

- Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language & Linguistic Theory* 22.4, 811–877.
- Müller, Gereon. 2005. Pro-drop and impoverishment. In Patrick Brandt & Eric Fuss (eds.), *Form, structure and grammar: A Festschrift presented to Günther Grewendorf on occasion of his 60th birthday*, 93–115. Berlin: Akademie Verlag.
- Newmeyer, Frederick J. 2004. Against a parameter-setting approach to language variation. In Pierre Pica (ed.), *Linguistic variation yearbook* 4, 181–234. Amsterdam & Philadelphia, PA: John Benjamins.
- Perlmutter, David M. 1971. *Deep and surface constraints in syntax*. New York: Holt, Rinehart & Winston.
- Rizzi, Luigi. 1997. On the fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar*, 281–337. Dordrecht: Kluwer.
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**John Bowers**, *Arguments as relations* (Linguistic Inquiry Monographs 58). Cambridge, MA: MIT Press, 2010. Pp. xii + 239.

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In *Arguments as relations*, John Bowers argues for a set of universal functional projections ordered according to the ‘Universal Order of Merge’ (UOM). Every argument, he claims, is merged in the specifier of one of these functional projections. One striking aspect of this proposal is that, as a result of the UOM, Ag(ent)-arguments are hierarchically lower than Th(eme)-arguments, which themselves are hierarchically lower than Aff(ectee)-arguments. The result is the exact opposite hierarchical structure of what has been assumed in the literature for over thirty years. This ‘inverted’ structure in combination with standard assumptions regarding Agree and Case assignment seamlessly derives an array of constructions from English, Russian, Japanese, and Chichewa, among others. One technical novelty is the necessary introduction of two types of EPP features, a vital move for Bowers for the convergence of transitive derivations and crucial for his rather nice account of reciprocal binding in one particular set of constructions. Although questions concerning the difference between these two types of EPP features remain, Bowers’s demonstration of the surprising scale of coverage of his inverted hierarchy intrigues one to consider seriously the implications of his approach.

In what follows, I first provide a summary of the main content of the six chapters, after which I point out how questions raised by assuming two types of EPP, as instantiated in this monograph, leads to a conceptual quandary. (Given length restrictions, I cannot give justice to the range of

construction types from the various languages that Bowers discusses in detail and offers an account for within his approach. Moreover, I do not discuss the two appendices, the first of which provides an event-based compositional semantics for his derivations and the second of which discusses first application of Merge.)

In Chapter 1, ‘Introduction and overview’, Bowers offers a dichotomy between PRIMARY and SECONDARY arguments. The former group consists of Ag(ent), Th(eme) and Aff(ectee), while the latter consists of Instr(ument), Ben(efactive), Source, Goal, and others. The UOM argued for in this monograph is as follows:

Ag < Instr < Ben < Goal < Source < Th < Aff < Voi(ce) < Pr(education) < T(ense)

The argument categories to the left merge before those to the right and are therefore structurally lower.

Chapter 1 also spells out general architectural assumptions that are integral to Bowers’s approach. Crucial is the need for two types of EPP, one associated with phi-features on a probe involved in Agree (phi + EPP), and another ‘pure’ EPP, not associated with Agree. This distinction plays a role in the calculation of his Relativized Phase Impenetrability Condition (RPIC). The RPIC is based on Chomsky’s (2001) Phase Impenetrability Condition but relativized to the type of probe (that is, phi + EPP vs. pure EPP), such that once an Agree relation with a probe P is established, a probe P’ merged later in the derivation cannot Agree with an element OF THE SAME TYPE in the domain of P.

As an illustration consider Bowers’s derivation of *John threw the ball to Mary*, whose initial (simplified) structure is as in (1).

(1) [TP T [PrD Pr [VoiP Voi [AffP [to Mary] Aff [ThP the ball Th [AgP John Ag [√throw]]]]]]]]

*Mary*, getting Case as part of the Prepositional Phrase (PP), is inactive and therefore does not intervene in other Agree relations. Consequently, *the ball* is able to Agree with Voi, which bears phi + EPP; it values and deletes Voi’s phi-features, receives accusative Case, and moves to SpecVoiP to satisfy its EPP. Given the RPIC, once the Agree relation has taken place, T, which also bears phi + EPP, can no longer probe into the domain of Voi, in which case, *John* cannot get Case. However, Bowers also assumes that Pr has a pure EPP feature (perhaps universally). Since pure EPP is of a distinct type from phi + EPP, *John* can move to SpecPrP to satisfy said pure EPP. From there, nothing impedes Agree with T and movement to SpecTP. The verb root raises via head adjunction as far as Pr, checking a(rgument)-selection features along the way.

Another crucial assumption made, following Collins (1997) and others, is that the element that moves to a specifier of a category to satisfy

$\phi$  + EPP need not be the same phrase that Agrees with the probe to value and delete the  $\phi$ -features. This is key for his derivation of locative inversion. Consider the initial structure of *A genie appeared on the table* given in (2).

(2) [TP T [PrD Pr [ThP *a genie* Th [LocP *on the table* Loc [ $\sqrt{\text{appear}}$ ]]]]

Since *appear* is intransitive (that is, there is no Voi), *a genie* Agrees with T, gets nominative Case and moves to SpecTP (via SpecPrP) to satisfy its EPP feature. An alternative derivation produces *On the table appeared a genie*. Since Pr has a pure EPP, *on the table* can move to SpecPrP. The only active Determiner Phrase (DP) is still *a genie*; thus, it Agrees with T and gets nominative Case. *On the table* then moves to SpecTP to satisfy its EPP feature.

In Chapter 2, 'Passive', Bowers discusses the passive construction in detail. One appealing aspect of his approach is that each argument in a passive construction is merged in the same functional projection as in the corresponding active construction. More concretely, in both *John threw the ball to Mary* and *The ball was thrown to Mary by John*, both *John* and *by John* are merged in SpecAgP. In the active version, Ag c-selects a DP with unvalued Case; in the passive, Ag c-selects a PP. In the passive, Voi is [-active] and bears only pure EPP. *The ball* Agrees with T and moves to SpecTP, via SpecVoiP and SpecPrP. *John* is Case-marked as part of the *by*-phrase. Substantial empirical support for the hierarchically low position (lower than the Th-argument) of the *by*-phrase is provided by data involving Condition C, negative polarity items, reciprocal binding facts, and word order markedness tests. Bowers motivates the inclusion of a Part(icipal) Phrase, and extends his account to predicate adjectives and predicate nominals.

He also undertakes a review of previous accounts of passive from Jaeggli (1986) to Collins (2005). It is pointed out that the combined effect of previous passive-related operations (as, for example, theta-role absorption, and theta-role transfer) does nothing more than offer a non-transformational mechanism of lowering the external argument, which on Bowers's account is unnecessary, since the external argument is merged low in the structure to begin with. Bowers further provides numerous arguments against Collins's (2005) 'smuggling approach' to passives.

The thrust of Chapter 3, 'Affectee arguments', is to explore the argument relation of Aff. Bowers first claims that the prepositional dative (as in *John threw the ball to Mary*) and the double object construction (as in *John threw Mary the ball*) are surface variants of a common underlying form in which both *to Mary* in the former and *Mary* in the latter are merged in SpecAffP. Like Ag, Aff can select either a DP with unvalued Case or a PP.

Furthermore the author claims that there is a range of subtypes of Affectees: Possessive, Goal, Source, Benefactive, and Experiencer. Several

of these Affectee types are distinguished from other similar arguments types: Aff<sub>GOAL</sub> from Goal, Aff<sub>BEN</sub> from Benefactive and Aff<sub>SOURCE</sub> from Source. A key property of an Affectee is that it is prototypically animate and is frequently marked with a preposition or receives inherent case. Japanese and Russian are shown to provide empirical support for his proposal.

Finally, Bowers examines a telling pattern of reciprocal binding facts from active and passive prepositional dative and double object constructions that provides remarkable support for his UOM and follows directly from assuming two distinct types of EPP features.

In Chapter 4, 'Grammatical function changing morphology', Bowers first addresses the applicative constructions handled in Baker (1988) by preposition incorporation (PI). The difference between PI in English and Chichewa, it is claimed, comes down to the presence or absence of particular morphology on the head of Aff. In English, regardless of whether or not the argument in SpecAffP is a DP with structural Case or a PP, no morphology appears on Aff. In Chichewa, when it is a DP with structural Case, there is usually a morpheme *-ik-* that accompanies it, whereas a DP marked with a preposition takes a phonetically null Aff. The former derivation is parallel to the English double object construction, and the latter to the English prepositional dative construction. Bowers proceeds to show how this accounts for why applicative objects behave like real objects and why only one applicative object per clause is allowed. Bowers also discusses how noun incorporation and antipassives can be handled in this system and provides a typology of function-changing morphology.

The book also addresses causativization. The causative suffix is argued to be a piece of verbal morphology introduced by the argument category Cau(se), which is positioned structurally lower than Ag. Given the probe in T and a probe in Voi, Bowers's analysis of causatives predicts the presence of causative unergatives, illustrated in English by *Mary burped the baby*. In transitive causatives, however, one of the arguments must have inherent Case. This gives rise to two types of causatives for Bowers depending on which argument receives inherent Case. The two types are attested in Chichewa A and Chichewa B. He then illustrates interesting interactions between causatives, applicatives and passives. Finally, he offers an account of periphrastic causatives in English, the *faire*-construction in French, Swahili double causatives, and Hiaki causatives.

In Chapter 5, 'Derived nominals', Bowers argues that the same basic argument categories appear in both sentential and nominal structures, the main difference being located in the higher functional categories and the Case-marking properties of nominals. Concretely, nominals require the category D(eterminer), instead of T(ense), and in place of PrP, Bowers employs Nom(inative). Derived nominals do not project Voi, thus they cannot mark accusative Case. As in sentences, Ag and Th may c-select a DP with unvalued Case and Ag may c-select a PP headed by *by*. For nominals such as *the sale of*

*the book to Mary by John*, in which the Th-argument appears to the left of the Aff-argument, Bowers proposes an argument category  $P(a)rt(it)v(e)$  between NomP and AffP, to which the Th-argument moves. He then discusses the different Affectee types (Source, Goal, Benefactive, Possessive and Experiencer) within the nominal system.

It is claimed that the head of each of the primary argument categories in derived non-event nominals in English is spelled out morphologically, much like these heads are in the verbal domain in languages other than English, as discussed in Chapter 4. Thus, English *-er/-or*, as in *runner* and *consignor*, is a light noun that satisfies the a-selection requirements of Ag. The suffix *-ment*, as in *consignment*, although it can appear with eventive nouns, can be considered a light noun that can satisfy the a-selection requirements of Th. The suffix *-ee*, on one of various uses, as in *addressee*, is the spell-out of the argument category Aff. In contrast, Bowers assumes that event nominal suffixes are the morphological realization of the category Nom. Finally in this chapter, he offers an account of compounding in terms of head adjunction to Th.

In chapter 6, ‘Conclusion’, Bowers briefly recaps the main points of the monograph.

Bowers’s book handles an impressive range of constructions from distinct language families in a seamless manner, crucially relying on the assumption of two distinct EPP features ( $\phi$ +EPP and pure EPP) to maintain a hold on the data. As discussed above, this assumption is minimally vital for transitive derivations to go through. It arises directly from the claim that the Ag-argument is structurally lower than the Th-argument, and is essential for sustaining Bowers’s central thesis, namely the UOM.

Although a necessary technical assumption for Bowers, one wonders how different these two types of EPP features are in his system. For one, the same category of elements (DP, PP, expletive *there*) can satisfy either of them, suggesting that they share some fundamental property; both are, after all, EPP features. Nevertheless, their difference in type must be substantial; otherwise, transitive derivations could not hope to converge, since there would be RPIC violations. Since eliminating the  $\phi$ -features from  $\phi$ +EPP results in pure EPP (which is crucial for the account of the reciprocal binding facts of passive and active prepositional dative and double object constructions from Chapter 3), the source of the difference in EPP type appears to be located in the mechanism involved in the bundling of the  $\phi$ -features with pure EPP. If this is the case, it is natural to ask what that mechanism is and where it is located. If it is located in the syntax, this would appear to violate the No Tampering Condition (Chomsky 2005). If it is located in the lexicon, this would appear to require a lexical operation for features akin to Merge. Under Minimalism, either option is less than ideal, leaving us with a conceptual quandary, albeit against the backdrop of a formidable and well-grounded approach to ‘inverted’ argument structure.

## REVIEWS

## REFERENCES

- Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago, IL: University of Chicago Press.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2005. Three factors in language design. *Linguistic Inquiry* 36.1, 1–22.
- Collins, Chris. 1997. *Local economy*. Cambridge, MA: MIT Press.
- Collins, Chris. 2005. A smuggling approach to the passive in English. *Syntax* 8.2, 81–120.
- Jaeggli, Osvaldo A. 1986. Passive. *Linguistic Inquiry* 17.4, 587–622.
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**Barbara Citko**, *Symmetry in syntax: Merge, Move and labels* (Cambridge Studies in Linguistics 129). Cambridge: Cambridge University Press, 2011. Pp. xii + 276.

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This is a monograph in Minimalist syntax. It brings readers' attention to those aspects of the Minimalist sentence-building procedure that can conceivably be said to involve some notion of symmetry, though symmetry may be realized in different ways in different parts of that procedure.

Considerations of (a)symmetry in syntax have long been a point of interest in mainstream generative syntactic theory, receiving strong impetus from the influential work of Kayne (1994), whose basic statement, the Linear Correspondence Axiom (LCA), proposes a direct mapping between syntactic structure and linear precedence. In Kayne's theory, a symmetric relation of c-command between two nodes in a syntactic tree results in contradictory instructions concerning linearization of terminals under those nodes (the terminals would end up both preceding and following each other) and is hence to be avoided. In order to be successfully linearized, two nodes must instead stand in an asymmetric c-command relation. It is thus with Kayne's proposal that symmetry-related concerns were first accorded prominent status in modern approaches to generative syntax.

Kayne's LCA clearly demonstrates that if we are to consider symmetry in its most rigorous, formal sense, we need to adopt a mathematical conception of symmetry and understand it as a property of relations (in this case, c-command). An approach to symmetry not couched in strictly relational terms tends to bring about a more informal, intuitive sense of symmetry with no single across-the-board definition thereof. The latter, intuitive approach