

Unifying predicate cleft constructions

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1. The problem. Like many West African languages, Vata, a Niger Congo language of the Kru family, has a particular verbal focus construction, sometimes referred to as the *predicate cleft* construction. This construction involves contrastive focus on V or a predicate: a V is understood as contrasting with some verb implicit in the discourse: ¹

(1) **pā** ñ ká mē **pá** ā (Vata) (Koopman, 1984)

throw you FUT it throw Q

‘Are you going to THROW it’ (*throw* as opposed to *roll*)

(2) **pā** í kǎ mé’ **pá**

throw I will it throw

‘I will throw it’

The following properties characterize the contrastive verb focus construction in Vata.

¹This particular way of expressing contrastive focus on V is not wide spread typologically. It is found in many West African languages of the Kwa family (for instance Yoruba, Fongbe, Ewe, Abe) and the Kru families (Vata, Gbadi, ...), in Caribbean Creoles (Saramaccan, Sranan, Haitian, Jamaican...). The Vata data are based on my fieldwork, discussed and analyzed in Koopman (1984) and Koopman and Sportiche (1986).

² The Nweh data are based on Nkemnji (1995) and data gathered during the UCLA fieldmethods class on Nweh, UCLA spring and winter quarter, 1996. Thanks go to the participants of the class, Michael Nkemnji, Tonia Androutsopoulou, Edward Garrett, Matt Gordon, Catherine Crosswhite, Javier Gutierrez, Peter Hallman, Chai-Shune Hsu, and Matt Pearson, as well as to Manuel Espanol-Echevarría, Anna Szabolcsi, Ed Stabler, Andrew Simpson, and Dominique Sportiche. A computerized data base on Nweh is available on request. Working papers are in preparation.

As in Vata, the clause contains two copies of the same V. The *leftmost* verb in Nweh has the form and distribution characteristic of Vs in clauses without verbal focusing. The *rightmost* verb carries particular verbal morphology (a tonal prefix and suffix and a segmental suffix).³

Apart from linear order, there is a further difference between Vata and Nweh which concerns cooccurrence restrictions of wh-phrases and focused verbs. In Vata, a focused V cannot cooccur with any wh-phrase, regardless of whether the wh-phrase is a subject, an object, or an adjunct (Koopman 1984):

- (5) a. *pā àlɔ ò ká mǝ́ **pá** lá (Vata)
 throw who he-R FUT it throw wh
- b. * àlɔ pā ò ká mǝ́ **pá** la ~ (Vata)
 who throw he-R FUT it throw wh

In Nweh subject wh-phrases can cooccur with predicate cleft (6), but non subject wh-phrases cannot (7):

- (6) àwɔ kɛ̀? ñjuɔ bé juó lé
 who P1 n-buy fufu buy Q
 ‘Who BOUGHT the fufu?’ (as opposed to who sold the fufu)

³Because of space limitations, I will not be able to go into the dependency between the two verbs in Nweh. It is difficult to show that the relation can be non-local, since many clause types can contain focus. Straightforward island violations are observed for subject islands and purposive islands.

- (7) *àtèm kè/ òjuò kò jùò lé
Atem P1 n-buy what buy Q
'What did Atem BUY' (as opposed to sell)

The data above raise the questions that I will try to answer in this paper:

- (8) How should one account for the difference in linear order?
(9) How should one account for the different cooccurrence restrictions of focused verb and wh-phrases.

I will present an analysis of the predicate cleft construction, and argue for an optimally simple analysis of the crosslinguistic variation which derives both the differences in word order and the differences in cooccurrence restrictions from a common underlying structure.

2. Theoretical assumptions. The theoretical assumptions below are 'minimalist' in spirit, but differ in the general shape of the theory. The overall picture is closest to the work of Sportiche 1993, Kayne 1994, Rizzi 1995, Cinque 1996.

- Syntactic structures are Binary Branching structures, obeying X-bar theory. Whether the properties of X-bar theory can be derived (Kayne, 1994, Chomsky, 1995) is of no concern to the present paper.
- Each feature projects. This is what Sportiche (1996) calls the 'atomization' of syntactic structures. The one-projection-per-feature theory is a logical continuation of work in the eighties on the architecture of clauses, DPs, APs and PPs.
- All languages are underlyingly identical (Universal Base Hypothesis).

- There is no head initial head final parameter: all languages are Spec head complement underlyingly (Kayne, 1994). For the purposes of this paper it is sufficient that there are no underlyingly mixed languages.
- There is no crosslinguistic difference in hierarchical structure (Sportiche 1993 1995, Cinque 1996, Koopman, 1996). Language variation cannot be attributed to different hierarchical locations of projections associated with the same semantic interpretation. This rules out analyzing the difference between Vata and Nweh in terms of a different location of Focus (say high focus versus low focus).
- There is no Procrastination: everything must move overtly. Crosslinguistic differences do not derive by overt or covert movement, but by movement of different sized constituents (see Koopman, 1996, for more discussion as well as the present paper). Movement (copy and deletion) is of usual kind:
 - head movement (left adjunction only, no base generated morphology)
 - XP movement (leftward only to designated Spec positions, no adjunctions).

It is important to keep in mind that *there is much more XP movement (pied-piping)* than we are used to in standard analyses of say English, with big parts of sentences, and sentences themselves moving around (Sportiche 1993, Koopman 1995, 1996, Kayne 1994, Nkemnji 1995). Much of this pied-piping is transparent in African languages both within DPs (final determiners, quantifiers, demonstratives etc) and within the clause (final negation, final question particles) (see in particular Nkemnji 1995).

- Movement obeys locality. Head movement obeys the Head Movement Constraint, and XP movement can only reach a local Spec. Head movement extends the domain of movement, and brings the next local Spec

in the local domain (the Head Constraint of Van Riemsdijk 1978, The Government Corollary of Baker 1988, Equidistance of Chomsky 1991). Locality is ‘wired-in’, and not subject to Economy.

Movement takes place for licensing purposes, either for the familiar morphological reasons, or for semantic reasons (scope). In addition, I assume that movement can be forced because of a principle that I have called the *PPA (Principle of Projection Activation)* (Koopman 1996))

(10) Principle of Projection Activation (Koopman 1996) (PPA)

A Projection is interpretable iff it is associated with lexical material at some stage in the derivation.

The PPA prevents representations with truly empty projections (where neither Spec, nor head contains a lexical item or a trace) and forces movement. A translation of the PPA into the standard Minimalist terminology comes close to

(11):

(11) functional heads are strong.

- Overt material must be linearized. I assume that the distribution of overt lexical items over these huge universal structures is determined by some version of the *LCA*

(Linear Correspondence Axiom (Kayne 1994)). In Koopman, 1996, I modify the LCA and show that this modification yields the doubly filled C filter⁴.

(12) Modified LCA has as consequence that no Spec and head position can simultaneously contain overt lexical material.

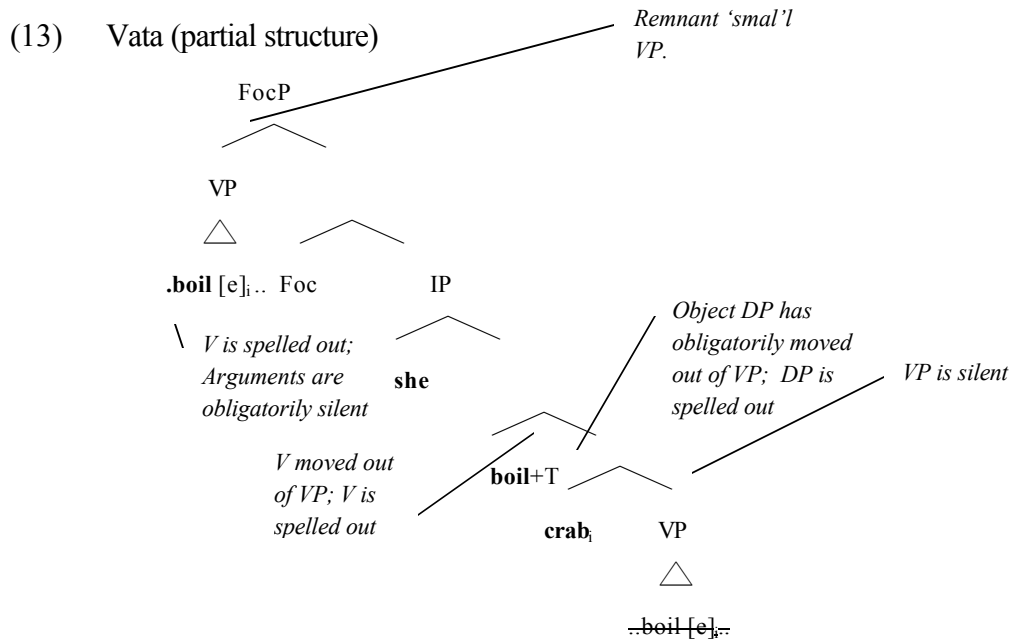
3. The analysis of predicate cleft. The verbal focus construction in Vata and Nweh receives the same contrastive focus interpretation (which Larson and Lefebvre (1991) analyze as quantification of the event). This construction never yields an emphatic reading, (*he DID want to..* as opposed to *he did NOT want to...*), and cannot be used with individual level predicates. Since the focused verb occurs in a particular position in the clause, I will assume that it is ‘associated’(in a sense to be made precise below) with the Focus Projection (FocP). Since the same semantic interpretation arises, I will assume that it is associated with the same FocP in both Vata and Nweh.

3.1. Predicate cleft in Vata. In Vata, the focused V appears at the left edge of the sentence, pointing to a head initial FocP (FocP>IP). The focused verb is

⁴ Maria Rita Manzini (personal communication) points out that the same conclusion can be reached in a particular version of the Minimalist Program: if each feature projects, then each projection will have exactly one feature to be checked. This can be achieved either by head movement or by XP movement. This might not be sufficient however. There are configurations with an overt head, where some constituent must still move to the Spec of that projection. Final question particles for example, are overt, but still trigger pied-piping of their complement. At the point of linearization, the projection no longer contains lexical material in both Spec and head position. One could say alternatively that the pied-piping is triggered to satisfy the features of yet another projection.

‘associated’ with the FocP, which implies that the focused verb is either in the Spec position of the FocP, or in the head position. In Koopman 1984, I argued that the focused verb moved to COMP via head movement (at that point basically the only available analysis). I called this type of head movement the wh-type of head movement (A’ head movement), because it behaved like phrasal A’ movement, and not like V to I movement which I called the A type head movement. With the subsequent development of the ‘middle’ field, an XP analysis of the predicate cleft construction has become feasible and desirable: instead of head movement, predicate cleft involves XP movement of a ‘small’ VP containing nothing but V to Spec, FocP. This analysis immediately accounts for the A’ properties of the construction: the predicate cleft construction patterns with XP movement, because it *is* XP movement. An XP analysis of predicate cleft makes the distinction between two types of head movement unnecessary, a welcome result. Finally, the XP analysis finds empirical support: some adverbs and aspectual markers may optionally accompany the focused V (Koopman 1984). There is no evidence that these should be analyzed as forming a complex head with the focused V. Since arguments and small clause predicates may never accompany the focused V, it must be the case that all arguments and complex predicates *must* obligatorily vacate the VP⁵. As I argue elsewhere on independent grounds, arguments and predicates must always be licensed in specific landing site positions outside of the minimal VP. The following annotated tree illustrates the derivation for Vata (English words are used for convenience).

⁵The verbal focus construction thus represents a case of *remnant* movement (cf. Den Besten and Webelhuth 1990), i.e. a case in which extraction out of a constituent is followed by subsequent movement of that constituent to some higher position.



The resulting sentence contains two overt copies of the same V, each carrying different morphology. This is an old and well known problem of this construction that requires a new explanation. Under a head movement analysis, as in Koopman 1984, it was the spell-out of the V in the clause that required an explanation. Under a remnant movement analysis, it must be explained why the focused verb cannot be silent. Let us briefly consider the 'spell-out' problem taking into account the hierarchical relations. The V within the VP does not c-command the V in I, and therefore does not form a V chain with it. The V within the clause is thus spelled out for the same reason any V in the head of a chain position is. What is unexplained is why the focused V cannot be silent. The V moves outside of the VP to get tense morphology, just as arguments move out of the VP, prior to movement of the VP to Spec FocP. The V must be spelled out within the VP, (and within IP) but the copies of the arguments that are contained in the preposed VP cannot be spelled out and can only be spelled out in the IP. I will assume that spell out of V is forced by recoverability (after all, if the focused verb were silent, nothing would signal verbal focusing), and that spelling out of arguments is prohibited in the

absence of a local licenser. The morphology associated with the verbal focus plays a crucial role in that it makes the spell out of the focused verb possible.

3.2. Predicate cleft in Nweh. Vata and Nweh have the same verbal focus construction, with the same meaning, and therefore involve the same underlying hierarchical structure. The languages differ however as to the position in which the clefted predicate (=small VP) appears. In Vata it surfaces at the left edge of the sentence, pointing to a hierarchical order FocP>IP, in Nweh it surfaces somewhere toward the right edge. This is depicted in (14), which also includes information about the morphological structure of the clefted predicate:

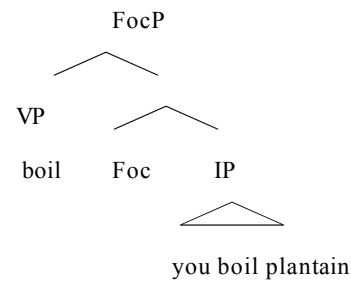
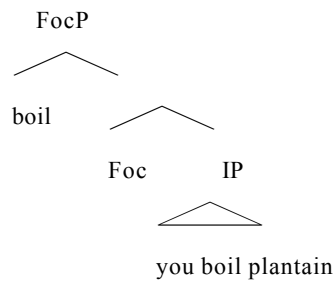
- (14) *Vata*: [V+tone] DP T ...V₁... (Q)
V-focus morphology *V₁*
- Nweh* DP T Vf DP... [focus tone+ V +segment] (Q)
V₁ [*focus morphology* - *V-focus morphology*]

The FocP in Nweh cannot be *underlyingly* head final, because of the assumption that there are no underlyingly head final languages (see section 0). The surface order in Nweh must therefore be derived by some leftward movement. At the surface it looks as if Nweh is using a low FocP, and Vata a high FocP. However, since by assumption there is no crosslinguistic difference in hierarchical order (this is really a ‘minimalist’ assumption) and since the construction in Nweh and Vata yield the same interpretations, FocP must be higher than IP in Nweh as well. Thus:

(15)

Vata

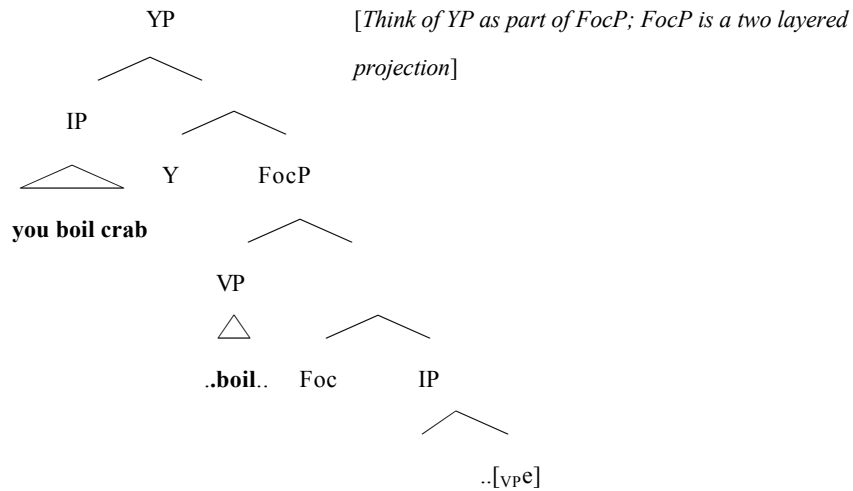
Nweh (yields wrong order)



+IP moves around focused VP

IP movement around the focused VP in Nweh raises the question of the landing site for IP. IP cannot land in Spec, FocP, because it hosts the clefted VP. Since it precedes the clefted V, it must be in the Spec of some higher position, YP. YP itself must be lower than Q, because the entire complement of Q precedes Q and Q scopes over FocP. Hence $Q > Y > \text{Foc}$. Although I will continue to label this projection YP, it is probably part of the focus projection, which should thus be viewed as a two layered projection. The YP possibly plays a role in pseudocleft constructions: *what John boiled is a crab*. The predicate cleft construction in Vata would be comparable to a cleft construction; the predicate cleft construction in Nweh to a pseudocleft construction.

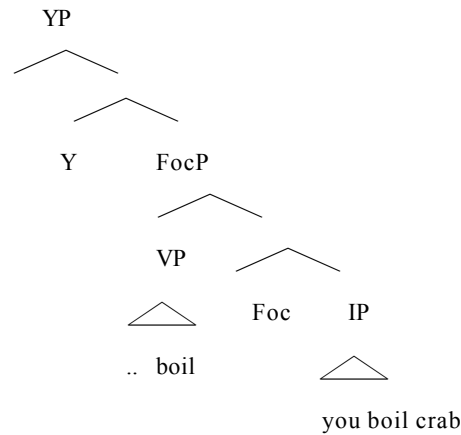
(16) *Nweh*: IP moves to Spec, YP



The movement of IP to Spec, FocP obeys locality. If Foc moves to Y both Spec, FocP and Spec, YP are equidistant to IP. Empirical evidence for Foc to Y head movement consists of a low tone preceding the focus constituent. Thus, Spec, YP and Spec FocP are ‘active’ in Nweh.

3.3. Crosslinguistic variation involving YP. If there is a YP above FocP in Nweh, this projection must be present in Vata as well (there is no crosslinguistic variation in structure, see section 0). Since the PPA requires that all projections be activated by lexical material (i.e. all functional projections are strong) the question arises how the YP is licensed in Vata. There is no indication of any head preceding the focused verb in Vata. It must therefore be the case that the Spec of YP is filled. I assume that the entire FocP moves to Spec, YP in Vata, thus giving the appearance of the head initial character of the FocP.

(17)

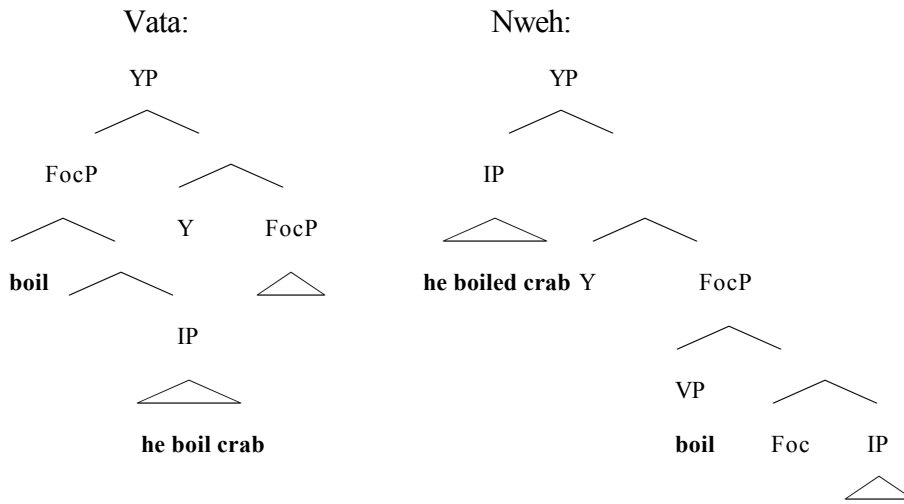


In both Vata and Nweh, Spec, YP contains a constituent, but the size of this constituent varies:

- (18) in Vata: FocP is in Spec, YP
 in Nweh: IP is in Spec, YP

The difference between Vata and Nweh is not a structural difference, nor a difference involving head initial/head final character of a particular head, nor a difference involving covert versus overt movement. *The difference lies in the size of the constituent that occupies YP*, with the entire FocP in YP Vata, and the IP (the complement of Foc) in Nweh. This is depicted in the following structure:

- (19) Derived structures in Vata and Nweh: snapshot of YP.



It is easy to see that this analysis yields the different linear orders of Vata and Nweh from a common structure. I show in the next section that it does more: the incompatibility of wh-phrases and predicate cleft in Vata, and the compatibility of subject wh and predicate cleft in Nweh fall out from the derived structures in (19).

4. Deriving cooccurrence restrictions from necessary structural properties. Predicate cleft and wh-phrases are always incompatible in Vata. In Nweh, subject wh-phrases can cooccur with predicate cleft, but no other wh-phrases can. The incompatibility of focused verbs and wh-phrases in Vata was accounted for quite simply in earlier versions of the theory with a single landing site position for A' moved elements (COMP). Complementary distribution followed from competition for the same landing site. This solution obviously cannot work for Nweh since the cooccurrence of wh-phrases and predicate cleft is configurationally determined. Intuitively speaking, subject wh-phrases are able to reach the wh-position, but object wh-phrases are not, and this is precisely what the structures give us, as I will show below.

In the one projection per feature theory, these cooccurrence restrictions must be derived in a different way. For a similar problem arising in Italian, Rizzi 1995

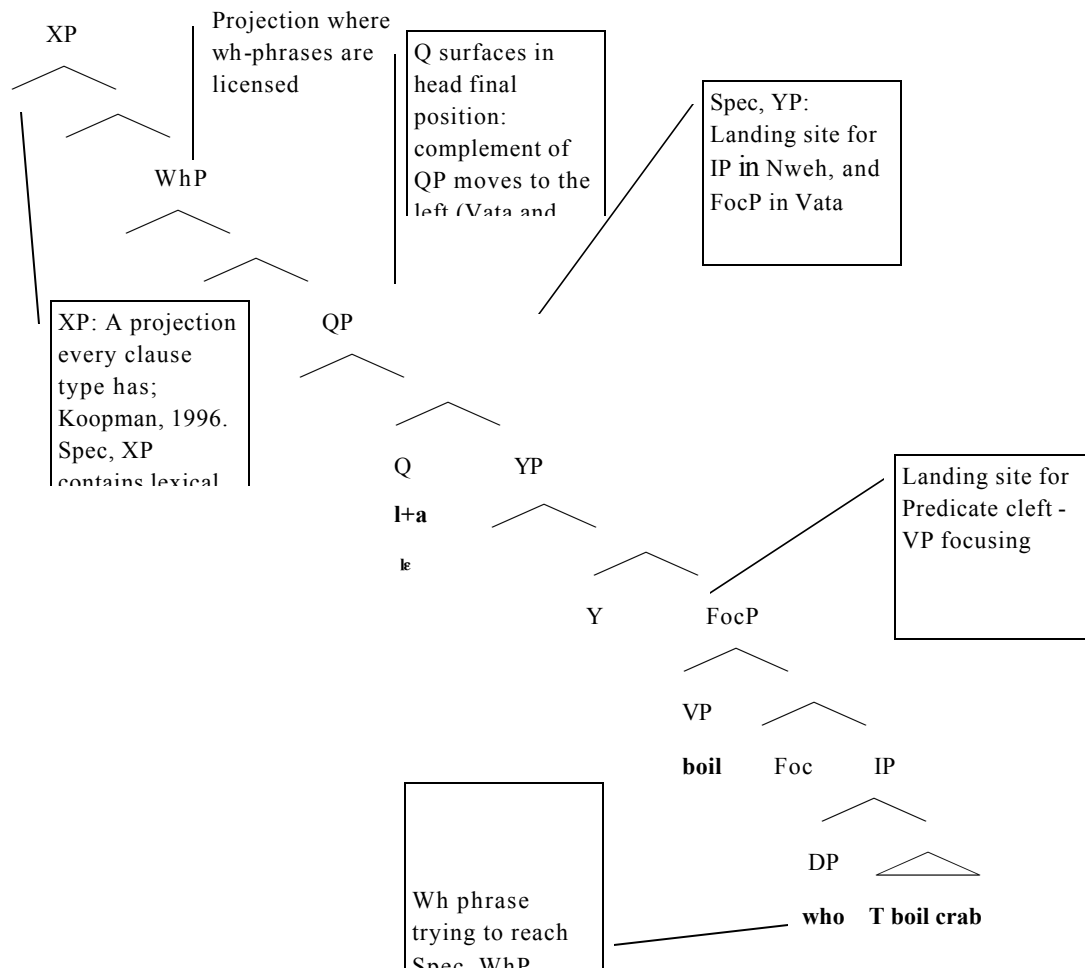
proposes that the incompatibility of focus and wh-phrases follows from the fact that *wh-phrases are inherently focused*. This type of explanation predicts that wh-phrases and focus can *never* cooccur, and runs into trouble because Nweh subject wh-phrases and focused verbs can cooccur. It is unlikely that subject wh-phrases, and object wh-phrases receive a different focus interpretation, and we are dealing with contrastive focusing on V throughout. The Nweh data suggest a structural explanation which should have the effect that subject wh-phrases are able to reach the wh-position, but object wh-phrases not. I will now argue that the structures in (19) exactly yield this effect. What must be explained is the following:

- (20)
- a. Wh-phrases cannot cooccur with predicate cleft in Vata
 - b. Subject wh-phrases can cooccur with predicate cleft in Nweh
 - c. Object wh-phrases cannot cooccur with predicate cleft in Nweh

In Koopman (1996), I have argued that wh-questions consist of a Wh projection, where wh-phrases are licensed and a Q projection, with Wh>Q. This yields the structure Wh>Q>YP>FocP. Wh-question formation involves the appearance of a sentence final matrix question particle in both languages (*la* in Vata, *le* in Nweh) indicating leftward movement of the complement of Q.

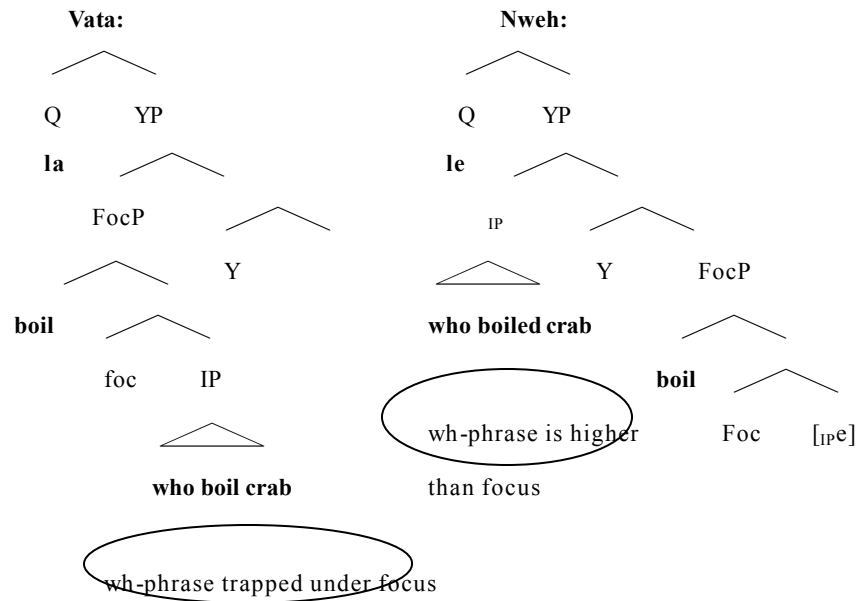
(21) Snapshot of a cooccurring predicate cleft and subject wh-phrase in Vata and Nweh:

snapshot taken at the point in the derivation where arguments and predicates have scrambled out of VP, VP has moved to Spec, FocP. The wh-phrase is in subject position of IP, and needs to reach Spec, Wh.



The structures in (21) are going to diverge, when movement to YP takes place (FocP moves to YP in Vata), IP moves around FocP to Spec, YP in Nweh, yielding the structures below:

(22) Snapshot of derived YPs in Vata and Nweh (lexical items boldfaced):



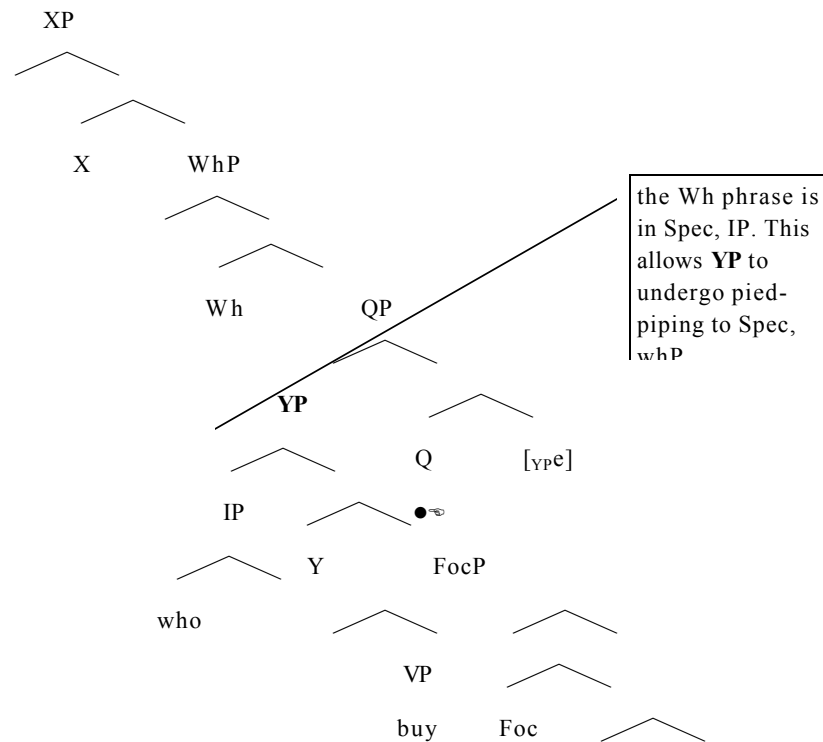
The cooccurrence restrictions fall out from these structures, as I will show in more detail below. In a nutshell:

- Wh-phrases in Vata can never cooccur with predicate cleft, because the wh-phrase will be unable to reach Spec, WhP. (section 4.1.)
- Subject wh phrases in Nweh can cooccur with FocP, because the movement of IP around FocP brings the wh-phrase in the local realm of the Spec, wh. (section 4.2.)
- Non subject wh-phrases in Nweh are also moved around focus, yet cannot cooccur with focused Vs. The question why they cannot cooccur with predicate cleft cannot be answered in the same way as in Vata, since the wh-phrase in Nweh is no longer trapped under focus (section 4.3.)

4.1. The non-occurrence of predicate cleft and wh-phrases in Vata. As shown in (22) the wh-phrase in the predicate cleft constructions in Vata will always be trapped under focus. In order for a licit wh-interpretation to arise, the wh-phrase must move to Spec, WhP. But in order to do so, the wh-phrase must cross an intervening A' position, yielding a locality violation. The wh-phrase cannot trigger pied-piping of the entire FocP complement, because it is not in the right structural configuration to trigger pied-piping. It follows that predicate cleft and wh-phrases are incompatible in Vata: the wh-phrase always remains trapped under the FocP and can never reach the WhP in this configuration.

4.2. The cooccurrence of subject wh-phrases and predicate cleft in Nweh. Let us look at the next stage in the derivation in (22), when the complement of Q has raised to Spec, QP.

(23) Nweh: subject wh-phrases cooccurring with predicate cleft



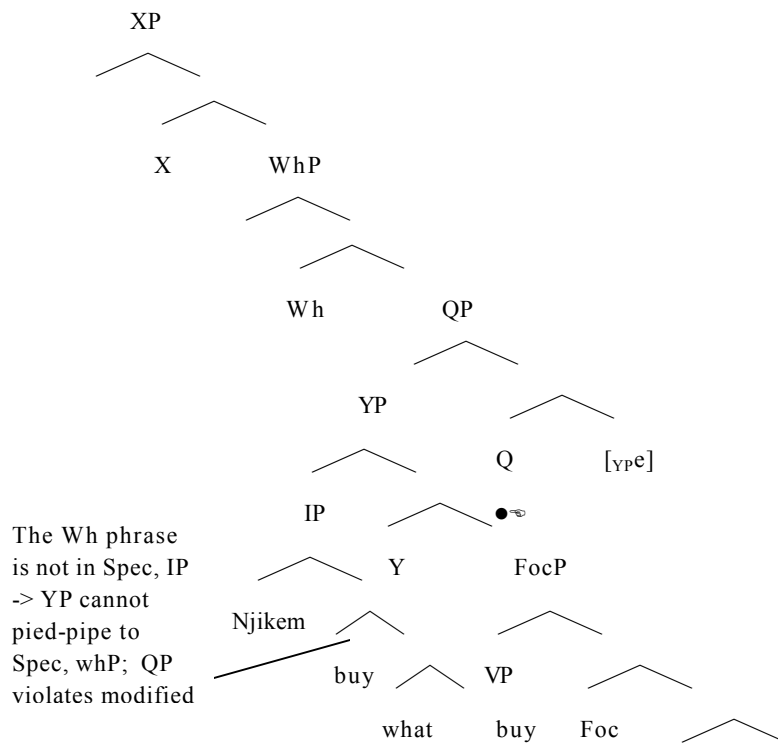
The wh-phrase in the IP occurs in the Spec of the Spec position. This is a well-known pied-piping configuration (cf. *whose brother's picture did you take*), allowing it to pied-pipe the YP to Spec, whP. (For arguments that English subject extraction involves pied-piping of the entire clause, see Koopman 1996). This structure can be linearized without any problems, because no projection contains lexical material in both Spec and head position simultaneously. Note that the option of subextracting the wh-phrase is blocked by the modified LCA (which derives the doubly filled C filter, see section 2). If the subject were to extract, there would not be enough space for linearization: the QP projection would contain lexical material in both the head and the Spec position. movement, and thus violate the doubly filled C filter. Subject wh-phrases and predicate cleft can thus cooccur in Nweh because of the movement of IP around the focused

constituent, and the particular position the wh-phrase occupies within the IP which allows for pied-piping of the bigger constituent.

4.3. The non cooccurrence of wh-phrases and predicate cleft in Nweh.

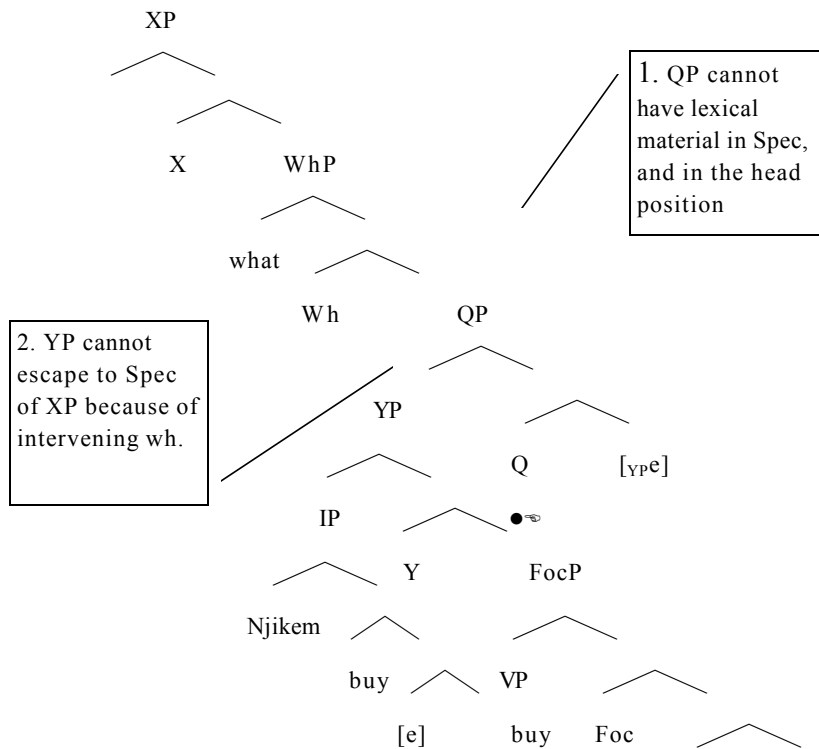
Let us consider the structure of a cooccurring predicate cleft and non-subject wh-phrase in Nweh at the point in the derivation where YP (containing the wh-phrase) has inverted with Q (moved to Spec, QP):

(24) Nweh: object wh-phrases cannot cooccur with predicate cleft



No grammatical sentence results from this structure. Two questions arise: why is pied-piping of the entire YP not possible (as it is for subjects), and why cannot the wh-phrase move to Spec, WhP on its own: one certainly must allow for movement of wh-objects! Non-subject wh-phrases are not in a pied-piping configuration (they are not in the Spec position of the entire constituent). The YP therefore cannot undergo pied-piping, and the surface string that would be derived by pied-piping is ungrammatical (**njikem boil what boil* (cf. example (7))). If the wh-phrase is too deeply embedded to trigger pied-piping, why cannot it extract by itself to Spec, WhP? This certainly seems to be a normal configuration for object extraction: it crucially differs from the Vata configuration, in that there is no intervening A' position. Suppose then that the wh-phrase is able reach Spec, whP in this configuration, and let us see if the resulting structure can be excluded on other grounds:

(25) Movement of wh-phrase to Spec, WhP:



The structure will be ruled out by the doubly filled C filter, if nothing else happens: both Spec, QP and Q contain overt lexical material. This accounts for the illformedness of (26):

(26) *akO njikEm kE? njuO juO IE (without further inversion)
 what Njikem P1 N-buy buy Q

It is interesting that this structure improves substantially if it is embedded in an overt cleft construction (which seems to create the additional space for the realization of lexical material)

(27) ? akO m azea njikEm kE? njuO juO IE

what Foc Rel Atem P1 n-buy buy Q

What is it that Atem BOUGHT

The structure in (25) is blocked as well if further inversion takes place, showing that such inversion (IP movement) must be impossible as well in this structure (presumable because of the intervening wh-phrase).

(28) *njikEm kE? njuO juO kO IE (with further inversion)

Njikem P1 bought buy what Q

5. Conclusion. In this paper, I have provided strong support for a unified analysis of the predicate cleft construction in Vata and Nweh. A common hierarchical structure can be assumed to underly Vata and Nweh. The difference in surface order reduces to a difference in the size of the constituent that occupies a particular Spec position: in Nweh IP moves around FocP to YP, whereas in Vata, the entire FocP occurs in YP. This analysis not only gets the different linear orders, but also, quite suprizingly, yields a simple explanation of the different cooccurrence restrictions of wh-phrases and focus Vs. This explanation uses non controversial assumptions about locality, a conservative assumption about pied-piping configurations (a wh-phrase can pied-pipe a constituent iff it is ‘associated’ with the Spec of that constituent), and (restricted) appeal to the generalized doubly filled C filter. My analysis does not appeal to a head initial head final parameter (such an analysis in fact would not allow the same explanation of the cooccurrence restrictions), nor to a different hierarchical organization (the analysis shows that it is not *necessary* to assume a different hierarchical struture, it does not show that a different hierarchical structure cannot be assumed). All movements

are overt and no appeal is therefore necessary to covert movement, nor to the strong weak distinction of functional categories.

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