not excluded by the above principles. Among others are the null structure ' []$^{\prime}$,
 containment in Prince and Smolensky 1993 and Prince and McCarthy 1993).
 lexical head. This would not occur if there were no relation between the lexical heads in the optimal realization of the input be consistent with the argument structure of the More generally, the purpose of Compatibility and Theta-Consistency is to ensure that <John,-,-,->, given the principle of Compatibility. in (11), because the subject Mary is not a legitimate syntactic expression of the input specification, i.e. to <John,-,-,->. This excludes (13) as a candidate structure for the input the external theta-role of (11) be assigned to the optimal realization of its input

Theta-Consistency permits us to distinguish (13) from (12), because it requires that
(13) [ip Mary has [vp run ]] (11) $<$ run $(x), x=$ John,,$-- T=$ pres. perf.>
(12) [IP John has [vP run ]]
be made. syntactic analysis of the sub-input <John,-,-,->, and thus no appeal to Compatibility can legitimate candidate for input (11). In fact, nothing forces us to consider Mary the rules out structure (13), with the external theta-role of run assigned to the DP Mary, as a

into which $\theta$ is mapped in input $\alpha$. the assignee of $\theta$, if structurally realized, must be the optimal realization of the input $\beta$ (10) Theta-Consistency: Given an input $\alpha$ and its lexical head $L$, for any theta role $\theta$ of $L$, N

-
$<$ suns projection until it reaches the IP node. (The percolating grid is represented as $\langle x\rangle$.
Theta-role saturation is represented with an asterisk.) unsaturated role simply continues its percolation through the whole extended present..$^{2}$ As the figure illustrates, I assume that in this case the theta-grid with its the external theta-role is left unassigned, since no structurally realized subject is



assigned to the referential theta-role of the theta-assignee. sisterhood, and, in accord with Williams (1994), it involves linking the theta-role being

 occur in terms of theta-saturation. The theta-grid of the theta-assigner is copied from


then follow from the fact that they do not conflict with any other constraints of UG


әұрр!риеә


 assignment does not occur and the principle is therefore vacuously satisfied. For
 that the overt subject of a transitive verb be theta-assigned within the VP, it also leaves


(15) Local Theta-assignment: if it occurs, theta-assignment occurs within the with non local theta-assignment. below, which belongs to the filtering component of GEN and eliminates all candidates Sportiche ( 1988,1991 ). The assumption is formalized in the input independent principle the base-generated position for the subject of unergative verbs, as in Koopman and


 NP-movement leaving to further research to determine whether the latter should be dissertation, they are not essential to them. I will therefore still assume the existence of While Williams' theoretical results appear compatible with the claims of this Williams that rely on theta-role percolation is also the suppression of NP-movement.
 Williams (1994), to derive various linguistic facts, such as the existence and properties of Percolation of external theta-roles throughout the clause has also been proposed by can percolate from $V$ to IP because IP is the extended projection of $V$.



headed by John in the input
 accessible at the DP node. In (18c), T case-relates with the displayed external theta-role intrinsic to the nominal head John. In (18a) and (18b) the referential role R is directly In each structure, case relates the case-assigner T in $\mathrm{I}^{\circ}$ with the referential role -suọ̣exapu!̣oว әseว




(18a) Preverbal subject. (18b) SpecVP subject.
> (18c) Null subject

(17) Input: <sing(x), $x=<\operatorname{John}(R),--,--,-->,--, T=$ pres. perf.> head is explicitly represented, and the three candidates in (18), represented with their to nominal heads. Consider the input in (17), where the referential role $R$ of the lexical case as a relation between a case-assigner, like $\mathrm{I}^{\circ}$ or $\mathrm{V}^{\mathrm{o}}$, and the referential role intrinsic

Drawing from a similar idea concerning agreement in Williams (1994), I represent
1.5. Case-assignment and Agreement
explained in the next section. (16a). This will play a role in the modeling of agreement and case-assignment, as it is percolation is that the theta role is locally accessible at the IP node in (16b) but not in



sиoнехари!ог
 se as a relation between a case-assigner, like $\mathrm{I}^{\circ}$ or $\mathrm{V}^{\mathrm{o}}$, and the referential role intrinsic



$ज$ is not encoded in the input. as will be explained in chapter 5 . For now, it is sufficient to notice that this information


 from the interaction between the constraint CASEGOV, a constraint introduced later and


(6L)



 section 4.4.2 for the analogous agreement configurations, this qualifies as a spec-head




 case-assignee. Thus, in (18a), the referential role of the subject in specIP is accessible occurs. The configuration is determined by the positions of the case-assigner and of the

(21) <see (x,y), (x=John, y=Mary), -- , T=pres. perf.> potential candidate structures are evaluated in relation to the input in (21) below. GEN, i.e. by virtue of one of the principles introduced in the preceeding sections. The by Genf but excluded from the candidate set fed to EVAL by the filtering component of of structures generated by GEN. I will mark with an asterisk those candidates generated
 1.6. A Sample of Candidates Generated by GEN and their Status should occur and introduced later in this chapter. encoding requirements on the configuration under which the agreement coindexation them in input. As case-assignment, agreement too is governed by universal constraints nominal arguments accessed through the mediation of the thematic role associated with referential role of expletives, realized nominal arguments, or structurally unrealized referential role of a potential nominal constituent, which includes, as stated before, the coindexation between the Genf-supplied $\phi$-features of an inflectional head and the In analogy with the representation of case, agreement is represented as a first place. there is always a candidate lacking it because $\operatorname{Genf}$ did not generate any $\phi$-feature in the are generates freely by Genf, hence for every candidate showing agreement on feature $\phi$
 case-assigner H .
(20) Case Filter: coindex the referential role R of a potential nominal constituent with a satisfy the Case Filter are legitimate candidates. nominal referential role R is a potential nominal constituent. Only the structures that
 intended to include overt nominal constituents, whether expletive or not, as well as


 $\stackrel{\rightharpoonup}{~}$


-

4

 structures not realizing the


( E をz) are legitimate candidates. the DP in specIP position are treated as uninterpreted expletives, then (23b) and (23c) specifications in input (21). However, if the external theta role is left unassigned, and because theta-assignment provides an interpretation in contrast with the mappingoutside VP, and structure (23c) violates Theta-Consistency with respect to input (21),

 KreN uaəs

(ezz)
 marked DP (see section 4.2.1). The structures follow below: thematic object (see section 5.2.1). Likewise, agreement occurs with the nominative Where not otherwise indicated, T assigns case to the thematic subject and $\mathrm{V}^{\mathrm{o}}$ to the

 1995), who analyzes English declaratives like John loves Mary as involving a subject in specVP. In her

 Grimshaw (1995) in that it refers to empty heads rather than to headless projections, and
 The next constraint is OBHD, also proposed by Grimshaw $(1993,1995)$. OBHD is failed

## 

 Subject. subject structures as well as structures placing the subject in inverted position both fail violated whenever the specIP position is left structurally unrealized. For example, null and contentless extended projections have been ruled out in section 1.2.1. SUBJECT is entails the presence of an overt element in specIP position, since lexical null elements conceive SUBJECT as requiring that the specIP position be structurally realized. ${ }^{3}$ This (Chomsky 1982:10), and for the arguments presented in this work it is sufficient to SUBJECT is reminiscent of the second clause of the Extended Projection Principle antecedent of a reflexive or reciprocal, as in Bittner and Hale (1996). The constraint where A-position is here defined operationally as any position which can host the The constraint SUBJECT requires that the highest A-position of a clause be realized, proposed in Grimshaw $(1993,1995)$.

- Phrase-structure constraints: the constraints SUBJECT and OBHD have first been principles of the filtering component of GEN. assessed with respect to legitimate candidates, i.e. to candidates that satisfy all the in the discussion of specific issues are not included here. The constraints will be always



$0 Z$
 NO $\Phi$-FTS were the only agreement constraint, agreement would never occur. Notice





## (29) Case-assignment configurations:

 example, the case-assigner $X^{\circ}$ satisfies CASEGOV only when case-assigning YP or ZP, the case-assignee is the sister of the case-assigner or the specifier of the latter. For

Failed if the case-assignee is not locally properly governed by its case-assigner. - CASEGOV: A case-assignee is locally proper-governed by its case-assigner. government. The definition follows below.

sensitive to the configuration under which case is assigned and agreement occurs. - Constraints related to case and agreement: the case and agreement constraints are
 constraint plays in this work is nevertheless entirely consistent with its role in


 role in XP associated (see section 4.4.2). would satisfy AGR. As already pointed out, agreement may also occur with the theta-


 Failed when no spec-head agreement occurs on H relative to $\phi$. and the referential role of a potential nominal constituent. - $\mathrm{AGR}_{\phi, H}$ : A head H should host spec-head agreement between an agreement feature $\phi$
 feature $\phi$ and the referential role of a potential nominal constituent. - LOOSEAGR ${ }_{\phi, H}$ : A head H should host clause-bound agreement between an agreement
agreement features, the constraints can also be viewed in terms of feature-licensing.
 see chapter 4 for details (cf. the alignment constraint family in McCarthy and Prince family of related constraints, with one constraint for each value of $\phi$ and H provided; The definitions below should be interpreted as constraint-schemata, identifying a head configuration agreement coindexation. The constraint AGR requires agreement to occur under a specagreement occurs. The constraint, LOOSEAGR, is satisfied by any clause bound occur. The constraints differ in the assessment of the configuration under which kept in mind that both constraints are violated whenever an agreement relation fails to әq snчł р

 ranked constraints. penalizes input-external material provided by GEN which is not required by any higher





FULL-INT plays an important role in the analysis of expletives, which I analyze as

## Failed by uninterpreted lexical material.

-FULLINTERPRETATION: Lexical conceptual structure is parsed.
definition of gradient constraint, see also Prince and Smolensky 1993) conceptual structure (LCS) associated with the uninterpreted projection (for the gradient constraint whose violation is proportionate to the complexity of the lexical

Following Grimshaw's analysis of do support $(1993,1995)$, FULL-INT is conceived as a projections, i.e. projections which have not been theta-assigned. Lodovici (1995a,b), which penalizes any candidate involving uninterpretable overt INT), proposed by Grimshaw $(1993,1995)$ and also used in Grimshaw and Samekfreely added by GEN. This is the domain of the FULLINTERPRETATION constraint (FULL-

PARSE applies only to the elements in input, and therefore has no say on the material
PARSE(see 1.3 for the definition of compatible). parsed as the DP John but also as the pronominal DP he, as in he runs, without violating head. Therefore, the thematic subject of the input <run $(x), x=$ John,,$-- T=p r e s>$ can be

Any overt projection compatible with an input lexical head counts as parsing that
Failed by unrealized input items.

- PARSE: Structurally realize input items into phrase-structure.

Parse requires the parsing of all the input items, including the tense specification. to the input $\langle r u n(x), x=J o h n,--, T=$ pres $>$ because it does not parse the lexical item John. unrealized. For example, the structure [runs] fails PARSE once when assessed in relation extended projection they help to form. The constraint is failed once for each item left first projected and then composed together, so that they are structurally realized in the Grimshaw $(1993,1995)$, requires that the items of the input be parsed, i.e. that they be











 left unrealized.


## chapter 2).

 constituent with topic status (the notion of topic constituent is discussed at length in realization of constituents which are contrastively focused or have as their antecedent a әчł suıəлоя sұu!̣e,Failed by traces - STAY (Grimshaw 1993, 1995): Traces are not allowed. Chomsky's shortest movement (1993)). movement and is violated once by each trace left by constituent movement (cf.

1995, Grimshaw and Samek-Lodovici 1995b). from the interaction of FULL-Int with the other constraints of UG (see also Grimshaw

The general goal is to predict the distribution of expletive items across languages comparison).

LCS (a similar proposal in non-OT terms is found in Rothstein 1995; see chapter 2 for a
 possible that ...]' is not because Mary involves a greater violation of FULL-INT. Ideally, violate FULL-INT minimally. Thus, 'It is possible that ..]' is grammatical while '[Mary is


 Failed by non-alligned focused constituents. with the right edge of a verbal YP in the clausal extended projection. - ALIGNFOCuS (XP, Left, YP, Right): Align the left edge of the focused constituent XP occurs elsewhere in the structure.



 with topic antecedents will be marked as topic-referring. some independent component of grammar would have to ensure that only arguments




 alternations in English, is explored in section 2.2.7.2.) Deficiency Hypothesis and by comments by Grimshaw and Kayne on topic-related structurally minimal, and inspired by Cardinaletti and Starke's (1994) Structural
 status. Failed by structurally realized arguments coindexed with antecedents with topic - DROPTOPIC: Do not realize arguments which have topic antecedents.
antecedent is not a topic, then DROPTOPIC is vacuously satisfied in either case. DROPTOPIC is violated. If $\theta$ is left unassigned, $\mathbf{D}$ ROPTOPIC is satisfied. If instead the antecedent is a topic and $\theta$ is nevertheless assigned to a realized constituent, then constraint Drop Topic checks the status of the antecedent of a theta-role $\theta$. If the
set (see Prince and Smolensky 1993). form within this finite set. This will in turn be the optimal form of the whole candidate other members of the candidate set, the above procedure can be used to find the optimal

4. Let $C$ be the next lower constraint and repeat from step 1 . step 1 (without passing through step 4). 3. If all candidates violate $C$, erase one $C$-violation from each candidate and repeat from
2. If at least one candidate satisfies C , eliminate from CS all the candidates that violate (30) For $\mathrm{C}=\mathrm{C}_{1}$ to $\mathrm{C}_{n}$, do the following:

1. Assess the status of each candidate
(30) $\mathrm{For} \mathrm{C}=\mathrm{C}_{1}$ to $\mathrm{C}_{n}$ do the following: only the optimal candidates: computed according to the procedure below, which terminates leaving in CS all and The optimal candidate(s) relative to a constraint hierarchy $\mathrm{H}=\mathrm{C} 1 . . \mathrm{Cn}$ can be better than $\mathrm{S}^{\prime}$. candidate $\mathrm{S}^{\prime}$, there is a higher ranked constraint $\mathrm{C}_{\mathrm{i}}$ in $\mathrm{H}, \mathrm{i}<\mathrm{k}$, on which S (or $\mathrm{S} 1 . . \mathrm{Sm}$ ) does CS such that for any constraint $\mathrm{C}_{\mathrm{k}}$ in H on which S (or $\mathrm{S} 1 . . \mathrm{Sm}$ ) does worse than another CS , the optimal candidate(s) relative to H is that candidate S (or candidates $\mathrm{S} 1 . . \mathrm{Sm}$ ) in

1.8. Selection of the Optimal Candidate

Phonology by McCarthy and Prince (1993). constitute a syntactic analogue of the family of alignment constraints studied in left alignment in Hungarian vs. right alignment in Italian). AlIGNFOCUS would then
 interesting hypothesis arises that ALIGNFOCUS characterizes a family of constraints Samek-Lodovici (1995a,b), while the above constraint affects only contrastive foci, the Lodovici 1993, 1994, Belletti and Shlonsky 1994). As pointed out in Grimshaw and 1987, Rochemont and Culicover 1990, Bonet 1990, Tuller 1992, Saccon 1993, Samek(see work by Antinucci and Cinque 1977, Schuh 1982, Calabrese 1985, 1990, Shlonsky







 example, candidates (a) and (c) tie on $\mathrm{C}_{1}$ and $\mathrm{C}_{2}$. However, candidate (c) is suboptimal


status on the lower constraints. thus suboptimal relative to the remaining candidates (a) and (c), independently of its constraints. For example, candidate (b) fails the highest ranked constraint C 1 , and is -Shading expresses the irrelevance of a candidate's performance on the shaded -Violations are marked by stars. Fatal violations are followed by an exclamation mark. The optimal candidate is marked with the symbol 'ros'. Candidate (a) is thus the optimal
candidate in the tableau below. -The constraints are displayed left to right by decreasing rank.
Tableaus are interpreted as in Prince and Smolensky (1993): 1.9. Notation and Terminology discussion of some problematic issues involving deictic topic antecedents concludes the Di Eugenio (1993, 1995, Dimitriadis (1995), Huang (1984), and Montalbetti (1984). A

 classification of null subjects at the bottom of Cardinaletti and Starke (1994)'s Structural
 The remaining two sections explore the connections between the analysis of null on overt expletives in null subject languages. derive aspects of the crosslinguistic distribution of expletives, such as the universal ban Furthermore, the interaction of the above constraints with the constraint FULL-INT will and overt subjects within null subject languages as well as crosslinguistically. PARSE and SUBJECT is then shown to determine the complementary distribution of null structurally unrealized. The inherent conflict between DROP TOPIC and the constraints constraint DROPTOPIC, which requires that arguments with topic antecedents be left
The generalization just introduced motivates the proposal in section 2.2 of the Dimitriadis (1995). Huang (1984), and more indirectly also by Calabrese (1985), Di Eugenio (1990, 1995) and between null subjecthood and topichood proposed among others by Givón (1983), the base of Italian, Greek, Hebrew and Chinese data, also supports the correlation in Strawson's (1964) sense, see section 2.1). This generalization, which is established on stating that null subjects must be licensed by topic antecedents (where topic is intended
Fundamental to the following analysis is the empirical generalization in section 2.1
interaction of a fixed set of conflicting constraints. well as aspects of the crosslinguistic distribution of overt expletives all follow from the complementary distribution of null and overt subjects within and across languages as


## 2. Topic-referring Subjects









 centering theory. I come back to these analyses in sections 2.3 and 2.4 Eugenio's $(1990,1995)$ and Dimitriadis' $(1995)$ analyses within the framework of (1994) analysis of Italian null subjects as structurally deficient pronouns and Di


 maximal topic-accessibility, Huang (1984), allowing for the licensing of null constituents
 subjects, against generalization (1). us to expect free variation in subject position between null and overt pronominal Burzio 1986, Jaeggli and Safir 1989). Without further qualification, this view would lead overt pronominals (among others Chomsky 1981, 1982, Rizzi 1982, 1986, Safir 1985,


(1) Null subjects must be licensed by topic antecedents Chinese examined in this chapter. The generalization in (1) below holds for the data from Italian, Greek, Hebrew and discourse status of the antecedent and does not coincide with "previously mentioned".




## 

 The next day he signed a new contract. The next day, (he) / he signed a new contract.
 The 3rd of July this contract was signed by the president.


(4) Greek.

Later on, he visited the university. More late, (he) /he / he has visited the university. b. Piú tardi, ${ }^{*} \mathrm{e}_{\mathbf{i}} /$ egli $_{i} /$ lui $_{\mathbf{i}}$ ha visitato l'universitá. This morning the exhibition was visited by John. This morning, the exhibition was visited by John. a. Questa mattina, la mostra é stata visitata da Gianni i . (3) Italian. not contrastively focused in relation to other individuals.) judgments below are given under a non-focused interpretation, where the pronoun is For a typology of pronominal forms in Italian see Cardinaletti and Starke 1994. The correct. ${ }^{1}$ (The Italian data involve both the weak form egli as well as the strong form lui. following data from Italian, Greek, Hebrew and Chinese show, the prediction is be true even if the $b y$-phrase constitutes the only possible antecedent available. As the independently showed to be a non-topic, should not license a null subject. This should

 2.1.2. Evidence from Topic and Non-topic Antecedents in Passives by Strawson.
perform its indexing function. This in turn explains the semantic distinctions observed เ $\varepsilon$
 entry-referent it denotes, giving us the intuition that the sentence is about the exhibition.



## 

 Sentence topics, within this view, are one of the means available in language toorganize, or classify the information exchanged in linguistic communication -
they are signals for how to construct the context set, or under which entries to entries, as explained by Reinhart in the following terms (1981: 80): sets of propositions under the referents they denote. Topics thus function as indexing added to it. Topics are assumed to organize the discourse-context by grouping together with it, and not rejected by any participant on the base of their private knowledge, is which the discourse participants agree, and such that any new proposition consistent following Stalnaker (1978), represents the discourse-context as the set of propositions on A more formal rendition of the notion of topic is given in Reinhart (1981) who, was visited by John is uninterpretable under the same context (Strawson 1964:89). in John's town there is no swimming-pool, while the sentence The local swimming pool the sentence John spent the morning at the local swimming pool can be interpreted as false if referred to as the king of France. Since none is found, (2b) is deemed false. Analogously, list of people who visited the exhibition in search of an individual who could be exhibition, has reference. The truth-value of (2b) can then be established by checking the France, is referenceless. Sentence (2b) instead is interpretable, because its topic, the interpreted in relation to its topic, (2a) is uninterpretable, because its topic, the king of Davison 1984, Gundel 1985, Prince 1981, Reinhart 1981). Since each sentence is the topic-status of subjects in canonical positions see also Li 1976, Givon 1986, 1983, the subject of the sentence, but not in (2b), whose topic is the subject the exhibition (for


[^0]simply false, rather than uninterpretable expression is introduced as a by-phrase of a passive, the sentence is likely to be deemed
 More generally, these speakers seem to prefer overt pronominals across the board, and appear to be 2 Some speakers of Mainland Mandarin Chinese find the null subject of the (b) sentence rather marginal discussion. too are illegitimate null subject antecedents, confirming the generalization under


confirming the generalization that null subjects must be licensed by topic antecedents. (10), while it is ungrammatical when the antecedent has non-topic status, as in (3)-(6), Summing up, the null subject is grammatical when the antecedent is a topic, as in (7)-

sentences, yet the informants find it grammatical (in Hebrew, increased speech speed
As noted, in Hebrew and Chinese, the null subject is slightly dispreferred in these
The next day he signed a new contract.
Tin epomeni mera, $\mathbf{e}_{\mathbf{i}} /$ ?? $_{\text {? }}$ aftos $_{\mathbf{i}}$ ipograpse ena kenuorgio simvoleo.
The next day, (he) / he signed a new contract.
\[

$$
\begin{aligned}
& \text { Today (he)/he break ASP another one. } \\
& \text { Today he broke another one. }
\end{aligned}
$$
\] b. Jintian $\mathbf{e}_{\mathbf{i}} / \mathbf{t a}_{\mathbf{i}}$ dapo le linwai yizhi.


a. Zuotian, Lisi $_{\mathbf{i}}$ dapo le yizhi beizi.


$$
\begin{aligned}
& \text { (9) Hebrew. } \\
& \text { a. Ba-slos a be Juli ha-naథixatam al ha-xoze ha-ze. } \\
& \text { In-three in July the-president signed on the-contract the-this. } \\
& \text { The third of July, the president's brother signed this contract. } \\
& \text { b. Lemoxorat } \mathbf{e}_{\mathbf{i}} / \mathrm{hu}_{\mathbf{i}} \text { xatam al xoze xadas . } \\
& \text { The next day (he) / he signed on contract new. } \\
& \text { The next day he signed a new contract. }
\end{aligned}
$$

 3 The possibility of lacking reference without disrupting interpretation is a sufficient condition for non-
topichood, but not a necessary one. Being part of the topic, a possessor contributes to the identification of Tin epomeni mera, ${ }^{*} \mathbf{e}_{\mathbf{i}} /$ aftos $_{\mathbf{i}}$ ipograpse ena kenuorgio simvoleo.
The next day, (he) / he signed a new contract.
The next day, he signed a new contract. The third of July, the president's brother signed this contract. In-the 3 July-gen, the brother of the-gen president-gen signed this the contract. a. Stis 3 Iouliou, [o adelfos tou proedrou $\mathrm{u}_{\mathrm{i}}$ ] ipograpse afto to simvoleo. (13) Greek. In the afternoon he visited the university. In the afternoon (he) / he / he has visited the university Nel pomeriggio ${ }^{*} \mathbf{e}_{\mathbf{i}} /$ ? egli / lui $\mathbf{i}_{\mathbf{i}}$ ha visitato l'universitá. This morning John's brother visited the exhibition. This morning the brother of Gianni has visited the exhibition. a. Questa mattina [il fratello di Gianni $\mathbf{i}_{\mathbf{i}}$ ] ha visitato la mostra. (12) Italian. null subject in the following sentence, confirming the generalization. data show, the non-topic antecedent $X$ in the expression brother of $X$ cannot license a Once again we have a non-topic with which to test generalization (1). As the following

## (11) John's brother visited the exhibition

 certainly is not about John. ${ }^{3}$ example, in (11) below, while the sentence can be said to be about John's brother, it is. This can be easily seen by applying Strawson intuitive definition of topichood. For
 The third of July, the president's brother signed this contract.
 (17) Greek
In the afternoon, he visited the university. b. Nel pomeriggio $\mathbf{e}_{\mathbf{i}} /{ }^{\text {? }} \mathbf{e g l i}_{\mathbf{i}} /{ }^{*}{ }^{\prime} \mathbf{u i}_{\mathbf{i}}$ ha visitato l'universitá. This morning, the brother of John has visited the exhibition.
 (16) Italian. those of examples (12)-(15).) second sentence subject, which is now a topic. (The missing glosses are identical to the correspondent data in (12)-(15). The only change involves the antecedent of the licensed, as shown in (16)-(19) below. Each of following data form a minimal pair with When the antecedent is the subject of the first sentence, null subjects are once again Today he broke another one. Today (he)/he break ASP another one Yesterday, Lisi broke a cup.
b. Jintian ${ }^{*} \mathbf{e}_{\mathbf{i}} / \mathbf{t a}_{\mathbf{i}}$ dapo le lin Yesterday, Lisi 's younger-brother break ASP one cup.
Yesterday, Lisi broke a cup. a. Zuoitian, [Lisi $i_{i}$ de didi] dapo le yizhi beizi. (15) Chinese. The next day he signed a new contract The next day (he) / he signed on contract new Lemoxorat ${ }^{*} \mathbf{e}_{\mathbf{i}} / \mathrm{h} \mathbf{u}_{\mathbf{i}}$ xatam al xoze xadas The third of July, the president's brother signed this contract. In-three in July the brother of the-president signed on the-contract the-this, sos-rg 'e
мәляән ( $\dagger$ ) a be Juli [ha-axs eha-nasi ${ }_{i}$ ] xatam al ha-xoze ha-ze
under a contrastive focus interpretation which is here irrelevant). the case, as the following example from Italian shows (the pronoun lui is grammatical

 assumption it should be a topic.
The by-phrase in (20) is the only non-wh constituent of the question, and under our
(20) Q: What exhibition was visited by the king of France? counterpart to Strawson's original passive example, as in (20) below. examine are topics. That this is the case, can be shown by examining the interrogative
 where the topic is not the subject of the sentence. To this end, I will use question answer the topic was also the subject of the sentence. To distinguish the two we need cases

 2.1.4. Evidence from Interrogatives while a non-topic cannot, forcing an overt pronominal subject.
Once again, we observe that a topic subject can be the antecedent of a null subject,
b. Jintian $\mathbf{e}_{\mathbf{i}} / \mathbf{t} \mathbf{t a}_{\mathbf{i}}$ dapo le linwai yizhi. Yesterday, Lisi broke a cup Zuoitian, [Lisi de didi] dapo le yizhi beizi

[^1] The next day he signed a new contract.
b. a. Ba-sos a be Julliha-ax s el ha-nasli $\mathrm{l}_{\mathrm{i}}$ xatam al ha-xoze ha-ze father is the topic of the question. A null subject is possible when licensed by the

 None, because (he) / he / he to-him prevent of to-go-out. Nessuna, perché ${ }^{*} \mathbf{e}_{\mathbf{k}} /{ }^{*}{ }^{\mathbf{e}} \mathrm{gli}_{\mathbf{k}} /$ luin $_{\mathbf{k}}$ gli ${ }_{\mathbf{i}}$ impedisce di uscire. Which exhibitions were visited by John's father? (22a) Q: Quali mostre sono state visitate da-[1 padre di Gianni ${ }_{\mathrm{k}} \mathrm{l}_{\mathrm{i}}$ ?
$\quad$ Which exhibitions are been visited by-the father of John?
issue. Gianni. Accordingly, the null subject is now unlicensed, confirming the generalization at QA-pair of (21) is tested again. This time however, the antecedent is the non topic

the correct licensing-factor, since the by-phrase is not a subject. subjecthood. Furthermore, and contra Calabrese (1985), it shows that subjecthood is not null subject. This points strongly in the direction of topichood as the licenser of null topic is matched by a shift in its ability to function as an antecedent for the following passives. In fact, we see that the shift in the status of the $b y$-phrase from non-topic to
The above data are particularly telling when compared with the data in (3) about
(21b) A: Recentemente $\mathbf{e}_{\mathbf{i}} /{ }^{\text {? }} \mathbf{e g l i}_{\mathbf{i}} /{ }^{\text {K }} \mathbf{l u i}_{\mathbf{i}}$ ha visitato la mostra di Klee e di Miró.






ubjects that the topic status of the antecedent is a necessary condition for the licensing of null licensing from QA-pairs and left-dislocation structures were shown to support the claim

 John's father, I know the reason why he criticized him. The father of John,, (I) know the reason for which *(he) / he /he him has criticized.
(25b) [II padre di Gianni $\left.{ }_{k}\right]_{i}$,, conosco il motivo per cui ${ }^{*} \mathbf{e}_{\mathbf{k}} /{ }^{\text {? }} \mathrm{egli}_{\mathbf{k}} /$ lui $_{\mathbf{k}} \mathrm{l}_{\mathbf{i}}$ ' ha criticato shown in (25b). topic antecedent John, forcing overt pronominal subjects. This is indeed the case, as The complementary prediction is that the null subject cannot be licensed by the nonJohn's father, I know the reason why he ran away. The father of John,,(I) know the reason for which (he)/he / he ran away.
 (25a) prediction is borne out, as shown in (25a). ${ }^{4}$ dislocated phrase should then be a grammatical antecedent for a null subject. The are always a topic for their own sentences. According to the generalization in (1), a leftstructures. Reinhart (1981) and Vallduví (1992) have claimed that left-dislocated phrases non-centrality of subjecthood in null subject licensing, comes from left-dislocation A final piece of evidence supporting generalization (1), and further arguing for the


 Yes, (he)/ he / he is left little ago.
$\mathrm{Si}^{\prime}, \mathbf{e}_{\mathbf{i}} /{ }^{*}{ }^{\mathbf{e g l i}} \mathbf{i}_{\mathbf{i}} /{ }^{*}{ }^{1} \mathbf{l i m}_{\mathbf{i}}$ é partito poco fa'

subjects.

 the interaction of Drop Topic, Subject and Parse determines the crosslinguistic

 Failed by unrealized input items. - PARSE: Structurally realize input items into phrase-structure.

 UG. In particular, overt pronominal subjects will occur on pressure of the constraints and must be derived from the interaction of DROP TOPIC with the other constraints of
 can be licensed by a topic constituent. The fact that non-topic antecedents license only null subjects must be licensed by a topic constituent, DROPTOPIC only asserts that they turning generalization (1) into a constraint. In fact, while the generalization states that

status.
Failed by structurally realized arguments coindexed with antecedents with topic

argument is parsed. arguments be left structurally unrealized, and is violated every time a topic-referring $1995 \mathrm{a}, \mathrm{b})$ and the other constraints of UG. DROPTOPIC requires that topic-referring interaction of the universal constraint DropTopic (Grimshaw and Samek-Lodovici
In the OT model developed here the distribution of null subjects is captured by the
 s!̣イ.

 arguments carrying this functional specification F be dropped. The ranking of $X$ with PARSE and
DROP TOPIC would create the split between Greek and Italian, on the one side, and Hebrew and Chinese captured by the topic vs. non-topic distinction. Like DROPTOPIC, a constraint $X$ may require that

 this case seem to allow for null as well as non null subjects. I do not have an analysis to offer at this time.
My assumption will be that null subjects in Hebrew and Chinese are derived the same way as in Greek




| T1. Italian topic-referring subjects: | DROPTOPIC >> PARSE $\gg$ SUBJECT |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| <cantare( x ), $\mathrm{x}=$ Giannitop $^{\text {, }}$-- , $\mathrm{T}=$ pres. perf.> | F.I. | DR.TOP | PARSE | SUBJ. |
| a. preverbal subj: [ lui ha cantato ] he has sung |  | *! |  |  |
| b. postverbal subj: [ -- ha cantato lui ] |  | *! |  | * |
| c. ${ }^{\text {cse }}$ null subj: [ -- ha cantato ] |  |  | * | * |
| d. null struct: |  |  | * * * |  | the reader of the topic status of the antecedent, not part of the input, see section 1.7.) constitutes a legitimate parsing of an argument. The subscript top is only a reminder for (c) is thus optimal and therefore grammatical. (Remember that an overt pronominal structure in (d), which fail to parse even the verb and the tense specification. Candidate PARSE, which is violated only once by candidate (c), but three times by the null between the surviving structures (c) and (d) is settled by the next lower constraint candidates in (a) and (b), because they structurally realize the subject. The competition none contains an expletive. The next lower constraint, D ROPTOPIC, eliminates the

All candidates satisfy the leftmost and highest ranked constraint FULL-INT because exhaustion of the candidate set is discussed later). unrealized. Examine tableau T1 below, which includes the relevant candidates (the full First, let me show that under this ranking a topic-referring subject is indeed left pronominal subject will necessarily be left unrealized. ${ }^{5}$ DROPTOPIC dominates SUbJECT and PARSE. Only in this case, a topic-referring


involving topic-referring arguments. been shown to govern the availability of null subjects across languages for inputs

Overall, the relative ranking of DROPTOPIC with respect to SUBJECT and PARSE has

status crucially depends on having PARSE ranked higher than DROPTOPIC.
If DROP TOPIC outranked PARSE, (a) would lose to (d), showing that its grammatical leaving (a) as the optimal candidate. structures tie on DROP TOPIC and FULL-INT, but not on SUBJECT, which is failed by (b), ranking (c) and (d) fatally violate PARSE, restricting the competition to (a) and (b). These once PARSE is ranked above DropTopic. As the tableau below shows, under this antecedent requires an overt pronoun. This is precisely the selected optimal candidate example, in English, the optimal realization of a pronominal subject with a topic

(26) Null subject languages: DROPTOPIC $\gg$ PARSE $\gg$ SUBJECT following ranking:

The above argument thus shows that null subjects are possible only under the rendered irrelevant by PARSE's low ranking. in favor of candidate (d) which does not fail it. The fact that (d) fails PARSE would be under the reverse ranking, candidate (c) would be eliminated when assessing SUBJECT,

The tableau provides evidence also for the subranking PARSE $\gg$ SUBJECT. In fact, fails but (a) satisfies. ungrammatical. The same would be true if SUBJECT dominated DROPTOPIC, which (c) lose to (a), which satisfies PARSE, and would therefore be suboptimal and
 'Lつョín S ło əsuədxə
 makes it possible to satisfy the higher ranked constraint SUBJECT, and therefore (b) English must be ranked higher than FULL-INT. As tableau T5 shows, the expletive in (b)
 support in Grimshaw's (1995)). where necessary (Grimshaw \& Samek-Lodovici 1995b, see also the analysis of dootherwise be violated. The OT model thus predicts that expletives are possible only when their presence makes it possible to satisfy higher ranked constraints which would

Expletives always fail FULL-INT, therefore we expect them to be grammatical only

here represented as expl which is left uninterpreted. candidate. This candidate, shown below, realizes the specIP node with an overt DP,

A candidate which was not included in the above discussion is the expletive 2.2.3. Expletive Subjects
overt subjects as the syntactic expression of non topic-referring subjects referring subjects in null-subject languages, and the crosslinguistic convergence on predicts both the proper crosslinguistic alternation in the syntactic expression of topichow the interaction between DROPTOPIC and the constraints SUbJECT and P ARSE



than violating SUBJECT. the expletive candidate in (b), because violating FULL-INT constitutes a worse violation again it is consistently solved in favor of the null subject candidate in (a), and against



candidate in (b), because it violates the lower one of the two conflicting constraints. As T 7 shows, under this ranking the null subject candidate in (a) wins over the expletive the language. This is in fact the effect of having FULL-INT ranked higher than SubjECT. always suboptimal, leaving the impression that expletives are absent from the lexicon of expletive candidates turn out optimal, the ranking identifying Italian makes them



Drop TOPIC. The analysis is summarized in tableau T6 candidate is less optimal than the preverbal subject candidate, which violates only English, therefore the OT analysis makes the correct prediction that in English this Such a candidate violates PARSE. But PARSE was shown to outrank D ROPTOPIC in referring subject, by satisfying DROPTOPIC while simultaneously satisfying SUBJECT.



 Cardinaletti 1992:74) and it seems that ... are both grammatical ${ }^{6}$ (Safir 1985:265, Rizzi 1986:541, Travis 1984:228, expletives, that is, there is no language where sentences like sings, meaning 'she sings',


 expletives, further explored in the next subsection. correlation between the availability of referential null subjects and the lack of overt of the universal lack of null subjects for non topic-referring antecedents, and by the




## पSIofur



UE!̣ełI
(28) Rankings for Italian and English: rankings follow below: antecedents, and its correlation with the availability of overt expletives. The identified distribution of null subjects in relation to topic-referring and non-topic-referring universal constraints properly predicts the language-internal and crosslinguistic



 DROPTOPIC>PPARSE>>SUBJECT $\gg$ FULL-INT, is incompatible with referential null relevant inputs. This is not the case. In fact, the resulting ranking, still get referential null subjects and overt expletives as the optimal structures for the

 Italian in the previous section that they are possible only under the ranking
 and Parse dominate FULL-Int.

Therefore the ranking of any language with overt expletives requires that SUBJECT

candidate is thus optimal only if FULL-INT is ranked lowest. The optimal candidate is the one which fails the least ranked constraint. The expletive null structure. Each candidate fails one constraint among PARSE, SUBJECT and FULL-InT.
 null subject candidate, which leaves the specIP node structurally unrealized, the case of a verb lacking an external argument and the three candidates in T9 below: the
 steps demonstration. rankings which are inconsistent with each other. This is shown in the following two 97


 expletive candidate has been added in (e)). The input in T12 marks the external tableu below (the verbal and nominal heads are represented by their category. The

compatible with these two rankings are compatible with the language being sought.



like seem requires the ranking \{PARSE,FULL-INT\}>>SUBJECT. discussion of tableau T9, repeated below, selecting the null subject candidate for a verb where she sings and seems [that ...] are both grammatical. As we know from the overt referential subjects for topic antecedents but lacking expletives, that is languages

Чџ!м sә尺еп. FULL-INT on input with argumentless verbs. SUBJECT on inputs with referential subjects, while satisfying SUBJECT at the expense of subjects thus follows from the impossibility of satisfying FULL-INT at the expense of әл!̣әјдхә ұгәло pue doxp-олd ге! dominate SUBJECT, but this contradicts the ranking established in step 1.












 The same is not true in Rothstein's model, which lacks constraint violability. Like is always the same element. expletive does not make it less a pronoun than its interpreted counterpart. The pronoun non-expletive one. The fact that a pronoun is not interpreted when functioning as an

 with an expletive as optimal, it will also select as optimal the structure with the consequences. In the OT model, when the evaluation function EVAL selects a structure

 DPs, constitute the optimal expletive elements. pronominals violate FULL-INT the least, and therefore they, and not other more complex contributing only a referential index. Thanks to their minimal conceptual structure, intransitive DPs (as in Abney 1987), lacking internal structures and semantically
 the lexical conceptual structure of the uninterpreted DP is. Following Rothstein We may conceive FULL-INT as a gradient constraint violated more the more complex parallel to Grimshaw's $(1993,1995)$ analysis of do-support. other DP's as expletives. The explanation hinges on the definition of FULL-INT and is


## 

 alternation (see also Grimshaw and Samek-Lodovici 1995a,b).









 the other. This is shown in tableau T13 below. (The preverbal subject candidate is







 make crucial use of the notion of harmonic binding, henceforth 'h-binding' (Prince \& generated candidate is less optimal than one of the candidates above. In the proof I will optima across all rerankings, I will show that for any possible ranking, any other GENconstraints they violate. To prove that these candidates exhaust the set of potential These candidates are all independent of one another, as one can see by checking the

PARSE (three times).



$(2)$
the four familiar candidates listed in (30).
Consider the input schema in (29) below, with a topic-referring thematic subject, and
 no extra candidate exists which does better than the optimal candidates discussed so


The purpose of this section is to complete the analysis presented thus far by

identification of expletives with pronominals proposed by Grimshaw and Rothstein. the proposed OT model permits us to capture in a less stipulative manner the In conclusion, besides deriving the distribution of null subjects and overt expletives,
inviolable status of the Full Interpretation principle in Rothstein's analysis. uninterpreted pronouns non-distinct from pronouns themselves is jeopardized by Overall, it appears that the insight on the fundamental nature of expletives as
 contrary to the original hypothesis. Parsing only the subject into a DP violates PARSE
 dissolving the problem by not creating a specIP position. Doing so costs additional




 Full-INT, and becomes h-bound by (a) itself. distinct from (a) unless it includes additional expletive material, in which case it fails
 it unfilled, it collects the violation of SUBJECT. Added to the PARSE violation, this
 violate at least PARSE. Cand cannot fail Drop Topic. Hence the subject must be left unrealized. Thus Cand must 3. Since step 2 showed that failing DropTopic alone is not possible, it follows that subject in specIP would make Cand indistinguishable from (b).





Drop Topic leaving the subject unrealized it fails PARSE, and vice versa.
 to a contradiction, as shown in 1 through 7 below:


 pronominal forms, and Italian shows no pronominal subject. expression of topic-referring subjects, whereas English in this latter case uses all its both for expletive constructions involving raising verbs like seem as well as for the refers to a non-topic. The sought language would however use its expletive pronoun


 really absent from the world languages or not. whenever possible. It is thus worth examining in detail whether expletive pro-drop is candidate', which would no longer exists if theta-assignment would be obligatory second step of the proof in section 2.2 .4 crucially relies on the existence of the 'expletive derivation of the universal ban on null subject languages with overt expletives, since the results of the OT analysis. Nevertheless, it would have serious consequences for the
 the issue. pronoun, and no "expletive pro-drop" language would be predicted to exist, dissolving function as expletive. The structure would then be analyzed as involving an interpreted would necessarily be assigned to the DP in subject position which would then cease to theta-role finds a potential assignee. In this case, the external theta-role in (31) above Conversely, we could assume that theta-assignment occurs obligatorily as soon as a

$\square$
 unassigned, and therefore uninterpreted, thus functioning as expletive. possible for the external role of run in (31) to leave the pronoun in subject position assumption on optional theta-assignment. For example, it is this assumption that makes
 form for topic-referring arguments. overt pronominal forms for argument with non-topic antecedents, but use an expletive like it sings as "she sings". More precisely, the sought language could have independent expletive pro-drop $)^{8}$. In a language like this, it should be possible to interpret a sentence topic-referring subject, but with an overt expletive in subject position (let us call it

The first concerns the above prediction of languages involving non-realization of a
2.2.7.1. "Expletive pro-drop" proposed.

I would like to discuss in this section a few potential developments of the model here
2.2.7. Potential Developments here below. instantiated by English and Italian respectively. The latter option is further examined non-overtly but with an expletive in subject position. The first two possibilities are referring pronominal subjects are expressed either overtly, or non-overtly, or finally notwithstanding, the analysis thus predicts a crosslinguistic typology where topicidentified, being ambiguous with silence, it cannot be learnt. Other constraints such as for example Tesar and Smolensky's (1993). Since the null-structure cannot be form is a crucial assumption of current theories of language acquisition in OT systems, null-analysis on the basis of its non-learnability, given that identification of the optimal converge around these four optima. These can be reduced to three if we exclude the optima available, and that the $4!=24$ rerankings of the four constraints here examined

A corollary of this proof is that candidates (a) through (d) are the only potential potential optima, in contradiction with the initial hypothesis.





## 


 It seems that it will rain. Expl seems expl+ABL, that begins rain+INFINITIVE+ILLATIVE. (34b) Se vaikuttaa siltä, että rupeaa satamaan.
suip. 7 I
(34a)
(34a) Se sataa.
with thematic subjects, and be interpreted referentially as meaning he or she, see (35). weather and seem clauses, as in $(34 a, b)$, but it can also occur as the subject of sentences and Nikanne (1994:12), in Colloquial Finnish the expletive se occurs as the subject of descriptively is a non pro-drop version of Standard Finnish. According to Holmberg

A language displaying this pattern exists, and is Colloquial Finnish, which
Sought L.: Pron sings.

(33) unique form, as shown in (33). pattern would look like English except that its pronouns have been collapsed into one non-topic. In this case, the Pron1 and Pron2 distinguished in (32) above, coincide. Its much like Chinese, does not have distinct pronominal forms for subjects referring to a There is a second less self-evident pattern which arises when the sought language, predicted by the OT analysis presented before. I have no such example to offer yet.

A language with such a pattern would offer clear evidence for the language typology
 Colloquial Finnish could resort to the pronouns häh (she/ he) of Standard Finnish in focusing contexts or antecedent determines an alternation in the syntactic expression of the subject. If we were to find that 9 Although Vainikka (1989:188) maintains that se is the only pronominal form for the third person of
Colloquial Finnish, it would be worth testing whether the topic vs. non-topic status of the subject

 DROP $^{2}$ OPIC $_{\text {rel }}$, would be reminiscent of Cardinaletti and Starke (1994)'s economy of arguments to be as much devoid of structure as possible. This constraint, call it analyzed through a relativized version of DROPTOPIC requiring topic-referring

 only a binary distinction between realization and non-realization of an argument.
 antecedents plays an important syntactic function.
 because its antecedent is a topic. In other words "stress-drop" would mimic "subject-



(36) a. Mary went swimming with John. She dived in.
even if unstressed, while that in sentence (b) requires stress.





pro-drop is empty until we determine the status of Colloquial Finnish. ${ }^{9}$
 cannot know yet whether Colloquial Finnish is or is not the sought language. However,

 agreement. This accounts for the alternation between agreementless Italian and



 agreement constraints, as explained in chapter 3 . The typology follows below:

 Chinese (on this apparent paradox see also the solutions developed in Huang 1984, Portuguese but are also available in languages lacking agreement completely, as agreement in null subjects languages with "rich" agreement such as Italian and typology which may account for why referential null subjects must be licensed by
 realized subjects. licensing condition for referential null subjects, and is never violated by structurally these conditions is violated by structurally realized subjects. AGR-LICENSE specifies a Drop Topic specifies under which conditions null subjects are necessary, and under argumentation (1986). The constraint A GR-LICENSE and DropTopic are different. requires referential subjects to be identified through agreement, along Rizzi's

agreement morphology on $\mathrm{V}^{\circ}$, as proposed in Rizzi (1986). null internal arguments in Italian could be derived from the absence of object oriented 1987). Moreover, if null constituents must be licensed through agreement, the absence of the agreementfull Portuguese infinitival can license a null referential subject (Raposo subject in specIP but it cannot license a referential null subject (Rizzi 1982). In contrast, specific configurations, the agreementless Italian infinitivals can assign case to an overt alternation between Italian and Portuguese infinitivals with overt subjects. Under in the licensing of null subjects. The relevance of agreement is nicely shown by the







 -(s[eu!̣uouoid DROPTOPIC ${ }_{\text {rel }}$ would depend on the full analysis given to stressed and unstressed performs better on DROPTOPIC ${ }_{\text {rel }}$ and therefore wins (the actual number of marks under identically under all constraints, but the candidate with the unstressed-pronominal PARSE. The stressed-pronominal and the unstressed-pronominal candidates perform in (c) satisfies DROP TOPIC ${ }_{\text {rel }}$, but is suboptimal because it violates the higher ranked unstressed topic-referring subjects would look like T14 below: the null subject candidate would favor unstressed pronouns over stressed pronouns. The derivation of English penalized wherever it is unneeded. Even when ranked lower than PARSE, DROPTOPIC $C_{\text {rel }}$

topic-referring argument Failed once by each immediate projection of the extended projection that realizes a - DROPTOPIC ${ }_{\text {rel }}$ Realize arguments with topic antecedents minimally.
structurally minimal realizations impose that an argument be structurally realized, DROPTOPIC ${ }_{\text {rel }}$ would militate for is left structurally unrealized. However, whenever other higher ranked constraints argument structurally. DROPTOPIC ${ }_{\text {rel }}$ would then be satisfied only when the argument immediate projection used in the extended projection that realizes the pronominal





 It is not difficult to amend these analyses so that they capture the correct distribution. free variation between null and overt subjects. obligatory across structures, this and the other analogous analyses incorrectly predict







Research on pro-drop has concentrated on establishing the syntactic conditions the pro-drop alternation, which do assume an overtly realized silent pro..


 advantage in exchange. alternation directly from the OT based interaction of the above constraints, with no


 have to be derived by different means. Notice however, that the syntactic requirements and no conflict with DROPTOPIC could ever arise. The pro-drop alternation would then


 from the interaction of PARSE and SUbjECT with DROPTOPIC. If null subjects were ensuing possibility of deriving the crosslinguistic distribution of null and overt subjects


And how does it compare with analyses of pro-drop that use pro? structurally unrealized. Is there independent evidence for this representational choice? Contrary to standard assumptions, in the preceding analysis null subjects were left

## 

absence of overt expletives from grammar rather than through lexical stipulation. ban against overt expletives in null subject languages, and derived the presence or referring to non-topics, which are always overtly realized. Furthermore, it predicted the

The analysis also predicted the crosslinguistic convergence in the analysis of subjects DROPTOPIC relative to the constraint SUbJECT and Parse. particular, I showed how the availability of null subjects is tied to the ranking of distribution of pronominal subjects in pro-drop and non-pro-drop languages. In SUbject, P arse and Full-Int provides a principled explanation for the empirical section, I showed how the interaction between DROPTOPIC and the universal constraints shown how null subjects are licensed only by topic-referring antecedents. In this structurally. Evidence in this direction was already provided in section 2.1 , where it was constraint DROPTOPIC, requiring that topic-referring constituents be not realized
 This section provided an OT analysis of the pro-drop alternation language-internally violation of AGR-LICENSE. This could be the case of Chinese. is also higher than SUbJECT and PARSE would then allow null subjects despite the violated whenever necessary to satisfy DROPTOPIC. Those languages where DROPTOPIC those languages ranking DropTopic higher than AGr-LICENSE. AGr-LICENSE would be (ii) languages lacking agreement can still have null subjects. This is the case for all lack null subjects. This could be the case of French. presence of agreement. A language in this group would have "rich" agreement and still low in the hierarchy, independently of the ranking of AGR-LICENSE and in spite of the SUbJECT or PARSE. These languages disallow null subjects because DropTopic is too
 null subjects, which is instead preserved by the Portuguese agreement full infinitivals.
 8 G

The above discussion indicates that the ungrammaticality of the German sentence in
 To-have seemed John to lie could you make lose the lawsuit.


(41) ? ${ }^{\mathrm{PRO}}$ expl avoir semble' que tu aies menti pourrait te faire perdre la cause.
involving aux-to-comp movement. unacceptable. The ungrammatical status of (42) shows that (41) cannot be analyzed as


After all, to seem that you are not married yet, can only favour you.
(40) ?Au fond, [PRO ${ }_{\text {expl }}$ paraitre [que vous n'etes pas encore marie's]] ne peut
(38) shown in (40) only slightly marginal; see (40) below. therefore a non-issue. Half of the native speakers I tested find the analogous of Italian

Additional evidence comes from French, where aux-to-comp is not possible, and
After all, to turn out for Mark to have lied can only favor us. In end, to-turn out Mark [to have lied] can only favour-us.
(39) *In fondo [risultare Marco [aver mentito] puó solo avvantaggiarci].
 In end, [to-turn out [that (you) not are yet married] can only favour-us]
(38) In fondo, [ $\mathrm{PRO}_{\text {expl }}$ risultare [che non siete ancora sposati]] puó solo grammatical, rather than unacceptable as it is. the case, the overt subject in sentence (39) should be licensed, and the sentence be
In end, to-seem [that you not are yet married] not can that favour-you.
\#2 in section 2.5 ; see also section 5.4 )



 meaning entities already introduced in discourse, and thus including both topic and introduced in discourse, weak and clitics must refer to "discourse prominent" entities,


 pronouns. deficiency with strong pronouns as the least and clitics as the most structurally deficient properties associated with them are then derived through a notion of structural


 2.3.2. Unrealized Null Subjects and Pronominal Typology

 (46) Mentre Sandro ${ }_{i}$ ritraeva Carlo ${ }_{k}, e_{i} /{ }^{*} e_{k}$ fumava.
of the initial adjunct, which is a topic, and not to its object, a non-topic. See (46).



antecedent. again, the clitic may take the subject as well as the object of the initial adjunct as A second instance of the split is shown in sentence (45), from Calabrese (1985). Once


 shown in (48c). ATB-extraction in conjuncts, as in (48a) and (48b) respectively, while clitics do not, as

 clitics. assumed in this work, then they are on a class of their own, more deficient than that of maximal projections, then they are weak pronominals. If they are structurally null, as
 The second criterion is uninformative, because it can be argued either way depending on their own, more structurally deficient than that of clitics. end of the prosodic spectrum. This confirms the hypothesis that they constitute a class clitics nor weak pronouns. Being phonologically null, they appear located at the lowest with weak pronouns on the basis of the first criterion. Null subjects are neither like not. Even assuming that null subjects are pro's it's unclear why they should be classified while clitics cannot, and weak pronominals are maximal projections, while clitics are contrastive stress), and phrasal status. Weak pronominals can bear lexical word-stress, clitics. The two criteria are presence of word stress (independent from phrasal and Cardinaletti and Starke's two main criteria for distinguishing weak pronouns from themselves. However, this classification seems problematic even according to classification of null subjects as weak pronouns, thus structurally richer than clitics

(47) (less structure) null <--- clitics <--- weak <--- strong <------ (more structure) and Starke's hierarchy of pronouns would then look like the following. referential dependence so increased as to allow for only topic antecedents. Cardinaletti subjects are the weakest pronouns, with their structure reduced to none and their increased referential independence (Grimshaw p.c.). Under this hypothesis, null extension of Cardinaletti and Starke's correlation between structural deficiency and

 subject is ungrammatical, while the pronoun egli is necessary.

 distribution as other overt pronouns: it is not possible when the antecedent is a topic, tested. In the idiolect spoken by these native speakers, the pronoun egli has the same Personally, I find the overt pronoun above marginal and so do the native speakers I John will leave when (he) / he finishes the work. (50) Gianni $i_{i}$ partirá quando $\mathbf{e}_{\mathbf{i}} /$ egli $\mathbf{i}_{\mathbf{i}}$ avrá finito il lavoro.
below the weak pronoun egli can freely alternate with a null subject.
The second piece of evidence of Cardinaletti and Starke shows that in the example (48a) is grammatical.

In contrast, unrealized subjects do not need to cliticize, and this is the reason why Mark called and reproached him.

(49) Marco lo ha chiamato e sgridato
example. onto and in fact extraction is fine if the auxiliary is extracted too, as in the following unrealized. The clitic of (48c) cannot ATB-extract because it needs a head to cliticize



(48c) *Marco lo $_{\mathrm{i}}$ [ha chiamato ed ha sgridato]. He ate some soup and drank some wine.
 (48b) Egli [ ha mangiato della zuppa ed ha bevuto vino]


Consistency, and be excluded from the competition. structure would not match the thematic relations in input, hence it would violate Theta-

 section 2.2.7.1, need not be local to VP, as in Williams 1994, and the subject CP or PP is

 would predict specIP to be occupied by an overt expletive, in order to satisfy SUBJECT.
 element. resistant non-nominal element with what is considered a case-transferring nominal
 English. Nor does it seem possible to license the pro $_{\text {expl }}$ in this particular structures by Notice that under standard analyses an expletive $p r o_{\text {expl }}$ is not an option available to to (56) to occur in the case-assigned position specIP (Stowell, 1981; Grimshaw 1994).
 (56) * [That he'll be late] '/s/ quite likely. (55) * In San Jose ' /z/ a great restaurant. (54) ANY place in San Jose $1 / z /$ a great place to live. grammatical). subtle, and some speakers though accepting the contrast in (54) vs. (55), find (56) adjoined PP in (55) as well as the sentential subject in (56) do not (these judgments are position. So, while the specIP subject in (54) licenses auxiliary reduction, the CPphonology interface. Kaisse claims that auxiliary reduction is sensitive to the subject

occupy a position higher than $\mathrm{C}^{\circ}$, leaving the subject position unrealized.
On the other hand, this behavior is expected if the constituents in (52) and (53)
s



: [That he'll be late] is quite likely.
${ }^{*}$ Is [that he'll be late] likely?
(zs) as shown in (52) and (53). did, they would undergo auxiliary inversion in interrogative contexts, but they do not, sentential and (some) propositional preverbal subjects do not occur in specIP. If they of Higgins (1973), Emonds (1972), Koster (1978) and Kaisse (1985), Bresnan notices how

Instances of empty specIP in English are presented in Bresnan (1994; see also the argued for an unrealized specIP position. languages, including English. In this section, I review some of the works which have
 2.3.3. Unrealized Subjects in English and Irish that is at the core of Cardinaletti and Starke's proposal. bottom of the scale, thus supporting the close correlation among these three dimensions it places the most structurally, referentially and phonologically deficient element at the properties. Moreover, it strengthens the structural deficiency hypothesis itself, because classification of null subjects with respect of their referential and phonological structurally deficient class at the bottom of the scale. This choice provides a proper with the hypothesis that null subjects are structurally unrealized, forming the most In conclusion, Cardinaletti and Starke's structural deficiency hierarchy is compatible $(\mathrm{He})$ / he has then moved on directed to the 'Chigi' palace. The exhibition has been visited by the President of the Republic.
(51) a. La mostra é stata visitata da [ -1 Presidente della Repubblica] ${ }_{i}$
 pronominals. This view was shown to be compatible with an analysis of null subjects as

 The diminished referential independence, coupled with the prosodic and structural structurally unrealized and accounting for their distribution.


### 2.3.4. Summary

 for an empty specIP at S -structure. substitute it at LF under Chomsky (1986)'s LF expletive replacement. Instead, he argues S-structure, given its mismatch in category with the argumental PP that would have to the non-overt syntax. However, McCloskey dismisses the hypothesis of a pro expl filler at within the minimalist program are weak in Irish, and therefore they are checked only in the subject-related case and agreement features which implement the effects of the EPP McCloskey falls short from proposing that the EPP is inviolable, and proposes that It must succeed. Must(59) Caithfidh éirí
[pp leis]

##  I-wouldn't like them leave[-FIN] <br> (58) Nior mhaith liom [CP [DP iad] imeacht]. (McCloskey 1994)

 -(69) pue infinitivals do otherwise require nominal subjects to occur preverbally; compare (58) infinitivals. Instead, PPs appear in postverbal position in infinitivals as well, even if would predict PPs to be able to occur in specIP across structures and in particular in Extended Projection Principle (EPP), because PPs do not need case. But, this in turn McCloskey argues that if the PP in (57) were in specIP, it could only be because of the

(57) [IP Laghdaigh [pp ar a neart ]l

## (McCloskey 1994)

 (1) Carlof ha fatto notare a Magda ${ }_{i}$ che ogni volta che Ugo $\mathrm{S}_{\mathrm{s}}$ é con Clara ${ }_{\mathrm{k}}$,
 12 Although Calabrese states a principle requiring null subjects to have theme antecedents, in part III Saccon 1993). However, some of the cases presented in section 2.1 do distinguish among




 subject of a primary predication and the $T$-domain of a subject includes its clause, all



 referent is expected. below through the notion of expected referent: null subjects are required whenever their complementary distribution of null and overt pronominal subjects in cases like (60)
 2.4.1. Topichood vs. Subjecthood
discussion of some problematic instances of null subject clauses. in the light of the role of topichood argued for in section 2.1. The section ends with a


with unrealized specIP.


 The father of John,, Mary knows the reason for which *(he)/he / he him has criticized. [II padre di Gianni $\left.{ }_{k}\right]_{\mathbf{i}}$, Maria conosce il motivo per cui ${ }^{*} \mathbf{e}_{\mathbf{k}} /$ ? ${ }^{\text {egli }}{ }_{\mathbf{k}} /$ lui $_{\mathbf{k}_{\mathrm{i}}} \mathrm{l}_{\mathbf{i}}$ ha criticato (qz9)

John's father, Mary knows the reason why he ran away. The father of John,, Mary knows the reason for which (he) / he / he ran away. [Il padre di Gianni] ${ }_{i}$,, Maria conosce il motivo per cui $\mathbf{e}_{\mathbf{i}} /$ ?? $\mathbf{e g l i}_{\mathbf{i}} /{ }^{*}$ lui $_{\mathbf{i}}$ é scappato. (62a)
obligatory overt subjects when the antecedent is not the topic, as in (62b). showing obligatory null subjects when the antecedent is a topic, as in (62a), and
 Here, the T-domain of the null subject does not extend beyond its clause. Hence,

Recently, (he)/ he / he has visited Klee's and Miro's exhibitions.
(61b) A: Recentemente $\mathbf{e}_{\mathbf{i}} /{ }^{?} \mathbf{e g} \mathbf{e l i}_{\mathbf{i}} /{ }^{*}$ luiui $\mathbf{i}_{\mathbf{i}}$ ha visitato la mostra di Klee e di Miró

## Which exhibitions were visited by John'?

(61a) Q: Quali mostre sono state visitate da $[\text { Gianni }]_{i}$ ?
phrase, see the discussion in section 2.1). license a null subject is only that its antecedent be a topic (for the topic status of the bythe null pronominal in (61b) is unexpected. It is instead predicted if what's required to antecedent is not a subject, and therefore not a theme. In either case, the obligatoriness of T-domain of the null subject, incorrectly predicting an overt pronominal, because the of the null subject, and no prediction is possible; (ii) or the interrogative clause is in the
 overt subject in the answer is unexpected under Calabrese's proposal, which allows


A first case is the QA-pair repeated below, where the antecedent of the answer's null licensing of null subjects.

## the two and show how topichood rather than subjecthood is the notion involved in the




 because sentence (63a) introduces the subject Sandro between the left dislocation phrase Mario, is necessarily also the topic of (63b). The assumption is not straightforward,
 As soon as he saw him, he blushed. -pəчsniq әч 'uәәs sey-uب̣ (әч) se-uoos-sV


As for Mario, Sandro met him in the street yesterday.


(63) licensing of null subjects. theme Mario. It thus appears that subjecthood and not topichood is crucial to the obligatorily takes as antecedent the subject and theme Sandro, and not the topic but nontheme, but it is a topic. However, as Calabrese observes, the null subject in (63b) domain. In particular, the left dislocated object Mario is not a subject, and therefore not a distinguishing between licensing by topic-antecedents and licensing by themes in a $T$ intrinsic topic nature of subjects. Calabrese proposes sentence (63) as a case

 their antecedent, which I here take to mean the antecedent topic vs. non-topic status. does recognize that in some cases null subjects are licensed by the discourse status of of DropTopic, in that it also ties null subjects to topic antecedents. ${ }^{13}$ Calabrese thus


 Calabrese does propose in passing a principle calssifying what he calls

әqе!̣!̣иәр! $K_{\text {Isnonsiqqueun }}$ sКем ———

 In conclusion, the important results attained by Calabrese in his (1985) study seem too. from the left-dislocated phrase by the time the next sentence is uttered, (63) is predicted
 dislocated phrases are topics only for the sentence in which they occur, (64) and (65) are be the only possible antecedent, against (64) and (65). On the other hand, if leftCalabrese's analysis is that it incorrectly predicts that the available theme Sandro should


 Mario,, nobody knows why when Sandro him-has met, (he) blushed. (65) Mario $_{\mathrm{s}}$, nessuno sa perché quando Sandro $\mathrm{o}_{\mathrm{i}} \mathrm{l}_{\mathrm{s}}$ 'ha incontrato $\mathrm{e}_{\mathrm{S}} /$ ?? $\mathrm{e}_{\mathrm{i}}$ é arrossito in (65) below, where no such alternative analysis is available. with a parenthetical adjunct in I', the test is repeated with the left-dislocation structure Since (64) could be analyzed as having Mario as the SpecIP subject of the sentence,
 Mario,, when Sandro him-has met, (he) blushed.
(64) Mario ${ }_{\mathrm{s}}$, quando Sandro $\mathrm{l}_{\mathrm{s}} \mathrm{l}_{\mathrm{s}}$ 'ha incontrato, $\mathrm{e}_{\mathrm{s}} /$ ?? $\mathrm{e}_{\mathrm{i}}$ é arrossito. null subject can only take as its antecedent Mario. by an available theme in its T-domain, when one exists, and Sandro is one. Instead, the analysis, the null subject should take Sandro as antecedent, because it must be licensed
 have two potential antecedents: a non-theme topic in the left dislocated phrase Mario, indeed independent from topic licensing follows in (64) below. As in (63) above, we has been introduced. ${ }^{14} \mathrm{~A}$ more reliable sentence to test whether theme-licensing is ZL




 together with constraint reranking permits us to predict the complementary distribution




 constraints of UG.
 pronouns. In contrast, the OT analysis only requires that topic be dropped, deriving the
 The two analyses however are not equivalent. The statement in (66) above specifies relation between null subjects and the topic status of their antecedents. Eugenio's proposal is thus based on the same intuition exploited in this work, i.e. the





(66) Typically, a null subject signals a CONTINUE [transition] and a strong pronoun a claim follows in (66) below. theory, identifies the class of discourse transitions requiring null subjects. Her main The analysis of Di Eugenio $(1995,1993)$, cast within the framework of centering

2.4.2. Centering-based Theories
showed, neither left dislocation phrases nor subjects are always necessarily topics. follows a non-stative view of topichood which deserves further research: as (63)-(65)

17 A clearer judgement parallel to (71a) is provided by strong quantifiers, as in (1): not directly to the operator pro- or a PRO-gate. In these latter cases, the pronoun would be linked only to pro, PRO respectively, and possibility that an operator bind a pronoun in one link, while it allows for binding of a pronoun through a
 linked to the intermediate null pronominal pro. ${ }^{17}$ pronominal in (71b), and also for the overt pronominal in (71c), where the pronoun is (71a), which is directly linked to the operator variable $t$, it is possible for the null


) OPC (Montalbetti 1984:94): overt pronouns cannot link to formal variables iff the
alternation overt/empty obtains. ${ }^{16}$
pronominal is possible. states that overt pronouns cannot be directly bound by an operator wherever a null

In his dissertation, Montalbetti argued for the "Overt Pronoun Constraint", which 2.4.4. Montalbetti's Overt Pronoun Constraint John's father, I know the reason why he ran away. The father of John,,(I) know the reason for which (he) / he / he ran away.
(68) [Il padredi Gianni $]_{i}$, conosco il motivo per cui $\mathbf{e}_{\mathbf{i}}$ / ?? egli $_{\mathbf{i}} /{ }^{\text {/ }}$ lui é scappato.
has raised into its final position from the position of the null subject. across a strong NP island, excluding an analysis where the left dislocated constituent fact, the null subject is here licensed by the sentence initial left dislocated constituent

Left-dislocation sentences like the one below suggests that this cannot be the case. In operator (Huang 1984). Huang's analysis of Chinese null objects, that is as a variable bound by a deleted topic poses the interesting question whether Italian should be analyzed along the lines of

2.4.3. Huang's Zero Topics
analysis thus proves to be more constrained theory-internally subjects totally unconstrained, allowing for null as well as overt subjects. The OT

(72a) Quien t crees que $\left\{\begin{array}{c}\mathbf{e} \\ * \mathbf{e l}\end{array}\right\}$ es rico ?
Who believes that (he) /he is rich? the wh-variable of the main clause $w h$-subject, requires a null subject. (72a) below, Montalbetti's OPC correctly predicts that the subordinate subject, linked to otherwise agrees with Montalbetti's judgments on the previous sentences (71a)-(71c)). In introduced comes from the contrast presented below, provided by an informant which Preliminary evidence for an account of Montalbetti's data along the line just other less fortunate students. be grammatical only if it involved focusing, contrasting the 'many students' of (71c) to Under this account, (71c) should also lose out to its null subject counterpart. It could thus grammatical. Drop Topic. Sentence (71b) instead satisfies Drop Topic, and is selected as optimal and quantifier phrase counts as topic, the ungrammaticality of (71a) follows from its failing (Theta-Consistency excludes (71c) from competing with (71a) and (71b)). If the grammaticality with each other and that (71a) is ungrammatical because it is suboptimal

The OT analysis proposed here would maintain that (71a) and (71b) compete for

Many students believe that (they) are rich.
(71b) [Muchos estudiantes] $i \uparrow$ creen que pro son ricos.

this preposition as case-marker in the transition to Middle English. (Kurafuji p.c.). a case-marker not heading its own maximal projection, finding evidence in the historical cooptation of Browning (1987:98), quoting work by Lumsden (1987), suggests that the preposition to could be viewed as (1) Sue spoke [to these people ${ }_{i}$ ] [about each other ${ }_{i}$ 's friends] in Bill's house. 18 Pesetsky (1995:161) provides a second example where the object of the prepositional phrase is able to
bind an anaphora outside the PP:
 subject.) clitic always triggers a condition $C$ violation when coindexed with the subordinate Spanish equivalent of (74) is non-informative because it requires clitic-doubling, and the command, the subordinate subject, and in turn that the OPC does apply to (72b). ${ }^{18}$ (The condition $C$. This in turn entails that the indirect argument can bind, and thus cfollows only if coindexing the indirect-object with the subordinate subject violates This analysis is in contrast with data like those in (74) below, whose ungrammaticality

(73) [Quien] dijo' Juan [a t ] que $\left\{\begin{array}{l}* \\ \mathbf{e l} \\ \mathbf{e l}\end{array}\right\}$ es rico? not c-command the subordinate subject and therefore the OPC does not apply. preposition reconstructs and case-marks the wh-variable. In this case the variable does in (72b) is incorrect and that the actual LF-structure is that in (73) below, where the


[^2]subordinate subject must be overt. See (72b) below.

 v

 licensed by an antecedent with topic status. explored in this section is whether all instances of null subjects can be analyzed as



I leave these issues open to further investigation. syntactic function, while non-D-linked operators would have it only if subjects. As said, suggesting that D-linked operators could have topic-status independently of their distinction between D-linked and non D-linked operators made in Pesetsky (1989),



(75b) [A que estudiantes] dijo Juan que $\left\{\begin{array}{c}\mathbf{e} \\ \mathbf{e l l o s}\end{array}\right\}$ eran ricos?

allow for a coindexed null subject in the subordinate clause. types of operators. The data in (75) below show that some quantifiers and wh-operators to them. The second concerns the fact that the contrast in (72) does not occur with other right-dislocated and therefore it is unclear how the topic/non-topic distinction applies typical properties of topic constituents, like the possibility of being left or following considerations. The first is that quantified- and wh-expressions do not match pursued in this work. Nevertheless, the issue requires further research in light of the indirect object wh-operators didn't, the contrast would follow from the OT analysis

If instead variables of subject wh-operators had topic-status while variables of
Montalbetti's OPC thus does not account for the contrast between (72a) and (72b).
 distribution with null subjects. Thus, the data in (79) below, which constitute a minimal pronominals, first and second person pronominals are also in complementary evidence for this hypothesis comes from the fact that like third person overt

I will call tomorrow. (I) call-FUT-1sg tomorrow.
(78) a. e espeaker telefoneró domani
hearer of an utterance:

determining which constituents are granted topic status in a clause.
 John explained to Mary that she will not call him. (77b) Gianni $i_{i}$ ha spiegato a Maria ${ }_{k}$ perché ${ }^{*} \mathbf{e}_{\mathbf{k}} / \mathbf{e i}_{\mathbf{k}}$ non gli $\mathbf{i}_{\mathbf{i}}$ telefonerá.
John explained to Mary that (she)/she not him-call-FUT.
 John explained to Mary that (he)/he not her-call-FUT.
(77a) Giannii ha spiegato a Maria ${ }_{k}$ perché $\mathbf{e}_{\mathbf{i}} /{ }^{?}{ }^{\text {lu }} \mathbf{u}_{\mathbf{i}}$ non le $\mathrm{k}_{\mathrm{k}}$ telefonerá. grammatical antecedent for the following null subject.

Sentence (76) contrasts with (77) below, where the indirect object is not a
John said to Mary that he/she did not pass the examination. John has said to Mary that (he)/(she) not has passed the examination.
(76) Gianni $i_{i}$ ha detto a Mariak che $\mathrm{e}_{\mathrm{i} / \mathrm{k}}$ non ha passato l'esame. the indirect object Maria subject. For example, in (76) below, the null subject may refer to the subject but also to where more than one constituent per clause may act as antecedent of a following null ত






 John, I know the reason why he fled. John,, (I) know-1s the reason for which (he) is.3s fled. (81) Gianni ${ }_{i}$, $\mathbf{e}_{\text {speaker }}$ conosco il motivo per cui $\mathbf{e}_{\text {Gianni }}$ é scappato phrase as topic antecedent. topic, the speaker, while the subordinate subject is still free of taking the left-dislocated examined thus far. For example, in (81) below, the matrix subject refers to a deictic
 non-topic antecedent never arises. never be switched off. Thus, the case where a first and second person pronominal has a

 Which exhibitions were visited by John's father?
(80b) A: Nessuna, perché ${ }^{*} \mathbf{e}_{\mathbf{k}} /{ }^{*} \mathbf{e g l i}_{\mathbf{k}} / \operatorname{lui}_{\mathbf{k}}$ gli $_{\mathbf{i}} \mathrm{imp}$
: Quali mostre sono state visitate da-[1 padre di Gianni $\mathbf{i}_{\mathbf{k}}$ ?
Which exhibitions were visited by John's father?
occurrences of lui examined in section 2.1, an example of which is repeated below. second person pronominals with non-topic antecedents, analogous to the unfocused pronominals: their obligatory strong usage. There seems to be no instance of first and

Yet, a difference sets first and second pronominals apart from third person

 You will call tomorrow. b. Voi telefonerete domani.
You.pl call-FUT-2pl tomorrow
status of their antecedent, and the discussion of related analyses.

 also in the following chapters on contrastive focus, agreement and case-assignment.
 Cardinaletti \& Starke's (1994) pronominal typology defined in terms of structural lack structural representation. This assumption was shown to confirm and extend
 as for example the pro-drop parameter. assumptions cannot determine all of the above results without additional devices such
 Interpretation (Chomsky, 1986), and the topic oriented function of null subjects (among of lexical items, the Extended Projection Principle (Chomsky, 1982), the principle of Full of more classic frameworks, such as the projection of phrase structures out of an array conditions encoded by the constraints remind well known assumptions and principles these phenomena possible, and which therefore is supported by the above results. The
 and overt expletives. drop languages, and the impossibility of a grammar with both referential null subjects drop languages, the complementary distribution of null and overt subjects within pro-
 constraints Parse, Subject, F ULl-Int and Drop Topic directly affects the syntax of


mixed pro-drop languages.




 contrastive focus interpretation: it is John who screamed, as opposed to other



### 3.1.1. Introduction

 Appendix A. adjoined location and $\mathrm{A}^{\prime}$-status. A complete derivation for a specific case is given in of the VP-adjoined position at issue. Section 3.1.4 examines the evidence for its VPstructurally higher position. Section 3.1.3 discusses the evidence for the focused status distinguishes the focused VP-adjoined position from a linearly equivalent butThe next section introduces structural contrastive focusing in Italian. Section 3.1.2 here a primitive. following are compositionally derivable within Rooth's system. Contrastive focusing is focus developed in Rooth (1985) and all the logic expressions being used in the
 interpretation by raising into a VP-adjoined A'-position. Italian any VP-level constituent, including subjects, can get contrastive focus structural contrastive focus in postverbal position. In particular, I will show that in substantial and well-defined class of cases, subject-inversion is only an instance of and Rappaport 1995). In this first section I will investigate this issue and show that in a work by Calabrese 1982, 1985, 1992; Shlonsky 1987; Diesing 1992; Saccon 1993; Levin By comparison, investigation of the second issue has been far less systematic (but see Rizzi (1982), Safir (1985), Burzio (1986) work by Perlmutter (1971), Chomsky \& Lasnik (1977), Taraldsen (1979), Jaeggli (1980), subjecthood and its challenge to the Extended Projection Principle; see among others

The first question has received most attention, because of its correlation with null
(ii) What triggers subject inversion?

## (i) What makes subject inversion possible?

following questions:
Any complete account of subject inversion in Romance languages should answer the

Syntax proposed in this dissertation. OT analysis developed in section 3.2, lending further support to the OT approach to which is problematic under a Principles and Parameters approach, is predicted by the alignment depending on the syntactic context in which it occurs. Such a mixed pattern, pattern of the Chadic language Kanakuru as involving leftward and rightward focus

Finally, section 3.3 examines the issue of parametrization, analyzing the focusing preverbal realization of non-focused subjects in Italian and English. and agreement (see chapters 4 and 5). In particular, this accounts for the convergent "canonical subject position", i.e. in the position determined by the constraints on case than it seems at first sight, and the convergent realization of unfocused subjects in analysis also derives the universal absence of focused null subjects, a less obvious result manner from the interaction between ALIGNFOCUS and the other constraints of UG. The of inverted subjects within and across languages follows in a principled and unified

Section 3.2 pursues the main goal of this dissertation, showing how the distribution Grimshaw and Samek-Lodovici 1995). 1992, Brandi and Cordin 1989, Vallduví 1992, Saccon 1993, Samek-Lodovici 1994, position in phrase structure (see also Belletti and Shlonsky 1994, Calabrese 1982, 1985, is improper, and that the focus status of the subject is a crucial factor determining its speak of pro-drop languages like Italian as languages allowing for free subject inversion 1986) and Chadic languages (Tuller 1992, Schuh 1982). This section also shows that to known; see for example the analyses of Hungarian (Kiss 1981, Brody 1990, Horvath present in section 3.1 for Italian adds to the significant evidence in this direction already peripherally aligned, adjoining to VP or some higher projection. The evidence that I will constraint ALIGN-FOCUS requiring that contrastively focused constituents be

(3) Ha urlato Gianni
adjoined position, as in structure (3) below
In the following, I will argue that the subject in (2b) is focused structurally in VP-

(2b) Ha urlato Gianni, Domenica scorsa. emphatic stress. the postverbal subject is interpreted as contrastively focused even in the absence of
However, contrastive focus can also be expressed structurally. For example, in (2b),
(2a) GIANNI ha urlato, Domenica scorsa.
John has screamed, Sunday past.
JOHN screamed last Sunday. (2a) GIANNI ha urlato, Domenica scorsa.
focused only if associated with emphatic stress (in upper case). structurally. For example, when preverbal, subjects are interpreted as contrastively
Italian expresses contrastive focus in either way, through stress as well as (Rochemont and Culicover 1989). (Shuh 1982, Tuller 1992), Catalan (Bonet 1990), and in some cases even English are Hungarian (Horvath 1986, Kiss 1981, Brody 1990, among others), Chadic Languages contrastively focused constituents to a specific syntactic position. Examples of the latter Rooth 1985). Other languages express contrastive focus structurally, by raising 1971, Selkirk 1984, Culicover and Rochemont 1983, Rochemont and Culicover 1989, Some languages use stress, English being one of them (among others, see Chomsky Descriptively, languages vary with respect to the way they express contrastive focus.




claim on presentational focus). and not a subject oriented phenomenon (see Belletti and Shlonsky 1994 for a similar much like presentational focusing, and that it is available to any VP-level constituent, of these previous accounts by showing that contrastive focusing is structurally encoded
 Saccon's). Bonet's work; sister of $V$ or $V$ ' depending on the potential unaccusative nature of verb in analyses, who analyze postverbal subjects as in-situ (rightward specifier of VP in $(1982,1991)$, but inherently A-bar, differentiates this account from Bonet's, and Saccon's position of structural focus: the claim that the focus position is VP-adjoined, as in Rizzi information. Further distinctions concern the specific properties claimed here for the examine presentational focus, where the focused constituent is interpreted as new investigates contrastive focus, while Saccon, Calabrese, and Belletti and Shlonsky

The analysis presented here differentiates itself from these works in that it (1994), and Saccon (1993). (1993), and in particular Bonet (1990), Calabrese (1982, 1985, 1992), Belletti and Shlonsky subjects in Romance. Among others, see work by Belletti (1988), Delfitto and Pinto already recognized or hinted at a focus factor involved in the interpretation of inverted




 Consider the contrast between (5) and (7), which share the same word order. When (1990), and Samek-Lodovici (1993). relevant examples can be found in Antinucci and Cinque (1977), Calabrese (1992), Bonet


 position but they cannot be right-dislocated.
Quantified constituents like ciascun ragazzo 'each boy' may occur in the focus


 the main sentence, while right-dislocated ones are preceded by an abrupt
 dislocated ones are not.
(i) Constituents in the focus position are interpreted as focused, while right-


 focused positions are distinguished semantically, phonologically, and syntactically,

Together, these examples show that the right-dislocated and the contrastively
 (-agr) has laughed only the Mary, at-the movie.
(8) El a ridest sol che la Maria, al cinema. feminine subject clitic $l a$. adverb only also lacks agreement, as shown by the absence of the otherwise obligatory shows, a postverbal subject overtly marked as contrastively focused by the focusing

The contrast carries over also for inverted contrastively focused subjects. As (8) below dislocated postverbal subjects do. focused postverbal subjects do not show clitic agreement, while preverbal and rightSaccon (1993) analysis of postverbal subjects in Conegliano, where presentationally-

Strong evidence for the existence of two postverbal positions was also given in John didn't introduce him to anybody,, Carl. Gianni non [r lo $_{i}$ ha presentato $t_{i}$ a nessuno],, Carlo ${ }_{i}$.
(7) Gianni non ( $\mathrm{lo}_{\mathrm{i}}$ ) ha presentato a nessuno,, Carlo $_{\mathrm{i}}$. coindexed clitic (property (iii)). (ii)), it is not interpreted as focused (property (i)), and it allows for an optional intonational phrase of the sentence, here represented as a double comma, (property

(6) ${ }^{*}$ Joh not has him introduced to nobody Carl.

It is Carl that John did not introduce to anybody. John not has introduced to nobody Carl.
(5) Gianni non ha presentato a nessuno Carlo.
Gianni non ha $\Gamma_{\text {vp }} I_{\text {pe }}$ presentato $t_{i}$ a nes

## (Saccon 1993:217)

## w

(6) *Gianni non $\mathrm{lo}_{\mathrm{i}}$ ha presentato a nessuno Carlo ${ }_{\mathrm{i}}$.

 Let us now turn to the data. Consider the question-answer paradigm in (10) below. contrastively focused.

 constituent of the answer is the counterpart of the question wh-phrase. question and an answer identify the same set of propositions only if the focused Since focusing of different constituents identifies distinct sets of propositions, a
 answer identify the same set of propositions. In a bad pair, on the other hand the set of appropriate and which are not. Roughly speaking, in a good pair, the question and the
 relation between this set and the set of propositions denoted by the answer once its whdetermines a set of propositions which is associated with the sentence as a whole. The (1971), and Jackendoff (1972), contrastive focusing of a constituent in a sentence analysis, which draws from work by Hamblin (1973), Karttunen (1977), Chomsky

is contrastively focused
(9) Central assumption: In a question-answer pair, the answer's wh-phrase counterpart focused the answer corresponding to the wh-phrase in the question is always contrastively throughout this work. In particular, I follow Rooth in assuming that the constituent in answer pairs within Rooth's (1985) semantics for contrastive focus, which I assume
 3.1.3.1. Evidence from Question-Answer pairs
based on the analysis of question-answer pairs, focusing adverbs and ergatives. structural focus for constituents in the VP-adjoined focus position. The evidence will be


 necessary to turn (10c) and (11b) into a good answer. All native speakers with whom I tested the






focusing here is structural. ${ }^{2}$ and the pair is good. Once again, the object needs no emphatic stress, showing that raised into focus position to the right of the indirect object, as in (11c), focusing occurs bad, a sign that focusing of the object has failed. However, when the direct object is a ditransitive. If the object is in situ and lacks emphatic stress, as in (11b), the pair is


## раншдия очм ичо৷ s! +I

(10d) A: GIANNI, ha gridato
(10c) A: * Gianni ha gridato.
by the acceptable answer (10d). interpretation, the preverbal subject must be associated with emphatic stress, as shown therefore provides an unacceptable answer, as shown in (10c). To get a contrastive focus Contrast (10b) with a preverbal subject lacking emphatic stress, which is unfocused and contrastive focus interpretation must be determined by its position, i.e. structurally.

The postverbal subject of (10b) need not have emphatic stress. Therefore, its

(10a) Q: Chí ha gridato? Who screamed? contrastively focused. S! (q0I) u!
 ${ }^{3}$ The proper logic expression under Rooth's system would be the following:
$\quad \forall \mathrm{p}[(\mathrm{p} \wedge \mathrm{p}=$ introduce' $(\mathrm{I}, \mathrm{x}$, mary $))=>\mathrm{p}=$ introduce' $(\mathrm{I}, \mathrm{john}$, mary $)]$ :ounhon

object is raised into focus position, to the right of the indirect object.


* It is John that I introduced to Mary. (I) have only introduced John to Mary.
* $\forall x$ [ introduce' (I, $x$, mary) $=>x=j o h n]^{3}$ ${ }^{*}$ Ho soltanto $_{i}\left[\right.$ vp presentato Gianni $i_{i}$ a Maria].
(12) Ho soltanto presentato Gianni a Maria expressed through coindexation). contrastive focus interpretation of the object is unavailable (association with only is

Consider (12) and (13) below. In (12), the direct object is in situ. As predicted, a
true of all constituents involved in the following tests.) and the object raised into focus position are free of emphatic stress. This will thus be qualify as a focused constituent. (The test is informative only if both the object in situ with respect to the focusing adverb. Only the object raised into focus position should whether an object in situ and an object in focus position contrast in their focus status interpreted. We may therefore insert the adverb only in a sentence and then check focused constituent within their scope and always require one in order to be analysis of focus-sensitive adverbs such as only. These adverbs are sensitive to any

3.1.3.2. Evidence from Focusing adverbs
be focused structurally, by raising into a rightward focus position

 (рәu!̣eusuoz
 intonation (under the intonation associated with right-dislocation of the constituents following the that this use of solo is not productive and is not found with other verbs. In the following examples, It is unclear how the adverb acquires sentential scope. Here I will only make two observations. The first is

1) La segretaria ha messo solo dei fiori sul tuo tavolo.
The secretary has put only some flowers on your desk Kayne (p.c.) points out that in certain cases Italian allows a postverbal focusing adverb to have
sentential scope. This is for example the case in (1) below, from Benincá and Salvi (1988:122). Under the
relevant reading, (1) means that the only thing that the secretary did was put flowers on a desk. ${ }^{5}$ Kayne (p.c.) points out that in certain cases Italian allows a postverbal focusing adverb to have which seems the most obvious property gained by VP-adjoined constituents, is already available to the VP as a whole, which would then not need to self-adjunction. For example, accessability at the VP-level, 4 An important question that is not answered here is what requires structurally focused constituents to VP-denoted event is focused, ${ }^{5}$ as in (12b) below.

The second reading arises when the whole VP raises into focus position, ${ }^{4}$ so that the

It is to Mary that I introduced John.
 in (12a) below. reading arises when the constituent raising into focus position is the indirect object, as They are both predicted by the availability of postverbal structural focus. The first interpretations: one focusing the indirect object, and the other focusing the entire VP.

Although (12) disallows structural focus of the object, it still allows for two other
adjoined focus position in order to get contrastively focused.
The patterns in (12) and (13) show that the object must raise to the rightward VP-
It is John that I introduced to Mary.




 n

位 ?
IS John that I introduced to Mary.

 The lack of sentential scope in (3)-(6) excludes an analysis of (2) based on the presence of the verb trace in

John has given only a cat to Mary
 (5) Gianni ha chiamato solo Marco
John has called only Mark.

- Һvpuazsah hiuo paruıv svy ицо।
 (3) Gianni ha cantato solo ieri. $\neq$ Gianni ha solo $_{i}[\text { cantato ieri }]_{i}$
(14), the indirect object is right-dislocated (witness the pause introducing it, and the yet remain to the left of the indirect object. Compare sentence (14) below with (12). In indirect object is right-dislocated. The object can now raise into the focus position and
 た્ઠ strongly correlate with the asymmetric sets of interpretations associated with (12) and Overall, the existence of a postverbal position for structural focus was shown to
(13a) Ho soltanto [vp $\left.e_{i}\left[v p \text { [vp presentato } t_{h} \text { a Maria] Giannih }\right]_{i}\right]$. contains a focused object. The structure follows in (13a) below. self-VP-adjoins. This yields a structure where the whole VP is focused, and itself focusing. Formally, the direct object VP-adjoins first. Then, the whole VP projection canonical order of the internal arguments. I tentatively analyze it as involving nested in fact is a possible though marginal interpretation. This case also shows a nonThe linear order of (13) is, however, compatible with focusing of the whole VP, which prediction is borne out. predicting that (13), unlike (12), will not admit focusing of the indirect object. The

 (12b) Ho soltanto $_{i}\left[{ }_{\mathrm{vp}}\left[\mathrm{vp} \mathrm{t}_{\mathrm{i}}\right][\mathrm{vp} \text { presentato Gianni a Maria }]_{i}\right]$.


 To derive the proper denotation for (15) under Rooth's system, I assume that focusing of a complex


 was to introduce Bill, I cannot have also warned Mary about Bill. ио!̣əе К

 -uyol s! paypon oyn uosiad hiuo ayL ичо 1 рә>гем К [uo seН
(16) Ha soltanto camminato Gianni. subject in postverbal position is contrastively focused, as in (16). with non right-dislocated inverted subjects. The simplest case is the one where the
 1:12y o7 NHOl As for Mary, the only thing that happened to her was that I INTRODUCED

 attested too, ${ }^{6}$ as shown in (15).

Alternatively, the whole VP can raise into focus position. This predicted reading is
 $\left[\right.$ IP Le $_{\mathrm{k}}$-ho soltanto ${ }_{\mathrm{i}}\left[_{\mathrm{vp}}\left[\mathrm{vvp}\right.\right.$ presentato $\left.\left.\left.\mathrm{t}_{\mathrm{i}} \mathrm{t}_{\mathrm{k}}\right][\text { Gianni }]_{\mathrm{i}}\right]\right][\text { Maria }]_{\mathrm{k}}$
$\forall \mathrm{x}[$ introduce' $(\mathrm{I}, \mathrm{x}$, mary $)=>\mathrm{x}=$ john $]$
(t)
contrastively focused
presence of the related clitic). As predicted, the object can now be interpreted
focusing adverb only and constituents in postverbal position.



 рауром ศүио ичо! *
(17b) Ha soltanto $\mathrm{i}_{\mathrm{i}}\left[\mathrm{vp}\left[\mathrm{vp} \mathrm{t}_{\mathrm{k}} \text { camminato }\right]_{\mathrm{i}}\right]$ Gianni $\left.\mathrm{i}_{\mathrm{k}}\right]$. VP , is shown in (17b). focused subject. The unavailable structure, with the adverb co-indexed with the lowest constituents, cannot associate with the lowest VP projection, but must associate with the
 John only walked. $\forall \mathrm{p}[(\mathrm{p} \wedge \exists \mathrm{P} \mathrm{p}=\mathrm{P}(\mathrm{john}))=>\mathrm{p}=$ walked' (john) $]$
John only walked. (17a) Gianni ha soltanto camminato.
 alone. Since the VP contains only the verb, the interpretation focuses the verbal predicate
 A more interesting contrast is the one between (17a) and (17b). In (17a), the subject is Only John walked.
(16a) Ha soltanto ${ }_{i}\left[{ }_{v p}\left[{ }_{v p} t_{i}\right.\right.$ camminato $]$ Gianni $\left.i_{i}\right]$. interpretation. specVP position to the focus position, where it is assigned a contrastively focused The structure of (16) is shown in (16a): the subject has raised from its base-generated



(20) E' soltanto entrato un uomo dalla finestra.
and (21b). must associate with either the whole VP or the prepositional phrase, as shown in (21a) the pre-locative subject cannot be interpreted as associated with the adverb only, which use of focusing adverbs, as with the parallel cases involving nonergative verbs: in (20),
 excluded from this position, where they are fully grammatical and interpreted as focusing may affect definite and indefinite phrases alike, definite phrases cannot be object position, a post-locative subject can occur in focus position, and since contrastive contrastive focus accounts for this alternation. In fact, unlike the pre-locative subject in right of the indirect locative argument. The existence of a VP-adjoined position for Belletti observes that the definiteness effect is absent when the subject occurs to the - мори!м дчұ шоиf и! дшоэ sьч иьш $V$ Is come-in the man from-the window.
(18a) ${ }^{*} \mathrm{E}^{\prime}$ entrato l'uomo dalla finestra.
introduced by the intonational fall associated with right-dislocated constituents. precedes a locative argument, which in turn is analyzed as in situ because it is not in-situ subject of ergatives, as shown in (18). The subject is analyzed as in situ because it her investigation of partitive case, Belletti (1988) identifies a definiteness effect on the
contrastively focused, as in (19) below.



8 According to my judgement, the indefinite object can be right-dislocated, but only when coindexed with
an object clitic, as in (1) below. I owe this interesting observation to Eric Bakovic.

$$
\begin{aligned}
& \text { (26c) Q: Chi' ha lavorato almeno un poco? Who worked at least a little? } \\
& \text { A: ? Ha fatto qualcosina Gianni. } \\
& \text { Has done thing-little John. }
\end{aligned}
$$

'2иоу yวuq диам NHOI
¿วиоо ұрря диам очм
-8иччұои р!p NHOI ¿8и!чғои р!р очм
(26a) Q: Chí non ha fatto niente?
home.) (26b) and (26c) (in (26b), casa has the same sense found in the English expression going either because it is a negative expression, as in (26a), or because it is a generic, as in phrase is inherently unable to express old information because it is nonreferential,
 insight is strengthened by the examples in (26a)-(26c) below, all with a constituent Cinque (1977), because the latter affects only informationally old phrases. Calabrese's which would prevent it from undergoing rightward emargination à la Antinucci and Calabrese ties the contrast to the intrinsic new-information nature of the indefinite,
(25b) *Ha soltanto scritto $\mathrm{t}_{\mathrm{i}}$ Maria una lettera $\mathrm{a}_{\mathrm{i}} .8$
Has only written a letter Mary
Only Mary wrote a letter.
(25a) Ha soltanto scritto una lettera Maria.
the inverted subject is contrastively focused, as shown by the contrast in (25a) and (25b) occurs between the verb and a presentationally-focused subject. This is true also when
in (28c).



> It is the sausages that I cooked in the garden, (not the soup). Ho $\left[\mathrm{vp}\left[\mathrm{vp}\left[\mathrm{vp}\right.\right.\right.$ cucinato $\left.\mathrm{t}_{\mathrm{i}}\right]$ in giardino] $\left.\left.[\text { le salsicce }]_{\mathrm{i}}\right]\right]$
(I) have cooked in the garden the sausages.
(27) Ho cucinato in giardino le salsicce, (non la zuppa).
of the VP-adjoined locative, and thus occur higher than the VP-complex. hypothesis. In order to be contrastively focused, the object of (27) must shift to the right

The identical behavior of objects with respect to VP-level adjuncts confirms this focus position is higher than the VP-complex. generated position to a position to the right of the indirect object. This suggests that the section that in order to get focused, the subject of an ergative must raise from its baseLet us first look at the location of the focus position. We already saw in the previous

### 3.1.4.1. Location

between $\mathrm{I}^{\circ}$ and the lowest VP projection.
and its A vs. A' status. I will claim that the focus position is an A'-position located
This section examines the syntactic properties of the focus position, i.e. its location
3.1.4. Syntactic Properties of the Focus Position
rightward focus position. can acquire a contrastively focused interpretation structurally, by raising into a question-answer pairs and ergatives all converge on the conclusion that constituents

Summarizing the entire section, we have seen that the analyses of focusing adverbs,
internal arguments separating the subject from the verb. that focusing of the subject does not always require obligatory emargination of the guidelines offered by Calabrese. For the goal of this chapter, it was sufficient to show



 predication when this is within the main intonational phrase. Finally, in sentence (29c)
 Sentence (29a) shows that the contrastively focused subject can follow object than the predicate itself. subjects must follow a secondary predicate, and therefore must be in a higher position of contrastively focused subjects. In fact, as shown in (29) below, contrastively focused focused subjects, this argument provides further evidence for the VP-adjoined position secondary predication identified by McNulty (1988). When applied to contrastively themselves be located in specVP if they are to satisfy the conditions on the licensing of projection because they precede secondary predicates, which, Saccon argues, must

focused subjects in Catalan in a rightward specVP position (Bonet 1990). contrast with Bonet's admittedly unargued-for assumption locating contrastively

 presentational focus of light objects in the rightward specifier of a focus projection





(pəsnวoł pวa! $q$ )
(pasnoof qraлре алп̣езог)
postverbally focused by stress preverbally, as in (31b), or, finally, it is focused structurally, grammatical answers: either the adverb is provided in isolation, as in (31a), or it is question requires focusing of a VP-level adverb in the answer. There are three sentence-level adverb. Compare the question-answer pairs in (31) and (32). In (31), the structural focus is within the complement of $I^{\circ}$ and therefore too low to be accessed by a probabilmente, 'probably', cannot be structurally focused. This fact is predicted if

Second, unlike VP-level adverbs such as sempre, 'always', sentence-level adverbs like
Only John sang yesterday. Has only sung John, yesterday
[I' Ha [vp soltantoi ${ }_{\mathrm{i}} \mathrm{vp}$ [vp $\mathrm{t}_{\mathrm{i}}$ cantato] Gianni ${ }_{\mathrm{i}}$ ]]] ieri.
(30) Ha soltanto cantato Gianni,, ieri. focus position as well. only. By transitivity, it follows that $\mathrm{I}^{\circ} \mathrm{C}$-commands the focused subject and therefore the adverb only in turn c-commands the focused subject, because the latter is in the scope of auxiliaries given in Belletti (1990), $\mathrm{I}^{\circ}$ c-commands the adverb only in (30), and the c-command it. There are three arguments for this claim. First, under the syntax of The upper boundary for the location of the focus position is $I^{\circ}$, which can be shown to
contrastively focused subjects lie in a position c-commanding the lowest VP projection.
Summarizing the discussion so far, it is possible to conclude that postverbal



 (29a) $\mathrm{L}_{\mathrm{i}}$ 'ha mangiata $\mathrm{t}_{\mathrm{i}}$ cruda Marco,, la carne ${ }_{\mathrm{i}}$, (non Gianni).

contrastive focusing in postverbal position.) Fiorentino and Trentino, suggesting that these two dialects also allow for structural subject can be in the scope of the neg-marker (the original argument is given for assume with Belletti (1990) to be cliticized to I ${ }^{\circ}$. Sentence (33) shows that the focused
 the focused subject is provided in Brandi and Cordin (1989:138), who notice how A third argument identifying $I^{\circ}$ as the c-commanding boundary for the position of complement of $\mathrm{I}^{\circ}$, thus out of reach for sentence-level adverbs.

This is precisely the expected pattern if the location of structural focus is inside the hipuns иo 'วuos hiquqoud 11!m 11!!g (32c) A: * Bill verra' probabilmente. Bill, he will probably come, on Sunday (32b) A: PROBABILMENTE verra',, Bill,, Domenica . hququor $_{d}$ (32a) A: Probabilmente.

Do you think that Bill will come on Sunday?
(32) Q: Credi che Bill verra' Domenica?
but for the lack of option (31c), involving structural focus in VP-adjoined position. discover that structural focus is no longer available. See (32) below, which parallels (31)

When we turn to question-answer pairs involving sentence-level adverbs, we
(31c) A: Bill verrá sempre. Bill will always come. (31b) A: SEMPRE,, verrá,, Bill. (31a) A: Sempre. Always.


 (topicalization is irrelevant for the argument, but seems to improve the contrast). As in
 much like a raised subject in the matrix preverbal position does. This is not the case.


(q7E)

(34a) A se stesso, Gianni sembrava lavorare troppo.
clause. it is c-commanded by both the specIP subject and the focus position of the matrix anaphor c-commands the subject's base-generated position in the embedded clause, but below and its structure prior to movement in (34b). In its base-generated position, the source involves the study of its anaphor-binding properties. Consider sentence (34a)

be right-adjoined to the VP projection. projection while being c-commanded by $\mathrm{I}^{\circ}$, Consistent with these results, I assume it to In conclusion, the focus position has been shown to c-command the lowest VP




 structural focus position. In particular, in (36b) the infinitival complement precedes the
 $s$-structure, explaining the ungrammaticality of (35b).
 unable to license a focus position, then the focus position of (34b) would be within the


 [A me $]_{i} \quad\left[\mathrm{vp}\right.$ [vpsembrava $\mathrm{t}_{\mathrm{i}}$ [IP $\mathrm{t}_{\mathrm{k}}$ lavorare troppo]] Gianni $\mathrm{i}_{\mathrm{k}}$ ]. (35c) A me, sembrava lavorare troppo Gianni.
the anaphor, therefore the failure must be due to the A '-status of the focus position. focused subject's inability to A-bind the anaphor. But the focused subject c-commands anaphoric, as shown in (35c) below, the ungrammatical status of (35b) is due to the


It was John who seemed to work too much to himself. [A se stesso $\left.{ }_{k}\right]_{i}\left[{ }_{\mathrm{vp}}\left[\mathrm{vp}\right.\right.$ sembrava $\mathrm{t}_{\mathrm{i}} \quad\left[\mathrm{II}^{\mathrm{t}} \mathrm{t}_{\mathrm{k}}\right.$ lav
(35b) *A se stesso, sembrava lavorare troppo Gianni.
To himself, John seemed to work way too much. [A se stesso $\left.{ }_{k}\right]_{\mathrm{i}}$ Gianni $_{\mathrm{k}}$ [sembrava $\mathrm{t}_{\mathrm{i}}$ [ $\mathrm{t}_{\mathrm{k}}$ lavorare troppo] ].
(35a) A se stesso, Gianni sembrava lavorare troppo.
position, is ungrammatical. position. While sentence (35a) is grammatical, sentence (35b), with the subject in focus $\stackrel{\rightharpoonup}{\omega}$
 This opens the possibility that (36b) is grammatical because its complement occurs in a more local is sufficiently local to its trace to reconstruct successfully. Kayne (p.c.) notes how the landing site of the Possibly, the grammaticality of sentence (36b) relies on the fact that the displaced infinitival complement (3) * Luca lo sembrava spesso,, [lavorar poco].
Luke seemeed it often,, to work little. To-work in a bad way, I do not see how I may seem it.
(2) * [Lavorar male],, non vedo il modo in cui possa sembrar-lo.

Rizzi also shows that the infinitival complement resists left- and right-dislocation; see the data below (1) ${ }^{*} E^{\prime}\left[t_{k} \text { lavorare di piú }\right]_{i}$ che Gianni ${ }_{k}$ sembra $\mathrm{t}_{\mathrm{i}}$.
argues that reconstruction is not available for the infinitival complements of raising infinitivals. For
example, sentence (1) would be ungrammatical because the subject trace violates the ECP. 9 Sentence (36b), which has been found grammatical by all informants I tested, raises interesting
problems concerning the licensing of empty-categories. On the basis of data like (1) below, Rizzi (1990:38) has. own focused position, the subject in (38) should not have the focused interpretation it occurs to the right of the focused subject. If the matrix raising verb could not license its verb is presented in (38) below. Here, the whole embedded IP has been postposed, and




 - गlt?! y yom of waวs shomp дои p!p no 久
 Tu non sei sempre sembrato lavorare poco..
absence of a contrastive-focus interpretation for all other nonemphatic specIP subjects. 9




 adjoined structural focus position has A'-status.

In conclusion, the ungrammatical status of (35b) shows that the rightward VPthe possibility of creating a position and leaving it unfilled (Chomsky, 1992:30-32). GT operation responsible for combining/extending phrase markers is explicitly denied design of the process generating phrase markers in the Minimalist Program, where the argued for by Safir (1993) in his analysis of bare infinitives, and it also follows from the
 Has thought to himself Bill. Ha [vp [vp pensato $t_{i}$ [a se stesso] ] Bill $_{i}$ ].
(39) Ha pensato a se stesso Bill.
evidence for the absence of a specVP position. as in (39) below. The fact that the anaphor in (35b) doesn't get bound constitutes (thematic) specVP position does exist, it does A-bind an anaphoric indirect argument, nonthematic object position has never been attested. Furthermore, notice that when a expect the existence of nonthematic object positions as well; however, movement into specifier. To begin with, if VP-internal nonthematic positions were possible, we would

There is host of reasons to exclude the existence of such nonthematic base-generated casting doubts on the analysis of (35b). status, and the trace left in this position could then A-bind the reconstructed anaphor, focus position. As a potentially theta-marked position, this position could have an Agenerated specifier position for the raising subject to land in on its way to the matrix

A second objection to the analysis of (35b), arises if the matrix VP licensed a baseIt is Bill who seemed to have sung all time, (not Mark).
 [IP [IP Sembrava ${ }_{i}{ }_{v p}\left[{ }_{v p} e_{i} t_{h}\right]$ Bill $\left._{f}\right],\left[\right.$ [IP $t_{f}$ aver
 әл!̣!

 3.1.5. Summary status. accounts for this alternation, which would be completely unexpected if it had an Asubject has raised into specIP or into focus position. The $\mathrm{A}^{\prime}$-status of the focus position
 Summarizing, in raising structures, binding of anaphors and pronouns in the indirect object determines the WCO-violation. Reconstruction of the quantified phrase and successive $Q R$ past the reconstructed in an A'-position, the quantified subject cannot bind the pronoun at s-structure. The ungrammaticality follows from the A'-status of the focus position. In fact, being EACH child seemed to eat too little to his parents. [Ai suoi ${ }_{i}$ genitori] $]_{k}$ e' $^{\text {[vp }}\left[{ }_{\mathrm{vp}}\right.$ sembrato $\left.\mathrm{t}_{\mathrm{k}}\left[\text { [IP } \mathrm{t}_{\mathrm{i}} \text { mangiare poco]][ogni bambino }\right]_{\mathrm{i}}\right]$. * 若 operator-variable interpretation. Instead, (40b) is ungrammatical. indistinguishable from (40a) binding-wise and should be grammatical under the same matrix focus position. If the focus position were an A-position, sentence (40b) would be Compare (40a) to (40b) below. In (40b) the same quantified subject has raised to the Each child seemed to eat too little to his parents. To his.m.pl parents.m.pl, each child is seemed to eat little. [Ai suoi $i_{i}$ genitori $]_{k}\left[[\text { ogni bambino }]_{i} e^{\prime}\left[v p\right.\right.$ sembrato $t_{k}\left[t_{i}\right.$ mangiare poco]]]. Ai suoi genitori, ogni bambino e' sembrato mangiar poco.

## (40a)

by the subject quantified phrase
sentence therefore allows for an operator-variable reading where the pronoun is bound
the clause (Grimshaw and Samek-Lodovici 1995a,b , McCarthy and Prince 1993).



 VP-adjoined structural focus. subject languages as well as crosslinguistically, for any language presenting rightward
 structural focus position. The analysis will thus implement the insight that inversion is will determine for any given input whether the subject may or may not occur in the sұu!̣ex, interaction between the structural constraint placed on focused constituents,
 subjects. particularly evident, but it should not be seen as a syntactic phenomenon targeting specIP position, making the contrast between focused and unfocused subjects of subject inversion arises only by virtue of the fact that non-focused subjects occur in

 VP-level constituent and hence not to be a specific property affecting subjects.
 alternatives of preverbal subjects. them from their preverbal counterparts they cannot function as optional equivalent presentationally or contrastively focused, and since their interpretation distinguishes









In the following analysis, I will assume that the parameters of ALIGNFOCUS are and a leftward instance of the ALIGNFOCUS constraint. Chadic language Kanakuru as evidence for the simultaneous existence of a rightward come back to this issue in section 3.3, where I analyze the mixed focusing system of the


 derived from other properties of these languages that make their specific alignment Italian has rightward alignment but Hungarian has leftward alignment could either be
 could hypothesize the simultaneous existence of distinct ALIGNFOCUS constraints determined by the interaction of ALIGNFOCUS with other constraints. Alternatively, one
 projection, and Edge1 and Edge2 are mambers of the set \{Left, Right\}.
 (42) AlignFocus (XP, Edge1, YP, Edge2): $\forall$ XP, $\exists$ YP such that Edge1 of XP and Edge2
(1993). closely parallels the definition of generalized alignment found in McCarthy and Prince family of alignment constraints formalized through the general schema below, which phrases should be aligned to. The above constraint would then be only an instance of a specifying the projection and the edge of the target projection which the focused
 Phonology, where the notion of alignment is pervasive (McCarthy and Prince, 1993). The constraint is cast in terms of alignment to emphasize the parallel with Failed by non-aligned focused constituents. XP with the right edge of VP. (41) ALIGNFOCUS (XP, Left, VP, Right): Align the left edge of the focused constituent
 adjoined position. Culicover and Rochemont conclude that focusing is a crucial factor licensing its VPanswer with the inverted object is appropriate only where the object is focused,
 answer is appropriate for the question in (43), which focuses the direct object, but
 Their evidence is based on the QA-pairs in (43) and (44) which contain two distinct
questions, but a unique answer with the direct object following the indirect object. This although in this language it does not affect subjects. the constraint ALIGNFOCUS, structural contrastive focusing is present in English as well,

3.2.1. Structural focus in English and the Design of UG
 inversion in English and similar languages, it is worth reviewing the evidence for constraints. Before examining how this analysis determines the lack of subject be violated in all those grammars where it is ranked lower than other conflicting phrases occur in peripheral position in all languages. The constraint is in fact going to

Bonet (1990) for Catalan, and in this work for Italian (also Samek-Lodovici 1993, 1994).

 Stanley (1994), and Aboh (1995) respectively. Tikar (Cameroon) and Gungbe (Kwa family, Benin); see work by Koopman (1984), for Basque (Ortiz de Urbina, 1989), and for the African languages of Kru (Ivory coast),
 1987, 1990), Horvath (1986), Brody (1990) respectively). in the specifier of a focus projection taking VP as complement. See work by Kiss (1981, various ways: S -adjoined, or in specVP, or forming a constituent with the main verb, or nappropriate for the question in (44), which focuses the indirect object. Since the ulicover and Rochemont (1989:24) show how, in accord with the universal nature of ,




 from other, independent factors same requirement on structural focus, and derive the divergent behaviour of subjects Consequently, it is natural to seek an analysis where English and Italian undergo the objects, but diverges from Italian with respect to contrastively focused subjects.
 focusing occurs in VP-adjoined position, like in the Italian case. This distribution, which matches a similar distribution in Italian, is accounted for if
(45f) *I only gave to Mary a book about linguistics. (45e) ? I only gave to Mary a book about linguistics. (45d) I only gave to Mary a book about linguistics.
(45c) *I only gave a book about linguistics to Mary (45b) I only gave a book about linguistics to Mary. (45a) I only gave a book about linguistics to Mary. edge of the VP; see the underlined constituents in (45a) through (45f) constituent associated with the contrastive focusing adverb only is always to the right Moreover, Culicover and Rochemont point out that in the following sentences, the from England [a new girlfriend].

B: Well I don't know if you know this yet, but Sam also brought back
(45) A: Sam just came back from England, and brought me a new bracelet.
associated with the right-adjoined constituent a new girlfriend. provides the following example, where the contrastive focusing adverb also is

Additional evidence comes from the study of focusing adverbs. Rochemont (1986)

(44) Q: For whom did John purchase a brand new fur coat?
(sұวә!qns [Inu рәнегәи (nevertheless, we know that PARSE dominates SUBJECT from the analysis of topicirrelevant in this case, since (b) and (c) are equivalent on all other constraints as well, since both violate SUBJECT, but (c) also violates PARSE. The ranking of PARSE is ALIGNFOCUS violation is fatal to (a). Candidate (b) beats the null subject candidate in (c)
 specIP, violates ALIGNFOCUS, while the structural-focusing candidate (b), with a VP-

This is shown in T1 below. The preverbal-subject candidate (a), with the subject in relative to SUBJECT.

Inversion of focused subjects in Italian is due to the higher ranking of ALIGNFOCUS
 optima because they harmonically bound any other structure in the candidate set. null structure. Finally, I will show that these structures exhaust the set of potential an unrealized subject. Then, I will extend the analysis to expletive structures and to the structures: one with a preverbal subject, one with a VP-adjoined subject, and one with presented in the following way. First, I will consider only three basic candidate
 Failed by uninterpreted lexical material. -FULL INTERPRETATION: Lexical conceptual structure is parsed. Failed by unrealized input items.

- PARSE: Structurally realize input items into phrase structure.

Failed when the highest A-specifier of a clause is left structurally unrealized. - Subject: The highest A-specifier of a clause must be structurally realized. and English. have to respect all the already established ranking relations for the grammars of Italian alternation of chapter 2 . Therefore, the analysis of structural focusing below will also
 PARSE, and FULL-INT. These latter constraints, listed again below, have been subjects in English, from the ranking of ALIGNFOCUS relative to the constraints SUBJECT, LLI
satisfies all constraints. both tableaus, the optimal candidate is the preverbal subject candidate in (a), which shown in tableau T3 for the Italian ranking and tableau T4 for the English ranking: in two grammars are correctly predicted to converge on the same optimal form. This is the conflict with SUBJECT. The ranking of the two constraints is uninfluential, and the

 structurally in peripheral position, as in Italian. subjects occur preverbally in specIP position, as in English, or postverbally, focused



The new ranking thus derives the preverbal position of English focused subjects. violate SUBJECT, which now constitute a worse violation than violating AlIGNFOCUS. subject candidate (a) the optimal candidate, see T2 below. In fact, both (b) and (c)


(I'で ALIGNFOCUS. This is shown in T5 for Italian and in T6 for English (see also section constituent is the object, which is parsed in focus position in both languages, satisfying can then be satisfied by parsing the subject in specIP. In the tableaus below, the focused
 always occur in specIP position. equivalent to saying that other constraints notwithstanding, unfocused subjects will in (a) violates no constraints, it is optimal across all $4!=24$ rerankings of them, which is converge in parsing unfocused subjects in specIP. In fact, since the preverbal candidate



ELI



\section*{| <sembrare(-,x), $\mathrm{x}=<\ldots .>,--, \mathrm{T}=$ pres.> | F. I. | PARSE | A.F. | SUBJ. |
| :--- | :---: | :---: | :---: | :---: |
| a. null subj: [ -- sembra [che ...]] |  |  |  | $*$ |
| b. explet. subj: [expl. sembra [che ...]] | *! |  |  |  | <br> } tableau T7 shows. (a). This can only occur if failing SUbJECT is a lesser violation than failing FULL-INT, as structure with an overt expletive, in (b), is beaten by that with an unrealized subject, in dominates SUbJECT in Italian. For example, for the raising verb sembrare (to seem), the

We already know from the discussion of expletives in chapter 2 that Full-Int these constraints determines the status of the expletive candidate is thus the relative ranking among we will see, is potentially in conflict with both Subject and A LIGNFocus. What
 satisfies SUBJECT and ALIGNFOCUS simultaneously and thus constitutes a challenge to


### 3.2.5. Expletive Subjects

predicting the divergence in the analysis of focused subjects syntactic expression of focused objects and unfocused subjects, while at the same time analysis accounts for the observed convergences among the two languages in the focused objects in English, which appears to be less systematic than in Italian, the OT


|  |  |  |  | [! ! feoo mny mau puexq e] [K.ieW <br>  |
| :---: | :---: | :---: | :---: | :---: |
| $i *$ |  |  |  |  |
| ${ }^{\prime}+1$ | ${ }^{\prime} \mathrm{I} \cdot \mathrm{H}$ | \#SyVd | 'fans |  |




As far as Italian is concerned, the suboptimal status of the null candidate in (b) sasensue will thus provide information on the relative ranking of this latter constraint in the two structure, which vacuously satisfies all constraints except PARSE. Its suboptimal status


English.


 rankings found so far for English. thus that FUll-Int dominates Alignfocus. This ranking is also consistent with the suboptimal status of the expletive candidate shows that violating FULL-INT is fatal, and FULL-INT. It is thus the ranking between ALIGNFocus and FULL-INT that matters. The violating ALIGNFOCUS, while the expletive candidate satisfies ALIGNFOCUS and fails

 failing FULL-INT. candidate in (b) because under this ranking failing SUBJECT is a lesser violation than SLI
any additional constraint C then be h-bound by one of the candidates in (a) through (c), since these do not violate

 $\cdot(p 9 t)-($ (eqt) $<q$
(47) Proof: assume the existence of a candidate Cand not harmonically bound (h-bound) above, and thus can never be optimal. A brief proof follows below.

All other competing candidates are harmonically bound by one of the structures





항
in this chapter for an input involving a focused subject. crosslinguistic variation attainable through reranking of the four constraints considered

3.2.7. Candidate Set Exhaustion and Cross-linguistic Variation

from the higher ranking of PARSE relative to ALIGNFOCUS.










 produced would be either (i) the null subject candidate $[--a u x V]$ in (b), or (ii) the structure fails it three times), because the only legitimate competing candidates thus





cases, Cand is h-bound by (b), which fails only SUBJECT. subject elsewhere, failing ALIGNFOCUS, or not parse the subject, failing PARSE. In all
 3.2 Cand cannot violate SUBJECT, because in order to be distinct from (b), Cand would bound by (a), which fails ALIGN FOCUS alone. some elements of the input, violating PARSE. In either case Cand would end up h-
 3.1 Cand cannot violate ALIGNFOCUS, because to be distinct from (a), Cand would have

 paragraphs discussing the expletive and null structures. Cand would then end up h-
 2. Cand cannot satisfy all constraints, because satisfying AlignFocus and SUBJECT LIL




LNI- ${ }^{-7 T N A}$ necessarily from the independently established higher ranking of SUBJECT relative to postverbal presentational focus as optimal. The obligatory expletive there then follows position. The higher ranking of ALIGN-PRES-FOCUS relative to SUBJECT selects constituents marked as presentationally focused to occur in rightward VP-adjoined
 constructions. Indeed, English presentational focus could be analyzed along the same optimal structure exemplifying the third group is familiar, being like English there respectively. I have no representative for the third group yet. Notice however that the
 by an expletive. with other focused arguments, but with the difference that the specIP position is filled languages that resemble those in the previous group, with focused subjects patterning The final group, is represented by the expletive candidate in (c), and contains position of focused subjects and that of unfocused, canonical subjects. subjects pattern with other focused arguments, and the split occurs between the languages where ALIGNFOCUS affects subjects as well. In these languages, focused
 respond to the demands of ALIGNFOCUS. particular, which are not being subject to the SUBJECT constraint, and are thus free to
 8IL

 needed, then pro is a potential target for structural focusing.





## 

(48) Q: Chí ha gridato? Who screamed?
pointing gesture identifying a referent for the pronoun.) positions available to pro. (In the examples below, the word deictic symbolizes a below shows, and as independently argued for by Cardinaletti (1994) in her study of the licensed the same way as overt subjects. Yet, it obviously does not, as the example focusing pro. For example, in Italian, pro could occur in focus position, being case-


 suboptimal universally, under any ranking. PARSE, while candidate (a) violates only SUBJECT. Thus (a) h-bounds (b), making (b) As the following tableau shows, the null subject candidate in (b) violates SUBJECT and in focus position. candidate leaving the subject unparsed is h -bound by the candidate realizing the subject subjects. This result follows necessarily from the analysis given here because the

 unrealized and no assumption specific to null subjects other than their unrealized status
 chapter 5）．Their limited referential range（occurrence with topic antecedents only）and overt subjects，and like overt subjects they must be assigned case（see chapter 1 and
 one of the many things GEN can do with a subject in the input．Otherwise，unrealized In the proposal defended here，on the other hand，leaving subjects unrealized is just positions，thus ruling out its occurrence in focus position． full noun phrases．This missing projection forces pro to occur only in case－assignment a deficient pronoun lacking its own case projection，which in turn is an essential part of follow from specific assumptions on the representation of pro，which is conceived of as analysis，the restricted referential range of null subjects and their unfocused nature here and that proposed in Cardinaletti and Starke（1994）．In Cardinaletti and Starke＇s

are h－bound by the candidate with the overt subject in focus position． outranks SUBJECT and PARSE．They cannot be optimal in focused contexts because they be optimal when there is a topic－referring antecedent and the constraint DROPTOPIC distribution is determined by their failing the SUBJECT and PARSE constraints．They can referential than overt subjects．The only difference is that they are not realized．Their unrealized nature，without further stipulation．Unrealized subjects are no less


## A：＊pro［deictic］dapo de！She／he）did it！

Ta［deictic］dapo de！
S／he break did．
sseio feчł dSV ォеәлq очМ
әรəแฺчว（6†）
when pronominals are focused．
 pronoun is supplying that could not be supplied by pro．This is even clearer in Chinese， 0ZI

 Іод＇suon！


## 

：पS！${ }^{6}$ oung

（50）Rankings for Italian and English：
The relevant rankings argued for in this chapter are summarized below chapter 2 ，with which it shares the use of three constraints．

Moreover，the analysis is consistent with the analysis of null subjects developed in can focus structurally． between focused subjects and focused objects internal to English，where only the latter convergent analysis of focused objects in the two languages，and for the alternation Italian and English in the analysis of focused subjects．The analysis also accounts for the unfocused subjects in Italian，as well as for the crosslinguistic alternation between and PARSE accounts for the language－internal alternation between focused and
 Kieuurns 6でと
unrealized，on which it is crucially based． analysis presented here，and constitutes evidence for the view of null subjects as

overt subjects in focus position and therefore they never occur as focused． иечł［еuи̣！ N
(51) Clausal Complements: V FocusXP CP. constituents and should thus also be analyzed as focused.) Tuller also shows that the distribution of wh-phrases matches that of other focused Kanakuru follows a strict SVO pattern, with unfocused subjects in preverbal position. verb and the clausal complement. (According to Tuller, in the absence of focus shown by the examples in (52), where the focused wh-subject intervenes between the constituent follows the main verb and precedes the clause, as in (51) below. This is
 Southern Bade, Tangale, and Ngizim; see Tuller, 1992). classified into the following three basic patterns. (Similar data are also found in

 focusing pattern of Kanakuru will show. among these two perspectives. The answer is yes, as the following analysis of the mixed The crucial question is whether there are empirical consequences distinguishing complement in different languages). in Grimshaw (1995) in her discussion of the position of a head relative to its
 there exist a leftward and a rightward version of the abstract ALIGNFOCUS constraint, universal, and therefore they are present in the grammar of every language. Thus, if In the Optimality Theoretic perspective, on the other hand, all constraints are alignment as either leftward or rightward is set, the opposite value becomes inaccessible. Therefore, once the value of an hypothetical parameter specifying the direction of focusand Parameters perspective, distinct values of a parameter exclude each other. Theoretic and the Principles and Parameters perspectives of grammar. In the Principles importance of this question lies in the distinction it brings out between the Optimality How is this opposition in the direction of structural focus to be captured? The Brody 1990, Ortiz de Urbina 1989, Koopman 1984, Stanley 1994, Aboh 1995). 1994, Bonet 1990, Rochemont and Culicover 1989, Kiss 1981, 1987, 1990, Horvath 1986,
(Tuller, ex. (21a), p319)
(56a) Tui [worom mono] shire.
(55) Simple DPs: V DP FocusXP.
the DP complement, as in (55). Some examples follow in (56). with no more than number or possessive specifications, the focused constituent follows
(iii) Pattern 3 - Simple DP. When the verb takes a simple DP complement, i.e. a DP
ssubaq Ћu วұр ヨНS

THE CAT ate the fish that she fried. Ate fish-the cat-the RM she fried up.
(54b) Ade [shiruwoi] Ngadlai [m « shee wura ane]. (Tuller, ex. (9a), p.309)
WE sold the horse and the cow.
Sold horse-the we with cow-the.
(54a) Wupe [dowi] $\mathbf{m}<n \boldsymbol{n i}$ [g $<n$ lai].
(53) Complex DPs: V $\mathrm{N}_{\mathrm{i}}$ FocusXP [DP $\left.\mathrm{t}_{\mathrm{i}} \mathrm{YP}\right]$.

 between the nominal head N of the DP and the adjoined modifier or relative clause, as if adjoined PP-modifier or relative clause, then the focused constituent intervenes
(ii) Pattern 2 - Complex DP. When the complement is a complex DP containing an

 ldation dx
$\qquad$ joined PP-modifier or relative clause, then the focused constituent intervenes

[^3]${ }^{10}$ This gloss is not given in the original paper, but can be deduced

what incorporates is the complex Determiner+Noun, as Tuller's glosses suggest. in (57ii) below. The focused phrase is marked as '+focus.' I also assume that in (57ii) leaving behind any DP adjuncts (Tuller, 1992). The structure for this latter case is shown head then incorporates into the verbal complex in order to get case under adjacency, intervening focused phrase interferes with the adjacency requirement. The nominal can left-adjoin to VP, as in (57i) below. However, when the complement is a DP, the complement is a clause, the requirement is vacuously satisfied and the focused phrase requirement that the DP complement be assigned case under adjacency. When the adjunction of the focused phrase. As Tuller proposes, the two patterns arise from the

'sumo8 omz plos $\exists \mathrm{M}$
Sold gowns two we.






 s! uo!̣วə!





 adjacency between the verb and the DP it assigns case to.

First, I assume that Tuller's case adjacency is a constraint CASEADJ requiring linear In order to derive the patterns of Kanakuru, I make the following assumptions.

case-adjacency, determining the otherwise mysterious focusing pattern of Kanakuru.

 construction. Leftward focus alignment would thus inevitably block case-assignment

In the next section, I will claim that head-incorporation is not possible in these


(58) Simple DP complements.
adjoins to the right, rather than to the left, as in structure (58) below. in this case the head of the DP stays in situ unaffected, while the focused phrase VPfocused phrase, and therefore an incorporation analysis is excluded. My proposal is that (see her discussion in footnote 16 page 320). In these cases, a whole DP precedes the



; however, if this
satisfies SUBJECT, but fails both focus constraints, and $\mathbf{A F}_{\text {left }}$ in particular. Since this is two. Next comes candidate (a), with the subject in specIP position. This candidate opposite. Since $\mathbf{A F}_{\text {left }}$ outranks $\mathbf{A F}_{\text {right }}$, candidate (b) wins the competition between the
 and (c), which align the focused subject in leftward and rightward position, Let us start with the simple case of clausal complements. Consider first candidates (b) obeying either $\mathbf{A} \mathbf{F}_{\text {left }}$ or $\mathbf{A} \mathbf{F}_{\text {right }}$, depending on the form of the complement.

The tableaus below show how a focused subject ends up left- or right-adjoined to VP,
(59) Kanakuru: $\left\{E C P\right.$, CASEADJ\} $\gg$ AF $_{\text {left }} \gg$ AF $_{\text {right }} \gg$ SUBJECT $\gg$ STAY $^{11}$ the ranking in (59). dominate $\mathbf{A F}_{\text {left }}$ and $\mathbf{A} \mathbf{F}_{\text {right, }} \mathbf{A F}_{\text {left }}$ dominates $\mathbf{A F}_{\text {right }}$, which dominates SUBJECT, as in its leftward counterpart. The pattern of Kanakuru follows when CASEADJ and ECP constituents seen in the previous analyses of Italian and English. The constraint $\mathbf{A F}_{\text {left }}$ is $\mathrm{AF}_{\text {right }}$ is the constraint requiring rightward VP-adjoined alignment of focused ECP, and the two opposite versions of ALIGNFOCUS, $\mathbf{A F}_{\text {right }}$ and $\mathbf{A F}_{\text {left. }}$. The constraint

structure of DPs, but I leave the actual development to further research. that the theory of inputs can be further developed in order to represent the internal Finally, I assume that GEN is extended so as to allow for noun-incorporation, and incorporates. The role of $\mathbf{S T A Y}^{\text {TA }}$ will become clearer in section 3.3.3. therefore it is violated every time a focused constituent aligns, and when a head focusing the subject occurs in specIP position. STAY is always violated by movement, position. SUBJECT must be dominated by the focus constraints, since in the absence of SUBJECT is satisfied by the candidate placing the focused subject preverbally, in specIP

For completeness, I also include in the analysis the constraints Subject and STAY. head-movement nor antecedent-government.
 9 9I
 andidate could involve incorporation of the verbal head of the complement. This candidate would fail does not. Both (b) and (c) violate STAY once due to the alignment movement. The incorporation ${ }^{12}$ Whether the subject in (a) violates CAS ADJ or not is uninfluential to the analysis, thus I will assume it
ranked lower than $\mathbf{A F}$ left, and thus failing $\mathbf{A} \mathbf{F}_{\text {left }}$ is fatal to (c). Candidate (c) also violates and satisfies $\mathbf{A}$ Fright , while (d) does the reverse. But as we already know, $\mathbf{A} \mathbf{F}_{\text {right }}$ is
 otherwise (b) would win over (d). violates $\mathbf{S}_{\text {TAY }}$ one time less than (d). STAY is thus also lower ranked than CASEADJ, because the focused phrase intervenes between the verb and the complement DP, but

Candidate (b), identical to (d) but for the lack of noun incorporation, fails CASEADJ, grammatical. that $\mathbf{S T A Y}^{\text {TA }}$ is lower ranked than $\mathbf{A} \mathrm{F}_{\text {left }}$, else (a) would win and (d) would not be analysis of the previous tableau. It also violates STAY one less time than (d), showing well. It satisfies SUbject, but SUBject is ranked lower than $\mathbf{A F}_{\text {left }}$ as we know from the Candidate (a), with the subject in specIP, fails both focus constraints, and thus $\mathbf{A F}_{\text {left }}$ as
 adjacency, hence CASEADJ is satisfied, and so is $\mathbf{A F}$ left. noun and its adjoined modifiers, but does not interfere with case-assignment under
 verbal complex where it is assigned case (I represent it only as N , with no reference to optimal candidate (d), the nominal head of the DP complement incorporates into the number specifications. Here we have the four candidates shown in T 15 below. In the


optimal, deriving the pattern associated with clausal complements. ${ }^{12}$ ranked higher than SUBJECT, candidate (b) also wins this competition and is selected as
also STAY , but this constraint was already shown to be lower ranked than $\mathbf{A F}_{\text {left }}$. leftward structural focusing, giving us the ranking ECP>>AF left. . Candidate (d) violates satisfies. Its suboptimal status tells us that violating the ECP is worse than failing the assumptions discussed in the previous section violates the constraint ECP, which (c)
 already know that $\mathbf{A} \mathbf{F}_{\text {right }}$ is ranked lower than $\mathbf{A}$ Fefft . conflict on $\mathbf{A F} \mathbf{F}_{\text {right }}$ and $\mathbf{A} \mathbf{F}_{\text {left }}$, but violating $\mathbf{A F} \mathbf{F}_{\text {right }}$ cannot be fatal to (b), because we and since (c) wins, CASE ADJ must be higher ranked than $\mathbf{A F}_{\text {left. These candidates also }}$
 The suboptimal status of (b) shows that violating case adjacency is worse than the given constraints. therefore harmonically bound (c), which could not be optimal under any reranking of its set of violations would then be a superset of those of (a). Candidate (a) would Kanakuru. If $\mathbf{A F}$ right did not exist in Kanakuru, (c) could not be grammatical, because suboptimal status of (a) also shows that $\mathbf{A} \mathbf{F}_{\text {right }}$ is indeed part of the grammar of reverse. The optimal status of (c) thus shows that $\mathbf{A} \mathrm{F}_{\text {right }}$ outranks $\operatorname{SUBJECT}$. The adjoined position. Candidate (a) satsfies $\operatorname{SUBJECT}$ but fails $\mathbf{A F}_{\text {right }}$, while (c) does the number projections. The optimal candidate is (c), focusing the subject in rightward VP-



 already in the analysis of the status of (a) $\mathbf{S}_{\text {TAY }}$ one time less than (d), but $\mathbf{S T A Y}^{\text {TAY }}$ was shown to be lower ranked than $\mathbf{A F}_{\text {left }}$
than the thematic subject. other changes have been made. The reader may check on his/her own that the proposed ranking
correctly determines the word order of (61) when the focused constituent is a locative modifier rather version of the dissertation officially filed at Rutgers University, which contains the reverse ranking. No
other changes have been made. The reader may check on his/her own that the proposed ranking VP-internal position of the unfocused subject of example (61). This corrects an inconsistency in the 13 As this tableau and tableau T18 show, in Podoko STAY is ranked above SUBJECT, accounting for the



T17. Focusing with object DP with adjoined modifiers ${ }^{13}$.
rather than (b). Kanakuru, rightward focusing would win over leftward focusing, making (c) optimal it in leftward VP-adjoined position. Similarly, if $\mathbf{A F}_{\text {left }}$ did not outrank $\mathbf{A F}_{\text {right }}$, as in SUBJECT, otherwise putting the subject in specIP would be a better choice than focusing observable in Kanakuru. The suboptimal status of (a) vs. (b) shows that $\mathbf{A F}_{\text {left }}$ outranks

The other ranking relations inferrable from the optimal status of (b) were already therefore (b) is optimal. CASEADJ, which (a) and (c) satisfy. But CASE ADJ is now lower ranked than $\mathbf{A F}_{\text {left }}$, and because it satisfies $\mathbf{A F}_{\text {left }}$, which the latter fail. The price is once again a violation of which is now ranked lower than STAY. Candidate (b) also outperforms (a) and (c) incorporation adds violations of STAY that (b) spares at the price of violating CASEADJ, incorporation. In fact, (b) now wins over the incorporation candidate (d), because ranking the optimal candidate is (b), with a left-adjoined focused subject and no complements with adjoined modifiers. As the tableau below shows, under the new analysis is analogous to that given for Kanakuru. Consider instead the case of DP

its use through a parameter. This is shown below. reranking of CASEADJ below STAY, with no need to postulate a new device and restrict the focusing pattern of Western Bade, Podoko, and Aghem follows directly from the 0 0と
difficulties with the analysis of DPs with possessive and number specifications.
 focusing patterns would be unexpected, and focusing patterns such as the one parameter determining the direction of alignment on one or the other value. Mixed
 лоғ рдұипоээв



 ranked lower than STAY. constraints used in the analysis of the mixed pattern of Kanakuru, once CASEADJ is

 (ECP or $\left.\mathbf{S}_{\text {TAY }}\right) \gg$ CASEADJ. $\mathbf{A F}_{\text {left }} \gg\left\{\mathbf{A F}_{\text {right }}\right.$, SUBJECT, CASEADJ $\}$ T18. Object DP with number and possessive projections:
is the constraint to beat. also fatal to (d), since ECP then outranks AF $_{\text {left, }}$ which in turn outranks CASEADJ, which unmatched by (d). If ECP has the same ranking that it has in Kanakuru, its violation is than (b), and STAY was shown to outrank CASEADJ, the highest violation of (b) Noun incorporation in (d) is also excluded, because (d) violates STAY one more time it violates $\mathbf{A F}_{\text {left, }}$, which (b) satisfies, and which outranks both CASEADJ, and SUBJECT. loses to leftward focusing in (b). Lack of structural focusing, in (a), is excluded because $\mathbf{A F} \mathrm{F}_{\text {left }}$ now outranks both $\mathbf{A F}_{\text {right }}$ and CASEADJ, ensuring that rightward focusing in (c) complement has number and possessive projections, as shown in T18 below. In fact,



 follow as inevitably under Principles and Parameters subjects was shown to follow inevitably from the analysis, while it does not appear to


 English both follow from the interaction of the constraint Alignfocus with the how the distribution of this type of subject inversion and its absence in languages like structures in Italian are actually instances of rightward structural focus. Then, I showed syntax. In particular, I first demonstrated how a systematic class of subject inversion

 3.4. Conclusions
one expects to find under an Optimality Theoretic view of Syntax. problematic pattern of Kanakuru, but this pattern constitutes precisely the kind of case Put differently, not only does the OT analysis account in a principled way for the determine the optimal form. complement has number or possessive specifications, giving $\mathbf{A F}_{\text {right }}$ an opportunity to relatively high ranking of ECP and CASEADJ forces a violation of $\mathbf{A F}_{\text {left }}$ when the DP


However, since the constraints are universal, the OT framework predicts that under by adding the constraint $\mathbf{A F}_{\text {left }}$ at the bottom of the tableaus in section 3.2). leaving $\mathbf{A F}_{\text {left }}$ no opportunity to show its effects (the reader may check for him/herself opposite situation occurs in Italian, where the higher-ranked focus constraint is $\mathbf{A F}_{\text {right }}$, where the lower ranked $\mathbf{A F}_{\text {right }}$ has no opportunity to select the optimal candidate. The was shown in the analysis of leftward focusing in Western Bade, Podoko, and Aghem, depending on which is ranked highest in the grammar of each specific language. This direction are derived by the interaction of UG constraints with $\mathbf{A F}_{\text {right }}$ or $\mathbf{A F}_{\text {left }}$

most languages focusing alignment is attested only in one direction. of mixed patterns is contingent on particular constraint rankings, accounting for why in
 Kanakuru. their status relative to the hierarchy of UG constraints that identifies the grammar of
 Kanakuru is evidence for the latter view, since both leftward and rightward focus £ $โ$
concludes the chapter. recapitulating the analysis of agreement with postverbal and null subjects. Section 4.6 and the constraints that were introduced in chapters 2 and 3, concluding and discusses the interaction between the agreement constraints introduced in section 4.2 as agreement with null subjects, with expletives, and in past-participles. Section 4.5
 Standard Arabic, where distinct agreement features give rise to distinct agreement 4.1. Section 4.3 extends the analysis to instances of mixed agreement in Italian and agreement constraints and shows how they derive the universal implication of section

 case-assignment introduced in the next chapter. interaction of the agreement constraints proposed in this chapter and the constraint on syntactic paradigms within and across languages will be shown to follow from the constraints will also come from the discussion of case in chapter 5 , where a variety of
 in its specifier, while the opposite does not hold true. with a subject in its c-commanding domain, it will also agree on feature $\phi$ with a subject analysis derives the universal implication that if an inflectional head agrees on feature $\phi$ absence of agreement on distinct structures across languages. At the same time, the
 determined is instead derived by grammar. here too a property like agreement, which has been classically conceived as lexically ions from the same constraints. Moreover, as in the analysis of expletives in chapter 2, generalizat crosslinguistic variation in terms of conflicting constraints, and yet derive universal



 the specifier of the head hosting object agreement. For example, the generalization would be clearly however that the existence of object agreement in addition to subject agreement does not per se contradict
the generalization. This would be contradicted only if object agreement would cease once the object is in



 preserved or lost, but never acquired, in accord with the above implication. a spec-head to a c-commanding configuration, agreement on a specific feature can be The comparison between the second and third columns shows that when moving from column lists the set of languages allowing for multiple subject positions that I examined. The evidence for the above universal implication is summarized in table (2). The first
 a clause S, and DP be the subject of S. Then, if $X^{\circ}$ agrees with DP on feature $F$ when $X^{\circ}$ (1) Primacy of Spec-Head Agreement: Let $X^{\circ}$ be the head carrying agreement features in projection projected by H. ${ }^{1}$ morphology with a subject that H c-commands than with a subject in the specifier of the
 domain, also agrees on that same feature with a subject in its specifier. Put differently,
 for specific languages also by Saccon $(1993: 104)$ and by Fassi Fehri (1993). An universal implication in (1), mentioned in informal terms by Moravcsik (1978:365), and

 $\stackrel{\leftrightarrow}{\omega}$
occur with singular third person morphology masculine subjects, it can affects feminine subjects: plural feminine subjects in postverbal position can 2 Haiman \& Benincá (1992) notice in passing that while loss in number agreement does not affects 1994). 1989:footnote 8, Saccon 1993, Belletti and Shlonsky 1994 and Samek-Lodovici 1993, position of postverbal subjects is also found in Rizzi 1982, 1990, Brandi and Cordin
 with the postverbal focused subjects in (3b), which were shown to occur in VP-adjoined

 under spec-head as well as under c-command configuration. these variation in the set of features allowing for unrestricted agreement, i.e. agreement This includes variation in the set of agreement features that are realized, and among understand the kind of linguistic variation that any theory of agreement must deal with. c-command configuration, as well as of agreement loss. The discussion will help to presented below. These involve instances of preservation of agreement under the table, the agreement patterns of Italian, Standard Arabic, and Conegliano are


| Language: | spec-head <br> agreement | agreement under <br> c-command | References |
| :--- | :--- | :--- | :--- |
| Moroccan Arabic, <br> Italian, <br> Spanish, <br> Chinese. | num, ps, gen <br> num, ps <br> num, ps <br> none | num, ps, gen <br> num, ps <br> num, ps <br> none | Fassi Fehri (1993) |
| Standard Arabic, <br> French. | num, ps, gen <br> num, ps | ps, gen <br> ps | Fassi Fehri (1993) |
| Fassan, |  |  |  |
| Genoese, | num, ps, gen <br> num, ps, gen <br> Ampezzan, | (num), ps <br> (num), ps <br> nomagnol. ps, gen | (num), ps <br> (num), ps |
| num, ps, gen |  |  |  |
| Conegliano, | num, ps, gen <br> Trentino, | ps <br> num, ps, gen <br> ps <br> num, ps, gen | ps |

 postverbal subjects in chapter 3. Saccon (1993) distinguishes presentational postverbal subjects, whithin





 preverbally, in specIP, or postverbally, where they are assigned a presentational




 The girls hit the boys. The-girls-Nom hit-pst-3Fpl/*-3Fs (4a) L-banaat-u Darab-na ${ }^{*}$-at restricted to the spec-head configuration of (4a). agreement is available under both agreement configurations, number agreement is

 эо uо!̣! Unrestricted agreement coexists with agreement loss in Standard Arabic. Fassi Fehri 'au s! paypon очм иosuad дчL
 -paypon I
 the-girls-Nom
 - [ ue-p Ker $^{2}$

## כ्V-sイoq-әчł

## 

 $\infty$   ${ }_{\mathrm{N}}$



 features are collectively or individually expressed by overt agreement morphology. This realized or an unrealized nominal argument, or of an expletive. I assume that agreement head and the referential role of a potential nominal constituent, i.e. the referential role of a agreement itself. Agreement is here a coindexation between agreement features on a Before introducing the constraints governing agreement, let me clarify the notion of 4.2.1 The Agreement Coindexation agreement features or not. ${ }^{4}$ depend on whether the optimal structures selected by a language grammar hosts language allows for agreement or lacks it is not a lexical choice, but will eventually a head, generating both candidates with and without agreement. Therefore, whether a As mentioned in chapter 1, I assume that GEN may freely add agreement features to 4.2. Constraints on Agreement while still deriving the universal implication just established. developed in the next section will explain such variation through constraint reranking, realized only under the spec-head configuration or also under c-command. The analysis variation concerning which agreement features are realized, and whether they are The three patterns just introduced already display a significant degree of linguistic

(5b) *La riva la Maria.


๘

##  <br> Riva la Maria.




are always coindexed with the nominative-assigned subject. languages examined here is that the agreement features on a nominative-assigning $\mathrm{I}^{\circ}$

There is a hedgehog in the garden.
-

hedgehog in the garden.
$79!^{\circ}$ sG
There is a hedgehog in the garden.
Expl is a hedgehog in the garden.

assignment from $I^{\circ}$ to the lower DP see the analysis of case in chapter 5). $I^{\circ}$ of geben does not, in which case the DP surfaces in the accusative case (for direct caseagreeing $I^{\circ}$ of sein assigns nominative case to the lower subject, while the agreementless the nominative case is overtly marked on the DP determiner, we observe that the
When we examine the correspondent sentences with a singular indefinite DP, where
 Expl gives.3s / give.3pl three hedgehogs in the garden.


 Expl is. $3 \mathrm{~s} /$ are.3pl three urchins in the garden.

with sein does $I^{\circ}$ agree with the lower DP. and geben 'to give' may both introduce a presentationally focused DP. However, only as shown in the following German example. As (6) and (7) show, the verb sein 'to be' agreement and case-assignment can be found in languages with overt case morphology,








Failed when no clause-bound agreement occurs on H relative to $\phi$. feature $\phi$ and the referential role of a potential nominal constituent.
(11) LOOSEAGR ${ }_{\phi}$ : A head H should host clause-bound agreement between an agreement
(this latter case is addressed in section 4.4.1). relevant agreement feature, or because the coindexed referential role is in another clause when a head does not host agreement within its clause, either because it lacks the the head carrying the agreement features (Grimshaw 1991). The constraint is violated requiring that the relation hold within the clause, intended as the extended projection of LOOSEAGR ${ }_{\phi}$ imposes a looser condition on the configuration of agreement, only
 always satisfy $\mathbf{A G R}{ }_{\phi}$. it. Section 4.4.2 will examine agreement with unrealized subject, showing why they in specIP satisfies $\mathbf{A G R}_{\phi}$, but agreement between I ${ }^{\circ}$ and a subject in a lower position fails


 Failed when no spec-head agreement occurs on H relative to $\phi$. and the referential role of a potential nominal constituent. (10) $\mathrm{AGR}_{\phi}$ : A head H should host spec-head agreement between an agreement feature $\phi$ referential role of a potential nominal constituent. agreement. The constraint $\mathrm{AGR}_{\phi}$ requires a head to host spec-head agreement with the structures with sufficiently local agreement are preferred to structures with less local section 4.1. Intuitively, the first two constraints, $\operatorname{AGR}_{\phi}$ and LOOSEAGR ${ }_{\phi}$, state that

 agreement, in (a), wins over the one lacking it, in (a'), because it satisfies LOOSEAGR,


 $\phi$, and thus lacks $\phi$-agreement. The ranking of AGR, LOOSEAGR, and NO $\Phi$-FTS drives


 any agreement feature. agreement under any configuration, such as Italian on gender agreement or Chinese on -(iii) languages with no agreement, i.e. languages lacking feature $\phi$, hence lacking $\phi$ Standard Arabic on number, and Conegliano on number and gender agreement; under the spec-head configuration but not under the c-command configuration, such as -(ii) languages with agreement loss, i.e. languages which show agreement on feature $\phi$ Standard Arabic relative to gender agreement; Italian belongs to this group with respect to person and number agreement, and
 -(i) languages with unrestricted agreement, i.e. languages preserving agreement on language groups: examined in the previous section. In fact, their reranking establishes a partition of three

Failed once by each agreement feature. (12) NO $\Phi$-FTS: Avoid agreement-features against agreement-features.

Both constraints above conflict with a third constraint, NO $\Phi$-FTS, which militates

## LOOSEAGR ${ }_{\phi}$

 AGR and LOOSEAGR, with no $\phi$-subscript, are intended to refer to $\mathrm{AGR}_{\phi}$ and of it only later, in the analyses of the actual languages. Also, in the following the names Lit
(.q) әмиэпия LOOSEAGR, NO Ф-FTS determines the outcome, selecting as optimal the agreementless agreementless candidate (b') on AGR. Thanks to its rank, which is higher than that of when agreement occurs under a non spec-head configuration, as in (b), it ties with the agreement, in ( $a^{\prime}$ '), because it satisfies the highest ranked $\mathbf{A G R}$, which ( $\mathrm{a}^{\prime}$ ) fails. However,
 - Agreement loss arises when AGR dominates NO $\Phi$-F, which in turn dominates unrestricted agreement. therefore irrelevant for the characterization of the ranking conditions yielding
 failed by both structures otherwise, as shown in (b) and (b'). Hence, structures (a) and



agreement
(b') for the same reason. This ranking thus determines languages with unrestricted concerned, the structure with agreement, in (b) wins over the one lacking agreement, in ても
 ‘ıqumи Standard Arabic, which has unrestricted agreement in gender, but agreement loss in
 agreement with respect to person and number, but lacks agreement in gender, thus but in another with respect to a different feature. For example, Italian has unrestricted agreement features. Therefore, a language may fall into one class relative to one feature



of the ranking of the two agreement constraints relative to each other. independently of the agreement configuration under consideration and independently

 EtI
sмочs ग̣qе.





| әuоu ' 4 | unu 'บә̊ ' | บว® 'sd 'p | บә® 'q |
| :---: | :---: | :---: | :---: |
| unu 'uว8 'sd \% | unu 'sd 'a | unu $\cdot \sim$ | sd e |


the person, gender and number features. in the abstract terms proposed in (14) below, i.e. as the list of possible combinations of representation of the competing candidates. I will represent the competing candidates
 gender, thus belonging to the no-agreement class with respect to gender agreement. FTS higher than both LOOSEAGRgen and AGRgen, and therefore lack agreement in relative to agreement in number. The same grammar may simultaneously rank NO $\Phi$ LOOSEAGR ${ }_{\text {num }}$ dominating NO $\Phi$-FTS falls into the class of unrestricted agreement features, such distribution follows automatically. For example, a grammar with another agreement-feature. If the agreement constraints are relativized with respect to certain class with respect to one agreement-feature and to another with respect to


implication on the primacy of spec-head agreement. agreement under a spec-head configuration. Hence the analysis entails the universal theory of agreement, is a language where agreement under c-command is richer than particular, what is excluded from this list, and hence is predicted impossible by this reverse, and fall into the third group. No other agreement pattern is thus possible. In grammar will either rank AGR over NO Ф-FTS, and fall into the second group, or do the FTS, and fall into the first group, or rank them in the reverse order. In this latter case, a region of the tripartition. Any grammar will in fact either rank LOOSEAGR over NO $\Phi$ Any possible grammar created by the three agreement constraints falls into one理I







are characterized by the ranking conditions shown in (17) below.





(16) Funziona-no/* $\{0, i, \mathrm{i}$, ,iamo,te $\}$ bene le auto.

## aulfyuom sam a 2 L

The.Fpl car.Fpl


## work.3pl/*\{1s,2s,3s,1pl,2pl\}

 and postverbal VP-adjoined subjects. participle agreement in gender see section 4.4.4). This was shown in (3), and is shown


 Italian and Standard Arabic agreement should further clarify this proposal. have to predict (b) as the optimal candidate for this case. The following analysis of



configurations.
 tableau as well, and is therefore not repeated. The optimal status of (e) shows that under head relation with $I^{\circ}$. The discussion proposed for the former tableau applies to this




status of (e) is successfully determined. higher than LOOSEAGRgen and AGRgen, the violation is fatal to (g), and the optimal which (e) lacks, (g) violates NO $\Phi$-FTS one time more than (e). Since NO $\Phi$-FTS is ranked except for the full agreement candidate (g). However, by expressing gender agreement, The same ranking is also responsible for the suboptimal status of all other candidates ungrammatical, contrary to observation. rather than lowest, candidate (e) would be suboptimal relative to (h) and thus of LOOSEAGR ${ }_{\text {num }}$ and LOOSEAGR ${ }_{p s}$ over N O $\Phi$-FTS: were NO $\Phi$-FTS ranked highest

 readability, I omit them from the tableaus below

following ranking conditions:



 Standard Arabic.


### 4.3.2. Standard Arabic

 in Italian. constraints, much like the ranking of NO $\Phi$-FTS in T4 ad T5 excludes gender agreement features, by ranking NO $\Phi$-FTS higher than the relevant $\mathrm{AGR}_{\phi}$ and LOOSEAGR ${ }_{\phi}$ The analysis can also be extended to any language lacking agreement on one or more or more features, while lacking agreement on one or more different features. can be systematically extended to any language showing unrestricted agreement on one changing the agreement feature index at the foot of each constraint, this specific study (13) predicts the unrestricted agreement in person and number found in Italian. By

preserves number and person agreement, but not number agreement. as optimal by virtue of its minor number of violations. Hence, the optimal candidate and the full-agreement candidate (g) now falls onto NO $\Phi$-FTS. But NO $\Phi$-FTS selects (d) responsibility of determining the most harmonic form between the number-deficient (d)
 the same reasoning applied before. However, the change affects number agreement, candidates. This has no effect on gender and person agreement, which is motivated by


leaving the full-agreement candidate $(\mathrm{g})$ as the optimal optima. Violation of $\mathrm{AGR}_{\text {num }}$, crucially ranked higher than NO $\Phi$-FTS, is fatal to (d), candidates that violate one or both constraints, leaving only (d) and (g) as potential LOOSEAGRgen relative to NO $\Phi$-FTS is sufficient to exclude from the competition all Consider agreement in specIP first, in T6. The higher ranking of LOOSEAGR ${ }_{p s}$ and omit from the tableaus the ininfluential constraints $\mathbf{A G R}$ gen and $\mathbf{A G R}_{\mathrm{ps}}$ pattern. This is shown in the two tableaus below. Once again, for reasons of readability I





 configuration already exclude such cases). As (19) shows, even when the matrix clause











accord with the relevant conditions found in table (13). agreement features can be accounted for by reranking the agreement constraints in
 ұиәшәәліе ләриә8




The prediction is correct, as shown in (20). agreement, we expect agreement in gender and number to occur in this case as well.
 coindexation between seem and the lower subject is analogous to that between a verb




 ге!̣uәn|ృи!̣u! well as the constraints $\mathrm{AGR}_{\mathrm{ps}}, \mathrm{AGR}_{\text {num }}$ are all failed by both candidates and therefore
 relation, candidate (b) would satisfy the higher ranked LOOSEAGR num and LOOSEAGR ${ }_{p s}$, sult. Notice that if LOOSEAGR had no conditions on the domain of the agreement while candidate (b) violates it twice, and is therefore suboptimal, deriving the correct reover two clauses. However, candidate (a) satisfies the next lower constraint, NO Ф-FTS, does not because it lacks agreement, and candidate (b) because the coindexation spans because neither candidate hosts a clause-bound agreement coindexation. Candidate (a) subject, in (b), violate the high ranked constraints LOOSEAGR num and LOOSEAGR $\mathrm{ps}^{\text {, }}$

 The two verb forms in (19) compete with each other and are evaluated in accord to

 features (see also Harris 1991). what I assume to be a default morphology associated with the absence of agreement




 that maximal projections should recapitulate the properties of their heads. Under this projection XP, whether by percolation or by any other mechanism exploiting the fact






clauses in languages with unrestricted agreement such as Italian. by LOOSEAGR correctly accounts for the lack of agreement with subjects of lower

 these constraints, and is therefore suboptimal. extended projection boundary. The candidate lacking agreement in (a) instead fails LOOSEAGR ${ }_{\text {num }}$ and LOOSEAGR ps, because the agreement coindexation does not cross an tableau T9 shows, the agreement candidate in (b) satisfies the high ranked constraints The grammaticality of agreement in this case follows from the grammar of Italian. As 'pazon arvy ot suaas sıafor mat Seem-3pl / seem-(3s) default to- have voted few voters
(20) Sembrano / *sembra aver votato pochi elettori.




 The case of Standard Arabic is particularly interesting, because this language places overt specIP subjects. subjects shows instances of null subjects with poorer agreement than that available to To the best of my knowledge, the prediction is correct and no language with null for agreement loss. fullest agreement paradigm available in the language, even when the language allows subjects in languages carrying $I^{\circ}$-agreement. Null subjects should thus always show the
 both $\mathrm{AGR}_{\boldsymbol{\phi}}$ and LOOSEAGR ${ }_{\phi}$.
hosting the agreement feature $\phi$ qualifies as a spec-head configuration and thus satisfies formally identical). It follows that agreement between a null subject and a head $I^{\circ}$ referential role of the DP in its specifier (if nodes dominate themselves the relation is percolated thematic role also in IP is as local as the relation between IP and the the IP node. The relation between the projected agreement features on IP and the unassigned thematic role percolates throughout the extended projection, until it reaches thematic role in the input which is left unassigned in the phrase marker. The lexical head of the unparsed subject in input. The lexical head is associated with a Agreement with an unrealized subject is agreement with the referential role of the


ұиәшәәляе реәч-эәdS VP-adjoined position respectively.
 zst



 Is.3s fallen.Fs.
(24) E' cadut-a.
(24) below, also shows obligatory gender agreement. has no intrinsic gender. What interests us is that the null subject counterpart of (23), in unrelated to any property of the referent denoted by tazza 'cup', which being inanimate, Crucially, the fact that the word for cup is feminine is an idiosyncrasy of Italian, The cup has fallen. The.Fs cup.Fs is.3s fallen.Fs.

subject.
Consider (23) below. The past participle agrees in number and gender with the as predicted by the above analysis. lexically. Access to this information thus requires access to the unrealized item in input, agreement with null subjects is sensitive to information which can only be encoded
 4.4.2.1. Evidence for Agreement through Thematic Assignment They (f) came. ${ }^{\mathrm{T}} \mathrm{d}_{\mathrm{i} \varepsilon}$-әureว (22) Ji?-na Came-3Fs
The girls came. (21a) Jaa?-at 1-banaatu.
the girls.Fpl.
agreement specIP subjects in (21b), and then both with the null subject in (22), also showing full
 address a single hearer．The agreement pattern is unchanged．
 ¿sع．7n＇ （26c）Lei parler－á？
 ¿әұә－ләןлед ！̣о $\Lambda$

¿ ！е－ләцлед $n_{L}$（е9乙）
person and number with the pronominal subject，rather than with the actual referent The corresponding three sentences are listed below．Notice that $I^{\circ}$ always agrees in son feminine singular form Lei rather than with the familiar second singular form $T u$ ． can be honorifically addressed with the second plural form Voi as well as the third per－ the person，number，and gender of the hearer．For example，in Italian，a single hearer possible to address the hearer with conventional pronominal forms that do not match French，German，Hungarian，Tigrinya and many other（see Moravcsik 1978：361），it is the study of agreement with honorific pronouns．In many languages，including Italian， Further evidence for the role played by inputs in null subject agreement comes from
＜cadere $(x)$, x＝tazza，,$-- T=$ pres．perfect $>$
fall $\quad$ cup
including its syntactic gender ${ }^{5}$ ）． referential role of a noun encodes all the syntactic properties of the lexical item， role assigned to it，making agreement in gender possible（I am assuming that the shows，the lexical element in the input is directly accessible through the thematic theta－

The analysis just given provides a simple answer to the above question．As（25） while pointing at a broken cup on the floor．
referent for its null subject through the deictic context．For example，one could utter（24）





In summary，conceiving agreement with null subjects as agreement with the

## Idz＇no $\quad$ yeads

## ＜parlare（ x ）， $\mathrm{x}=$ Voi $_{\text {topic }},-$－， $\mathrm{T}=$ future＞

Idz＇no人 yeads

（28a） agreement obtains． simply agrees with the subject，and since this is identical in both cases，identical example，（26b）and（27b）would have the two inputs in（28a）and（28b）．In either case， $\mathrm{I}^{\circ}$ fact that the input of the sentences of each pair share the same thematic subject．For specified in the input，then the pairwise match between（27）and（26）follows from the forms of honorific pronominals count as lexical elements and must therefore be

The analysis proposed here has a straightforward answer to this：if the idiosyncratic
only when the agreement specifications match those of the overt honorific pronominals？ agreement－identification，as in Rizzi（1986），why is the honorific interpretation possible honorifically and not others？And if pro were instead licensed and interpreted through pro＇s with the same specifications of overt honorific pronominals can be used with all possible agreement specifications，what would warrant that precisely those
 come about？If the subject of the examples in（27a）through（27c）were pro，the perfect

How does the perfect match in agreement between the cases in（27）and those in（26）
¿sčind yerads




i！！e－səped

Will you speak？
¿ybods noh ll！M
¿ypods noh 1l！M
 hosts person and number agreement under a spec-head configuration between the verb morpheme is encodes person and number agreement at the same time. Candidate (a)



 nominative-assigning auxiliary is directly to the DP a man. Agreement thus occurs coindexed with the case-assignee, the agreement coindexation in (30) relates the directly to a man in (30). Since agreement features on a case-assigning head are directly
 explained in detail in chapter 5. As I will show there, the difference between (29) and


(32) Es ist ein Mann im Garten.

ক
There are three men in the garden
7ьчł suววs 7?
(31) Es scheint dass
replicated in German, where the expletive is invariant.
The asymmetry does not depend on specific properties of there, and in fact can be
(30b) There are three men in the garden. (30a) There is a man in the garden (29) It seems that.
clearly agrees with the postverbal subject rather than with the expletive there. while the verb agrees with the English expletive it in the english sentence (29), in (30) it

Agreement with expletives occurs in some structures and not in others. For example,
4.4.3. Agreement with Expletives
independent pro subject. are either unaccounted for or at best accidental in the approaches favoring an accessibility permits us to account for the properties of agreement just observed, which 9GI
әчł Чł! weaker requirement would assume that agreement on a feature $\phi$ must be overtly encoded on at least one with the assumption at the beginning of this chapter that agreement must always be overtly encoded. A


 since $i s$ in English is singular. Finally, the candidate with no agreement is given in (c).
 agreement feature of the $I^{\circ}$ auxiliary, underlined, coindexed with the subject in specVP, The candidate with person and number agreement is shown in (a), with the
 әsез чग!чм u! ‘иo!̣! case-assigned subject, which I will assume to be in specVP. Nothing would change If the
 targeting presentationally focused subjects, along the lines given in tableau T12, in



 which is structurally identical to the English one. of gender agreement. The exact same analysis applies of course to the German case,

 position does not change the outcome, since their pattern of failures matches that of the LOOSEAGR num, and LOOSEAGR ${ }_{\text {ps }}$ which (b) fails. Ranking of $\mathbf{A G R}$ num and $\mathbf{A G R}$ ps in any The agreement candidate (a) is optimal because it satisfies the higher ranked constraints 늬



optimal structure NO $\Phi$-FTS, is violated by both once, but one additional time by (a), leaving (b) as the $A G R_{\text {num }}$, because their agreement relation is not sufficiently local. The next constraint ranked LOOSEAGR ${ }_{p s}$. The remaining competitors, (a) and (b), fail the next constraint, reranked the constraints. The candidate with no agreement is still blocked by the high
 constraints NO $\Phi$-FTS on top of LOOSEAGR num and AGR $_{\text {num }}$ on top of NO $\Phi$-FTS (see
 These varieties of English provide the English equivalent of loss of number agreement
(33) There is three men in the garden :морә clauses does not occur (Baker 1989:359), and which would reject (30) in favor of (33)




of the associated problems will be reviewed in chapter 5 .
 expletive pronominal through the specifier of PPA. While the existence of null expletives has been a its way to specIP, thus triggering agreement where no agreement should occur. Moreover, under Kayne's




 under specific circumstances in the O.T. analysis developed here, is provided in Kayne (1987). Under




 $\square$ Luca has arrived. Maria has arrived. (34a) Luca.3Ms é.3s arrivat-o.Ms.
 participle of passives and unaccusatives ${ }^{7}$, which agrees in gender and number but lacks
 even opposite sets of features. For example, in Italian, while $I^{\circ}$ agrees in person but lacks



 lacking agreement in (33). require agreement transmission, but it is unclear how it would account for the case



 항
limited in number and elementary in character, involving the following elements generated is fully systematic. The actual primitives of the analysis of agreement are

While the number of generated constraints may seem large, the way they are
$\left\{\right.$ L.AGR $_{\text {num,pp, }}$ L.AGRgen,pp $\} \gg$ NO $\Phi$-FTS $\gg\left\{\right.$ L.AGR $_{\text {ps,pp }}$, AGR $\left._{\text {ps,pp }}\right\}$ $\begin{aligned} & \left\{\mathbf{L} . A G R_{\text {num,infl }}, \mathbf{L} \cdot A G R_{p s, i n f l}\right\} \gg \text { NO } \Phi-F T S ~\end{aligned}>\left\{\right.$ LL.AGR $_{\text {gen,infl }}$, AGR $\left._{\text {gen,infl }}\right\}$ (36) $I^{\circ}$ and past-participle agreement in Italian
$-\mathrm{I}^{\circ}$-agreement in person and number:
(36) $I^{\mathrm{o}}$ and past-participle agreement in Italian:
is determined by the following ranking conditions: Italian agreement pattern for $I^{\circ}$ and for the past-participle of passives and unaccusatives

Ranking conditions will now have to be determined for each head. For example, the

|  |  | ェрриәŋ |
| :---: | :---: | :---: |
|  | $\begin{gathered} \text { Fu!̣’umuyפVASOOT } \\ \text { [Ju! unu yפV } \end{gathered}$ | ıəqum ${ }^{\text {N }}$ |
|  |  | uosia ${ }_{\text {d }}$ |
|  | ${ }_{\text {oI }}$ |  |

and $p p$ for past participle). thematic role). The group of constraints so generated is listed in (35) (infl stands for $\mathrm{I}^{\mathrm{o}}$, head (or more precisely, for the head hosting the morpheme that absorbs the external LOOSEAGR $\Phi$ families doubles into a constraint for $I^{\circ}$, and one for the past-participle which are indexed with respect to heads. Thus, each constraint in the AGRФ and

The proposal explored here is a further relativization of the agreement constraints,
We boys have arrived. You (pl) have arrived.
(34c) Noi.1pl siamo.1pl arrivat-i.Mpl. (34d) Voi.2pl siete.2pl arrivat-i.Mpl


Some girls entered from the window.
ip [Alcune ragazze $]_{i}$ sono [agr-pp $t_{i}$ entrat ${ }_{k}-\left[_{\mathrm{vp}} \mathrm{t}_{\mathrm{k}} \mathrm{t}_{\mathrm{i}}\right.$
$\begin{aligned} & \text { dalla finestra }]]] . \\ & \text { Some. } 3 \mathrm{Fpl} \text { girls. } 3 \mathrm{Fpl} \text { are. } 3 \mathrm{pl} \\ & \text { entered. } \mathrm{Fpl}\end{aligned}$ from the window.
(37) Alcune ragazze sono entrate dalla finestra.
participle projection. involving the past-participle and the trace of the subject in the specifier of the pastparticiple agreement in gender and number may occur under a spec-head configuration past-participle of (37) has moved to an agreement projection higher than VP. Past participle is insensitive to the position of the subject. In accord with Kayne (1987), the unrestricted agreement is exemplified by Italian, where agreement in unaccusative past unrestricted agreement and agreement loss in past-participle agreement. The case for


Conversely, the same agreement classes that we observed for $I^{\circ}$-agreement exist for is correct. and extends to any instance of agreement. To the best of my knowledge the prediction agreement, i.e. the primacy of spec-head agreement is not specific to agreement in $I^{\circ}$,
 interaction between $\mathbf{A G R}_{\phi}$ and LOOSEAGR $_{\phi}$ with $\mathbf{N O} \Phi$-FTS. involves, agreement is always governed by the same fundamental mechanism: the invariant across syntactic structure: whatever head it concerns and whatever features it


(iv) the constraint NO $\Phi$-FTS, against any agreement feature. version (i.e. AGR and LOOSEAGR).
 be represented by distinct nodes in the phrase-structure representation).
(ii) the set of distinct agreeing heads (these need not be categorically distinct, but only

$\stackrel{\rightharpoonup}{\Xi}$


 ALIGNFOCUS constraint discussed in chapter 3, and is thus relevant for the analysis of


 is not specific to $I^{\circ}$. agreement. The analysis also derives the fact that the Primacy of Spec-Head Agreement active on distinct heads within the same clause while maintaining a unified theory of agreement heads permits us to account for variation in the set of agreement features


object position, as in (38b), the past participle no longer agrees. subject in the past participle specifier. However, when the subject remains in the lower 1989). In (38a), the past participle agrees in gender and number with the trace left by the Past participle agreement loss in gender and number occurs in Conegliano (Saccon There entered from the window some girls.

Are 3 pl entered. Fpl some. 3 Fpl girls. 3 Fpl from the window [ip Sono [agr-pp entrat ${ }_{k}-\mathrm{e}\left[\mathrm{vp} \mathrm{t}_{\mathrm{k}}\right.$ [alcune ragazze] ${ }_{i}$ dalla finestra $]$.

[^4] preverbal candidate in (a) and the inversion candidate in (b) (for the suboptimal status
 ALIGNFOCUS dominates AGR, or else AGR would make the candidate with the inverted

 surviving LOOSEAGR and NO $\Phi$-FTS, violate AGR. optimal because (c) and (d), the only additional candidates satisfying and thus
 independently of its ranking. If ranked highest, it does so directly, since all other forms provided separately, to represent the fact that AGR selects (a) and (b) as optimal the subject in different positions, with and without agreement. The column for AGR is position or unrealized. This is shown below. The tableau on the left lists candidates with the agreement component as a whole favors candidates with the subject in specIP


analysis of Italian to illustrate the results arrived at abstractly


| ＊ |  | $i_{*}$＊ |  |
| :---: | :---: | :---: | :---: |
| ＊ |  | $i_{*}$ |  |
| ＊ |  | $i_{*}$＊ |  |
| ＊ |  | $i *$ |  |
|  | ＊ | $i *$ |  |
|  | ＊ | $i *$ |  |
|  | ＊ |  |  |
|  | ＊ |  |  |
| ฯワVヨSOOT | SLH－Ф ON | VొV | ＜ŋıวd＇səıd＝${ }^{\prime}-{ }^{\prime} \mathrm{N}=\mathrm{X}^{\prime}(\mathrm{x}) \Lambda$＞ |

agreement constraints favor candidates with the subject in specIP or left unrealized that just examined for languages with unrestricted agreement．Taken collectively，the agreement system（see table（13）in section 4．2）．Therefore，the situation is identical to

Languages with agreement loss have AGR as the highest ranked constraint in the

## 4．5．2．Languages with Agreement Loss

PARSE，as discussed in chapter 2.
candidate thus depends only on the ranking of DROPTOPIC relative to SUBJECT and subjects agreementwise，as we saw in section 4．4．2．The optimal status of the null subject


Align Focus＞＞AGR．
（39）Focus－related inversion in languages with unrestricted agreement：
the condition below：
AlignFocus dominates AGR will show focus－related inversion．This is characterized in



ио！̣еz！！̣едх－uou ұวə！̣qns



 agreement in（e）－（h），which violate the same constraints．This is shown in the tableau position of the subject or its realization among the potential optimal candidates lacking of NO $\Phi$－FTS makes candidates with agreement suboptimal，but says nothing about the constraints and the constraints Alignfocus and Drop Topic．In fact，the high ranking

 relative to SUBJECT and PARSE． the ranking of the agreement constraints，but only on the ranking of DrOPTOPIC
 ALIGNFOCUS＞＞AGR
（40）Focused inversion in languages with agreement loss：
dominates AGR，for the same reasons given before． Here too，focus－related inversion will only be possible in languages where ALIGNFOCUS岁
AGR num and AGRps. (b) shows clearly how inversion may occur only if A LIGNFOCUS dominates both
 one on top, with increasing divergence going downward from the optimal candidate. [ aux VP DP ]. To improve legibility, the candidates are rearranged with the optimal [DP aux VP]; the candidates prefixed with Inv, represent the inversion candidate combinations. The candidates with the prefix preV represent the preverbal candidate preverbal position and in postverbal position, each is split into the 8 possible agreement

-No agreement in gender: -Unrestricted agreement in person: -Unrestricted agreement in number: (42) Italian agreement-pattern. responsible for the agreement pattern of Italian, repeated in (42) below. compatible with the above condition in (41) as well as with the ranking conditions

ALIGNFOCUS >> $\left\{\mathrm{AGR}_{\text {num }}\right.$, AGR $\left._{\mathrm{ps}}\right\}$.
(41) Conditions on the availability of focus-related inversion in Italian:
about languages with no-agreement. ALIGNFOCUS, while no ranking condition is set on AGRgen in accord to what was said translates into the requirement that $\mathrm{AGR}_{\text {num }}$ and $\mathbf{A G R}$ ps are ranked lower than agreement features. Hence, the fact that Italian allows focus-triggered inversion conditions on the interaction between AGR and ALIGNFOCUS must then be relativized to agreement relative to person and number, but no-agreement relative to gender. The






 suọsnjpuo) '9't effects of $C$ will surface only in those languages where $C$ dominates $A G R_{\phi}$. any constraint C requiring the subject position to be elsewhere than in specIP. The the constraint ALIGNFOCUS is ranked above $\mathbf{A G R}{ }_{\phi}$. More generally, this will be true for






agreement such as that developed on independent grounds in this chapter.
 crosslinguistically. In many ways, those analyses and the simplification of case-theory variation in case-assignment found both language-internally as well as AGR with the case-related constraint CASEGOV provides a unified analysis for pattern of the position of focused subjects. In the next chapter we will see how the interaction of
 with the other constraints of UG. We have already briefly examined the interaction
 chapter provided an analysis of agreement with null subjects which makes no reference
to structurally realized empty pronominal subjects. languages, in accord with the assumptions made in the previous chapters. Likewise, the transmission, and thus has no need to postulate a null expletive in null subject postverbal subjects and with expletives which makes no reference to agreement
Other results provided in this chapter concerned an analysis of agreement with from the same constraints responsible for crosslinguistic variation in agreement restricting agreement loss to non spec-head configurations, which was shown to follow may now add to the universals derived in chapters 2 and 3 the universal implication


 the potential of O.T., already seen at work in the analysis of the expletive in chapter 3, of





 (Rizzi, 1982). sentence (4) the auxiliary avere assigns case into specIP from the $\mathrm{C}^{\circ}$ position, as in (5) represented in (3) (Rizzi 1982, Chomsky 1982, 1986, Safir 1985, Burzio 1986). Finally, in






$$
\begin{aligned}
& \text { (4) Avendo Marco vinto, } \\
& \text { (5) Avendo }{ }_{i}\left[\text { Marco ti }{ }^{2}\right. \text { ver }
\end{aligned}
$$

## 'uon oчп yuvW St 4I

 -्रrew uom sey


## - uom svy yırw

## (1) Marco ha vinto

nominative case to the overt subject in three distinct ways. following three Italian sentences, which according to the linguistic literature assign
 5.1. The Need of a Unified Analysis of Case Assignment the conclusions. agreement transmission through a null expletive pro expl element. Section 5.7 presents

 0LI






 central to the analysis developed here. Section 5.3 derives case-assignment variation


determined by the low rank of FULL-INT with respect to CASEGOV of English and Arabic will in fact provide us with cases where expletive elements are distribution to the rank of FULL-INT in a given grammar (see chapter 2 and 3). The study

The analysis will also support the view of overt expletives developed by Grimshaw CASEGOV and STAY positions in Italian and Standard Arabic in relation to the reranking of AGR relative to will be shown true even for canonical subjects, which for example take different position, but only optimal subject positions relative to an input and a grammar. This The analysis of case-assignment will confirm that there is no universal default subject

Other important results in line with the claims made in previous chapters concern the Rizzi's account of Italian aux-to-comp infinitivals (Rizzi, 1982), and Sportiche (1991), nor to stipulate special case-assignment configurations as in the other constraints of UG, with no need to parametrize case theory, as in Koopman languages will be shown to follow directly from the interaction between CASEGOV and government. Linguistic variation in case-assignment configurations within and between reduced to a single constraint, CASEGOV, requiring that case be assigned under proper s! чगฺчм 'ұиәuuß

## ase〕 [eumpdo ©s


 the Case-Filter is excluded from the candidate set.

The Case-Filter belongs to the filtering component of GEN: any structure violating


Case Filter: Coindex the referential role $R$ of a potential nominal constituent with a constituent is not case-marked. ungrammatical any structure where the referential role of a potential nominal is regulated by the inviolable Case-Filter, defined below, which rejects as


 prevents the case coindexation from being absent, thus allowing for case-unmarked important aspects. The first concerns the existence of case-assignment: so far, nothing
 specIP position, the specVP position, and the position of in situ objects. reciprocal, as in Bittner and Hale (1996). A-positions relevant for this analysis are the




 with the analysis of agreement (see section 4.4.2 on agreement with null subjects).

 constituent, and is accessible on the DP node, which therefore constitutes the target of expletive and overt argumental DPs, the case-assignee is the referential role of the




 лОЭ case-assignee. This constraint is introduced in the next section. one universal simple constraint requiring that the case-assigner properly governs the



## It seems that nobody voted.

 - КроqKue рәұол әлеч-оł ұои suәәs(9)
 transmission by a raising pro expl. is therefore too low to receive case directly from the matrix $\mathrm{T}^{\circ}$, forcing us back to case(nobody) is licensed by the subordinate neg-marker non of the subordinate clause, and solution does not extend to a case like (6) below, where the lower subject nessuno assuming that $\mathrm{T}^{\circ}$ assigns case directly to the VP-adjoined subject. However, this

Finally, Rizzi (1990) avoids the problems associated with the pro $_{\text {expl }}$-analysis of (2) by this analysis with that of (1) and (2). that the auxiliary in $\mathrm{C}^{\circ}$ does govern the subject, but there is no obvious way to connect 5.6). Analyzing the aux-to-comp construction in (4) is technically less problematic, given appealing once again to a pro expl element, with all the associated problems (see section how the same requirement can be satisfied by the inverted subject in (2) without requirement triggers raising of the subject into specIP position. It is unclear, however, required to be governed by $\mathrm{C}^{\circ}$ or a chain headed in $\mathrm{C}^{\circ}$ (their Case-Filter). In (1), this analysis of case. For example, in Bittner and Hale's model nominative subjects are The data in (1), (2) and (4) seem problematic also for Bittner and Hale's (1996) additional option of checking case through agreement in order to derive (1). checked in the internal domain of the gerundive auxiliary in $\mathrm{C}^{\circ}$, must then rely on the
 relate the analysis of (1) to that of (4). For example, a recent proposal by Longobardi will see in section 5.6 , undesirable. Moreover, the minimalist analysis doesn't directly LLI
theory of case assignment, proposing proper government as the only condition other value with respect to each feature. The analysis proposed here simplifies the Languages, and even specific structures within a language, are marked for one or the

E
 $\pm$ assignment-through-spec-head-agreement.
that there are two independent parameters for case-assignment configurations: McCloskey 1991, an by Fassi Fehri for Standard Arabic, 1993). These authors maintain involving case-assignment into specVP proposed by Chung \& McCloskey 1987, parametric option internal to case theory (see also the analyses of VSO languages

 The idea that case-assignment occurs under government dates back to Rouveret \& $M^{-M} \mathrm{~d} \Lambda<\square$

violate it when case-marking UP, WP, or VP. case-assigner $\mathrm{X}^{\circ}$ would satisfy CASEGOV when case-marking YP or ZP, but it would assigner or the specifier of the complement. For example, in the structure below the CASEGOV is violated when the case-assignee is not the complement of the case-

- (ii) YP is in the specifier position of $\mathrm{X}^{\prime} \mathrm{s}$ sister. - (i) YP is the sister of $X^{\circ}$, or
(8b) Local proper government: $X^{\circ}$ locally proper-governs YP if:
Failed if the case-assignee is not locally properly governed by its case-assigner
(8a) CASEGOV: A case-assignee is locally properly governed by its case-assigner
 whose chain-foot c-commands and is closest to the object chain-foot is that of the coindexed with $\mathrm{V}^{\circ}$ and the subject with $\mathrm{T}^{\circ}$, as in (12a) below. In fact, the case-assigner


$$
\text { (11) }\left[\text { IP John }{ }_{i} \operatorname{met}_{v, \text { nom,acc }}\left[t_{i} t_{v} \text { Mary }\right]\right] \text {. }
$$

 case-assigners, $\mathrm{V}^{0}$ and $\mathrm{T}^{\circ}$, and the structure in (11), where the finite verb has raised and and is closest to X 's own chain-foot. For example, consider the input in (10), with two
 the position of the foot of their respective chains.. In particular, I assume that a case-case-assigners and case-assignees, i.e. what is coindexed with what, is determined by positions of the case-assigner and of the case-assignee. However, the mapping between
 transitive verbs can assign accusative case. is specified in the lexicon; in particular, finite tense can assign nominative case and that only Tense, Verbs and Prepositions are case-assigners, and that the case they assign


examine the issue of case-assignment configuration. Legendre, Raymond and Smolensky 1993's analysis of case-typology, which does not including those satisfying CASEGOV.
 CASEGOV and the other constraints.

$$
(10) \text { < meet(x,y), (x=John , y=Mary), --, T=present> }
$$







 t<I

 gets assigned to thematic subjects in transitives structures should follow from the constraints of UG
 to the specVP subject under proper government, thus satisfying CASEGOV candidate like (14) below, the tense operator is part of the auxiliary has and assigns case

 иәәмұәq КГио 马u!̣ч!! 5.2.2. Candidates with specVP Subjects and with Expletives
(13b) [IP John ${ }_{i, \text { nom }}$ has $_{\text {nom }}\left[t_{i}\right.$ met $_{\text {acc }}$ Mary accl] $]$. (13a) [IP -- has nom $\left[J^{2} n_{i, \text { nom }}\right.$ met $_{\text {acc }}$ Mary $\left.\left.{ }_{\text {acc }}\right]\right]$.
candidate (13b) does not, because the specIP subject is not properly governed by $\mathrm{I}^{\circ}$. CASEGOV. This is shown in (13) below. While candidate (13a) satisfies CASEGOV, subject provides case-assignment configurations which fare differently with respect to which a specific coindexation occurs. For example, variation in the position of the

 coindexation relating the case-assigner and ther case-assignee one case-assignee. Therefore the mapping is trivial, since there is only one possible caseIntransitives, passives and unaccusatives structures involve only one case-assigner and coindexed with the thematic subject, and accusative case with the thematic object ${ }^{1}$.



sense specified above





иәрлея әчł и!̣ иәu әәлчъ әле әләчц (9І) мојәq (9L) и!̣ ұечұ әгduехә

 then checking their status relative to the other candidates. is easily shown by substituting (15a) and (15b) in all tableaus with candidate (14) and

 topic open to further investigation. As the reader may check, whenever candidate (14) is affect the analyses in this chapter, I will use the simpler candidate in (14) and leave this Grimshaw (1995). Since using the candidates in (15) instead of the one in (14) does not inflected verbs and auxiliaries, as for example in Chomsky (1992), Williams (1994) and in Pollock (1989) and Belletti (1990), or whether the lexicon makes available fully



##  (15a) [AgrP -- has ${ }_{i}$ [TP John ${ }_{k} t_{i}\left[v P t_{k}\right.$ sung ]l].

the subject, while (15b) satisfies CASEGOV but violates STAY. position. Candidate (15a) violates CASEGOV but spares a STAY violation on the part of the subject remains in specVP and one like (15b) where the subject raises into specTP projection. Consequently, one could distinguish between a candidate like (15a) where



An alternative view of clause structure would decompose IP into a plurality of
(14) [IP -- has [Vp John sung ]]



## Failed by traces. - STAY (Grimshaw 1993, 1995): Traces are not allowed.

Failed when no spec-head agreement occurs on H relative to $\phi$. feature $\phi$ and the referential role of a potential nominal constituent


 in the next section). The definitions of these constraints follow below.




 argument to occur elsewhere than in the position required by CASEGOV, as for example conflict with CASEGOv. These include any constraint that requires a case-assigned
 5.2.4. Constraints Conflicting with CASE Gov
unassigned also in inputs with finite tense. aspect, however, concerns the newly introduced possibility of leaving the theta roles
 through context. Since no subject is specified, no referential role is associated to the this would have to be attained either through a controlling antecedent or impersonally, $T=$ non finite $>$. The thematic role for the subject would still require an interpretation, but for their subject. The input for the clause to go would then look like $\langle g o(x), x=--,--$,
 evidence for a case marked PRO). of infinitivals as non case-assigning syntactic contexts (but see Sigurdsson 1991 for
 әң7 деч s! s!s
 example the presence of non finite tense as well as coreference between a controller and







 structures traditionally analyzed as involving a PRO subject. I will not provide an

The second type of infinitival structures has no overt subject, and include all analysis is given in section 5.5 . grammatical is determined by the constraint hierarchy of each language. A detailed in the English case. These structures compete with each other, and which structure is with case-assigning auxiliaries, as in the Italian case, or case-assigning prepositions, as John to go. To account for these case, I assume that GEN can freely generate candidates infinitivals, and in English infinitivals involving a prepositional case-assigner, as in for


 chapter 4, section 4.4.3) explaining why agreement occurs with the lower subject in these constructions (see also nominative case-assignee, agreement occurs directly with the subject DP three men,


 expletives, since in the analysis developed here no null expletive is possible. as coindexed together and sharing case. This coindexation applies only to overt
 constraint, and that this is a structure where it is violated (Grimshaw, p.c.). For the time
 Here, we have two DPs and one case-assigner: how is the case-filter satisfied?







 subsections. relation of (17) supported by one or more of the derivations examined in the next
 In particular, the following constraint hierarchy emerges as the underlying grammar CASEGOV with the other constraints of UG.

All these structures will be shown to be fully predicted from the interaction of alternation in gerundives and infinitivals. aux-to-comp linear order in conditional subjunctives, and (v) the lack of such aux-to-comp movement, (iv) the alternation between overt complementizers and order in conditional subjunctives, which will be shown not to involve actual (ii) aux-to-comp structures in gerundives and infinitival constructions, (iii) aux-to-comp particular, I will derive: (i) the specIP position of subjects in declaratives,
 5.3. Nominative Case in Italian Clauses

Violated when a head hosting finite tense hosts agreement features - T/-AGR: A head hosting non finite tense cannot host agreement features. constraint of UG. Parameters analysis is assumed to be a lexical specification is thus here formalized as a agreement show no agreement in infinitivals and gerundives. What in Principles and gerundives. This constraint captures the well known fact that many languages with occurrence of agreement on a head hosting non-finite tense, as in infinitivals and
 ${ }_{6 L I}$













## 

inclusion is therefore uninformative. such cases in fact, a constraint makes no distinction among the given candidates, and its constraints from a tableau whenever they are satisfied by all candidates being listed. In


introduced where relevant, always listed under a letter different from (a)-(d). when its analysis diverges from that of candidate (b). Other specific candidates will be trace in specVP, as explained in section 5.3 .2 below. I will examine this candidate only position, is casewise equivalent to candidate (b), with nominative case assigned to the auxiliary moved to $\mathrm{C}^{\circ}$. Candidate (d), with the subject in the rightward VP-adjoined A'subject in specIP, (b) has the subject in specVP, (c) has the subject in specIP and the
 affecting the overall outcome of any tableau. would only add an additional violation of $\mathbf{S}_{\text {TAY }}$ to all competing candidates, not $\stackrel{\rightharpoonup}{\circ}$
but not in (b)


outranks $\mathbf{S}$ TAY, else (b) and not (c) would be the optimal structure. would surface as optimal. Similarly, the suboptimal status of (c) shows that SUBJECT constraints. The optimal status of (c) vs. (a) shows that CASEGOV outranks STAY, else (a) violate all AGR, the selection of the optimal candidate is passed on to the lower agreementless counterparts of the structures just examined in T1. Since these structures the optimal candidate to the agreementless structures in (a) through (c), which are the
 by the comparison between (e) and (a) which tie on all other constraints, makes now violated by any structure with agreement. Its higher rank relative to AGR, shown

 case (this is here simply assumed, but is later derived in section 5.5).











respect to the given input and constraint hierarchy of evaluation. grammatical structure is always the one that makes the overall structure optimal with
 agreement in the case of declaratives. No such addition is necessary in the O.T,

 lower ranked than CASEGOV, as in the analysis of Standard Arabic in section 5.4. accord with CASEGOV when agreement is absent because T is non finite, or when AGR is


 Universal $33(1966,94)$ stating that "when number agreement between the noun and the how this alternation is just one case of a more general behavior described by Greenberg alternation between declaratives and gerundives examined here, and further observes
 domain of the case checking head, hence under c-command, except when they are minimalist theory of case where case features must be checked within the internal agreement, has been independently pursued by Longobardi (1996), who develops a
 structures with non finite tense.






 and their omission from the preceeding tableaus is thus unproblematic. two constraints are vacuosly satisfied by the candidates of all the analyses seen so far, non-overt heads, and OP-SPEC, requiring operators to occur in specifier position. These analysis of English inversion, which include О ${ }^{\text {BHD }}$ (Obligatory Heads), violated by




Mark said anything before they silenced him.
(20) *Marco ha detto alcunché prima che lo azzittissero.

## Had Mark said anything,, (they) would have silenced him. <br> (19) [Op avesse Marco detto alcunché],, I'avrebbero azzittito.

 ungrammatical the operator, while in the declarative in (20) the NPI is unlicensed and therefore alcunché 'anything' in object position. In the conditional in (19), the NPI is licensed by That this is the case is proven by the licensing of a negative polarity item (NPI) like from indicative declaratives by the presence of an operator in their highest specifier. number and person, much like declaratives. However, conditionals are distinguished not extend to those structures whose tense is finite and which present agreement in examined by Rizzi (1982). The OT analysis given for gerundives and infinitivals does without addressing the analysis of aux-to-comp in conditional subjunctive clauses,әұәјduoə әq ұои р 5.3.1.1. Aux-to-comp in Subjunctives
needed distinction, and confirms Rizzi's original aux-to-comp analysis subjunctives could have different causes. The proposal presented here achieves the principle be case-assigned in specVP. The parallel word order of aux-to-comp and
 of the complementizer-auxiliary alternation in conditional subjunctives. But gerundives movement is not sufficient to settle the issue, because it is entirely based on the analysis










Candidate (b) is thus optimal (c) and (d) are suboptimal relative to (b), because they violate STAY, which (b) satisfies. the optimal candidate, since all other candidates fail $\mathbf{A G R}{ }^{4}$. Of the remaining candidates, This violation is fatal to (a), showing that OBHD outranks AGR, otherwise (a) would be Candidate (a) is suboptimal because the head of the CP is left empty, violating OBHD operator. These constraints are therefore omitted from the tableau.


 ゅ8


Conditional subjunctives allow for the complementizer alternation illustrated in (21)
below and just analyzed in tableaus T3, T4 and T5 above. follows from the analysis presented here. But first let me summarize the relevant facts. not show an alternation between aux-to-comp and an overt complementizer. This, too,
 5.3.1.2. Lack of Complementizers in Gerundives

because it is always vacuously satisfied). identical to that they had in the previous case. The constraint $-\mathrm{T} /-\mathrm{AGR}$ is also omitted (The tableau does not contain PARSE, and O p-SPEC, whose role in the analysis is selects structure (a) as optimal, because AGR is violated by (b), (c) and (d) but not by (a). longer violated. The ranking AGR>>CASEGOV, motivated in the previous section, now Consider tableau T5 below. The complementizer is now overt, therefore $\mathbf{O B H D}$ is no Grimshaw in her work $(1993,1995)$. the kind of semantically empty complementizer freely generated by GEN discussed by since if is associated with a specific lexical conceptual structure, and therefore cannot be
 proposal accounted for? We only need to assume that the complementizer if is part of
 The optimal candidate (b) has no aux-to-comp. How are then the alternations $\stackrel{\widetilde{\aleph}}{\leftrightarrow}$




(GL neəqең әəs)

(七L pue $\mathcal{E L}$ sneәтqеł әәs)

structures of two distinct inputs, as we saw in the previous section. subjunctive conditionals in (30a) and (30b), repeated below, are therefore the optimal conditional subjunctive has its own semantic import, and is thus part of the input. The
 between conditional subjunctives and gerundives and infinitivals with overt subjects
 I believe I spoke enough әлә!!әа I
ояиәч! $*$
$\stackrel{*}{0}$
$\stackrel{0}{0}$
0 овиә!!․
$\qquad$ di Luca aver parlato abbas
 complementizer can introduce subjectless infinitival complements, as shown in (24). of the position of the subject, as shown in (23a) and (23b), although the same


(22) Ritengo [aver Luca parlato abbastanza].
to-comp structures, as in (22). complements with overt subjects, but these can only occur in complementizerless auxposition of the subject. For instance, a verb like ritenere (believe), may take infinitival an overt subject may be introduced by an overt complementizer, independently of the


ঞু

 The suboptimal status of (b) tells us that ALIGNFOCUS also outranks STAY, otherwise constraints (c) performs like or worse than (d).

 already know that the availability of structural focus in Italian is due to the higher rank subject chain, and therefore it is directly assigned to the subject trace in specVP. We candidate (d) below. Nominative case is assigned to the highest A-position of the
 Finally, let us look at subject inversion. As we know from preceding chapters, when
 independent analysis Grimshaw's analysis and are themselves strengthened in return by Grimshaw's auxiliary inversion in conditionals. They thus constitute independent evidence for optional that in extraction-contexts and for the alternation between complementizer and



derived. of a complementizer alternation for gerundives and infinitivals with subjects is thus constraints CASEGOV, failed by (a) and (a'), and SUBJECT, failed by (b) and (b'). The lack comp structure, because though it violates STAY the most, it satisfies the higher ranked (c), since $\mathrm{C}^{\circ}$ is already occupied by the auxiliary. The optimal candidate is the aux-toL8L



 examined in this section. available some additional candidates which have not been yet considered. They are A'-position, the case-assignee is the trace left behind. However, transitives make verbs, where the verb assigns accusative case to the object. If the object is raised to an


element, nor to structure specific case-assignment devices. structures receives a principled explanation with no recourse to a dummy proexpl
 in this respect: once the constraint on focus is allowed to interact with the constraint single component of the grammar is greatly simplified. Subject inversion is exemplary
 in declaratives, aux-to-comp and inversion structures has been met. This result shows



AGR. that the remaining constraints CASEGOV and STAY, violated by (a), are ranked below were AGR to outrank ALIGNFOCUS, (d) would lose to (a), given that we already know
 precisely the higher ranking of ALIGNFOCUS over Stay.
 881
 postverbal focused subjects, shown in (d) below. Here the competing candidate (e)


sufficient to make (f) suboptimal independently of the ranking of the ECP constraint. addition to the violations of $\mathbf{A G R}$ and $\mathbf{S}$ TAY, which (f) shares with (c), and therefore is head, and thus violate the ECP constraint introduced in chapter 3. This violation is in participle on top of the object, as in (f), since this movement would move through the $I^{\circ}$ suboptimal. Nor can the violation of CASEGOV be eliminated by raising the past






 with the nominative subject in specVP, under a non spec-head configuration. Therefore,


 already seen in chapter 2. optimal status follows from the higher ranking of DROPTOPIC relative to SUBJECT, as null subject candidate is thus equivalent to candidates with overt preverbal subjects. Its CASEGOV, because the theta role is not properly governed by the auxiliary in $I^{\circ}$. The
 extended projection until it reaches the IP node. As explained in section 4.4.2, the associated with the referential role of the input's thematic subject percolates in the an input with finite tense and a topic-referring subject. The unassigned theta role compare the null subject candidate in (b) with the one having an overt subject in (a) for case-assigner depends on its final position in the extended projection. For example, free to percolate to the IP node and the case coindexation that it establishes with the referential role, and must be assigned case to satisfy the case filter. The thematic role is role associated with the unparsed nominal argument in input is also associated with its casewise is parallel to their agreement analysis, provided in section 4.4.2. The thematic


previously examined, with no change in the suboptimal status of candidate (e).



CASEGOV vs. SUBJECT thus accounts for the suboptimal status of (e) longer gets case under proper government, failing CASEGOV. The higher rank of 06I
dos
The final ranking emerging from the analyses in this and the previous chapter
identifying (a portion of) the grammar of Italian follows below: particular input at issue. depending on the ranking of specific constraints relative to each other, as well as the of the overall harmony of the clause relative to the constraint-hierarchy of the language,
 give rise to. contentful and contentless complementizers in English and for the alternations they

 complementizer/inversion alternation in conditionals, and to the lack of a similar constructions. The analysis was then extended to subject inversion structures, to the was possible to derive case-assignment alternations in declaratives, and aux-to-comp agreement in infinitivals. With these notions and by exploiting constraint interaction, it local proper government, spec-head agreement in finite tense contexts and lack of analysis appeals to very simple and known constraints, such as case-assignment under configurations displayed by Italian, thus addressing one of the goals of this chapter. The



The girls hit the boys. The-girls-Nom hit-pst-3fp/3fs the-boys-Acc. łе-*/вu-qеге $\quad \mathrm{n}$-ұееиед-7

 eu-*/łe-qe.red $\begin{array}{ll}\text { ?al-banaat-u } & \text { Zayd-an. } \\ \text { the-girls-Nom } & \text { Zayd-Acc. }\end{array}$
(28a) SpecVP subjects: Darab-at/*-na ?al-banaat-u Zayd-an. Agreement is in person, gender and number with preverbal-subjects and only in person
and gender with postverbal-subjects, as shown in (28). In matrix clauses, the subject is always nominative, independently of its position. (1993) study of Arabic Syntax, and Khalaily's (1993) analysis of Standard Arabic the clause. The basic generalizations are illustrated below, as described in Fassi Fehri's location of the subject relative to the verb, and on the matrix vs. complement status of
 CASEGOV and FUll-Int. assignment follows from the reranking of AGR and STAY and from their interaction with This section shows how the Arabic basic pattern of nominative and accusative Under Optimality Theory, crosslinguistic typology arises from constraint-reranking. 5.4. Case Assignment in Arabic Declaratives





 already know from the analysis in T12 that FULL-INT outranks SUBJECT, and therefore

The comparison of (c) with (a) shows that CASEGOV outranks FULL-INT. In fact, we therefore need not be coindexed with the subject). case-catchers ${ }^{5}$ (the expletive is assigned its own case from the complementizer and






とĐV<< [ $\angle V L S$ Io $\Lambda O$ OASVO]

FULL-INT, else (c) would override (a) and be selected as optimal.
Finally, the suboptimal status of (c) shows that SUBJECT is also ranked lower than would be optimal.






 because $\mathrm{V}^{\circ}$ is in $\mathrm{I}^{\mathrm{o}}$ position, too high to satisfy CASEGOV . In the following discussion I assignment by $\mathrm{V}^{\circ}$ in $\mathrm{I}^{\circ}$ to the object, which never occurs under proper government of Italian). All candidates violate CASEGOV at least once, due to accusative case-

 Candidate (c) realizes specIP through the expletive element $h u$. Finally, candidate (e) does not realize the specIP position. Candidate (b) raises the subject into specIP. Consider the candidates in T12 below. Candidate (a) has the subject in specVP and Subject. higher ranking that Standard Arabic assigns to CASEGOV and STAY relative to AGR and


specIP but precedes a subject in specVP position. (1993), I also assume that the verb moves into $I^{\circ}$, where it linearly follows a subject in nominative case is assigned by $\mathrm{T}^{\mathrm{o}}$, and accusative case by $\mathrm{V}^{\mathrm{o}}$. In accord with Fassi Fehri satisfied by all candidates, which have all finite tense. As before, I will assume that
 case-assigning complementizers. CASEGOV over FULL-INT. The same inference cannot be made in Italian because it lacks complementizer ? anna. They will be shown to follow from the higher rank taken by Standard Arabic in subordinate clauses introduced by the case assigning lack expletive subjects in matrix declaratives. However, expletive subjects do arise in CASEGOV. Both Italian and Standard Arabic rank it higher than SUBJECT, and therefore Moreover, Standard Arabic casts light on the rank of FULL-INT with respect to reranked lower than CASEGOV and STAY. that the specVP position of canonical subjects arises when AGR and S UBJECT are





accusative case. As expected, no expletive occurs, confirming the analysis just given





(30) $\mathrm{C}^{\circ} \mathrm{S}_{\mathrm{acc}}\left[\mathrm{V}_{\mathrm{I}} \mathrm{I}^{\circ}\right]_{i}\left[\begin{array}{ll}\mathrm{vp} h u t_{\mathrm{i}} & \left.\mathrm{O}_{\mathrm{acc}}\right] \text {. }\end{array}\right.$

 violates both CASEGOV and Stay. constraints CASEGOV and STAY also explains the suboptimal status of (b), which The same ranking, together with the lower rank of AGR relative to one or both of the suboptimal status of (e), leaving undetermined the rank of STAY relative to FULL-Int. The higher rank of CASEGOV relative to FULL-INT is also sufficient to derive the anticipated lower rank of SUBJECT relative to both CASEGOV and STAY. outranks SUBJECT, CASEGOV MUST outrank SUBJECT as well, confirming the previously FUll-Int, which is violated by (c) but satisfied by (a). Moreover, since FUll-Int closestcase-assigner). The suboptimal status of (a) then shows that CASEGOV outranks unproblematic: the morphologically realized case is the one assigned from the $\stackrel{\zeta}{6}$

е-цее! емпн (zع)


original form and translation from Fassi Fehri, 1993): relation to the unmarked postverbal subjects (all examples below are provided in their











 of SUBJECT relative to FULL-INT explains the suboptimal status of (c).



 been shown to be lower ranked than one or both of the constraints CASEGOV and STAY). well. (The status of SUBJECT and AGR is irrelevant in the comparison, since they have same ranking is sufficient to explain the suboptimal status of candidates (c) and (e) as else candidate (a) would be optimal, since it violates CASEGOV and STAY only once. The subject and the verb move. It follows that ALIGN-F outranks both CASEGOV and STAY, assigned under proper government. Moreover, it violates STAY twice, because both the but violates CASEGOV twice, because both the subject and the object are not case candidate (b) in T15 below, the only one with the subject in specIP, satisfies Align-F
 alternation. distinct discourse functions in order to account for the preverbal/postverbal subject minimalist approach, where strong vs. weak features would have to be associated to Lodovici (1995a,b). Notice that similar assumptions would be needed also within a focused postverbal subjects developed in chapter 3 and in Grimshaw and Samekanalysis of the preverbal/postverbal asymmetry is in line with the analysis of Italian specIP position, where $f$ stand for a marker for specificity or contrastive focus. This
 Cow-nom spoke-3sf.
A cow has spoken.
(33) Baqarat-un takallam-at.
specific cow (Fassi Fehri (1993), ex31 p28): pure non-specific indefinites. Thus, the following preverbal subject must refer to a (ii) Specific Interpretation. Unlike postverbal subjects, preverbal subjects cannot be L6I



 teresting aspects.


## 


(34) Standard Arabic



(b), plus ALIGN-F and AGR harmonically bound by the optimal (b), since it violates the same constraints violated by

 Candidates (c) fares better than (b) relative to CASEGov and STAY, but these constraints


 the source of abstract case follow from the grammar of each language. ${ }^{6}$ the same underlying input, and that the differences with respect to agreement and to infinitival structures from Italian, Portuguese and English are distinct optimal forms of clauses with overt subjects. In particular, the analysis will show how the following three the same constraints also determines crosslinguistic variation in the syntax of infinitival
 structures in Italian and Standard Arabic follow from the reranking of UG constraints.
 5.5. Infinitival Clauses with Overt Subjects Crosslinguistically use expletives in different syntactic contexts. language. Predictably, languages where FULL-INT is dominated by different constraints crosslinguistic distribution of expletives is thus governed by the grammar of each higher than FULL-INT, and more harmonic structures are not available. The whenever a constraint that can be satisfied through an expletive element is ranked an optimality framework. Like epenthesis in phonology, expletives are possible (see tableau T12). This difference in the grammatical role of expletives is expected under Arabic, as shows the suboptimal status of the expletive candidate (c) in matrix clauses position on pressure of SUBJECT. In fact, this latter kind of expletive is ungrammatical in assignment requirements rather than by the need to structurally realize the subject The analysis also provides us with a case where expletives are motivated by casecase STAY were eventually shown to be lower ranked than AGR Standard Arabic and, possibly, also the specVP position of Standard Arabic subjects, in CASEGOV determines the specIP expletive of complements introduced by ?anna in

 the derivations made so far, since in structures with finite tense the optional additional case features






(36) $<\mathrm{V}(\mathrm{x}), \mathrm{x}=\mathrm{N},--, \mathrm{T}=$ compound non finite $>$
(37a) $D P_{k} \quad$ Aux $_{\text {case }}\left[\mathrm{t}_{\mathrm{k}}\right.$ PastParticiple ]. associated to the preposition P in $\mathrm{C}^{\circ}$, which thus functions as case assigner. ${ }^{7}$ providing the auxiliary with case-assignment power. In (37b), the case feature is


 finite tense operator $T$ of the infinitival, but it can also be associated to other elements. nominative case feature is actually provided by GEN. This can be associated to the non determined by grammar, and thus as a result of competition. Let us assume that the assign nominative case. Here, I would like to analyze this case-assignment capability as the analysis of Italian I assumed that non finite T of gerundives and infinitivals could The input shared by the above infinitival structures specifies that $T$ is non finite. In
A
O
N్ర

we will find reversed in Portuguese grammar，where（g）is the optimal candidate．

 suboptimal because they violate－T／－AGR，which（c）satisfies．In fact，T／－AGR is ranked CASEGOV and SUBJECT vs．STAY．The agreementfull counterparts of（a）－（c）in（f）－（h）are structure in（c）has been examined in section 5．3，and follows from the higher rank of


the specIP subject from a preposition in $\mathrm{C}^{\circ}$ preverbal subject．And the grammar of English should select（38e），with case assigned to
 structures lacking agreement，as already partially shown in section 5．3．The grammar of
 each specific language，where each grammar is a reranking of the same UG constraints．


\％


动艮 $=$艮齐 突
$=$ ${ }^{\text {ase }}{ }^{\text {ase }} \mathrm{xn}_{\mathrm{xn}} \mathrm{xn}$


Pas
 ［ ग गृ！ ${ }_{7 \mathrm{Se}_{\mathrm{C}}}$ $\mathrm{J}^{\mathrm{SE}}{ }_{\mathrm{d}}$ $\mathrm{d}^{7 \mathrm{Se}_{\mathrm{d}}}$


transitivity FULL－INT could only outrank STAY．






 andidate selected by English． reranking of these two constraints will be responsible for deriving（e）as the optimal than STAY，else（e）would beat（c），which violates STAY one less time．Precisely the

 FULL－INT．While the suboptimal status of（d），（i）and（j）could be due to their other intrinsic lexical conceptual structure of the preposition is not interpreted，violating
 position，much like do does in Grimshaw＇s（1995）analysis of English do－support（see
 The remaining suboptimal candidates（d），（e），（i）and（j）all involve a preposition in





SUBJECT. also accounts for the suboptimal status of (d), which violates both C ASEGOV and STAY, or else candidates (c) and (b) would win over the optimal (e). The same ranking
 Lodovici 1995). of overt subject expletivs in English in chapter 2 (see also Grimshaw and Samek-
 grounds the lower rank of FULL-INT with respect to SUBJECT, else (a) would be more
 agreementfull ( j ) would be the optimal candidate, rather than the agreementless (e).


 Italian.

 syntax of tensed declaratives. In fact, when $T$ is tensed, $-\mathrm{T} /-\mathrm{AGR}$ is vacuosly satisfied by
 t0

 CASEGOV is lower ranked than the violations of FULL-INT by (j). and STAY. Hence, (g)'s optimal status can be maintained only if its violation of CASEGOV. It is in fact violated by ( j ), which shares with ( g ) the violations of -T/-AGR suboptimal status of (d), (e) and (i). In any event, FULL-INT must be ranked higher than

 same position of the precedent tableau to facilitate comparison, is not sufficient to tell us

 AGR. host an agreement coindexation, but not under a spec-head configuration, thus violating $-T /-A G R$ is also responsible for the suboptimal status of candidates (f) and (h), which -T/-AGR, which is the highest constraint violated by (g). The higher rank of AGR vs. candidates lacking agreement features in (a)-(e), because AGR is a higher constraint than





 £0Z
applying to the chain (clitic, DP) rather then to the chain (pro expl, DP).


 follows from the chain-relation established between the expletive and the lower DP. In Safir (1985), I ${ }^{\circ}$





 into question the existence of proexpl. proexpl-chain and bind an anaphor in its scope. This prediction is not borne out, calling




## 

these results extend to there-insertion structures is addressed at the end of the section. to the OT analysis of subject inversion proposed in this dissertation. The issue of how







## 

ha parlato Gianni $_{\mathrm{i}}$.
has spoken John.
(39) pro expli, ha parlato Gianni $\mathrm{i}_{\text {. }}$.
specIP and then transmits it to the lower subject through the chain, as in (39) below.

 902







 the previous chapters, as well as in Grimshaw (1993, 1995), and in Grimshaw and
 Italian, Portuguese and English with respect to infinitivals with overt nominal subjects,


 status of ECM constructions. the structure of English infinitivals with overt subjects, while still deriving the optimal


satisfies, and thus (e) ends up harmonically bound by (k) assignment by the ECM-verb, (e) would in any case violate FULL-INT, which (k)
 of the previously examined candidates. In fact, even if case-assignment by an ECM verb




 soz
 pro $_{\text {expl }}$ does not exist, the ungrammaticality of (40) follows straightforwardly from the

 particular, stipulating that $p r 0_{\text {expl }}$ cannot bind an overt anaphor makes it a mystery how
 severely ungrammatical sentence (40) above. As we saw, any attempt to refine the pro $_{\text {expl }}$-analysis, which fails on its own premises by predicting as grammatical the

$(44$ c) *sembrava [non guadagnare abbastanza nessuno] a se stesso. (44b) *sembrava a se stesso [non guadagnare abbastanza nessuno].
 grammatical sentence, as (44a)-(44c) show. Moreover, any alternative placement of the anaphor in (40) fails to produce a the grammaticality of (41), where the anaphor occurs in the same structural location. caused by a syntactically odd location of the anaphor. This is already implausible, given

$\phi$-features for the purpose of agreement.
$\phi$-features and non-referential on one hand, while capable of encoding transmitted

pafon anvy of wazs sıafon maf 'วu! s!ly This time, [Questa volta] [ pro $_{i, \operatorname{expl}}$ sembrano $\left[\mathrm{t}_{\mathrm{i}} \text { non aver votato [molti elettori] }\right]_{i}$ ]].
'بฺоңәә ! !
subordinate clause).
by the possibility of being interpreted within the scope of the neg-marker of the


 N
 respect to agreement. As Burzio (1986) and Chomsky (1982) note, the $\phi$-features of the


 There are two strong reasons to doubt of the adequacy of this analysis. To begin with, thus deriving the ungrammaticality of (40). the lower DP, with the c-commanding domain of the lower DP as its binding scope, referentiality, as proposed by Burzio (1986). The pro expl-chain would then be headed by binding, due to an intrinsic impossibility of bearing $\phi$-features and, therefore,

Nobody seemed to earn enough.
 (42) Sembrava [ non guadagnare abbastanza nessuno].
is indeed related to failure of anaphoric binding on the part of the hypothetical pro expl . grammatical structure, as shown in (42) below. This confirms that the problem with (40)
Notice that once the anaphor is omitted from sentence (40), we get a perfectly
 Nobody seemed to himself to-earn
(41) Nessuno sembrava a se stesso guadagnare abbastanza 1991)). not neg-concord with a neg-marker in $I^{\circ}$ when occurring in specIP position (Zanuttini, necessary to keep the interpretation invariant, since Italian negative polarity items do
 In contrast, when the subject is itself in the matrix subject position it is able to bind
ysnouว uıvə of fjasu!̣ of pauәวs fpoqo
[IP pro $_{i, \operatorname{expl}}$ sembrava [a se-stesso ${ }_{i}$ ] [ IP ${ }_{i}$ non guadagnare abbastanza nessuno ${ }_{i}$ ]. (40) *Sembrava a se stesso non guadagnare abbastanza nessuno.
Ғృəsuịч of pəuəəs

 the very existence of pro expl by noticing its incapability of participating in V2 structures.


inverted subjects. lacks a pro expl element, no comparable violation of condition C arises in connection with
 all these characterizations of the pro $_{\text {expl }}$-analysis don't rescue it from the problems qualification of Binding Theory which would otherwise be unnecessary. Furthermore,

The central problem of all these analyses is that the pro $_{\text {expl }}$-analysis leads to a bindee. argumental binders (e.g. proexpl) must occur within the governing category of the
 such, as seen in the previous section. Burzio also provides conditions on caseBinding Theory holds true only for argumental binders, and expletives do not qualify as correspondent case-transmitting clitic. Finally, Burzio (1986:chap2.3) assumes that definites are allowed to be contra-indexed and therefore not bound by the (1985) assumes that indefinites escape condition C at S-structure, while VP-adjoined neutral superscripting (Chomsky 1982:chap5, also Chomsky and Jaeggli 1981). Safir role by a binding-element does not violate condition C. Chomsky adopts bindingmajor proposals: Rizzi (1982) solves the problem by stating that any DP getting its theta-
 condition C of Binding Theory. This problem is solved in different ways by different between pro expl and the lower inverted subject, which if left unqualified would violate anaphoric-binder. A more well known binding problem is created by the coindexing

 to case in this chapter, in section 5.3.2. subjects with respect to agreement in section 4.2 and 4.4.1 in chapter 4, and with respect


precisely the case of (47).
 V2-movement into $\mathrm{C}^{\circ}$. Any V2-language ranking V2 higher than Full-INT would also

 goals of this work, but we could hypothesize the existence of a constraint V2 requiring



 compatible with an OT account. Under an OT perspective, (45) follows from the higher

Notice that while the data in (45)-(47) are problematic for the proexp-analysis, they are and that something that doesn't exist cannot be preposed.
 preposed [into specCP]". His conclusion, in line with the arguments presented in this

 It is snowing. It is-snowing.
(47) Фad snjoar.

It is snowing.
(46) proexpt ingry

Suب̣оия-s! tеч … ungrammatical, while overt expletives are grammatical, as in (47).
 0 oz










1993, or structure specific case-assignment in Rizzi 1982). Koopman \& Sportiche 1991, Chung \& McCloskey 1987, McCloskey 1991, and Fassi Fehri components of grammar rather than outside it (cf. parametric case-assignment in incorporate the theoretical devices responsible for linguistic variation inside specific reason that many analyses of the Principles and Parameters tradition have to interaction that is not available if grammatical requirements are inviolable. It is for this abstract principles of constraint interaction (Prince \& Smolensky 1993). This is a kind of interaction between grammatical components, which is governed by the general theory of abstract case-assignment, shifting the burden of linguistic variation to the

perspective on syntax at the core of this work. extended many of the general results of the previous chapters, all related to the OT

I leave this suggestion open to further research. an expletive, which besides violating FULL-INT also violates the constraint CASE-FILTER.



 ZLZ







(50) Two men seemed to each other to be in the garden (at the same time)
(49) *There seemed to each other to be two men in the garden (at the same time).
to that between (40) and (41) above. connection with pro expl -chains, as shown by the contrast between (49) and (50), parallel

With respect to binding, these chains suffer from the same problems just examined in
(48) There $_{i}$ seemed $t_{i}$ to be $[\text { three men }]_{i}$ in the garden.
connecting overt expletive and referential subjects, such as the one in (48) below.
A second result of the above discussion concerns the grammatical status of chains realization. discussion thus strengthened the hypothesis that null subjects have no structural unrealized, and case and agreement direct coindexed with the relevant subject. The pro $0_{\text {expl }}$ element is posited, with the position occupied by $p r o_{\text {expl }}$ analyzed as structurally contrast, the above discussion showed how all these problems disappear as soon as no traces and to mediate case and agreement with coindexed referential subjects. By имо sұ! pu!̣ of se .,ге! to be at once "intrinsically non-referential" as to not qualify as a binder for coindexed positing $p r o_{\text {expl }}$ is problematic in relation to binding theory, because pro $_{\text {expl }}$ would have and focused subjects developed in chapters 2 and 3 . The above discussion showed how




satisfying ОВНD, such as do (Grimshaw 1993, 1995). expletives satisfying SUBJECT, as English it (section 2.2.3), and verbal expletives infinitival constructions (section 5.5) and of in nominal phrases (Brisson 1994), nominal
 shown in section 5.5. Consequently, we find a variety of expletive elements. is particularly visible in English, where FULL-INT is ranked low in the hierarchy, as expletive elements is as varied as the constraints that may conflict with FULL-INT. This FULL-INT (Grimshaw 1993, 1995, Grimshaw and Samek-Lodovici 1995). The array of epenthetic element inserted only to satisfy a linguistic constraint ranked higher than These analyses confirm the extension of the notion of expletive to any uninterpreted appropriate configuration, as in the analysis of the preposition for in English infinitivals. ?anna-subordinates, or functioning as case-assigners to provide case under the absorb a discharged case under the appropriate configuration, as in Standard Arabic
 English, or under a spec-head relation by an agreeing $I^{\circ}$ as in Portuguese. government by a raised auxiliary, as in Italian, by an expletive preposition, as in whether overt subjects of infinitival constructions are assigned case under proper
 remain in specVP and follow the verb or raise into specIP and precede it. At the same


 constructions with overt subjects found in Italian, Portuguese and English. subordinate clauses introduced by ?anna, as well as the distinct paradigms of infinitival ยเ乙



6.1. Null Subjecthood and Subject Inversion
Bakovic (1995), Ferguson (1995), Kurafuji (1995) Raymond (1995), Sells, Rickford and Wasow (1995), Müller (1995), Babko-Malaya (1995), (1995a,b), Speas (1994), Brisson (1994), Legendre, Wilson, Smolensky, Homer \& Raymond \& Smolensky (1993), Grimshaw (1993, 1995), Grimshaw \& Samek-Lodovici built on the insights offered by pioneering works in this area, such as Legendre, This work also developed a more detailed and complete optimality theoretic syntax, frameworks. a limited comparison between OT and the Principles and Parameters and Minimalist inventories. These issues are discussed in the following sections, which will also include variation within and across languages, on language universals, and on lexical based prodrop parameter. Moreover, it provided a new perspective on syntactic account of null subjecthood and subject inversion, eliminating the need for a lexically assignment encoded in the universal constraint CASEGOV. It also brought forth a new In line with the above hypothesis, the analysis also led to a unified theory of caseassociated with agreement. assignment configurations, in finite and non finite clauses, and associated or not
 for and related together a variety of syntactic paradigms both language-internally and subject, (iii) canonical subjects, and (iv) expletives. In particular, the analysis accounted the language-internal and crosslinguistic distribution of (i) null subjects, (ii) focused between a small set of universal constraints was shown to determine major aspects of
 analysis of specific syntactic modules. syntax would add to the deductive structure of linguistic explanations and simplify the from the interaction of violable conflicting constraints through an OT approach to


## 6. Discussion

 subject inversion is explained through the prodrop parameter. Since no version of this

 availability of null subjects). crosslinguistic distribution (e.g. the contrast between Italian and English on the


 optimal in each given case. The analysis thus accounts for the proper distribution of

 Lodovici 1995a,b). PARSE. The details of the analysis are in chapter 2 and 3 (see also Grimshaw and SamekDrop Topic and AlignFocus with the independently needed constraints SUBJECT and analyzed as dictated by grammar, depending on the interaction between the constraints
 optional and the related notion of free inversion are misleading generalizations. their overt preverbal counterparts, and therefore that the notion of null subjects as
 (1993), Levin and Rappaport (1995).


 '千66I '\&66I) ! for example Antinucci and Cinque (1977), Calabrese (1982, 1985, 1990), Bonet (1990), constituents in specific syntactic positions to a focused interpretation. For Romance, see
 be cases of structural focus, following from a general syntactic requirement on Similarly, a substantial class of instances of subject inversion in Italian were shown to dependence holds crosslinguistically.




higher rank of AGR vs. CASEGOV, as shown in the derivation below. The analogous derivation for Italian
is discussed in section 5.3.3. 1 The suboptimal status of objects as fillers of the subject position in transitive verbs follows from the

However, X and Y need not be related with each other, and therefore the prediction

 Unlike OT constraints, parameter values are inherently non universal, since by Parameters model, where crosslinguistic variation is modeled by using parameters. crosslinguistic and language-internal dimensions, is not available in the Principles and The typological prediction just examined relating together linguistic variation on the from the higher constraint -T/-AGR, giving CASEGOV a chance to be satisfied in gerundives and infinitivals with overt subjects, where AGR is violated on pressure Italian we find cases where the subject is c-commanded by its case-assigner. This occurs highest, as in Italian, the subject c-commands the case-assigner. However, even in in Standard Arabic, the subject is c-commanded by its case-assigner, but when AGR is
 determines crosslinguistic variation in the position of the nominative case-assigner with
 and rightward focusing is attested. of higher constraints, the satisfaction of the lower constraint $\mathbf{A F}_{\text {right }}$ becomes possible same alternation occurs within Kanakuru itself: whenever $\mathbf{A F}_{\text {left }}$ is violated on pressure such as Kanakuru and other Chadic languages. However, as section 3.3 showed, the rightward structural focus, such as Italian, to languages with leftward structural focus, adjunction edges, determines the crosslinguistic alternation opposing languages with
 and objects. English on focused subjects can thus be observed within English itself between subjects fillers of the subject position. ${ }^{1}$ The same alternation observed between Italian and



 examined in section 2.2.4. In fact, null subjects are possible only if FULL-INT is ranked



 always implies spec-head agreement. accounting for the implication examined in chapter 4 that agreement under c-command under c-command is possible while spec-head agreement is not possible, thus constraints, whose possible rankings excluded the case of a language where agreement possible rankings of a set of constraints. This was the case with the agreement Language universals may also arise from the language partition determined by the focused subjects in Italian. unrealized, as with Italian topic-referring subjects, or forced into specific positions, as contrast, non canonical subjects can occur in the above positions, but can also be left depending on the ranking of SUbject and AGR relative to CASEGOV or STAY. In

 of constraints, which in turn reduces the degree of syntactic variation determined as DROPTOPIC and AlignFocus. Therefore, their syntax is determined by a smaller set



 universals in all areas where UG constraints do not conflict. through constraint-reranking, on the other hand OT is geared to predict linguistic

If on one hand language variation is decomposed in its universal components
6.3. Language Universals

Principles and Parameters approach.



 in the Minimalism framework. and constraint hierarchy, at the core of the OT framework, play an important role also the two formalisms. In particular, I will show how the notions of constraint violability
 goes beyond the goals of this work. The more limited goal of this section is to facilitate

6.4. Constraint Violability and Ranking in Minimalism agreement constraints. availability on syntactic structures governed by grammar through the interaction of the agreement in chapter 4, with agreement features freely supplied by GEN, but with their
 Nevertheless, the pronominal inventory supplying the expletive elements is actually select distinct optimal structures, some with and some without expletive elements. impression that languages differ in their expletive inventories occurs because grammars grammar (chapter 2 and 3; see also Grimshaw and Samek-Lodovici 1995b). The elements in Italian, English and Standard Arabic were all shown to be determined by


Another example involves the distribution of expletives. Along the lines of languages. availability of a [+pronominal] inflectional head $\mathrm{I}^{\circ}$ specific only to null subject between Drop Topic and the other constraints of UG, and thus need not assume the direction. For example, the availability of null subjects is derived from the interaction






A final but important kind of universal following from the OT analysis concerns the


 reranking. In OT, constraint reranking determines crosslinguistic variation. In



 the constraint ranking solution. On the contrary, the constraint ranking solution would particular case. There does not appear to be independent evidence for preferring it over kind. The second concerns the motivation underlying the serial ordering solution in this

 two open issues related to the serial ordering solution. The first is whether this solution
 they use serial ordering through syntactic levels to get the same result that would be of economy of representation at a syntactic level prior to that of Last Resort. In other words,
 conceivable even within Minimalism. violability of the economy principles of Minimalism that makes constraint ranking be violated in order to satisfy some higher ordered one. In other words, it is the intrinsic
 because both principles already incorporate in their definition the notion that a syntactic
 $\kappa_{\lceil }$dde pue pəsuеч principles with respect to each other would solve the problem. In fact, this would seem
 structurally complex constituents satisfy Last Resort through minimal movement, but
 in tension with Last Resort. In fact, structurally minimal constituents satisfy economy of Starke, 1994. See also section 2.3.2). As these authors notice, economy of representation is with Cardinaletti and Starke's economy of representation principle (Cardinaletti and
 constraint ranking becomes more evident when economy principles conflict with each

-Suvs oym 11!g hipo svo +I
 -Кем диеләрал Кие и! not considered in the semantic derivation. Its inclusion would not affect the derivation structure in (3). The main simplification concerns the subject VP-internal trace, which is
 discussion of the system and its formalization).

 node. The variable C in (1) is assigned to the focus denotation of the sister VP node. In and true, where $p$ is eventually the proposition truth-conditionally denoted by the VP is equal to $p$. In other words, no proposition other than $p$ can be under consideration and is a member of the focus denotation of the scope of only, it is true that proposition q


(1) $\lambda \mathrm{p}[\forall \mathrm{q}((\mathrm{q} \& \mathrm{C}(\mathrm{q}))=>\mathrm{q}=\mathrm{p})]-$ type: $\langle\mathrm{t}, \mathrm{t}>$
conditional meaning of sentential only shown below (see Rooth 1985). intension is built-in in the denotation of all logic constants. It also assumes the truth-


v x!puaddv
semantic derivation of the interpretation of (2). Notice that contrastive focus of the subject in focus position is essential for a formal the singing of y , then q is the proposition sing'(bill), i.e. the proposition that Bill sang. For any proposition q , if q is true and, for some individual y in the context q asserts





- Fiorentino, Trentino (Brandi and Cordin 1989).
 cl.3s arrive-FUT-3s three men.3pl.
(2) Il arriverá tres hommes.
The following example shows loss of number agreement with inverted subjects. - чогдя •

agreement causes ungrammaticality. preverbal as well as postverbal subjects. Sentence (1c) shows further that lack of number The examples in (1a) and (1b) show that plural morphology is grammatical with agreement, I rely on Fassi Fehri's analysis of Moroccan Arabic as a language with
unrestricted agreement. independent of the subject position in Moroccan Arabic. For person and gender

 detailed descriptions in sections 4.1 For the agreement patterns of Italian, Standard Arabic and Conegliano, see the

ज
Loss of gender agreement has already been illustrated in section 4.1. The following
example shows loss of agreement in number.

(1989). absence of the overt locative clitic $g l i$ in inversion structures. See Brandi and Cordin

There arrived some girls.
cl. 3 Fpl are. 3 pl come. 3 Fpl some. 3 Fpl girls. 3 Fpl .
(4b) *Le son venute delle ragazze.
There arrived some girls.
There is.3s come. 3 Ms some. 3 Fpl girls. 3 Fpl .
(4a) Gl'é venuto delle ragazze.
while number and gender agreement is not possible, as shown in (4b). subject is plural and marked Feminine: only person agreement is maintained in (4a), The loss in number and gender agreement is particularly clear when the inverted Mary arrived. cl.3Fs is.3s come.3Fs The.3Fs Mary.3Fs.
 Mary arrived. There is.3s come.3Ms te.3Fs Mary.3Fs.

they have with sentential negation 1989:138, fn8). subjects is proposed by Brandi and Cordin on the basis of the scope interactions that adjoined position. Compare (3b) with (3c). (The VP-adjoined position of postverbal The agreement clitic is obligatorily missing when the subject is in postverbal VP-


(玉66L) n7 шощ иәует existential sentences, where they do not display agreement. The following examples are
Postverbal subjects in Chinese are restricted to a few unaccusative verbs and
- Chinese (Lu, 1994).
A turtledove is singing. He.Ms sings a turtledove.Fs.
(6d) Romagnol: E chenta una turtureina.

(6c) Ampezzan: $\begin{array}{llll}\text { Agnere } \quad \text { l } & \text { e sta } & \text { ra sagra } & \text { inz el nosc paes. } \\ \text { Yesterday he.Ms } & \text { is been the feast.Fs } & \text { in the our county }\end{array}$
The following examples from Haiman and Benincá (1992:193) show loss of gender
- Fassan, Genoese, Ampezzan, Romagnol (Haiman and Benincá 1992). $\begin{array}{cc}\text { sange } & \begin{array}{c}\text { xin laoshi. } \\ \text { new teacher. }\end{array} \\ \text { ASP three-CL } & \text { nhis school this semester }\end{array}$ -

(z66


 University, CA.
 Boston: Kluwer Parameter. In Osvaldo Jaeggli and Kenneth Safir (eds). The Null Subject Parameter. Brandi, Luciana and Patrizia Cordin. 1989. Two Italian Dialects and the Null Subject

Borer, Hagit. 1989. Anaphoric AGR. In Osvaldo Jaeggli and Kenneth Safir (eds). The
Null Subject Parameter. Boston: Kluwer. Borer, Hagit. 1983. Parametric Syntax. Dordrecht: Foris. Bonet, Eulalia. 1990. Subjects in Catalan. In MIT Working Papers in Linguistics. Agreement. LI 27:1-68. Bittner, Maria and Ken Hale. 1996. The Structural Determination of Case and Study. NLLT 13, V. 3:489-526. Belletti, Adriana and Ur Shlonsky. 1995. The Order of Verbal Complements: a Comparative Belletti, Adriana and Luigi Rizzi. 1981. The Syntax of $n e:$ Some Theoretical Implications.
The Linguistic Review 1.2. Belletti, Adriana. 1990. Generalized Verb Movement. Torino: Rosenberg \& Sellier Belletti, Adriana. 1988. The Case of Unaccusatives. LI 19:1-34.

Bakovic, Eric. 1995. A Markedness Subhierarchy in Syntax. Ms., Rutgers University,
New Brunswick, NJ. Baker, C. L. 1989. English Syntax. Cambridge: MIT Press. Baker, Mark C. 1988. Incorporation: A theory of grammatical function changing. Chicago:
University of Chicago Press. Babko-malaya, Olga. 1995. Case Competition. Ms., Rutgers University, New Brunswick,
NJ. I emarginazione. In Studi di Grammatica Italiana VI: 121-146. Antinucci, Francesco and Guglielmo Cinque. 1977. Sull'ordine delle parole in Italiano: Aboh, Enoch Oladé. 1995. Focalization in Gungbe. Talk at Venice University.

Abney, Steven. 1987. The English Noun Phrase and its Sentential Aspect. Doctoral
Dissertation, MIT. sәэиәәәәу

 Chomsky, Noam. 1995. Chapter Four. Ms., MIT. Chomsky, Noam. 1992. A Minimalist Program for Linguistic Theory. MIT Occasional
Papers in Linguistics. MIT. Chory, Nom. 1992. A Mine Mit Ocision Chomsky, Noam. 1991. Some Notes on Economy of derivation and Representation. In R.
Freidin, (ed). Principles and Parameters in Generative Grammar. Cambridge: MIT Press. Chomsky, Noam. 1986. Knowledge of Language. New York: Praeger. Chomsky, Noam. 1982. Some Concepts and Consequences of the Theory of Government and
Binding. LI-monograph. Cambridge: MIT Press. Chomsky, Noam. 1981. Lectures on Government and Binding. Dordrecht: Foris. Chomsky, Noam. 1980. On Binding. LI 11:1-46. Chomsky, Noam. 1979. Pisa Lectures. Transcript. Ms., MIT.

Chomsky, Noam. 1977. On Wh-movement. In P. Culicover et al. (eds). Formal Syntax 71-
132.
In D. Steinberg and L. Jacobovits, (ed). Semantics. London: Cambridge University
Press. Chomsky, Noam. 1971. Deep Structure, Surface Structure and Semantic Interpretation. Cons, Cardinaletti, Anna. 1994. Subject Positions. Ms., University of Venice. Italian. In Kuno Susumi, and Höskuldu Thrainsson (eds). Harvard Working Papers in
Linguistics, V. 1. Calabrese, Andrea. 1992. Some informal Remarks on Focus and Logical Structures in System. Ms., also in N. Fukui, T. Rapoport and E. Sagey (eds). 1986 MITWPL. Papers
in Theoretical Linguistics. V. 8 . Calabrese, Andrea. 1985. PRONOMINA - Some Properties of the Italian Pronominal
 Calabrese, Andrea. 1982. Alcune Ipotesi sulla struttura informazionale della frase in Burzio, Luigi. 1986. Italian Syntax. Boston: Reidel. Browning, Marguerite. 1987. Null Operator Constructions. Doctoral Dissertation, MIT.




Jaeggly, Osvaldo 1980. On Some Phonologically Null Elements in Syntax, Doctoral
Dissertation, MIT. Press.
 Huang, James C.-T. 1989. Pro-Drop in Chinese: a generalized Control Theory. In
Osvaldo Jaeggli and Kenneth Safir (eds). The Null Subject Parameter. Boston: Kluwer. 15:531-574. Huang, James C.-T. 1984. On the Distribution and Reference of Empty Pronouns, LI Horvath, Julia. 1986. FOCUS in the Theory of Grammar and the Syntax of Hungarian,
Dordrecht: Foris. NELS 24. Holmberg, Anders and Urpo Nikanne. 1994. Expletives and Subject Positions in Finnish. Higgins, Roger. 1973. On J. Emonds's Analysis of Extraposition. In John Kimball (ed),
Syntax and Semantics II. NY: Seminar press. Harris, J. W. 1991. The Exponence of Gender in Spanish. LI 22. Hamblin C. L. 1973. Questions in Montague English. Foundations of Language 10. Arnold. Halliday, M. A. K. 1967. Notes on Transitivity and Theme in English, part II. London
 Hajicova, Eva. 1984. Topic and Focus. In P. Sgall, (ed). Contribution to functional Syntax. Haiman, John and Paola Benincá. 1992. the Rhaeto-Romance Languages. Routledge. Linguistic Review V. 8:233-251
Haegeman Liliane, Raffaella Zanuttini. 1991. Negative heads and the Neg criterion. The
Gundel, Jeanette K. 1985. Shared Knowledge and Topicality. Journal of Pragmatics V.
9:83-107. Doctoral Dissertation, University of Texas. Gundel, Jeanette, K. 1974. The Role of Topic and Comment in Linguistic Theory. Universals. Proceedings of the Workshop Is the Best Good Enough. Cambridge: MIT Press. Grimshaw, Jane and Vieri Samek-Lodovici. 1995b. Optimal Subjects and Subject UMASS, Amherst. Grimshaw, Jane and Vieri Samek-Lodovici. 1995a. Optimal Subjects. UMOP V. 18.
 Grimshaw, Jane and Sara Rosen. 1990. Knowledge and Obedience: The Developmental
 23：381－405．

Lasnik，Howard．1992．Case and Expletives：Notes toward a Parametric Account．$L I$ Laka Mugarza I．M．1990．Negation in Syntax：on the Nature of Functional Categories and
Projections．Doctoral Dissertation，MIT Japanese．Ms．，UCSD． Kuroda，S．－Y．1986．Whether we Agree or not：a Comparative Syntax of English and Kurafuji，Takeo．1995．Violability of Proper Binding：A Case Study from Japanese Small
Clause．Ms．，Rutgers University，New Brunswick，NJ． English．LI 3：269－320． Kuno，S．1972．Functional Sentence Perspective：a Case Study from japanese and Koopman，H．and D．Sportiche．1991．On the Position of Subjects．In James McCloskey，
（ed）．The Syntax of Verb－Initial Languages．Lingua，Special Edition：211－258． Koopman，H．and D．Sportiche．1988．Subjects．Ms．，UCLA． Koopman，Hilda．1987．On the Absence of Case Chains in Bambara NLLT V． 10. Koopman，Hilda．1984．The Syntax of Verbs．Dordrecht：Foris． Kitagawa，Y．1986．Subjects in Japanese and English，Doctoral Dissertation，MIT． Kenesei（eds）．Approaches to Hungarian．V．3．JATE Szeged． Kiss，Katalin．1990．Against treating Hungarian as a V－second Language．In Istvan Kiss，Katalin．1987．Configurationality in Hungarian．Dordrecht：Reidel． Kiss，Katalin．1981．Structural Relations in Hungarian，a＇Free＇Word Order Language． LI
12：185－213． in Proceedings of Console II．Tubingen，Germany． Khalaily，Samir 1993．The Relevance of the Split Complementizer Hypothesis．To appear Kayne，Richard．1989．Null subjects and clitic climbing In Osvaldo Jaeggli and Kenneth
Safir（eds）．The Null Subject Parameter．Boston：Kluwer． Kayne，Richard．1987．Facets of Romance Past Participle Agreement．Ms．，MIT． Kayne，Richard．1975．French Syntax．Cambridge：MIT Press． Dissertation，MIT．

Kaufman，S．Ellen．1975．Theoretical Responses to Navajo Questions．Doctoral
Karttunen，L．1977．Syntax and Semantics of Questions．Linguistics and Philosophy V．1：3－ FL：Academic Press．
 てとて

Prince，A．and P．Smolensky．1991．Optimality．Paper given at Arizona Phonology
Conference．
Portner，Paul and Katsuhito Yabushita．1994．The Semantics and Pragmatics of Topic
Phrases．Ms． Pollock J．－Y．1988．Verb movement，UG and the structure of IP．LI 20：365－424． Pesetsky，David．1995．Zero Syntax．LI－monograph．Cambridge：MIT Press． Press． and A．G．B．ter Meulen（eds）．The Representation of（In）definiteness．Cambridge：MIT Pesetsky，David．1989．Wh－in－situ：Movement and Unselective Binding．In E．Reuland Perlmutter，D．1971．Deep and Surface Constraints in Syntax．New York：Holt，Reinhart
and Winston． Ortiz de Urbina，Jon．1989．Parameters in the Grammar of Basque．Dordrecht：Foris． Müller，Gereon．1995．Partial Wh－Movement and Optimality Theory．Ms．，Tübingen． McNulty，M．Elaine．1988．The Syntax of Adjunct Predicates．Doctoral Dissertation，
University of Connecticut，Storrs，CT．
 McCloskey，James．1994．Subjects and Subject Positions in Irish．LRC－94－05，USC．
 McCloskey，James．1991．Clause Structure，Ellipsis and Proper Government in Irish．In McCarthy，John，and Alan Prince．1993．Generalized Alignment．Ms．，UMASS，Amherts
Mass，and Rutgers University，New Brunswick，NJ． Montalbetti，Mario．1984．After Binding－On the Interpretation of Pronouns．Doctoral Lumsden，John．1987．Syntactic Features．Doctoral Dissertation，MIT． Lu，Hui－chuan．1994．Preverbal NPs in Spanish and Chinese．Doctoral Dissertation，
UCLA． at XXII Incontro di Grammatica Generativa．Bergamo，Italy． Longobardi，Giuseppe．1996．Il programma minimalista e la teoria del Caso．Talk given Li，Charles N．1976．Subject and Topic．New York：Academic Press．

Levin，Beth，and Malka Rappaport Hovav．1995．Unaccusativity．LI－monograph
Cambridge：MIT Press．

 $\varepsilon \varepsilon ะ$


Generative Grammar, proceedings of 1979 GLOW conference.475-516. Pisa. Ms., later appeared in A. Belletti, L. Brandi and Rizzi, (eds.) Theory of Markedness in
Taraldsen, Tarald. 1979. The Theoretical Interpretation of a Class of Marked Extractions.
 Taraldsen, Tarald. 1978. On the NIC, Vacuous Application, Und ere tinguistics Club, Ta Logico-Linguistic Papers. 1971. London: Methuen \& Co.
 Stowell, Timothy. 1981. The Origins of Phrase Structure. Doctoral Dissertation, MIT. Sentence Focus in Tikar. In APLA 18. Stanley, T. Carol. 1995. "The coming that they come" Verb Topicalization and Verb and Stalnaker, R. 1978. Assertion. In P. Cole (ed). Pragmatics: Syntax and Semantics. V. 9. New
York: Academic Press.
 UMASS.
Speas, Peggy. 1993. Null Arguments in a Theory of Economy of Projection. Ms. Sigurdsson, Halldor Armann. 1991. Icelandic Case-Marked PRO and the Licensing of
Lexical Arguments. NLLT.

Approach to Variation in Negative Inversion. In AAVE. Ms., Stanford University. Sells, Peter, John Rickford, and Thomas Wasow. 1995. An Optimality Theoretic Selkirk, Elisabeth. 1984. Phonology and Syntax. Cambridge: MIT Press. H. Jungraithmary (ed).The Chad Languages of the Hamitosemitic-Nigritic Border Area.
160-174. Berlin: Verlag von Dietrich Reimer. Schuh, R. G. 1982. Questioned and Focussed Subjects and Objects in Bade/Ngizim. In Schlonsky, Ur. 1987. Null and Displaced Subjects. Doctoral Dissertation, MIT. Samek-Lodovici, Vieri. 1995. Sul Focus Strutturale. In Fara (ed). Parliamo Italiano. 59-70,
Rimini: Fara. Samek-Lodovici, Vieri. 1994. Italian Focus Position. Talk given at the XXIV Symposium
on Romance Languages, Los Angeles 1994. Samek-Lodovici, Vieri. 1993b. Neg-raising and Negative Quantifiers in Italian. Ms.,
Rutgers University, New brunswick, NJ. Samek-Lodovici, Vieri. 1993a. Italian Postverbal Focus Position and its Role in
Postverbal Wh-Extraction. Ms., Rutgers University, New Brunswick, NJ. Semantics. V. 2:47-70.
 ¢ $£$

Safir, Kenneth. 1985. Syntactic Chains. New York: Cambridge University Press,. Saccon, Graziella. 1993. Postverbal Subjects. Doctoral Dissertation, Harvard University. Rouveret, A., and J. R. Vergnaud. 1980. Specifying Reference to the Subject. LI 11. Rothstein, Susan D. 1995. Pleonastics and the Interpretation of Pronouns. LI 26:499-529

Rooth, Mats E. 1992. A Theory of Focus Interpretation. Natural Language and Semantics.
V. 1:75-116.
Rooth, Mats E. 1985. Association with Focus. Doctoral Dissertation, GLS, UMASS
Amherst. Theory of Grammar. New York: Cambridge University Press. Rochemont, Michael, and Peter Culicover. 1989. English Focus Constructions and the Rochemont, Michael. 1986 Focus in Generative Grammar. Amsterdam: Benjamins.

Roberge, Yves. 1986. The Syntactic Recoverability of Null Arguments. Doctoral
Dissertation, UBC. Geneva.

Rizzi, Luigi. 1991. Residual Verb Second and the Wh-Criterion. Ms., University of Rizzi, 1. 1990 Relativized Minimality. LI-monograph, Cambridge: MIT Press. Rizzi, L. 1986. Null Objects in Italian and the Theory of pro. LI 17:501-557. Silva-Corvalan (eds). Studies in Romance Linguistics. Dordrecht: Foris. Rizzi, Luigi. 1986. On the Status of Subject Clitics in Romance. In Osvaldo Jaeggli and C. Rizzi, L. 1982. Issues in Italian Syntax. Dordrecht: Foris. Rizzi, L. 1980. Negation, Wh-movement and the Null Subject Parameter. mimeographed
manuscript later appeared in Rizzi (1982). Reinhart Tanya. 1983. Coreference and Bound Anaphora: a Restatement of the
Anaphora Questions. Linguistics and Philosophy. V.6:47-88. Reinhart, Tanya. 1981. Pragmatics and Linguistics: An Analysis of Sentence topics.
Philosophica 27:53-94. Raposo, Eduardo. 1987. Case-Theory and Infl-to-Comp: The Inflected Infinitive of
European Portoguese. LI 18:85-108. Prince, Ellen F. 1986. On the Syntactic Marking of Presupposed Open Propositions.
Parasession Papers, CLS 22:208-222. Prince, Ellen F. 1981 Toward a taxonomy of given/new information. In Peter Cole (ed).
Radical Pragmatics. 223-255. New York: Academic Press. appear as LI-monograph, Cambridge: MIT Press. Grammar. Ms., Rutgers University, New Brunswick, NJ. and U. of Colorado. To
 モモz

Zanuttini Raffaella. 1991. Syntactic Properties of Sentential Negation. A Comparative
Study of Romance languages. Doctoral Dissertation, UPENN.
 Weerman, F. 1989. The V2 Conspiracy. Dordrecht: Foris. York: Oxford University Press.

Vikner, Sten. 1995 Verb Movement and Expletive Subjects in the Germanic Languages. New
Vainikka, Anne M. 1989. Deriving Syntactic representations in Finnish. Doctoral
Dissertation, UMASS at Amherst. Vallduví, Enric. 1992 The Informational Component. Garland Publising Inc.

Valimaa-Blum, R. 1988. Finnish Existential Clauses: their Syntax Pragmatics and
Intonation. Doctoral Dissertation, Ohio State University. Vali Bium, R 1988. Finnish Existential

Travis, Lisa demena. 1984. Parameters and Effects of Word Order Variation. Doctoral 10:303-334.

Tuller, Laurice. 1992. The Syntax of Postverbal Focus Constructions in Chadic. NLLT V. 236

ఫু
S6-8661
웅
$\stackrel{\rightharpoonup}{0}$
06-886

| Ш- |
| :--- |
|  |
|  |

98-0861

Ph.D. in Linguistics.
Rutgers University, New Jersey.
Teaching Assistant, Department of Linguistics,
Brandeis University, Massachusetts.
M.A. in Linguistics and Cognitive Sciences,

Brandeis University, Massachusetts.
Teaching Assistant, Department of Psychology,
Researcher at IRST, Trento, Italy.
Italy.
‘чэлеәsәу эо ן!

КโенI 'оие
B.A. in Computer Science,

Vieri Samek-Lodovici


[^0]:    (2b) The exhibition was visited by the king of France. ---> false.
    

[^1]:    (19) Chinese.

[^2]:    To whom did John say that (he)/he is rich?
    

[^3]:    
    (52b) Neigon nuN [ka Aish wat g Billiri].
     (LZદ'd '(e६Z) 'хә ‘лә[In ${ }^{\text {L }}$ ) (Tuller, ex. (23b), p.321)
    

    $$
    \begin{aligned}
    & \text { (52a) Yimben nuN [ka bome wat go Billiri]. } \\
    & \text { Think who that Bome went Billiri. }
    \end{aligned}
    $$

[^4]:    (37b) Sono entrate alcune ragazze dalla finestra

