Fronting: The Syntax and Pragmatics of 'Focus' and 'Topic'[*]

ANNABEL CORMACK & NEIL SMITH

Abstract

We argue on conceptual and empirical grounds that there are no dedicated Topic and Focus heads. Instead, we postulate two semantically trivial heads, **Gap** and **Φon**, which may be merged in the left periphery, with distinct syntactic and morphological properties. **Gap** is a Case assigner; **Φon** morphologically selects for the PF-interpretable part of some sign. These heads can be exploited to front phrases which may be pragmatically interpreted as topic or focus. We further argue that the two fronting mechanisms postulated can explain certain properties of NPI licensing in English, where Copy Movement, with or without movement in the PF component, cannot.

1 Summary and outline

In this paper, we intend to set out what we consider to be the most economical explanation of topic and focus. The idea is to sketch what we consider to be the proper distribution of explanations between syntax, pragmatics, and semantics.

Throughout, we use 'topic' for "what the clause is about", and 'focus' for that portion of the sentence which could plausibly provide the "new" material in an answer to a question, or which supplies contrastive information. The informal vagueness of these characterisations is not a problem, as we will argue that there are no heads dedicated to 'fronting' topic or focus. Rather, UG allows phrases to be fronted by either of two distinct mechanisms, each of which involves a licensing head. The two heads have minimal semantics but distinct syntactic properties. Each head may select for TP, and both occur in English. The first of them involves a head which is morphologically incomplete, and has to be associated with the PF part of some other head. For mnemonic

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reasons, we will call it **Φon**. **Φon** is typically but not exclusively exploited to front topics. The second involves a head which assigns [+Case], and is associated with a 'gap' or trace in the TP. We designate this head **Gap**; it is typically but not exclusively exploited to front a focussed phrase. In each case, what we informally refer to as 'fronting' is achieved directly by Merge. The USE of the two heads with their distinctive interpretive implications is driven by the Communicative Principle of Relevance, maximising the cognitive effects at minimal processing cost (Sperber & Wilson 1995: 260ff). We claim further that, "Dislocation" structures aside, no other head needs to be postulated to licence fronted material. We will also find uses of the heads that fall under neither topic nor focus. Because of these possibilities, much previous work has to be reanalysed, and some of our conclusions can only be tentative.

If **Φon** and **Gap** heads carry no semantic information determining their uses, then we may find that, despite the generalisation mentioned above, fronted focus phrases exploit **Φon**. We will show examples of this and explain why, in contrast, fronted topics do not exploit **Gap**. The existence of the two heads may lead to ambiguity. Disambiguation is dependent on context, and relies on the Principle of Relevance, though different readings of apparently ambiguous sentences are often intonationally distinct. What intonation is relevant is determined by the proposition together with the context, where the context includes the speaker's assessment of what is new to the hearer (Steedman, 2000: §4.2; Ladd, 1996: ch5). Thus the speaker can control the speaker's interpretation to some extent by using intonation which forces some proposition to be part of the context (because the hearer has to reconcile the intonation with the proposition and the known context).

We will introduce the two heads in turn, and show in sections 2 and 3 how each may be exploited. In section 4, we will demonstrate their distinct syntactic properties by showing different scope, reconstruction, and binding effects. Much of the data used here contrasts the fronting of focussed negative quantified phrases with and without inversion. We claim that if there is inversion, it can only be into the **Gap** head. **Φon** necessarily induces reconstruction, since only the PF-part of some sign is fronted, leaving the LF part in situ. Fronting licensed by **Gap** is argued to leave a trace, and there may be 'reconstruction'. We argue that the trace has an independent semantic value, and may be of lower (entity) type, or of higher (quantifier) type, where the latter produces an LF logically equivalent to reconstruction. We show that the two kinds of displacement we provide, and their reconstruction properties, make correct predictions that the Copy Theory of movement cannot make. Facts about the distribution of **Φon** and **Gap** heads (section 5) demonstrate that both the heads are functional heads.

2 Fronting by PF displacement
2.1 Split Signs and displacement

On the assumption that we should exploit the minimal apparatus adequate to account for the facts, we have argued in previous papers (Cormack & Smith 1997, 1998, 1999) that a 'movement' account is not appropriate for "head-movement". The alternative we proposed was the Split Sign account: the PF-part of some sign is actually merged at a position distinct from that of its LF-part. This gives the effect of "head-movement" with the PF and the LF of the head appearing in different places in the structure; the two positions must be related in a way that gives necessary locality restrictions.[1] We want to argue that such a Split Sign account is appropriate for handling the data which fall under the remit of **Φon**.

Our account of "fronting" is then extremely simple. We postulate a head **Φon**, selecting for TP. It typically makes no overt phonological contribution, but its morphological properties demand that it host lexical material. The PF part of some word or phrase within TP must then raise to **Φon** to satisfy this requirement. We see no objection in principle to a phrasal PF appearing under a head.

Suppose then there is available in the grammar such a head **Φon**, which has the property that it needs some other PF to amalgamate with. Suppose further that we assign no other properties to this head, so that in particular, its semantics will be the trivial identity function. What use could such a head have? We will argue that it is suitable as a host for fronted topics. Of course, showing that **Φon** as defined could be used for topics does not show that we have the correct characterisation. We need to investigate the properties of the postulated head and the structures it induces.

Here is a simple example of a **Φon** structure. For clarity, we simplify as far as we can, and use notation such as XP and specifiers without commitment to their validity. Small caps are used for the LF-interpretable parts of signs (i.e. for meanings, more or less). Bold type is used to mark the main stress. The sentence in (1) is constructed by merging the LF-interpretable pieces shown in (2a), meeting the selection requirements of the various heads.

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[1] This account of apparent displacement is not the same as 'movement in the PF component' as exploited by Aoun & Benmamoun (1998), Sauerland & Elborne (1999). We argue for our version in the last section of the paper.

(1) This tie, **Fred** bought
H LH H* L% (notation of Pierrehumbert 1980)[2]

(2) a LF: [$_{\Phi on}$ IDENTITY[$_{TP}$ FRED [$_{T}$ PAST [$_{VP}$ [$_{V}$ BUY [$_{DNP}$ THIS TIE]]]]]]
b PF: [$_{\Phi on}$ this tie [$_{TP}$ Fred [$_{T}$ *e* [$_{VP}$ [$_{V}$ bought [$_{DNP}$ *e*]]]]]]

So far as semantics is concerned, the LF-part corresponding to the fronted phrase is in the clause-internal non-fronted position. In other words, it will behave interpretatively as if it is 'reconstructed' to the internal position. We assume that the PF-interpretable part of the phrase *this tie* is amalgamated with the PF-interpretable part of **Φon**, and the whole PF is merged under the higher head **Φon**. Since **Φon** is phonologically null, we can't tell by inspection just how this amalgamation is done. These assumptions entail that nothing like a 'Topic criterion' (Rizzi 1997: 287) or a '**Φon** criterion' is needed to ensure the existence of a fronted phrase.

We are assuming an architecture of the language faculty under which linguistic material presented to the hearer may drive pragmatic processes such as inference. The interface to pragmatic processing is the LF-output of the grammar. This might lead one to suppose that **Φon** was of no use at all, since it has no effect on LF. However, pragmatic processing is not driven solely by LF input: context also plays its part. Context is in effect the set of propositions and entities accessible to the hearer, which may be partially determined by the speaker's linguistic choices. At least two kinds of material may be relevant here: accessible propositions representing knowledge, beliefs and desires; and accessible entities and other objects of thought, such as concrete or abstract things, properties or reasons. Imagine that the accessibility of entities is determined simply by position on a list. An entity will move up the list if I make it salient in the visible context by pointing to it; it will equally move up the list if I mention it. Now we can see a use for **Φon**: by mentioning some entity early on in the sentence, it manipulates the accessibility list, raising the salience of some object on the list. This

[2] We use this notation for convenience only; we are not committed to all aspects of Pierrehumbert's theory, according to which the representation in (1), for instance, would be ill-formed.

does seem to be exactly the function of syntactically marked topics, since they refer to things already presumed to be available in context.[3]

The exploitation of **Φon** suggested above is driven primarily by pragmatic considerations, though of course the topicalised phrase must be syntactically and semantically processed. There are also other uses of **Φon**, serving stylistic or discourse purposes, as in *On the way here, I met Deirdre*, where the fronted phrase simply sets the scene for what follows. Further examples are discussed in section 5. Note that inasmuch as **Φon** enables a phrase to be placed in a marked position, it will also be potentially usable to focus that phrase. We will see examples of this use in section 4.

2.2 Syntax of Φon

The constraints that apply to a **Φon** structure as opposed to its non-fronted counterpart are given in (3):

(3) (a) The c-selection and s-selection properties of **Φon**
(b) The morphological properties of **Φon** including m-selection
(c) Those concerning the proper locality relation between the PF and LF parts of a split sign
(d) In representations which are PF interpretable, restrictions on heads not dominating PF material, and in particular, on the LF parts of Split Signs.

For reasons of space, we will say only a little about these matters here. The selection properties under (3a) pose no special problems, though there seems to be some variability between languages and speakers (see section 5). If the semantics is the identity function, s-selection is for a proposition (modulo possible type-shift). Under (3b), the question arises as to the existence of overt **Φon**. The only recent claim that we know of for an overt Topic head is that of Aboh (1999), who argues that Gungbe has a

[3] Birner & Ward (1998: 32), claim that a fronted argument (including topic or focus) must be in a 'poset' relation to some entity mentioned previously in the discourse. Poset relations (a notion constructed by Hirschberg 1985/1991, for her account of scalar implicatures) are a heterogeneous bunch, including subset, superset and mereological relations, and identity. In Relevance Theory (Sperber & Wilson 1995), it is assumed that when an entity is mentioned in discourse, the associated encyclopaedic entries become relatively accessible. The poset relations are just such things as would appear in the encyclopaedic entry for some given entity, and hence the related objects and concepts also become more readily accessible. There is no need to invoke 'poset relations' as such.

head *yà* appearing after topics, which are noun-phrases, or locative or temporal phrases (see section 6.1).

We turn to the question of the morphophonological selection by **Φon** in English. Fronted topics in English include more than just noun phrases like *this tie* in (1) which could be argued to be headed by D: in particular, they include predicates headed by V or A as in (4) and (5) below, and adjuncts such as the adverbial phrase in (6):

(4) [They said she would be happy] … and *happy* she certainly is
(5) [They said he must eat his spinach]… but *eat his spinach*, he wouldn't
(6) [They said Brendel would play the sonata too fast], and *too fast* he did indeed play it.

We have two options then: **Φon** in English does not select morphophonologically just for D, or the fronting in these examples is due to the second head, **Gap**. For reasons we come to later, it is difficult to ascertain the correct answer for English.

The constraints under (3c) impose locality restrictions. For the checking relation between the parts of Split Signs, we have proposed (Cormack & Smith 1998, 2000) a minimality constraint based on categories and percolation. **Φon** fronted phrases are subject to strong island constraints (subject islands, complex-noun-phrase islands, and adjunct islands). Adjunct islands, as in (7)

(7) *Rosa, I cooked duck to please *e*

are explained if percolation of the relevant feature from an adjunct, without percolation from its host, is impossible (Cormack & Smith 1994)[4]. Cormack 1999 argues that argument noun phrases, being headed by a two place operator D are also adjuncts in the relevant sense, and that subject clauses are similarly headed by D. This accounts for the islandhood with respect to **Φon** fronting of complex noun phrases and subjects. Examples of each are shown in (8) and (9).

(8) *Rosa, no-one disputes the claim that her boss admires *e*
(9) *Rosa, that her boss dislikes *e* is known by all of us

[4] In other words, the percolating feature is a head-feature in the sense of falling under the Head Feature Principle of HPSG. (Pollard & Sag 1994:34).

We further predict that parasitic gaps with **Φon** fronting are impossible because one PF (*the letters* in (10)) cannot be associated with two LFs (the phonologically empty nodes '*e*'), unless the item is given as a radically split sign in the lexicon: an implausible assumption for a phrasal category.

(10) * [$_{\textbf{Φon}}$ *The letters*] [I filed *e* without reading *e*]

In principle, however, it would be possible to PF-front a Right Node Raised (RNR) constituent, as in (11).

(11) # [$_{\textbf{Φon}}$ *The letters*] [[I filed *t* without reading *pg*][*e*] (*pg* = parasitic gap)

We claim however that this is precluded for other reasons. An RNR phrase must be either phonologically heavy, or deliberately presented as delayed. The first requirement is not met if the phrase is made phonologically empty, and the second is not met if the presentation of the phrase is early as in fronting. We predict then that the acceptable (12) can only be derived with **Gap**, whether *the letters* is topic or focus:

(12) The letters, I filed without reading

Evidence that this is correct is given by (13), where, as we argue in section 3.2.3, fronting is licensed by **Φon** (**Gap** would give inversion).

(13) *No letters, I filed without reading (= 39b)

Finally, under (3d), we may have constraints on the occurrence of LF parts without their matching PF part. In some cases, certain positions may simply not allow dislocation with **Φon**: Postal's (1998) B-extraction sites seem to be of this kind (see section 6.2). In other cases, such as that of Italian Clitic Left Dislocation (CLLD) discussed below, it may be required instead that a clitic occurs in this position. Indeed, the properties we ascribe to **Φon** structures overlap to a considerable degree with the properties Cinque (1977; 1990: chapter 2) ascribes to CLLD. These properties include obligatory reconstruction, sensitivity to Strong Islands, and failure to licence parasitic gaps. An example of CLLD is given in (14), where *propria* is a reflexive possessive adjective, and *l'* is a clitic pronoun:

(14) La propria$_i$ identità, Piero$_i$ non l'ha ancora persa
'His$_i$ identity, Piero$_i$ has not lost it yet' (Cinque 1977:401)

Cinque argues that these structures are not due to movement,[5] and while there are differences between Italian and English, we think that Italian would succumb to the sort of explanation we are providing, i.e. with *la propria$_i$ identità* in **Φon**.[6]

3 Focus and the Gap head

3.1 Predication fronting

The second fronting mechanism involves a Case-licensing head **Gap**. Following Cormack (1999) we assume that the mode of discharge of theta-roles of lexical heads is mediated locally by a Combinator, where the choice of Combinator is determined by the syntactic Case licensing available. If a head assigns [+Case] then a theta-role has to be discharged immediately by some suitable phrase, using the combinator **A** (function-argument application).[7] Thus the presence of **Gap** entails that some theta-role is available for discharge, and that it is discharged by some phrase. Moreover, **Gap** forces both the insertion into the structure of the fronted 'argument' phrase, and the presence of a 'gap' in the TP (given by a trace), so that some theta-role is available for the argument

[5] Cinque (1990) offers an account of CLLD in terms of a 'Binding chain' distinct from a chain formed by movement, perhaps including an empty operator. Rizzi (1997: 292-293) argues that English uses a 'null anaphoric operator' for Topic structures. He argues that Italian has no 'null anaphoric operator' available, but that the clitic serves the same purpose in establishing an anaphoric link. The accounts of CLLD given by Zubizarreta (1998: 112-116, and 186-188, footnote 23), and Aoun & Benmamoun (1998) (who argue that there is PF movement of the full noun phrase), are closer to our proposal. See also Sportiche (1998: chapter 4). Under a Split Sign account of CLLD, we would assume that the LF of a determiner could optionally be associated with two PF-parts, the extra one being a clitic. The necessity for a clitic in the case of Italian object fronting licensed by **Φon** would presumably fall under a language-specific constraint on **Φon** of the kind falling under (3d).

[6] Although Italian topics are usually referential, both Rizzi (1997) and Cinque (1977, 1990) note that CLLD may dislocate a quantified noun phrase in certain cases (see section 4 for quantified noun phrases fronted by **Φon**).

[7] "A-movement" is mediated by the combinator **R,** licensed by [–Case]. See also footnote 10.

to discharge. No 'Focus criterion' (Brody 1990:208) is required to ensure the presence and licensing of the argument.

Consider then a simple focus structure as in (15).

(15) **This tie**, Fred bought
H* L H L H%

(16) LF: $[_{GapP}[_{DNP}$ THIS TIE$]$ $[_{Gap}$ *ID* $[_{TP}$ FRED $[_{T}$ *PAST* $[_{VP}$ $[_{V}$ BUY$]$ $[_{DNP}$ *TRACE*$]]]]]]$
PF: $[_{GapP}$ $[_{DNP}$ this tie$]$ $[_{Gap}$ *e* $[_{TP}$ Fred $[_{T}$ bought $[_{VP}$ $[_{V}$ *e*$]$ $[_{DNP}$ *e* $]$ $]]]]]$

The usual value for a trace has the type <*e*>, the type of an entity. Using this will yield (by the semantics set out in Heim & Kratzer 1998: 184 ff) a value for the TP as shown in (17a). If however the trace is given a higher type <<*e*,*t*>,*t*>, the type of a quantifier phrase, then the TP will have the semantic value set out in (17b).

(17) a λx $[_{TP}$ FRED $[_{T}$ *PAST* $[_{VP}$ $[_{DNP}$ *x*$]$ $[_{V}$ BUY$]]]]$ where *x* is of type <*e*>
b λX $[_{TP}$ FRED $[_{T}$ *PAST* $[_{VP}$ $[_{DNP}$ *X*$]$ $[_{V}$ BUY$]]]]$ where *X* is of type <<*e*,*t*>,*t*>

By virtue of the rules of lambda-elimination, where the trace is of the lower type, the predicate and the fronted phrase combine to give the fronted phrase wide scope; where the trace is of the higher type, the meaning of the fronted phrase will be reconstructed to the trace position, so that it may have narrow scope with respect to other operators in the TP. For discussion and arguments for or against introducing higher-type traces into representations, see Cresti (1995), Lechner (1998), and Sauerland & Elborne (1999).

As an example, there are two natural readings of (18), with the fronted noun phrase having scope either above or below *intend*. With a lower type trace *t*, we only get the wide scope reading, where there are two chapters such that John intends to read them. With a higher type trace *T*, we can obtain the reading where John intends to read any two chapters.[8]

(18) Two chapters, John intends to read *t*/*T*

The alternation of scope possibilities here contrasts with what is made available by **Φon**, where the LF of the fronted element, and hence its scope, is within TP.

[8] Note that if there is reconstruction, then the totality of readings available may include scope variant readings that would be available if the phrase had been merged in the lower position.

Under the standard movement analysis leaving a trace at LF, the interpretation of LF is external to syntax. When the higher-type trace interpretation is chosen, the interpretation is referred to as obtained by 'semantic reconstruction'. However, we wish to use the indicated distinction differently. We assume that traces of the two types are distinct grammatical objects, with their own syntactic, semantic, and phonological properties. The two possible traces, each of which is phonologically null, are shown in (19). Selection features are shown in square brackets, and identified by a preceding slash.

(19) a **lower type trace** category: D[/D]; type: <*e*,*e*>; meaning: $\lambda x.x$
b **higher type trace** category: V[/(V[/D])]; type: <<*e*,*t*>,*t*>; meaning: $\lambda X.X$ [9]

We call this the 'Merge trace' hypothesis. Under this hypothesis, the relation between the LF THIS TIE, and the chosen trace is not mediated by movement. Rather, we claim that the fronted phrase and the trace are independent LF-interpretable and PF-interpretable items, merged in the positions shown in (16). Each of these objects requires syntactic Case-licensing: the fronted item obtains it from Gap, and the trace from V in the normal clause-internal way. Morphological case however is not assigned by Gap: we assume that m-case and phi-features are marked on the trace, if they are assigned to the trace position, as in (20). They are then passed compositionally up the tree, and are matched on the fronted phrase by the usual means when the selection is discharged.[10]

(20) trace category: D[α phi-features, μ m-case] [/D[α phi-features, μ m-case]]

The meaning of the TP is produced compositionally (using the function composition) to yield the two versions of (17) for the two distinct trace values of the D-headed complement of the verb. The distinct narrow or wide scope readings for the fronted phrase in examples such as (18) follow as before. We will argue for this interpretation of traces in section 4.

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[9] Because we are working in a system without variables, type-shifted versions of these will also be needed, to accommodate non-subject noun phrase meanings (see discussion in Heim & Kratzer 1998, ch.7).

[10] For the standard Combinatory Categorial Grammar version of composition using **B**, see Steedman (e.g. Steedman 1993). Cormack (1999) adds a 'composing' version of the [–Case] combinator **R**. Feature matching is discussed extensively in the HPSG literature (see Pollard & Sag 1994).

We need to make it explicit that although a higher-type trace makes a 'reconstruction' scope available, we do NOT assume that there is any actual reconstruction of the fronted phrase to the trace position either in any component of the grammar, or in deriving the representation of the proposition expressed. The LF as given by **Gap** must be used by at least some pragmatic processing.[11] If this were not the case, then the use of **Gap** fronting with reconstruction would be equivalent to and less economical than using **Φon**.

Given this characterisation of **Gap**, the following motivations for **Gap** structures suggest themselves.

First, the structure makes the focussed phrase salient, both by displacing it from its normal position, and by fronting it. However, this property is shared with the simpler **Φon** structure, so if this was the only pragmatic intention, **Φon** would be used where the required scope and the locality restrictions permitted. We assume that this is what happens in examples like (21), where there is little doubt that the **Φon**-fronted phrase is focussed (we argue in section 3.2.3 that if the fronting used **Gap**, there would be subject-Aux inversion).

(21) Nothing, I ate *e* for breakfast

Second, the **Gap** structure, as exhibited for instance in (15) and (16), makes available at LF the gapped TP, a phrase which is effectively predicated of the fronted phrase. Unless sufficient cognitive effects of the fronting have already been derived, the use of such a structure requires the hearer to exploit the predicate for cognitive effects: the interpretation of the fronted phrase as providing a contrastive or exhaustive focus is the natural result. This is because the interpretation of focus typically requires just such a separation into a predicate and its argument, where the argument is the focussed phrase and the predicate is the 'background'. This idea goes back at least to Jackendoff (1972: 245-247). See also Chomsky (1977: 91-92) for topicalised noun-phrases interpreted as focussed. More recent work by Krifka (1991) and others takes in situ focus to require the focus:background articulation of the structure.[12] Rooth (1992) argues that the interpretation of a focussed utterance entails the construction of a set of alternative propositions, varying from the proposition which is the usual semantic value of the

[11] It is possible that there are Meaning Postulates (Inference Rules) capable of operating directly over at least some representations incorporating higher type traces, so that the proposition may never need to be put in a normalised form. Alternatively, the inference system manipulates Language of Thought representations. We leave this question open.

[12] See also Steedman (1991), Pulman (1997), Schwarzschild (1999).

utterance at the value contributed by the focussed phrase, and keeping the background constant. We take it that the rhetorical purpose of the focussing is that this alternative set is to be incorporated into the context in some way: they will be presented, but not asserted, as in interpretive use (Sperber & Wilson 1995).[13] Conversely, we claim that there is no parallel need for a topic:comment articulation, so that **Gap** is not used for fronted topics. The identification of a phrase as a topic indicates that it should be processed against a context of other information about that topic, but no context is required bearing a special relation to the comment.

One further use might be proposed for **Gap**, and that is to rescue cases where **Φon** would not license fronting. Interestingly, this appears not to be permitted (see section 6.2). Presumably this is because the extra contextual effects required to justify the use of the complex predicate:argument structure generated by **Gap** cannot include the licensing of the sentence itself: they must be effects derived from the use of the sentence.

3.2 Further properties of Gap

3.2.1 Fronting other types of phrase. We need to describe briefly how Gap structures work when what is fronted is not a noun phrase argument. Consider the cases of an argument which is not a noun phrase in (22), and of adjuncts in (23).

(22) Unscrupulous, Henry is *t*
(23) a Too fast, Henry drives
b With no job would he be happy

In (22), the verb *be* selects for an adjective (or more generally for a lexical head) and assigns [–Case] to the selection; at merge, an adjective trace is inserted. Compositional semantics will produce a predicate TP whose unsatisfied selection is for an adjective. The fronted adjective is licensed to satisfy this role by the mediation of the syntactic [+Case] assigned by the head **Gap**. There will be no m-case involved, since none is assigned to the adjectival trace position.

For (23), we may assume that it is permitted to type-shift the verb with respect to an adverb (or other adjunct), as shown in (24), which effectively makes the verb select for an adverb (Pollard & Sag 1994:387 use a similar device). The example in (23b) with

[13] Rooth's work, like that of others mentioned in the previous footnote is largely concerned with non-fronted (in situ) focus.

inversion shows that in some cases at least, the fronting of adjuncts cannot be due to the use of **Φon**.

(24) **Adverb as modifier** Category: Adv = V[/V] combines with a verb of category V to return V (V will itself be complex, i.e. with selection features).
Shifted verb category: V[/Adv] will combine with Adv to return V. The verb of type <*v*> is shifted to one of type <<*v*,*v*>,*v*>, with meaning λ*a* (*a*.V), where V is the verb meaning.

However, the verb presumably does not assign syntactic Case to this new quasi-selection, so no quasi-complement adverb can be inserted immediately. The selection is passed up the tree compositionally, and can be discharged by the fronted adverb only because of the presence of [+Case] associated with **Gap**.

Note that with **Gap**-fronted arguments with the semantic type of a predicate, and adjuncts, there is necessarily 'reconstruction'. This is because predicates, unlike argument noun phrases, are not binders, and in the case of adjuncts, there is not even any trace which could vary in type. The upshot is that we cannot use reconstruction to determine whether predicate-type arguments and adjuncts are fronted with **Gap** or **Φon**. However, since inversion is obligatory with negative adjuncts such as *never*, in contrast to the situation with *nothing*, we deduce that **Φon** cannot host adverbs.

3.2.2 Phonologically overt Gap. As with **Φon**, the question arises as to overt manifestations of **Gap**. An overt head used for focussing and wh-questions appears in various African languages. Aboh again — (Aboh 1999) has argued that in Gungbe, there is an overt focus head *wè*. Example (25) is a sentence without special focus; in (26), the object is fronted and focussed.

(25) S ná xìá wémà l op cit p.301
Sena read-Perf book the
'Sena read the book'

(26) wémà l wè S ná xìá *t* op cit p.258
book Det **Foc** Sena read-Perf
'Sena read THE BOOK'

We take it that Aboh's **Foc** is our **Gap**, and although English has no overt **Gap** morphology, the head **Gap** is arguably filled by an inverted auxiliary in 'Negative Inversion' structures, as we show below.

3.2.3 Negative inversion and Gap. In examples such as (27), where a negative phrase is focussed, we have inversion of the auxiliary to a position above the subject:

(27) Never before *have* they t_{aux} *T* seen reindeer in the wild[14]

The inversion site cannot be C, unless we have CP recursion, since such clauses can be embedded under a complementiser, as we see in (28).

(28) He said that never before *had* they t_{aux} *T* seen reindeer in the wild

The simplest hypothesis is that the inversion site is **Gap**. We argue (ms. January 2000) that all the negative phrases triggering inversion are in fact positive phrases commanded at LF by an instance of negation, as in the LF representation of (27) partially sketched in (29). The negation is echoic, in the sense of Cormack & Smith (2000), and we assume that it selects for T.

(29) ¬ [[∃*time*, *time* < now] [**Gap**$^{\textbf{inv}}$ [they have seen a reindeer at *T*]]]

It is this negation that selects for **Gap** with the inversion property, **Gap**$^{\textbf{inv}}$ (noninverting **Gap** is the default).[15] **Gap**$^{\textbf{inv}}$ m-selects for Aux. A generalised quantifier or some other argument (in this case, roughly corresponding to *ever before*) must intervene before the Gap head, to enable the [+Case] feature of Gap to be satisfied.

If inversion entails that the licensing head for fronting is **Gap**, then we can use this fact to show that we do need both trace-types for **Gap**, rather than relying on **Φon** for all the reconstruction instances. As we have just noted, the quantificational part of the negative

[14] Reconstruction is required for the temporal phrase, because as argued in Cormack & Smith (2000), these must be within the scope of T at LF.

[15] The rest of the phrase at LF will not be visible for c-selection. The LF shown allows for reconstruction of just the positive part of the phrase (giving a radically split sign, perhaps). If the negation and the positive phrase are combined with composition, then we will obtain reconstruction of the whole including the negation (total reconstruction).

phrase must be above **Gap** at LF. In (30), the unmarked reading has reconstruction of *nothing* below the modal; in (31) the unmarked reading gives *nothing* wide scope relative to *say* and the modal. The trace types for these readings then must differ as shown.

(30) Nothing must the baby eat *T* [¬∃
(31) Nothing did the doctor say the baby must eat *t* ¬∃ [SAY [

The question arises as to whether it is possible to have negative inversion where the fronting is licensed by **Φon**. Our answer is 'no'. First, we cannot have inversion of the Aux into the position of **Φon** itself, because we are claiming that it is the fronted phrase that is m-selected by and combines phonologically with **Φon**. Suppose then that there is some head X^{inv} below **Φon** into which the auxiliary is inverted. We require that X^{inv} is selected whenever **Φon** has m-selected the PF of a negative phrase.

At this point, problems arise. This PF of a negative phrase cannot itself do any selecting, so the selection must be done by a variant of **Φon**, say $\mathbf{\Phi on^{inv}}$. However, we need $\mathbf{\Phi on^{inv}}$ to occur only when it is associated by m-selection with the PF of a negative phrase. Since m-selection cannot see semantic properties, this has to be accomplished using either phonological or categorial properties. However, negative phrases are not necessarily categorially headed by negation, nor is the PF of the negative element necessarily peripheral, as shown by (32):

(32) Behind no man does an Amazon woman hide

We conclude then that negative inversion demands **Gap**.

We also need to consider the converse situation: does negative fronting require **Gap** and inversion? For many speakers, the answer to this question is 'yes', but for us and for many others from the South of England, it is 'not always', as witness (33) and (34) below. Our explanation for this is as follows. In the lexicon, negative words have lexical entries consisting of radically split signs, for instance associated with the PF *never*, the LF '¬' and the LF existential generalised quantifier which function as sketched in (29) above. For some speakers, including ourselves, a subset of negative words alternatively has a unitary LF representation, for example, where *nothing*, or the *no* in *no dogs*, is simply a single item at LF.[16] In the former case, there must be **Gap** and inversion,

[16] In the case of *no*, for instance, the item can be expressed as $\lambda P \lambda Q[\neg\exists x(Px \wedge Qx)]$.

because of the properties of this particular LF '¬'. However, if this is not present, as in the unitary LF cases, in principle either **Gap** or **Φon** could be used for fronting. In practice, Relevance Theory dictates that if **Gap** is intended, the radically split lexical entry will be used, since this unequivocally signals **Gap**. This Relevance Theory claim is supported by the fact that all the examples given in the next section with negative fronting but without inversion, have obligatory reconstruction, as is consistent with licensing by **Φon** but not by **Gap.**

4 Evidence for Gap distinct from Φon

In this section, we want to do two things. First, we want to justify further our claim that there are two distinct fronting mechanisms available in Natural Language. Second, we want to show that the Copy Theory of movement, with or without a separate post- Spell Out PF movement or a separate semantic reconstruction facility, does not capture the facts.

In order to show how **Φon** and **Gap** structures differ, we consider examples where a negative noun phrase is fronted. For us, both (33) and (34) are grammatical:[17]

(33) Nothing did I eat *t*/*T* for breakfast
(34) Nothing, I ate for breakfast *e*

Like (33), (34) is a focus-fronting sentence, but its uninverted structure must be derived by the use of **Φon**. Consider then the contrasting (a) **Gap** and (b) **Φon** pairs in (35) to (39).

(35) a Nothing did everyone eat *t* ¬∃ [∀
b Nothing, everyone ate *e* ∀ [¬∃
c Everyone ate nothing ∀ [¬∃ (the only reading for most speakers)

[17] The grammaticality judgements of the two authors coincide on all the examples that we have considered with the exception of wide scope reading for *no-one* in embedded subjunctive clauses, as in (i):

(i) John demanded that his daughter marry no-one AC:OK/NVS:* ¬∃ [DEMAND

That is, AC takes subjunctives to be like untensed clauses, where NVS takes them to be like tensed clauses (see example (38) and discussion below).

(36) a Nothing did anyone eat *t* ¬∃ [∃
b *Nothing, anyone ate *e*
c *Anyone ate nothing

(37) a Nothing must the baby eat *t*/*T* [¬∃,
or with an echoic interpretation, ¬∃ [
b Nothing, the baby must eat *e* [¬∃
c The baby must eat nothing [¬∃
or with an echoic interpretation, ¬ ∃ [

(38) a Nothing did he say the baby could safely eat *t* ¬∃ [SAY [◊
b Nothing, he said the baby could safely eat *e* SAY [◊ [¬∃
c He said the baby could safely eat nothing SAY [¬∃ [◊ or SAY [◊ [¬∃
(the reading '¬∃[SAY[◊…' may be available for some speakers)

(39) a No letters did I file *t* without reading *g*
b *No letters, I filed without reading

In (35), the (a) and (b) examples have different scope possibilities. In (36), fronting of *nothing* with **Gap,** but not with **Φon,** licenses the NPI *anyone* in subject position. In (37a) *nothing* can have wide or narrow scope, whereas in (37b) only narrow scope is possible. If the gap is in a tensed subordinate clause, as in (38a), reconstruction is impossible,[18] but with fronting induced by **Φon**, in (38b), reconstruction below *say* and the modal is obligatory. Parasitic gaps are licensed by **Gap**, but not by **Φon**, as (39) shows.

These contrasting effects show quite clearly that we have two distinct fronting mechanisms to hand. As an alternative to what we have suggested, we might consider using Copy Theory to account for the **Gap** structures (allowing the scope alternations), and post Spell Out PF movement for our **Φon** structures.[19] However, we think both moves are incorrect.

[18] In examples where the subordinate clause is untensed, reconstruction is possible: (i) *Nothing did he want the baby to eat*. We are not offering an explanation of this fact here, which was also observed in Cresti (1995: 79, (1)). It is presumably to be related to the scope facts discussed in relation to in situ focus by Partee (1999: 223, examples (8) and (13) to (15)).

[19] Sauerland & Elborne (1999) argue that this combination of movement accounts is needed.

Consider the **Φon** structure in (37b), and its non-fronting congener in (37c). If the fronting is simply PF movement, we would expect the readings of the two to be identical. However, (37c) has a reading that (37b) does not have. It can have a reading which is echoic, giving rise to negation with scope over the modal, as indicated in the representations shown. Similarly, the readings available in (38b) and (38c) differ.[20] We claim that the difference here can be explained by conditions on the PF-LF checking needed for **Φon**, together with a constraint otherwise needed for 'radically split' *nothing*.[21] It might be possible to explain the same fact under Copy Theory, but that would leave unaccounted for the fact that the **Φon** examples uniformly require reconstruction.

We have already claimed that **Gap**, rather than Copy Theory movement, is required to give focus effects, so that the focus:background structure is visible at LF. Another problem with using a Copy Theory of movement instead of **Gap** is that Copy Theory provides no distinction at the level of LF between examples like the grammatical (40a), and the ungrammatical (40b) and (40c). The most natural reading of (40a) is the one given, where the scope of the negative is below that of the modal; so under Copy Theory, the sole LF relating to *nothing* must be below the modal. We are assuming that there is no LF movement, thus excluding QR and the upward LF movement of heads such as the modal.

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[20] For (37), it might be suggested that the PF movement can only move a phrase with focus stress. However, in (38c), the stress seems to be identical for the main readings, yet only one of these readings is available for (38b).

[21] *Nothing* is radically split in the unmarked reading '¬ **[** [∃ …' of examples like (i) *You need eat nothing*. *Nothing* is the PF for both ¬ and ∃, where the modal occurs at LF between these. We argued in Cormack & Smith (2000) that the negation is merged at LF above the modal. But note that the PF *nothing* is unexpectedly realised at the lower of its two associated LF positions. We need some constraint that gives placing the PF at the Case-licensed position precedence over the soft constraint Raise. Further, we argue that within the clause, negation having scope over *must* is realised in an Echo[NEG] position; we suppose that this is true also of the negation portion of *nothing* if it has that scope. Hence any echoic reading of (37c) must be radically split, and will necessarily be realised at the Case position. Similarly, we claim that if the object has scope over the possibility modal *can* in (38c), the negative part of the *nothing* must fall under Pol.

(40) a Nothing must anyone eat [¬∃ [∃
b *Nothing, anyone must eat * [¬∃ [∃
c *Anyone must eat nothing * [¬∃ [∃

In contrast, for the **Gap** structure in (40a), the semantic reconstruction theory has two LF positions related to *nothing*: the LF position of *nothing*, and the LF position of the higher type trace, which gives the scope interpretation position. The NPI then can be licensed in (40a) but not in (40b) or (40c) by the fact that the LF of *nothing* commands the LF of the NPI *anyone*. A scope condition has to be met as well, of course: it is necessary that the licenser has scope over the NPI (Ladusaw 1980). Under our Merge Trace theory, this can be determined by looking at the trace types.

5 Distribution of Gap and Φon

One of the many things we do not discuss in detail here is the distribution of **Gap** and **Φon** structures. The distribution might be restricted by means of general locality constraints, but we do not think this will be sufficient, and expect to have to invoke c-selection and m-selection. One reason is that there is variation between and within languages.

Rizzi (1997) argues for potentially iterated Topic heads in Italian, which may occur higher or lower than the (single) Focus head, The English situation seems to be somewhat different. Multiple fronting does occur in English; we discuss some examples in the light of the heads we have proposed. For us, the examples in (41) and (42) are fully acceptable, provided an appropriate context is provided:

(41) a On Tuesday, not a single person did I speak to *t* –
b Into the collecting box, not a single coin did Billy put *t* –

(42) a In Austria, where did you go *t* –?
b … and for the bracelet, how much did you pay *t* –?
c … and in the blue vase, which flowers shall we put *t* –?
d If John won't come tomorrow, when will he come?

Not all similar examples are acceptable, as we see in (43) and (44):

(43) *The cat, not a drop of water did Billy allow – to drink *t*
(44) ?* …and the irises, where shall we put – *t* ?

The contrast between (42c) and (44) might suggest that the initial phrase must be a PP, but a more plausible alternative is that where the gap is a direct object, a resumptive pronoun is preferred. This still leaves open the question of whether the resulting sentence would be a Left Dislocation structure, a wh-island rescue, or whether the pronoun functions like the object clitic in Italian CLLD.

In the declarative examples in (41), the second fronted phrase is licensed by **Gap**. Wh-phrases are arguably focussed, and if the Copy Theory is rejected, must also involve **Gap**, since reconstruction may be inappropriate. Suppose then that the second fronted phrase in all of (41) to (44) is headed by **Gap**. What is the status of the first phrase? In some instances, such as that of (42d), the initial phrase may simply be adjoined to the *wh*-phrase. However, we can attempt to determine whether **Gap** or **Φon** is involved in an initial argument phrase by considering whether it is obligatorily reconstructed. Consider the examples in (45).

(45) a To three people, no dish did they serve *t* – 3 ¬∃, ¬∃ 3
b To three people, the cook said they served no dish –
3 SAY ¬∃, SAY 3 ¬∃, SAY ¬∃ 3[22]
c To three people, no dish did the cook say they served *t* –
3 SAY ¬∃, 3 ¬∃ SAY, ¬∃ 3 SAY

Example (a) shows that in principle, the fronting of the PP allows either scope for the quantifier phrases. In (b), *to three people* may reconstruct below *say* into a tensed subordinate clause. This entails that it may be licensed by **Φon**. However, in (c), where there is negative inversion, the PP may not reconstruct. This entails that the fronting is licensed only by **Gap**, and hence that **Gap**, but not **Φon**, may select for a **Gap**-headed clause (rather than only for T). Specifically, in English, **Gap** may select for **Gap**$^{\mathbf{inv}}$. The assumption here is that **Gap** is a functional category, and as such, selection is sensitive to its presence. A fronted phrase licensed by (and also selecting for) **Gap** is assumed to be headed by a non-functional (minor) head (the Agr which holds the combinator **A**,

[22] Notice that in (b), there are two readings with reconstruction below *say*, with scope alternation. That means that reconstruction does not entail that the scope of a phrase will be construed at the theta position pertaining to that phrase.

according to Cormack 1999), so such a phrase may intervene between the two occurrences of **Gap**.

Note that Rizzi (1997:296-7) suggests that the restriction to a single fronted focus arises from the interpretation of the predicate as 'presupposed', which naturally precludes its containing further focussed items. Under our analysis, the uniqueness is a property of the focus interpretation of **Gap**, rather than of **Gap** itself, so that the question of the possible iteration of **Gap** remained open.[23] Similarly, the pragmatic processing associated with a topic suggests that there can only be one topic per root clause (except possibly if there is an embedded clause representing another utterance). Again, no conclusion about the iterability of **Φon** can be drawn.

Haegeman (2000) discusses sentences like (46) (her 19c and 21c), where a phrase intervenes between a negative phrase or *wh*-phrase and the inversion site. For a small proportion of speakers, such sentences are acceptable.

(46) a % For what kind of jobs, during the vacation, would you go into the office?
b % On no account during the vacation would I go into the office[24]

The intervening phrases in (46) are problematic for an analysis using a Focus head, with inversion into the Focus and the focussed phrase in Spec-FocP, since nothing can intervene between Spec and its Head. Haegeman's analysis involves creating a complex fronted phrase, amalgamating the two fronted phrases. Her analysis accounts for the claimed fact that in such structures, both the *wh*-phrase and the intervener must be adjuncts.[25] She argues (p 143 ff.) that such adjuncts, which include conditional phrases, move to the specifier of a 'Scene' head, where they serve to set the scene or anchor the sentence to discourse.

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[23] Utterances with multiple foci, where just one is fronted, would be treated as having a single complex focus at LF, just as multiple *wh*-phrases must be treated as manifestations of a single complex *wh*-phrase.

[24] Punctuation of these examples is as in the text. Example (46b) however appears with commas in Haegeman's (36b). Haegeman (p.c.) says she deliberately asked the informants to exclude parenthetical intonation.

[25] This claim applies only to the relevant informants used by Haegeman. We cannot promise that we speak the same dialect, and Haegeman's informants are not available. We would appreciate comments on our examples from anyone finding the examples in (46) acceptable.

For us, the examples in (47) are wholly acceptable, with a 'parenthetical' intonation for the intervening phrase.

(47) a How much, over this busy weekend, do you imagine you will get done?
b When, if he arrives at all, will John arrive?
c How, if he doesn't drive, will Gerry get to the shops?
d Under no circumstances, given what he has drunk, should Tim drive home.

Under our analysis, the relation between the focussed *wh*-phrase and the inversion site will be one of selection, rather than a Spec–Head relation.[26] According to what we have suggested, an intervening phrase will be possible only if it is invisible to selection. This can be the case if it is headed by a minor category, either because it is an in situ adjunct, or because it is licensed by **Φon**, if **Φon** were a minor head. The latter option predicts that an argument may occur in the intervener position, as in (48).

(48) a *To whom, a book like this, would you give
(Haegeman 2000, (20c), from Koizumi 1995: 146)
b ?What sort of thing, to a person so rich, can one possibly give?
c ??Nothing, to that sort of person, can one possibly give[27]

Such examples as (48a) are uniformly unacceptable even by those accepting (46), according to Haegeman. She notes (page 132) that intervening argument PPs are sometimes marginally acceptable, as (48b) is for us. The difficulty of accounting for the sharp difference between the examples militates against an account using **Φon** (or indeed **Gap**). We conclude then that **Φon** too is a functional head, rather than a minor head.

The pattern of acceptability in (46) to (48) can be broadly predicted under our assumptions. Certain adjuncts, like the *if* clause in (47b), adjoin promiscuously, so that

[26] Suppose the inversion site for questions is C. In *I know* w*hich dog John saw?*, the determiner *which* selects first for a noun phrase, giving *which dog* and second for a C projection which has a determiner-projection gap, i.e. for a C[/D]. Thus *which dog* selects for *John saw t*. See Cormack (1999).

[27] Koizumi rejects a structurally similar example (Koizumi 1995: 146, example 28b).

left adjunction to an unsaturated **Gap** projection is to be expected.[28] The temporal interveners *during the vacation* in (46a), and *over this busy weekend* in (47a), can be analysed in a similar way, provided they do not have to be within the scope of T. This seems to be correct, since the marginality of the examples in (46) has to do with the difficulty of construing the temporal phrase as properly parenthetical in these particular examples. A good example has a construal where the parenthetical is 'background', as indicated in (49):

(49) Why, during the vacation, are all the lights on in the department?
'Why, given that it is the vacation, are all the lights on in the department (now)?'

This account requires no stipulation. We do not need any constraint on the adjunct or argument status of the initial fronted phrase (consider (47) a and c). The examples in (48) would be ungrammatical.

To accommodate the pattern of marginal acceptability of (48 b and c), we must allow some kind of fronting to the intervening position. If we reject **Gap** and **Φon** fronting, we are left with some variant of Haegeman's strategy, where the two phrases are treated as one. We suggest the following approach. Within a Categorial Grammar framework with type-shifted quantifiers, two adjacent arguments can be composed into a non-standard constituent (Steedman 1990). If we proceed in this way with a wh-argument and a plain one, such a composed constituent will inherit the +/–wh-properties of the syntactically higher one, and the selection properties of the lower one. A wh-phrase [[*what sort of thing*]∘[*to a person so rich*]] can be constructed, and may be merged in pre-**Gap** position, from where it will bind the gaps supplied by the traces at the theta positions of *give*.[29] If we assume that in processing, a composed constituent will be constructed from the canonic types for the arguments (where the PP binds a selection in a ditransitive phrase, and the object, a selection in a transitive phrase), we will not be able to construct the 'scrambled' composed constituent [[*to whom*]∘[*a book like this*]]. This correctly differentiates the two examples in (48).

[28] The occurrence of *donkey* sentences such as *If a man owns a donkey he beats it* shows that there is genuinely adjunction of the *if* clause above the main clause, rather than simply fronting from a lower position.

[29] For the horrid details, apply to the first author. We realise that there might be overgeneration if any suitable pair of constituents can be fronted in this way; further work is needed.

6 Further issues and evidence
6.1 Can Φon be overt?

As mentioned in section 2.2, Aboh (1999) argues that Gungbe has a head *yà* appearing after topics, which are noun-phrases, or locative or temporal phrases. This head seems to be a candidate for an overt **Φon**.

(50) ùn d ´ d ` **dàn l ´ yà** Kòfí hù ì (Aboh 1999: 324)
1sg say-Perf that snake Det Top Kofi kill-Perf 3sg
'I said that as for the snake, Kofi killed it'

There are, however, reasons to doubt that *yà* is the morphophonological realisation of **Φon**. First, fronting *yà* is incompatible with reconstruction, as we see in (51a). In (51b), we see that the equivalent focus structure is grammatical.

(51) a *foto ede ton ya Jan na kpla-e do ado go
photo he-self Pos Top John will hang-it on wall side

b foto ede ton we Jan na kpla do ado go
photo he-self Pos Foc John will hang on wall side
'John will hang a FOTO OF HIMSELF on the wall'
(Aboh, p.c.; no tone marking)

Second, the clause may contain a focussed strong pronoun or an epithet, instead of a weak pronoun coreferential with the topic, as in (52):

(52) Koku ya yokolu lo we (*e) ma wa azome
Koku top fool the Foc he neg come work
'As for Koku, THE FOOL didn't come to work' (Aboh, p.c.; no tone marking)

Third, *yà* cannot be used with contrastive topics (Aboh, p.c.).[30] The alternative is that *yà* is a post-position, meaning roughly 'about' or 'as for', and the weak pronoun *ì* in (50)

[30] Contrastive topics occur in B's reply to A: (i) A: Did you like them? B: John I liked, but Mary I didn't.

and the epithet *yokolu lo* in (52) are normal arguments, present both at LF and PF.[31] If this is right, **Φon** is not implicated at all: whatever syntactic and semantic work is done is done by the postposition, which is a two-place operator (a minor lexical head) introducing the topic as an adjunct to the clause. Note that such an adjunction structure, but with a phonologically empty head, can provide the syntactic and semantic hook on which to hang the 'hanging topic' of Cinque 1977, i.e. the topic in a Left Dislocation structure (Cinque 1990: 57-60 and references therein).[32]

The question still arises as to whether **Φon** could ever be overt, where the fronted element is or may be phrasal. We leave the question open.

6.2 Postal's 'Two types of left extraction'

We have argued that there are two distinct mechanisms responsible for the fronting which is more standardly seen as a case of 'A-bar movement'. In his 1998 book, Postal puts forward evidence that there are two kinds of A-bar movement, which he calls A-extraction and B-extraction, distinguished by differential acceptability in a dozen different environments. B-extraction cases comprise Topicalisation, the *wh*-movement in *it* clefts, and non-restrictive relative clauses; the rest, including *wh*-movement in questions, and negative preposing with inversion, are instances of A-extraction. It is to be expected then that we should find some connection between A-extraction and **Gap**, and B extraction and **Φon**. In (53a, b, g, h), we show some of Postal's data (his (19) page 29); we have added the rest in line with the environments listed in Postal's example (1) (page 1), so that (a) to (f) are A-extraction cases, and (g) to (i) are B-extraction:

(53) a [What way]$_i$ does Harry often talk t_i
b the way that$_i$ Harry talks t_i
c The way Harry talks t_i is affectedly
d [Not that way]$_i$ does Harry ever talk t_i
e Stella talks more oddly than (the way) I said Harry did t_i

[31] Locative PPs require *fl n* 'there' in the main clause. The pronoun is apparently absent in the main clause of a *yà* structure if the fronted phrase is a temporal PP (Aboh 1999: 327-329). We assume it is present but phonologically empty.

[32] Because of the post/preposition, the clause-initial noun phrase will not c-command the clause, so that the coreferential pronouns cannot be bound variables. This restricts Left Dislocation phrases to those that are referential, excluding in particular quantified noun phrases.

f What a silly way Harry talks t_i
g *That way, which$_i$ Harry talks t_i, …
h *[That way]$_i$, Harry often talks t_i
i *It is like this the way Harry talks t_i (*it*-cleft structure)

We agree with Postal's acceptability judgements in all cases except that of (53h), the Topicalisation structure. For Postal, these sentences have no acceptable reading (confirmed, Postal p.c.). For us, the majority of the Topicalisation structures which Postal designates as unacceptable, such as (53h), and (54b) below, do have acceptable readings, but only with appropriate intonation and with Focus interpretation. We can demonstrate this more clearly in another of Postal's structures, with colour resultatives.

(54) a What colour did he paint his car?
b Red, I painted my car
c #Magenta, his favourite colour, he even painted his CAR

(55) a *Not RED, I painted my car, but PUCE
b Not RED did I paint my car, but PUCE

The wh-extraction in (54a) is unproblematic. In (54c), the intonation and the non-restrictive relative tend to force a topic reading, and the result is anomalous. In (55a), the lack of inversion requires licensing by **Φon**, which is unobtainable in this structure, while the equivalent **Gap**-licensed structure in (55b) is fine. These differences support a syntactic differentiation between the mechanism used for obtaining non-focus fronting and that pertaining to focus-fronting, and so provides support for the **Φon** versus **Gap** analysis. They also support Postal's identification of certain structures as differentiating between various forms of extraction, although not along exactly the lines Postal's own dialect demands.

The situation can be described thus: There are certain environments which for some speakers (the authors), disallow extraction with **Φon**, and for other speakers (Postal), permit extraction with neither **Φon** nor **Gap**, but which for both dialects do allow other *wh*-type extraction (A-extraction). There are various conclusions we might draw from this. First, A-extraction and **Gap** extractions may be distinct syntactically, so that there

are at least three relevantly distinct fronting mechanisms.[33] Second, the uses of **Gap** may differ in different dialects, so that in particular, Postal cannot use **Gap** for fronting (although it is available with negative inversion). Third, the dialects may differ in some condition relating to focussing. We leave this problem unresolved, partly because the comparative data are somewhat murky.

6.3 Left Dislocation

Our claim that there are no heads dedicated to 'Topic' or 'Focus' is consistent with Ellen Prince's conclusions relating to Left Dislocation: the same structure can be used for diverse discourse purposes (Prince, 1988, 1997). However, Prince claims that the uses to which a structure is put cannot be derived from 'iconicity or common sense reasoning …', but that the knowledge of how to relate structures to their possible discourse uses must be part of linguistic competence (Prince 1988: 179, 1997: 139). With respect to topic and focus, we have argued above that the distinct syntactico-semantic properties of **Gap** and **Φon** lend themselves naturally to pragmatic exploitation with particular effects, and that such exploitation does take place in our dialect of English as predicted. No assumption of any linguistic sub-module relating to structures and their discourse uses was invoked, and indeed within the Minimalist program, it is hard to see where such information could be placed, although given the arguments of Blakemore (1987), lexical heads must be able to encode some sorts of pragmatic processing instructions.

We do not claim however to have shown that our position is tenable in general, or even that we have covered all that needs to be discussed for the cases we consider. Among other things, our explanation appealed to the relative simplicity of **Φon** relative to **Gap**, but we did not substantiate this intuition. It is clear too that further explorations are needed both for English and for other languages. For English, we need to determine the syntactico-semantic properties of other fronting structures such as Left Dislocation, including that (non-standard) variety giving rise to sentences like (56):

(56) Most people, they just vote for a party

This has to be done before attempting a pragmatic analysis of the use to which such structures are put. Only if this fails need we look for alternative explanations. Similar

[33] Postal (1998) argues for an extraction strategy involving non-overt resumptive pronouns, but this is for his B-extractions.

considerations apply to structures using the same heads in other languages. If nothing but pragmatics accounts for distinct discourse usages, we need to explain, or explain away, for example, why Postal's Topicalisation differs from ours, and how Hungarian could have positions usable for exhaustive focus but not for contrastive focus alone (Brody 1990: 201 and others).[34]

It will also be necessary to consider possible uses of **Gap** and **Φon** other than for fronting. For example, the [+Case] assigning property of **Gap** would enable subjects to appear before untensed predicate phrases. Where a predicate is selected, **Gap** will be ruled out by the need to check other local features, but it may be implicated for example in licensing the subject in exclamatives like (57):

(57) John married?! (I don't believe it!)

6.4 Christopher

An indication of the correctness of the pragmatic explanation of the discourse uses of fronting is provided by the case of Christopher (Smith & Tsimpli 1995). Christopher, an autist savant, has severely impoverished use of pragmatics, probably due to an impaired Theory of Mind. His English grammaticality judgements are almost normal, but with some interesting exceptions (op. cit. 48-57). Christopher consistently rejects Left Dislocation and Topicalisation structures, even when appropriate intonation and context are provided. He accepts *it* clefts, and at least sometimes, negative inversion structures. He also rejects some extraposition structures, such as *I didn't suspect it for a moment that you would fall*, requiring the omission of the *it*, while accepting *It bothers me that you could do such a thing*. The rejected structures arguably contain referential *it*, rather than expletive *it*, and so correspond to Right Dislocation.

It is important to note that Christopher understands all the structures mentioned (and "corrects" them). It seems then that he must have in his grammar all the appropriate syntax and semantics that underlies these structures. Why then are they rejected? We suggest that the rejection is pragmatic. Suppose we assume what we have argued above, with respect to Topicalisation, that the use is not determined by the 'topic' or 'focus' semantics of the head, but rather by general pragmatic principles, and that the same applies to Left and Right Dislocation. Then it follows that in every case, the 'correction'

[34] Data provided by Kriszta Szendröi and Misi Brody made it clear that the discussion in the (English language) literature on Hungarian fronting was inadequate to our purposes.

supplied by Christopher has the same meaning as and is simpler than the original.[35] According to the Communicative Principle of Relevance (Sperber & Wilson 1995), in such circumstances, only the speaker's expectation that the hearer will derive additional contextual effects justifies the use of the more complex form. If Christopher's impoverished pragmatics precludes his understanding of such contextual effects, he rightly rejects the structures.

7 Conclusion

In the analysis of fronting, we have proposed two new heads, **Φon** and **Gap**. Moreover, we claim that it is not useful merely to consider the interpretation of the fronted phrase as a 'topic' or a 'focus', or other discourse object. It is essential to consider which head the structure is licensed by, where the relevant heads are not distinguished by their semantics, but by their morpho-syntactic properties. Pragmatically guided inferential processing then depends on the properties of the different LFs. Syntactic properties such as locality restrictions, and semantic properties such as available scope interpretations, equally differ according to which head is exploited.

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[35] We assume that Christopher's rephrasing may legitimately discard identity elements such as **Gap** and **Φon**, and dummy *do*. In the case of *it* clefts, a rephrasing would have to discard lexical material such as equative *be* and the relative head. With negative inversion, paraphrases using the same lexical items are often awkward, and sometimes impossible (as with *No-one did anyone see*). We take it that the wide-scope negation which licenses negative inversion cannot be discarded nor may an alternative negation be substituted.

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