J. Linguistics **33** (1997), 539–562. Printed in the United Kingdom
© 1997 Cambridge University Press

REVIEW ARTICLE

Multiple paths towards Universal Grammar

ALAIN ROUVERET

Université Paris-8

(Received 10 July 1996; revised 20 February 1997)

Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi & Raffaella Zanuttini (eds.), *Paths towards Universal Grammar: studies in honor of Richard S. Kayne*. Washington, D.C.: Georgetown University Press, 1994. Pp. xvi + 491.

1. Introduction

In 1994, a collection of essays was dedicated to Richard S. Kayne by former European students and colleagues for his fiftieth birthday. The title of the book, *Paths towards Universal Grammar*, appropriately combines an allusion to one of Kayne's most celebrated theoretical innovation, that of 'unambiguous path', and a reference to what constitutes the common aim of the linguists working within the Chomskyan framework, the construction of UG. Taken together, the articles provide a gold-mine of new data, descriptive generalizations and theoretical discussion, and are a fair representation of the state of the syntactic art after the publication of Chomsky's *A Minimalist Program for linguistic theory* and Kayne's famous lecture on word order at the 1992 Glow meeting at Lisbon. Some are devoted to an extension or an appraisal of some of Kayne's most recent proposals: his analysis of the HAVE/BE alternation, his theory of word order, his analysis of enclisis and proclisis; others are more biased towards Chomsky's minimalist conceptions; others develop entirely new ideas and analyses. Taken individually, they vary in novelty and scope. But most of them contrive to achieve the high level of scientific rigour and accuracy, which Kayne's work has set up as a standard in syntactic research for more than twenty-five years. The volume strongly recommends itself to all scholars in the field.

Sections 2 to 10 of this article provide a descriptive overview of each of the chapters. Although they are alphabetically ordered in the book, several major topics emerge and I chose to follow a thematic order in this review. In section 11, I address some general questions about the nature of syntactic explanations in contemporary research.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

2. Functional categories

In his contribution dealing with the functional structure of Romance DPs and N-movement within these domains, Guglielmo Cinque clearly endorses the conception of phrase structure advocated by Kayne (1994), according to which functional heads are projected freely, provided that they make a specifier available for the insertion or the movement of a phrase and that the terms in the corresponding projection respect the Linear Correspondance Axiom. This line of analysis, which gives rise to a highly articulated functional structure of DPs, could appear questionable, at first, an impression which is somewhat enforced by Cinque's decision not to be specific about the labels of the various functional projections postulated inside DP. However, the importance of the data he considers is beyond question and the explanations he puts forward highly compelling. Cinque first shows that the asymmetry in the distribution of APs in Romance and in Germanic must be attributed to the raising of N in Romance, not in Germanic, to a functional head intermediate between N and D (he makes no claim about the trigger of N-movement in Romance vs. Germanic). Evidence in favour of partial N-movement in Romance comes from the contrastive behaviour of thematic APs (which obligatorily follow the N), attributive APs (which can precede or follow it, but give rise to different interpretations), speaker-oriented APs, ordinals, numerals and possessive adjectives (which obligatorily precede the N). Generating the various classes of APs directly into distinct specifier positions naturally accounts for the existence of unmarked serialization of the different classes of APs (poss > cardinal > speaker-oriented > manner > thematic): they simply reflect the hierarchical serialization of the functional projections in whose Specs the APs are generated. Finally, Cinque's analysis makes interesting predictions about the predicative/post-nominal attributive divide. Attributive APs, which immediately follow the N, show the restriction on maximal projections overtly found on the left-branch, while the sometimes complex APs which follow the complement do not. This suggests that the latter are on a right branch, i.e. in the peripheral 'predicative' position, which only allows adjectives which can be predicated of a maximal projection.

Both Adriana Belletti's and Raffaella Zanuttini's contributions deal with the articulation of negative markers within clause structure in Romance. Belletti considers the contrast between certain negative adverbs and negative quantifiers as to the possibility of having more than one of them in the same clause: (1) and (2) from Italian illustrate.

(1) * Non ho più parlato mai con Gianni.
NEG I have anymore spoken ever with Gianni
'I haven't anymore spoken with Gianni ever.'

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

(2) Non ho (più) detto niente a nessuno.
NEG I have (anymore) said nothing to nobody
'I haven't anymore said anything to anybody.'

Her basic proposal is that only negative phrases entering into an operator/variable relation in overt syntax, i.e., only those which have reached SpecNegP at Spell-Out, trigger absorption in SpecNegP at LF, voiding a potential violation of the NEG-CRITERION. Italian *più* and French *plus* satisfy this condition and are allowed to absorb with negative quantifiers which fill SpecNegP at LF. French *pas* does not, if one assumes that it is directly inserted into SpecNegP (it does not have the option of being generated in a lower position in the clause structure and never moves). Whence the ungrammatically of *Il n'a pas vu personne*. The ill-formedness of (1) follows from the plausible assumption that no more than one adverbial modifier is admitted for any maximal projection: one adverb must be base generated in SpecNegP and the other in the lower position of AspP modifier. The former is not allowed to absorb with the latter, since it doesn't enter into an operator/variable relation.

Raffaella Zanuttini offers a way to reconcile two basic insights concerning negative clauses: Pollock's (1989) and Belletti's (1990) proposal that negative markers in Romance originate in the projection NegP and that superficial differences in the position of these markers result from movement, and her own insight that presumably in all languages, sentential negation must be interpreted in a position higher than tense. Zanuttini's solution consists in postulating an additional functional projection, Polarity Phrase (PolP), at the top of the clausal structure, whose head can be endowed with strong or weak features. Negative markers are base generated in the specifier or in the head of NegP and are uniformly interpreted in PolP. In this approach, typological variation with respect to sentential negation is traced back to the morphological requirements of Pol: a language which negates a clause via a negative marker which is a head has strong negative features, an assumption which captures the observation that negative markers which are heads must precede the tensed verb (as in Italian *Gianni non ha telefonato a sua madre* 'Gianni hasn't called his mother'), while those which are maximal projections cannot (as in Piedmontese *Maria a l'ha nen parla tant* 'Maria hasn't talked much'). The strong features of PolP, which attract Neg markers into its head (as in Italian *Non ho visto nessuno* 'I saw nobody'), can also be checked by inserting a negative indefinite in its specifier (Italian *Nessuno ha detto niente* 'Nobody has said anything'). Zanuttini's analysis thus expresses in a natural way the correlation between the type of negative marker used by a language and the behaviour of negative constituents. But it must stipulate that in languages which have a negative marker which is a head but which cannot express negation – French *ne* is a case in point: it cannot by itself express negation, but must be coupled with a negative quantifier or with *pas* – the

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

movement of the negative marker is not motivated by the need to check features, but by the clitic nature of the negative marker.

3. Agreement heads, inflectional morphemes and cliticization

Several articles assign a prominent role to the different properties of Agr heads across sometimes closely related languages or dialects in explaining syntactic variation. Anders Holmberg's paper is a demonstration that 'the presence of rich inflection in a language may have the effect of increasing freedom of word order in one domain, while restricting it in another domain' (219). Among Scandinavian languages, only Icelandic and Faroese allow impersonal ergatives, where the argument precedes the verb in VP, and impersonal transitive constructions, where the subject of a transitive verb remains inside the predicate (Chomsky's transitive expletive constructions (TECs)). On the other hand, only in the Mainland Scandinavian languages is the impersonal version of the passive double-object construction well-formed. Holmberg proposes that the strong Agr present in Icelandic and Faroese is crucially involved in the licensing of predicate-internal subjects. His basic claim is that the strength of Agr, a subcomponent of I in his approach, determines the type of expletive subjects available in a given language and he devises a set of principles ensuring that languages which have strong Agr have weak expletives and languages which have weak Agr or no Agr at all necessarily have strong expletives. In Mainland Scandinavian the strong expletive *der/det* not only can, but also must head an A-chain and bind an empty category in SpecVP. This explains why a preverbal argument is not permitted in impersonal ergative constructions and why TECs are not available. In Icelandic, the weak expletive pro in SpecIP cannot head an A-chain (það is an expletive topic merged into SpecCP). Consequently, SpecVP can be lexically filled. In the passive double-object construction, the empty category in SpecVP can be antecedent-governed by the Mainland Scandinavian strong expletive in SpecIP, but not by the Icelandic weak expletive. In this case, strong Agr has the effect of forcing movement of an argument out of the predicate.

The properties of the Agr nodes also play a crucial role in Gemma Rigau's analysis of Catalan presentational/existential sentences. Both *ser* 'to be' and *haver-hi* 'to have + locative clitic' can occur in these constructions, although the choice between the two is not free (*No hi havia el degà/El degà no hi era*, both meaning 'The dean was not here/there'). One of the key ideas underlying Rigau's treatment is that only a [+person] AgrS is able to manifest the case property of T, a [−person] AgrS is not (she refers to Kayne (1989) for this idea). In sentences containing the verb *haver-hi*, the incorporated locative clitic not only absorbs the external argument of the verb, but also acts as an impersonalizer, inhibiting the person property of

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

AgrS and thus blocking the checking of nominative case. In sentences with *ser*, the inactive node is AgrO, AgrS retains its [+person] property even when a (non-incorporated) locative clitic is present. A striking property shared by most Catalan dialects – but not all, cf. Alguerese Catalan – is that sentences with *haver-hi* do not show the definiteness effect. This can be taken to show that the incorporated clitic does not affect the capacity of AgrO to mediate the checking of the verbal accusative case. To explain the fact that, although definite, the Theme argument cannot be realized as a clitic (* *L'hi ha*), Rigau suggests that, when *hi* moves to AgrO, it blocks the person feature and the presence of any other clitic on this node. Central Catalan shows agreement between the post-verbal Theme argument and the verb (*Hi han els estudiants* 'The students are here/there'). This suggests that in this dialect, the presence of the clitic has left the node AgrS only partially inactive: the morphological property of number remains active, which allows checking of nominative case on the prominent argument. According to Rigau, these dialectal variations confirm one of Kayne's basic insights: if no clitic is incorporated into the abstract presentational verb, it will be spelled out as *ser*. When it cooccurs with *ser*, *hi* is not incorporated into it.

A critical assessment of Kayne's (1993) provocative analysis of possessive HAVE as resulting from the incorporation of a dative-assigning element D into BE, followed by a lexicalization of BE+D, and of its extension to auxiliary HAVE, is precisely what Teun Hoekstra proposes in his contribution. He argues in favour of a more conventional Agr-based analysis. Hoekstra first raises the question as to how the possessed object receives case in the HAVE-type construction. If HAVE inherits a case assigning potential from the incorporee, is this potential put into use in constructions involving the auxiliary? And how? He further observes that there is an essential difference between the auxiliary *have* and the main verb *have*, which can also take a participial complement (cf. *John has his windows cleaned once a week*): only the latter seems to feature the D-element. This conclusion is indirectly confirmed by the behavior of *get*, which can be viewed as an ingressive counterpart of both BE and HAVE: its complement does not involve a D-element providing dative case and it has no use corresponding to auxiliary *have* (**John got killed Bill*/*John got killed*). Hoekstra is led to the conclusion that the possessive meaning of main verb HAVE arises as a result of HAVE asymmetrically c-commanding an empty predicate X, which assigns the thematic role of possessor to its subject. X also occurs elsewhere, as a causative element with causative HAVE, as the provider of the possessor role in nominal expressions, but is absent with auxiliary HAVE. As for BE, it relates to HAVE by lacking an available AgrO projection to license objective case. In other words, under Hoekstra's view, neither auxiliary nor main verb HAVE should be considered to derive from BE; rather both BE and HAVE are non-theta assigning elements with different case properties, i.e. with different functional superstructures. HAVE

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

is not BE-plus, but BE is HAVE-minus, where 'plus' and 'minus' refer to the availability of AgrO.

Ian Roberts explores the properties of a dialect in which object clitics and subject clitics seem to compete for the same position: Valdôtain. As in other Romance languages, participle-agreement is triggered when an object clitic appears in the pre-auxiliary position in a compound tense. But the participle-clitic order also exists. In this case, the participle does not agree with the clitic, a situation compatible with Kayne's (1989) analysis of past-participle agreement since the two elements are never in a spec-head configuration at any point in the derivation. The Valdôtain pattern, however, raises a potential difficulty against Kayne's (1991) analysis of enclisis, according to which the verb moves up higher than the functional head the clitic left-adjoins to. Adverb placement and the distribution of negation provide no independent support for a participle movement process in Valdôtain which would be absent in French. Roberts's solution is to claim that cliticization can also be substitution into an Agr head. He further notes that the position of object clitics in Valdôtain depends on the presence or absence of a subject clitic in pre-auxiliary position: when a subject clitic is realized in the pre-auxiliary position Agr1, the object clitic is inserted into AgrO and attracts the participle; when Agr1 is not filled by a subject clitic, the object clitic moves into this position and triggers agreement. The overall picture which emerges is that Romance languages vary as to whether they allow clitics to be substituted into head positions, a parametric difference ultimately related to the subject clitic system. This in turn implies that there are two different structures underlying V-clitic orders with non-finite V in Romance.

Knut Tarald Taraldsen's contribution starts out from a comparison between two Rheto-Romance dialects, Sursilivan and Vallader. In the former, reflexive clitics do not agree in person or number with the syntactic subject and attach to the participle in compound past tenses. In the latter, they show agreement and attach to the auxiliary. Moreover, unlike Vallader, Sursilivan has no non-reflexive clitics. Taralden's account relies on Kayne's (1986) analysis of reflexive critics, in which the surface subject, not the reflexive, represents the internal argument of the verb. In Sursilivan, reflexive clitics attach to a functional head Y above the V-projection, which is lower than the final position of the auxiliary in compound past tenses; in Vallader, they move to a position X distinct from and higher than Y. To account for the agreement asymmetries between the two dialects, he shows that in Vallader, not in Sursilivan, reflexive clitics can be characterized as elements chain-linked to the object. Since the object is the trace of the subject, reflexive clitics must agree with the subject. To explain that a reflexive clitic chain-linked to the trace of a nominative DP can have accusative Case, Taraldsen introduces an interesting distinction between the case-licensing of a head (morphological case) and the Case-licensing of its maximal projection (syntactic Case). The clitic licenses the object within the c-system and the

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

subject licenses it within the C-system. In Vallader, the c-system is active and the accusative clitic can only be c-licensed if it attaches to X. Sursilivan *se*, being attached to Y, cannot head a chain linking it to the head of the object and cannot agree with it either. Like the Romance dialects in which subject clitics are in complementary distribution with object clitics (Roberts's characterization of Valdôtain clitics), Sursilivan could make use of an inherent clitic position, an A′-head agreeing with the subject, a kind of AgrS.

The central idea of Anne Zribi-Hertz's contribution is that the syntactic description of nominative clitics in modern French must draw a distinction between two grammars, that of Standard French and that of Advanced French. In Standard French, nominative clitics can be proclitics or enclitics. Proclitics can undergo ellipsis and do not combine with a lexical subject. The standard analysis of enclitics claims that, in complex inversion constructions, they are also generated in SpecIP, while the lexical subject originates in SpecVP, and attach to the inflected verb raised to C (see Rizzi & Roberts 1989). Zribi-Hertz proposes a modification of this analysis, based on the properties of Advanced French. In Advanced French, nominative enclitics are absent; nominative proclitics are becoming obligatory in some finite clauses (*Pierre il mange* lit. 'Pierre he eats'), can cooccur with a quantified subject and do not undergo ellipsis in conjoined structures. Zribi-Hertz proposes to treat them as subject-agreement clitics directly generated in AgrS, like nominative proclitics in various languages – Piedmontese, Bantou – and claims that all non-ellipsable clitics – nominative enclitics in SF in particular – should receive the same analysis.

4. The antisymmetry of syntax

Two papers in the volume, dealing with German and Dutch respectively, address various aspects of the Antisymmetry hypothesis advanced by Kayne (1994). Henk van Riemsdijk reconsiders the phenomenon of pied-piping in German infinitives, illustrated in (3), in the light of this hypothesis.

(3) das Buch, das zu lesen er uns empfohlen hatte
the book which to read he us recommended had
'the book which he had recommended to us to read'

In van Riemsdjik (1984), it was claimed that the infinitival complement to *empfehlen* in (3) is a CP which is pied-piped as a whole into the specifier of the containing CP and that the relative pronoun, which originates as the object of the embedded infinitive, is moved into the specifier of that infinitival CP. The implication is that the relative pronoun, which forms a constituent with the rest of the infinitival clause, is able to act as if it were an operator in the higher CP, although positioned in the lower SpecCP. Kayne's (1994) proposal that specifiers, or rather XPs that constitute specifiers, are not upper limits to the domain of c-command, offers a potential solution to this

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

problem. It implies that the *d*-word in (3) would c-command in exactly the same fashion that it does in the non pied-piped version. However, a careful study of parasitic gaps in the clausal pied-piping constructions reveals that the gaps can only be licensed inside the infinitival clause. The empirical conclusion is that the *d*-word, which may be assumed to bind the two gaps, is in the lower SpecCP, not in the higher one, at S-structure and presumably at LF. Such a state of affair is not compatible with Kayne's proposal to permit wide scope c-command for specifiers. It supports van Riemsdijk's original analysis inasmuch as percolation is to dominating nodes, not to c-commanding ones. Van Riemsdijk speculates that this behaviour could be related to the fact that *d*-words in relative clauses are rather less operator-like than question words: the *d*-word need not be in a position from where it could c-command some variable in the relative clause. He offers further interesting speculations on the differences between relative clauses and interrogative clauses and on why pied-piping is always somewhat more liberal in the former than in the latter.

Jan Koster argues that, once Kayne's theory of word order is combined with Chomsky's checking theory, the VP word order of Dutch no longer has to be stipulated. Given the universal base order V XP, what has to be explained is how certain XPs end up in front of the V. In some cases, the answer is easy because minimalist assumptions tell us exactly which XPs must be moved to the left. The reason why NP-objects must precede the verb, while the opposite holds for CP-objects, is simply that NPs, but not CPs, have a Case feature that must be checked. This can only be done by moving the NP leftward since, given Kayne's proposal, the functional checking domains are necessarily to the left of lexical projections. VP-complements don't have to move (the traditional Verb Raising claimed for Dutch since Evers (1975) can thus be dispensed with). The extension of this approach to PPs and to APs, which respectively can and must appear to the left of V, seems problematic, however. Koster's solution to this problem exploits the notion of 'predicate incorporation' developed by de Hoop (1992). He proposes that, universally, a complement of V is either an argument or part of the predicate. If scrambling is just the movement of objects to SpecAgrOP to check the strong feature of AgrO, predicate incorporation is a movement into the specifier of a special functional projection, the Pred Phrase, intervening between the AgrOP and the VP, and concerning full phrases forming a close semantic unit with the verb. What triggers the movement of these XPs to SpecPredP? According to Koster, small clause predicates and weak NPs have Case-like N-features that need to be checked. As for PPs, they are moved if they have no independent argument status, i.e. if they are not analysed as independent Case-domains.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

5. What triggers movement?

Koster's paper can be read as an attempt to precisely characterize the grammatical dimensions which force the movements that make Dutch a SOV language. Several other contributions address the general question of the triggers of movement operations, a question which was already accessible in the Principles and Parameters framework, but is of a crucial importance in the Minimalist Program.

Maria-Luisa Zubizarreta argues that a number of focus-related syntactic processes are better understood if one takes into consideration the Accentual Licensing Constraint (ALC), a PF-constraint which requires that a focused (asserted) constituent dominate the lexical item with the main accent in the intonational domain. Since, as argued by Cinque (1993a), the main accent is generally assigned to the most embedded node in the I-domain, the syntax tends to place the identificationally or presentationally focused constituent in the most embedded position in this domain. The consequence is that several processes can be looked at as prosodically governed, rather than morphologically driven, syntactic operations. Right-dislocation and Scrambling in Romance are cases in point. In Spanish, only in VS structures can accented postverbal subjects be interpreted as wide focus; in VSO and VOS structures, only the subject is part of the assertion.

(4) (a) Llamo PEDRO.
called Pedro
'Pedro called.'

(b) Rompio PEDRO el vidrio.
broke Pedro the window
'Pedro broke the window.'

(c) Rompio el vidrio PEDRO.
broke the window Pedro
'Pedro broke the window.'

(4a) satisfies the ALC, whether IP or just the NP in Spec of VP is marked [Focus]. [Focus] marking of the subject in transitive structures gives rise to a well-formed representation at PF only if the object is right-dislocated, as in (4b), or scrambled to a position between IP and VP, as in (4c). Similar considerations explain why the word order V-DO-IO/LOC (with main accent on the IO or the LOC) allows narrow as well as wide focus and why [Focus] marking of the DO gives rise to a well-formed output only if the dative or locative PP scrambles to the left, into a position where it asymmetrically c-commands the DO, as shown, in each case, by binding phenomena.

Violeta Demonte basically reaches the same conclusions in her study of ditransitive constructions in Spanish. She also argues in favour of the scrambling of Indirect Objects and claims that this operation is motivated by scope, not by Case reasons. In order to prove that the basic order in Spanish

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

VP is OD OI, Demonte also invokes Cinque's principle and combines it with Haider's (1992) observation that a focus spreads maximally when the sentence constituents appear in their basic order. Only sentences showing this order (and containing an eventive predicate) can be adequate answers to the question *Qué paso*? ('What happened?')

Katalin E. Kiss is concerned with the definition of NP-movement. Her starting point is the observation that the standard categorization of transformations Move NP vs. Move *wh* does not pave the way to a satisfactory analysis of Topicalization, since it neither checks an operator feature, nor is a Case-driven process. She then argues that in Hungarian, Topicalization serves exclusively the purpose of creating a primary predication relation between the constituent in SpecIP and the VP or, in more technical terms, to check the 'subject-of-predication' feature of its target. She further claims that the invariant role of Infl across languages is precisely to mediate this predication relation, the role it plays in Nominative checking being specific to a type of language. One of the crucial properties distinguishing NP-movement from *wh*-movement is its essentially local character. But Kiss argues that this apparent boundedness is not an inherent property of the NP-movement transformation per se: what must be local is Case-checking. This proposal, combined with the hypothesis that *tough*-predicates may subcategorize for a VP which they detransitivize and with which they form a complex predicate, allows her to account for the properties of the *tough*-construction. Raising verbal predicates receive the same characterization. Kiss finally shows that the various tests usually taken to differentiate NP-movement from *wh*-movement are not reliable diagnostics and do not disprove an analysis of Topicalization and *tough*-movement constructions as instances of NP-movement: neither reconstruction effects for binding, nor the ability to license parasitic gaps can be restricted to *wh*-moved constituents; the lack of weak crossover effects in these constructions strongly suggests that they are instances of NP-movement.

Jacqueline Guéron develops an original analysis of the Inverse Copular Construction in English which provides new insights on the phenomenon. Although *John is my best friend* and *My best friend is John* are claimed to be syntactically related by raising operations, as in Moro (1991), *my best friend* is construed as a predicate only in the non-inverted version. Typical predicates cannot in fact raise to SpecIP (**A doctor is John*), a restriction which follows from the Functional Definition of Arguments and Predicates of Guéron & Hoekstra (1988), according to which XP is a Name if it is Case-marked and a Predicate if it is Tense-marked (directly governed by COPULAR [+Tense]). In **A doctor is John*, the raised DP is incoherently construed as both a name and a predicate. Such a DP can be raised to SpecIP, however, if it is interpretable as a quantifying expression rather than a predicate (*The best doctor in town is John*). A theory of DP interpretation is adumbrated according to which the construal of a DP as a R-expression

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

(Name), Predicate or Quantifying Phrase depends on the matching of its internal structure with its external syntactic context rather than the lexical items it contains. Whenever DP in SpecIP is interpreted as a quantifying phrase rather than a name, BE does not function as a copula, but rather as an operator identifying the two referential DPs. Guéron further introduces a distinction between two LF modules, the narrative component and the commentary component. The former interprets predications and event structures, the latter metalinguistic operations such as identification of R-expressions and the Focus/presupposition distinction. Inverse copular sentences typically belong to commentary rather than to narration, since they do not denote an event or a predication and do not define a proposition. Consequently, they are incompatible with propositional operations typical of the narrative component, such as negation and interrogation. Nor can they be located on the time axis associated with the narrative.

Manuela Ambar observes that the domain of application of the so-called Aux-to-Comp in Portuguese is larger than traditionally assumed. There exist grammatical instances of verb-initial Inflected Infinitival Clauses (IICs) in which no auxiliary is present, but a necessary condition on their well-formedness is that they give rise to an habitual/generic reading. This condition is fulfiled in (5b), not in (5a), where the temporal is the one associated with a definite reference to a single event. The grammatical IICs containing a pre-subject auxiliary *ter* only admit a single event reading, as (5c) illustrates.

(5) (a) * Penso comprarem eles o livro.
think-1.SG buy-INF.3PL they the book
'I think they buy the book.'

(b) (?) Penso comprarem eles muitos livros.
'I think they buy many books.'

(c) Penso terem eles comprado o livro.
'I think they have bought the book.'

Ambar's solution resorts to Chomsky's Checking Theory. Three factors interact: (i) the strength of the V-feature of the category Tense, which is uniformly weak in these domains; (ii) the presence/absence of quantificational elements within VP; (iii) the strength or weakness of morphological tense on the verb: the tense feature of eventive verbs, which give rise to the existential quantification of the event time, is assumed to be strong, that of stative verbs, which are compatible with a generic/habitual reading, is assumed to be weak. When the former raise to T, a conflict arises. Raising of the latter creates no conflict. Quantification inside VP has the effect of providing the verbal tense with a [+generic] feature, which allows it to be paired with the weak feature of T. The present form of the inflected infinitive seems to be a tenseless present or a zero tense, since it licenses only the habitual/generic reading. On the contrary, when auxiliary *ter* is present, this

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

reading is excluded: *ter* licenses the existential quantification of the event time, as true Past does. This follows if *ter* is characterized as a stative verb, with a weak tense compatible with the weak functional tense and if the source of the Past tense effect is located inside the participial clause itself. In Ambar's analysis, the VSO order, when it occurs, ultimately results from the V-feature of Agrs being strong – it is made strong by the governing Tense feature in C – and its N-feature being weak (the auxiliary never raises to C).

Jean-Yves Pollock raises the problem of what checking theory should say about the bare verbs of English, both in finite (*They sing*) and in non finite (*It is nice to sing*) clauses. He shows that covert LF checking does not apply to such forms, though it does to the overtly inflected verb (*He sings/He talked/He is singing/He has talked*). The argumentation runs as follows: (i) Assume that null suffixes must always have a canonical value. It follows that bare forms are verb roots in English – where there can be no null person suffix contrasting with $+s$, since $+s$ does not enter into a canonical paradigmatic contrast – but they are not in French – where the null present tense morpheme and the null third person morpheme do enter into such contrasts. (ii) The fact that verbs like *sing* and *talk* are bare in English does not mean that the corresponding clause is without functional information: the nominative case associated to subject pronouns in English must enter a spec-head agreement relation with a tense + agr complex. (iii) Null functional heads, like other null elements, must be 'recovered' or 'licensed' in the structure in which they occur. (iv) On the other hand, verbs must be syntactically or morphologically associated with at least some functional information concerning mood, tense, agreement, more precisely properly governed by a head providing this information. This accounts for the ungrammaticality of (6) and (7):

(6) *I believe [John to [like [kiss Mary]].
(7) *I ∅ [not [like Mary]].

(v) The well-formedness of (8) raises no problem if the lower verb incorporates into *come/go*, forming a complex predicate, properly governed by I. But in (9), the lower verb does not satisfy the association requirement because *come* has an inflection of its own that needs checking.

(8) They come talk to me everyday.
(9) *John comes talk with me.

6. Basic empty categories

Two articles specifically address the question of how 'basic' empty functional heads (empty categories that are not chain links) are licensed (Pollock's paper can be read as a contribution to this problem). In his contribution, Hubert Haider first argues that, as other empty categories, a basic empty head must be formally licensed – it is if a governing category selects its

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

projection – and identified – it is if it enters a spec-head feature matching relation. He then considers two situations which strongly suggest that this hypothesis does not suffice to make the required distinctions. The first one is the contrast illustrated in (10).

(10) (a) It is essential that this mission I not fail.
(b) *It is essential that this mission I not fails.

Haider claims that functionally marked lexical projections are licensed only as complements of specified functional heads, those that select the particular features. The VP in (10b) does not satisfy this condition, since it ends up as the complement of the negative element. The subjunctive form in (10a), which is a base form of the verb, is not subject to a similar locality requirement. A second problematic situation arises in English simple main clauses that do not contain an auxiliary. The empty I does not satisfy the formal licensing requirement. To solve the difficulty, Haider introduces the notion of co-projection. Co-projections are superposed isomorphic projections, which 'arise if an array of lexical elements simultaneously and completely meets the requirements of two string vacuously related configurations'. In other words, every element in the string is checked simultaneously for two sets of well-formedness conditions which contain the two superposed structures. The co-projection analysis is available in the simple sentence *It smells*, giving a structure in which the I-projection is superposed on the V-projection. It is not available in negative sentences **It not smells*, because the negative element does not find its proper structural environment in one of the superposed structures, since it would end up in a structural position c-commanding only a subpart of the V-projection. Unlike negation, adverbs must be assumed not to block co-projections.

Joseph Emonds argues in favour of a theory based on the two principles of economy stated in (11)–(12), which do not require counting derivational steps, as in Chomsky (1991), but rely instead on such transparent notions as words and phrases.

(11) *Economy of Derivation*
The most economic realization of a given deep structure minimizes insertions of free morphemes. ('Use as few words as possible.')
(12) *Economy of Representation*
A given subcategorization must be fulfilled in a domain using as few phrasal nodes as possible. ('Use as few phrases as possible.')

This theory ensures the presence in surface structures of a range of empty closed categories (through (11)) and licenses them by means of additional principles and devices. One of them is a redefinition and an extension of the syntactic domain in which subcategorization requirements can be fulfilled:

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

(13) a CONSTITUTES b if all the lexical material under b is under a, i.e. any nodes under b but not a are empty.
Y,___XP is fulfilled if and only if XP CONSTITUTES a sister of Y.

A second principle licensing empty functional heads is in (14).

(14) *Invisible Category Principle*
If all features F of a host category C except perhaps C itself are alternatively realized by overt productive morphology on the head of C's phrasal sister, C may be 0.

One of the effects of (12) is that it the notion of verb-raising can be eliminated entirely in English. Emonds proposes to characterize *is* as an element directly introduced into I. Since I must be a sister of VP and each VP must dominate a V, the minimal structure satisfying I, + −− XP for *is*, is (15) where neither I nor V has any specified V-features.

(15) $[_{IP}$ ne $[_{I'}$ $[_{I}$ is] $[_{VP}[_{V}\emptyset]$ [XP]]]]

When it is combined with (14) and an additional principle, *Alternative Realization*, (11) forces the obligatory replacement of all the two-word collocations by single word formations (*is* is truly a variant of *do* + *be* and *do* + *be* is excluded precisely when *is* is available) and permits inflectional alternatives to analytic constructions (English adjectival inflections *-er* and *-est* are a case in point). Emonds extends this approach to the pro-drop parameter. (14) predicts that the subject NP can be zeroed only if verbs raise to I and if the agreement features constitute the required 'overt productive morphology'. The latter condition is not satisfied in French, the former is not satisfied in English. The English empty I is licensed, however, since its features are all alternatively realized by the Tense suffixes on the verb.

7. THE LOCALITY PROBLEM

Luigi Rizzi's contribution is an amendment to the theory of locality presented in his book *Relativized minimality*. The notion of referential index plays a crucial role in the *Relativized minimality* treatment of argument/adjunct asymmetries with respect to extraction from weak islands: argument variables are allowed to bear a referential index, which allows them to be connected long-distance with their operator through a binding relation insensitive to relativized minimality, while adjunct variables, which are not assigned a referential theta-role, are not assigned a referential index and can only be connected with their antecedent via a chain satisfying antecedent-government. As some commentators have observed, the indexing proposal forces the assumption that selected adverbs, idiom chunks, and measure phrases have referential theta roles and indices, although it is not clear that they enter theta-marking. It also endangers any explanation of the ban against Super-raising based on relativized minimality. In his paper, Rizzi addresses the second problem. He argues that the theta-theoretic account of

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

weak islands can be maintained, once the sharper characterization of what counts as a referential index given in (16) is adopted:

(16) X can carry a referential index only if it bears an argumental Theta role on some level of representation.

In A′-dependencies involving a *wh*-argument, both the trace and its antecedent satisfy this condition, while in the constructions containing an adjunct, neither do. In A-dependencies, the NP-trace, which does not exist at D-structure and is not an argument at S-structure, nor at LF, cannot carry a referential index. Rizzi then discusses a set of constructions which show that the lack of argument/adjunct asymmetries is not an exclusive property of A-chains. Both partial *wh*-movement in German and *wh*-extraction from the focus position of a cleft construction involve the construction of an A′-chain with no argumental theta-role. The only available connection in this case is again government, which obeys relativized minimality. Hence the sensitivity of these chains to negative and other weak islands.

Viviane Deprez develops a minimal (and minimalist) account of the *that*-t effect which, in her view, has not received a satisfactory account in recent theories of extraction. Under her approach, this effect stems from the interaction of ECP conjunctively defined with general principles of economy. Structural economy, which excludes radically empty positions, entails that tensed clauses in English (but not in French) can be categorially realized as IPs. Taken together, structural and derivational economy favour the complementizerless (17) over its counterpart with an overt complementizer (18), which both satisfy the ECP.

(17) Who do you believe [t left]?
(18) Who do you believe [t that [t left]]?

Complementizerless subject relatives [a man [Op [t left]]] are ungrammatical because the subject trace is antecedent-governed by the empty operator adjoined to IP, but not head-governed. Deprez also asks why the complementizer is obligatory in certain non-extraction contexts. Her solution involves a recourse to the denotational properties of the various complement-types. Sentential complements which denote a single actual event discharge their event position internally with the complementizer, rendering the projection of the CP system obligatory.

8. Minimizing freedom

Eric Reuland's contribution constitutes a category in itself. The necessity to 'minimize freedom' has been one of the driving forces behind the development of syntactic theory since the publication of *Aspects*. For example, one effect of Kayne's (1981) binary branching hypothesis was to eliminate one instance of counting from the grammar since no component would have to stipulate n-arity of branching. Reuland observes that the

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

theory of lexical categories still retains a numerical aspect: why there should be 4 and why precisely these 4? He shows that the feature [±N] can be reconstructed as [±D], where D is interpreted as 'can be closed by a Determiner' and that the feature [±V] can be reconstructed as [±S], where [−S] refers to the inability to license a Subject (more precisely the inability to allow the saturation of a theta-role by an external argument). The four lexical categories are thus reduced to two binary features 'where each feature represents a basic property of the combinatorial system underlying language' (321). Turning to Binding Theory, Reuland observes that local determinacy can only be satisfied by binding conditions if governors and subjects turn out to be irrelevant in the binding conditions. The theory developed in Reinhart & Reuland (1993) has the required property. The domain in which a simplex anaphor (a SE-anaphor) has to be bound is given by the I node to which it can adjoin without violating the conditions on head movement.

9. The relation of the lexicon to syntax

Other papers explore situations in which particular lexical choices directly determine specific syntactic behaviour and interpretive properties. The general hypothesis put forward by Christer Platzack is that words both function as atoms for the computational system and as parts of the mechanisms checking the interface levels. Swedish expressions like *falla i sömn* 'fall in sleep', *gå till anfall* 'go to attack', which Platzack labels Abstract Transitional Phrases (ATPs), have properties which are less restricted than the properties of idiomatic phrases with the same form. Although no stranding is possible and the complement of the verb cannot be *wh*-questioned, the noun may be modified by an adjective. From a minimalist point of view, it is more economical to assume that ATPs are introduced into the derivation as ordinary V + PP and that only at LF are they structurally like pure idioms. More precisely, the structure undergoes two operations on its way to LF. N incorporates into V – an incorporation forced with bare nouns which, being Ns, cannot be identified via Case marking (Baker 1988) and excluded with definite nouns because of the universal ban on incorporation from a functional head to a lexical one – P + N incorporates into V. Platzack shows that the first incorporation must be a substitution, with the result that every segment of P dominates N, and that the second must be adjunction, with the result that one segment of V does not dominate P + N. This analysis accounts for the fact that fronting of the whole PP is considerably better than the fronting of the bare noun. Platzack also offers a tentative explanation for why ATPs can contain a noun modified by an adjective.

Paolo Benincà & Cecilia Poletto claim that verbs' syntax and morphology are determined in some of their aspects by the thematic grid of a lexical entry.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

Studying the Italian verb *bisogna* 'it is necessary' which has a very impoverished morphological paradigm, they present evidence suggesting that the loss of forms in a verbal paradigm can be precisely determined by semantic properties. *Bisogna* has apparently no subject position and cannot have a clitic attached to it. It can only appear in the present, imperfect and future indicative, present and imperfect subjunctive and present conditional. The authors observe that the possible tenses are not marked for a specific aspectual feature and are compatible with an unspecified time localization. In order to formally represent these tense restrictions, they suggest that *bisogna* is a purely functional element, as modal morphemes are, generated directly in one of the heads made available by Cinque's (1993b) articulated functional structure of the sentence, the Root Modality which hosts subject-oriented adverbs in its specifier. The fact that the lower functional structure is not activated explains that all the tenses that are checked at a level lower than Root Modality are impossible, that the embedded CP is not a true argument and that the subject position is not accessible (the corresponding thematic position is inert). Benincà & Poletto further show that the idea that the restrictions on *bisogna* are related to its defective thematic structure is supported by diachronic evidence, dialectal comparison and evidence internal to Italian.

Marie-Thérèse Vinet examines the syntax of predicative structures in a language which, according to many, has no inflectional one, in particular no Agr category: Mandarin Chinese. Like Benincà & Poletto for *bisogna*, she concludes that the two forms involved, *shi* and *you*, which are both defective, are directly inserted into a functional head. *Shi* is used with DP predicates, never cooccurs with adjectival predicates, and cannot combine with any of the aspectual forms which are verbal affixes. This leads Vinet to conclude that *shi* itself corresponds to an aspectual head. The syntactic realization of copular predication in Chinese can be carried out through the LF-checking of the lexical features of A or V in Asp – the head of Chinese clauses if one adopts Cheng's (1991) view – or through the lexical realization of an aspectual head, namely *shi*. A nominal head, however, cannot raise to D, then to Asp, without violating Grimshaw's (1991) law that movement is only possible within extended projections. Whence the obligatory resort to *shi*. The existential verb in Mandarin is *you* (it is not immediately clear why Vinet chooses to translate it by 'have'). Contrary to *shi*, it can be combined with most of the aspectual affixes. The interesting fact is that predicate locative structures can also be realized with *shi* in sentences where the subject is locative. However, the meaning changes. Vinet states that '*shi* is indicative of the permanent nature of the object of concern, *you* tells whether there is anything' and she suggests that the interchangeability of *you* and *shi* in certain structures could be related to the presence in both forms of an inherently locative DP subject.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

10. ANAPHORS

The basic insight underlying Luigi Burzio's WEAK ANAPHORA PRINCIPLE (WAP) is that there is a complementarity between semantics and morphology in the expression of coreference, in the sense that extra morphological material is employed only to achieve what the inherent semantics does not. Coreferential elements classify according to a scale of morphological strength: 1. ∅; 2. clitic (Italian *si*); 3. non-clitic (*sé*); 4. argument-intensifier (*se-stesso*). Burzio claims that the binding properties of the complex forms bearing an intensifier adjunct like English *own*, French *même* Italian *stesso*…are adequately accounted for by supposing that the binding principles apply independently to each part and that intensifiers are local anaphors. The prediction is that the combinations pronoun-intensifier like French *lui-même* 'him-same', should be possible only in languages and structures in which pronouns can independently occur locally bound (cf. French *Jean rit de lui*, lit. 'Jean laughs about him'). The behaviour of reflexives in prepositional small clauses, in which the subject blocks anaphora (19a), but cannot function as an antecedent (19b), follows from the WAP once one observes that transitive prepositions are semantically irreflexive predicates.

(19) (a) Gianni$_i$ ha aizzato Maria contro di sé$_i$/*se-stessoi$_i$.
Gianni incited Maria against self sel-same.
'Gianni incited Maria against himself.'

(b) Gianni$_i$ ha aizzato Maria$_i$ contro di *séi$_i$/ se-stessai$_i$.
Gianni incited Maria against self self-same
'Gianni incited Maria against herself.'

Burzio successfully extends the same approach to self-possession (*John is *his/his own doctor*), where the WAP requires the use of the strong anaphor to express a semantically disfavored coreference, to inalienable possession (*Gianni si taglia i capelli* 'Gianni cuts his hair'/*Gianni apre gli occhi* 'Gianni opens his eyes'), where inherent reflexivity is expressed by the weakest anaphor 'zero', while a clitic appears in neutral contexts, to self-identity (*Gianni non è piú *sé/se-stesso* 'Gianni is no longer himself'), where the use of strong anaphora is again required by the semantic deviancy, to person-portrayal identity. In English, the morphologically complex reflexives are consistently treated as strong anaphors by the WAP – they are permitted in inherently irreflexive contexts and disallowed in inherently reflexive ones (cf. *The window broke* (**itself*), which can be analysed as involving true reflexivity, rather than simple unaccusativity). Burzio insists that the WAP should be taken to be independent of the binding theory proper, that selects between anaphors and pronouns, and claims that pronouns are not licensed by an independent principle B, but just as the 'elsewhere' case.

Carmen Dobrovie-Sorin argues that Romanian does not have nominative *se*. Constructions of the type *se doarme* (SE sleeps), *se munceste* (SE works)

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

are only apparent counterparts of Italian *si dorme*, *si lavora*: Romanian *se* cannot coexist with copula passives, nor cooccur with accusative clitics or with prepositional accusatives. While the Italian construction relies on nominative *si*, the Romanian one can only be analysed in terms of middle/passive accusative *se*. Dobrovie-Sorin proposes a theory of the middle/passive *si* unergatives that departs from most current views of the phenomenon in both Romance and Germanic languages and relies crucially on the anaphoric status of *se*, rather than on its passivizing properties. The possibility is left open that intransitives be compatible with middle-passive *se* (and also with copula passives) – French is a case in point. In Romanian, on the other hand, the ungrammaticality of copula passives with intransitives is due to an interpretive constraint which prevents cognate objects from being assigned an individual-type denotation. This analysis sheds a new light on Italian *si* itself: Cinque's (1988) data concerning the distribution of *si*+V unergative in Italian nonfinite clauses is reinterpreted in terms of a middle/passive accusative *si*. Cinque's distinction between +/−arg *si* thus appears to be identical to the Case distinction between accusative and nominative *si*.

11. Conclusion

Unquestionably, *Paths towards Universal Grammar* has fulfilled its double purpose of enhancing Richard Kayne's major intellectual achievement and outstanding contribution to the fields of Romance syntax and general linguistics and of enriching our knowledge of UG. The above review has made it clear, I hope, that there is indeed much to admire and also much to learn in this volume. Taken together, the contributions cover a large spectrum of original data. They also illustrate different theoretical choices within the Principles and Parameters model of generative grammar and the more recent Minimalist Program. To this extent, they testify to the exceptional vitality and diversity of current syntactic research and, at the same time, show that the paths towards UG are not unambiguous.

All the contributors in the volume would certainly agree that, in order to be explanatory, a syntactic analysis must provide a natural and elegant representation of the generalizations that emerge from the data and, through the confrontation of these generalizations with the interpretive grid of the theory, reduce the complexity of empirical phenomena to the interaction of a few simple and conceptually natural theoretical entities. As for the theory itself, it should certainly be minimal in the formal options and syntactic devices it makes available. All the generative frameworks which have succeeded one another since *Aspects* aimed at being minimalist in this sense.

However, with respect to the restrictive set of theoretical entities which a minimalist model should incorporate, no general consensus has yet been achieved, even on such central issues as the derivation of phrase markers, the

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

projection of functional categories, the nature of movement, the derivational or representational status of locality constraints. On these issues, two conceptions can be identified; both aim at 'minimizing freedom', but define quite different, even antithetic research programs: Kayne's Antisymmetry hypothesis and Chomsky's Bare Phrase Structure proposal. Let us sketch these two approaches briefly.

Kayne (1994) submits that phrase markers are projected freely, subject to constraints such as the LINEAR CORRESPONDANCE AXIOM, whose effects include that phrasal projections are exclusively binary branching and do not involve double adjunction and that no rightward movements nor right-adjunctions in the base are permitted. He further suggests that 'in cases where movement is called for, but where no contentful head is available, the moved phrase must become the specifier of a head lacking intrinsic content. It may be that this is what one means by Agr…' (1994: 30). Although it leaves open the question of what drives or motivates syntactic movements, his proposal can be viewed as an impressive and wide-ranging attempt to increase the restrictiveness of the theory of phrase structure, hence adding to its predictability, without reducing its flexibility.

In the system advocated by Chomsky (1993, 1995a, b), phrase markers are built up one node at a time by the operation Merge, which takes as input two phrase markers and yields a new phrase marker. This derivational mechanism renders radically empty positions impossible. Only when they are filled by Merge or Move can specifiers be created; but multiple Spec configurations are allowed. Chomsky also makes the radically minimalist claim that Tense is, along with C, the only conceptually necessary functional head in clausal domains. Contentless heads, like Agr, should be dispensed with. The phrase maker architecture is determined in part, not by independent phrase structure principles (such as restrictions on adjunction), but by the need to check the formal (morphological) features associated to functional categories, which attract words and phrases out of lexical projections. In fact, within the Bare Phrase Structure system, in which the distinction between categories and terminals disappear, only features, not the functional heads which host them, are syntactically relevant. This is why functional heads can only be adjoined to, not substituted into.

However, minimizing syntax (by reducing it to a morphological checking computational system) is not without cost. As observed by Culicover (1995), 'the empirical phenomena which do not conform to the most restrictive interpretation of what is computationally simple, are assumed to fall outside of the scope of the computational system, under PF or LF'. Reordering operations such as Heavy NP Shift and extraposition constructions are a case in point. More generally, the construction of a minimalist syntax, in which even the primitive principles and constraints governing derivations are submitted to a minimalist critique, is highly desirable on conceptual grounds, but minimizing syntax is not equivalent to minimizing grammar. The

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

assumption that inflectionally complex forms enter the derivation fully formed means that a full-fledged 'minimalist' theory of morphology, as well as of morphological features, is called for.[1] The requirement that all derivations be interpretable at the interfaces places much of the explanatory burden on the latter.[2]

We don't know at the moment whether the extremely restrictive theoretical assumptions and formal devices put forth in the Minimalist Program can be maintained in the face of empirical evidence, since many of the analyses developed within the Principles and Parameters framework have yet to be accommodated within this program. I feel however that a natural way to conclude this review is to ask whether partial answers to this question are provided by the articles collected in *Paths towards Universal Grammar*, although neither Chomsky (1995a, b) nor Kayne (1994) were available in print when these contributions were written.

First, it is not clear how the notion of economy relevant to exclude non-optimal derivations should be formalized, whether it should exclusively involve counting and 'evaluating' derivational steps or should also refer to the notions of words and phrases, as Emonds proposes. Several papers strongly suggest, however, that economy considerations also constrain the projection of functional categories and phrases themselves. In Deprez's view, the non-projection of a CP-layer in a subset of embedded clauses in English explains the absence of complementizer-trace effects. Haider's theory of co-projections amounts to the claim that, for the strings which admit a co-projection analysis, the unfolded structure behaves as the one which does not resort to functional categories. Emonds traces back this structural economy requirement to the way subcategorization may be fulfilled (cf. his Economy of Representation Principle). Finally, economy considerations also constrain the use of morphological and functional resources, which are idiosyncratic and vary from language to language (Burzio's Weak Anaphora Principle, Emonds's Economy of Derivation and Alternative Realization).

[1] Although the variable strength of these features plays a crucial role in the account of linguistic variation, no effort is made to provide an independent basis for the strong/weak divide (is there a correlation between morphological richness and syntactic strength?).

[2] This situation is not without analogy with that of the seventies, although, needless to say, many theoretical issues seem to have been definitively settled since then and the class of primitive principles has been drastically narrowed. At the time, the theoretical problem was to choose between grammars having a single transformational rule together with a large supply of language-particular filters (Chomsky's view) and grammars having language-particular transformations, in particular unbounded ones, and virtually no surface filters (Bresnan's view). The following discussion from Chomsky (1970: 185–186) is particularly illuminating: 'The proper balance between the various components of the grammar is an entirely empirical issue… It would be pure dogmatism to maintain, without empirical evidence, that the categorical component, or the lexicon, or the transformational component must be narrowly constrained by universal conditions, the variety and complexity of language being attributed to other components.'

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

Second, several articles in the volume provide empirical evidence supporting the existence of additional contentful heads at the left periphery of the clause (Zanuttini's Pol or Benincà & Polletto's Mod), which are clearly distinct from C (which is immediately above them) and from the highest inflectional heads AgrS and T (which they asymmetrically c-command). This evidence seems difficult to reconcile with Chomsky's (1995b) claim that T is the only conceptually necessary functional head in clausal domains. The evidence presented by Koster in favour of a Pred head points to the same conclusion (granting that Pred is distinct from the category which Chomsky (1995b) labels v and which has both functional and lexical characteristics).[3]

But no general consensus emerges concerning the status and the functions of contentless categories, Agr in particular. While Holmberg assumes that, in Scandinavian languages at least, agreement morphology should be viewed as a sub-component of the feature complexes that define T and other functional (contentful) heads, most authors take for granted that it should be represented as an autonomous functional head. Two articles, however, put forward new proposals concerning Agr. In his analysis of Valdôtain clitics, Roberts suggests that Agr-heads, which certainly define adjunction sites, can also be substituted into by clitics in some languages. In her study of Catalan presentational sentences, Rigau convincingly shows that the [number] and [person] features associated to Agr-heads should be kept distinct. Although she does not take any stand on this question, her observations could be taken to show that the relevant features are not properties of the same category. One possibility would be to postulate two distinct categories, AgrNumber and AgrPerson. Another one would be to assume that [person] is a specification attached to finite T and that the occurrence of the category labelled Agr is crucially tied up with the necessity to license the [number] specification, which, being a relational property, has no autonomous functional representation.

Finally, the minimalist characterization of syntax as a computational system whose exclusive function is to build phrase structure configurations via the interpretation in structural terms and the checking of the morphological properties of functional heads, seems to restrict the scope of this component excessively. First, morphological necessity cannot be the only driving force triggering movement operations. Some movements are prosodically triggered and, to the extent that they affect scope and binding relations, they must be assumed to belong to the core of syntax, not to the PF component (cf. Zubizarreta, Demonte). These phenomena can be naturally integrated into the Antisymmetry syntax (at least, if it can be shown that the Spanish constructions which Zubizarreta analyses in terms of

[3] v is the highest head in the VP-shell, the specifier of which is the Merger site of the argument subject of transitive and unergative predicates and which is endowed with a D-feature, attracting the direct object argument.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

rightward adjunction can be adequately reanalysed in terms of leftward movement). In Chomsky's view, they fall outside the scope of the computational system. The conclusion that all movements are not morphologically driven should not come as a surprise. Besides the inflectional features, a feature-based grammar must also include 'quantificational' features [Neg], [Focus], [Wh], associated to Neg, C or other heads in the left periphery of the clause, which trigger the movement of heads and phrases endowed with a quantificational force, mark their scope, and thus cannot be assumed to undergo the same fate as morphological L-related features, which are deleted when checked. The EPP-feature advocated by Chomsky is another case in point (see also Kiss's contribution). It indicates that even the features responsible for the formation of A-chains are not necessarily involved in the satisfaction of a morphological requirement. Like the quantificational features, the EPP-feature participates in the creation of a scope relation, except that, in this case, we are dealing with the scope of an argument, not with that of a quantified expression. More generally, the view that movement is a last resort operation, triggered by the necessity to satisfy the formal requirements of functional heads, does not imply that these requirements are uniformly morphological in nature, nor that checking, as defined by Chomsky, is the only relation features can enter into.

Other contributions present evidence which endangers the claim that movement, conceived as attraction on the part of the target, must exclusively benefit to the latter. Pollock convincingly shows that English inflected forms enter a checking relation at LF, while the bare ones (which also function as finite forms) do not. This result can be taken to indicate either that movement must (also) benefit to the moved element, or that the feature composition of functional heads is not given once and for all, even within a given clause-type, in a given language. Moreover, if the direct insertion of modal or auxiliary elements into the functional domain is possible (see Emonds, Benincà & Poletto, Vinet, and also Chomsky (1993)), it must be assumed that, in these cases at least, lower functional structure, if present, is inactive and need not be checked.

As observed by Culicover (1995), the minimalist enterprise is 'an implicit recognition that syntactic theory, as represented in works such as *Lectures on Government and Binding* (1981) and *Barriers* (1986) has substantially exceeded its limits'. However, the above considerations suggest that the minimalist feature-based conception of functional heads and movement is too restrictive, or that the appropriate restrictions should, or at least could, be captured in a different way.

REFERENCES

Baker, M. (1988). *Incorporation: a theory of grammatical function changing*. Chicago: The University of Chicago Press.

Belletti, A. (1990). *Generalized verb movement*. Torino: Rosenberg & Sellier.

Cheng, L. (1991). On the typology of *wh*-questions. *MIT Working Papers in Linguistics*.

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
Chomsky, N. (1970). Remarks on nominalization. In Jacobs, R. & Rosenbaum, P. (eds.). *Readings in English transformational grammar*. Waltham, MA: Ginn & Co. 184–221.
Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris Publications.
Chomsky, N. (1986). *Barriers*. Cambridge, MA: MIT Press.
Chomsky, N. (1991). Some notes on economy of derivation and representation. In Freidin, R. (ed.). *Principles and parameters in comparative grammar*. Cambridge, MA: MIT Press. 417–454. [Also in Chomsky (1995b). 129–166.]
Chomsky, N. (1993). A minimalist program for linguistic theory. In Hale, K. & Keyser, S. J. (eds.). *The view from building 20: essays in linguistics in honour of Sylvain Bromberger*. Cambridge, MA: MIT Press. 1–52. [Also in Chomsky (1995b). 167–217.]
Chomsky, N. (1995a). Bare phrase structure. In Webelhuth, G. (ed.). *Government and binding theory and the minimalist program*. Oxford: Blackwell. 383–439.
Chomsky, N. (1995b). *The minimalist program*. Cambridge, MA: MIT Press.
Cinque, G. (1988). On *si* constructions and the theory of ARB. *Linguistic Inquiry* **19**. 521–581.
Cinque, G. (1993a). A null theory of phrase and compound stress. *Linguistic Inquiry* **24**. 239–297.
Cinque, G. (1993b). La struttura funzionale della frase romanza. Class lectures, University of Venice.
Culicover, P. (1995). The minimalist impulse. Ms., The Ohio State University.
de Hoop, H. (1992). *Case configuration and noun phrase interpretation*. Ph.D. dissertation, University of Groningen.
Evers, A. (1975). *The transformational cycle in Dutch and German*. Ph.D. dissertation, University of Utrecht.
Grimshaw, J. (1991). Extended projections. Ms., Brandeis University.
Guéron, J. & Hoekstra, T. (1988). T-chains and the constituent structure of auxiliaries. In Cinque, G. et al. (eds.) *Constituent structure*. Dordrecht: Foris.
Haider, H. (1992). Branching and discharge. Ms., Universität Stuttgart.
Kayne, R. (1986). Participles, agreement and auxiliaries, *se/si* and PRO. Paper presented at the Princeton Colloquium on Comparative Grammar.
Kayne, R. (1989). Facets of Romance past participle agreement. In Benincà, P. (ed.). *Dialect variation and the theory of grammar*. Dordrecht: Foris Publications. 85–103.
Kayne, R. (1991). Romance clitics, verb movement and PRO. *Linguistic Inquiry* **22**. 647–686.
Kayne, R. (1993). Toward a modular theory of auxiliary selection. *Studia Linguistica* **47**. 3–31.
Kayne, R. (1994). *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
Moro, A. (1991). The raising of predicates: copula, expletives and existence. *MIT Working Papers in Linguistics* **15**. 119–181.
Pollock, J.-Y. (1989). Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* **20**. 365–424.
Reinhart, T. & Reuland, E. (1993). Reflexivity. *Linguistic Inquiry* **24**. 657–720.
Riemsdijk, H. C. van. (1984). On pied-piped infinitives in German relative clauses. In Toman, J. (ed). *Studies in German grammar*. Dordrecht: Foris. 165–92.
Rizzi, L. (1990). *Relativized minimality*. Cambridge, MA: MIT Press.
Rizzi, L. & Roberts, I. (1989). Complex inversion in French. *Probus* **1**. 1–30.

Author's address: *Département des Sciences du Langage*,
Université Paris-8,
93526. Saint-Denis,
France.
E-mail:106347.3220@compuserve.com

https://doi.org/10.1017/S0022226797006555 Published online by Cambridge University Press