On the Representation of Wh-words and Foci: Evidence from Mixtec

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Abstract: In this paper, I identify a cross-linguistic preference for wh-words to move instead of more local foci in languages where they compete for a single position. I account for this preference by positing a probe which is relativized to an Ā-feature geometry in which [WH] entails [FOC]. Moreover, I propose that this probe will be valued by the goal that matches in the most features (Oxford, 2019), thus prioritizing movement of wh-words. I argue that this analysis is superior to an alternative that posits distinct heads which probe for wh-words and foci independently and show that the pattern is not reducible to a Focus Intervention Effect.

Key Words: Wh-movement, focus, Best Match, Mixtec

1 Introduction

It has been long observed that there are syntactic and interpretive similarities between wh-words and foci, including the fact that they seem to appear in the the same surface

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position in many languages (Horvath, 1986; Rochemont, 1978, 1986; Chomsky, 1977; Haida, 2007; Aboh, 2007; Rizzi, 1997; É. Kiss, 1998a; Croft, 1990, a.m.o.). Consider Aghem, for instance, a Bantu language spoken in Cameroon with a default SVO order. In this language, both wh-words (1a) and focused constituents (1b) appear immediately following the verb (Watters, 1979; Hyman, 2010).¹

(1) a. Á mó zî  [ndúghó]  tê k̩ nè à
EXPL PST eat who fufu DET today Q
‘Who ate fufu today?’

b. Á mó zî TİBVU TİBVGA bê  k̩ nè
EXPL PST eat dogs two fufu DET today
‘The TWO DOGS ate fufu today.’

The principal aim of this paper is to provide an account of how wh-words and foci are formally represented in the syntax, with the goal of explaining their surface similarity in a principled way.

A natural, and fairly common, hypothesis that has been advanced to account for the connection between wh-words and foci is to propose that they move to the same syntactic position, at least in some languages. This claim has been made for Hungarian (É. Kiss, 1998a), Italian (Rizzi, 1997, 2001), and Mongolian (Onea and Guntsetseg, 2011), among other languages. Furthermore, some researchers have argued that both are attracted to this position by the same feature. Throughout this paper, I refer to this idea as the Identity Hypothesis.

¹For expository ease, throughout this paper I box wh-words and put foci in small caps. I use standard Leipzig Glossing Conventions, with the following additions: ACT= Active Voice, AML= Animal Pronoun, EMPH= Emphatic Particle, EXPL= Expletive Subject, INT= Interrogative Clause, NEUT= Neutral Pronoun, PN= Proper Name Marker, PREV= Preverbal Particle, TAM= Tense, Aspect, Mood Marker, X= Unclear or Irrelevant Morpheme. Some glosses have been slightly altered from cited sources for the sake of consistency.
(2) **The Identity Hypothesis**: Foci and wh-words are formally identical in the syntax. They move to the same syntactic position because their movement is driven by the same feature.

Several versions of this hypothesis have been proposed in the literature. Aboh and Pfau (2011), Aboh (2007), and Aboh (2016) argue that both wh-words and foci can be attracted by the same head, which they assume to be a Focus Phrase (Bródy, 1990; Rizzi, 1997). Similarly, Erlewine (2018) accounts for multiple fronting of foci and wh-words in Toba Batak by claiming that they are both “formally focused” and thus share a feature which is subject to attraction by the same head. Finally, Horvath (1986) argues on the basis of Hungarian that \texttt{[FOC]} is a feature that is assigned to the constituent immediately preceding the verb, analogously to Case. She additionally claims that question wh-words must universally bear a focus feature at LF in order to be interpreted (pg. 118). Thus, question wh-words must move to the same position as other foci, in order to be assigned a \texttt{[FOC]} feature and properly interpreted.

In this paper, I argue for an alternative representation of wh-words and foci. Following many previous researchers, I propose that wh-words have both a \texttt{[WH]} feature and a \texttt{[FOC]} feature (Lee, 1999; Bošković, 2002; Sabel, 2000; Kim, 2006; Dong, 2009, a.o.). Furthermore, building on insights from the A-domain, I argue that these features are not independent of one another. Instead, I claim that they are arranged hierarchically with respect to one another in a feature geometry (cf. Abels, 2012; Foley and Toosarvandani, 2019). Specifically, I propose that the feature \texttt{[WH]} entails the feature \texttt{[FOC]}, such that all constituents marked with a \texttt{[WH]} feature are necessarily marked with a \texttt{[FOC]} feature. Focus movement, I argue, is driven by phrasal movement of a focus sensitive particle that is sometimes phonologically null, which bears \texttt{[FOC]}, and which contains a focus within its scope (cf. Cable, 2010, on wh-movement). This feature geometry allows us to simultane-
ously capture the fact that wh-words and foci appear to form a natural class, as well as to account for the fact that wh-words are sometimes treated differently by the syntax.

(3) **Focus Particle** \[\text{FOC}\]
    \[
    \begin{array}{c}
    \text{[FOC]} \\
    \text{|}
    \end{array}
    \]
    \text{[WH]}

To motivate this proposal, I will show that in several languages there is a preference to move wh-words over foci when the two are in complementary distribution, even if the focus is more local to the attracting head. While I will compare several unrelated languages, the main empirical focus of this paper will be San Martín Peras Mixtec (henceforth: SMPM), an understudied language spoken primarily in Mexico. In SMPM, both wh-words (4a) and foci (4b) must move to a preverbal position.

(4) a. \((X_0)\) shàshi _ kwi’i?  
    who ate fruit  
    ‘Who ate the fruit?’

b. MARIA ÑÁ tsyâ _ shită  
    M. she made tortilla  
    ‘MARIA made the tortillas.’

However, in the case that they co-occur within a single clause, movement of the wh-word always takes precedence, even if the focus is closer to the attracting head, a phenomenon that I refer to as the “wh-over-focus preference”.

(5) The Wh-over-Focus Preference
    \[
    \begin{array}{c}
    \text{(Ná) kishashi PEDRO RÀ}
    \end{array}
    \]
    \text{what brought P. he}
    \‘What did PEDRO bring?’
If we suppose that movement of both constituents is driven by the same feature, then there is an apparent violation of locality—the most local goal is being skipped by the probe in favor of a non-local goal. Furthermore, as I will show, this pattern is not unique to SMPM, but in fact holds in several other languages.

While there is a fair amount of work on the role that feature geometries play in pronoun inventories, agreement, and cliticization (see e.g., Harley and Ritter, 2002; Béjar, 2003; Béjar and Rezac, 2009; Foley and Toosarvandani, to appear; Coon and Keine, to appear, a.o.), there is much less work on how feature geometries interact with probes that trigger phrasal movement in the Ā-domain (though see Abels, 2012). In this paper, I argue that the apparent non-local movement of wh-words in (5) can be accounted for using two tools from the A-domain: multiple searches within a locality domain (cf. Béjar and Rezac, 2009; Coon and Keine, to appear) and Best Match (Oxford, 2019; Coon and Bale, 2014; van Urk, 2015). I propose that a probe relativized to [uFOC-uWH] will probe again past a focus in subject position, potentially finding a wh-word in object position, due to the fact that the focus does not completely satisfy its needs. The object will value the probe if it constitutes a better match for the needs of the probe, and will subsequently be internally merged into the specifier of the probing head.

In addition to my proposal, I consider two alternative hypotheses to explain the wh-over-focus preference shown in (5). First, in §3, I consider whether wh-words and foci are moved by two distinct features. Under this hypothesis, wh-movement and focus movement are superficially similar, but they are two distinct movements triggered by two distinct features, albeit to the same apparent position in some languages. Throughout this paper, I refer to this as the Disjoint Hypothesis.

(6) **The Disjoint Hypothesis:** Foci and wh-words are represented with distinct features. The connection between them is epiphenomenal: both happen to move to
similar surface positions, which creates the illusion that they are connected with each other.

While this alternative could account for some of the facts of SMPM, I argue that it encounters two problems, one empirical and one typological. Empirically, I show that the Disjoint Hypothesis struggles to explain why focus movement is normally obligatory (as in 4b), but becomes ungrammatical when a wh-word is present (as in 5). Typologically, I show that in language after language these two categories are connected with one another, but that the position to which they move varies across languages. Therefore, I argue that if we adopt the Disjoint Hypothesis, we are forced to resign ourselves to viewing the syntactic connection between wh-words and foci as a mere coincidence. I believe this would be an unsatisfactory result.

After presenting my main proposal in §4, I return to the Identity Hypothesis in §5 and consider whether it could be maintained by assuming that the preference for wh-movement over focus movement is due to a Focus Intervention Effect (FIE) (Beck, 1996, 2006; Pesetsky, 2000, a.o.). Because an in situ wh-word c-commanded by a focus is ungrammatical in many languages, then it may be the case that fronting a focus instead of a wh-word is impossible in SMPM because it creates this marked structure. However, I will show that two properties of SMPM allow us to rule out an FIE as an explanation for non-local movement. The first reason is that fronted foci can take narrow scope. A prominent semantic analysis of FIE attributes their ungrammaticality to a wh-word appearing in the scope of a focus operator, thus foci that take narrow scope should not be problematic, even if they c-command in situ wh-words (Beck, 2006). Second, because foci must move independently in SMPM, I argue that syntactic accounts of this effect that attribute the ungrammaticality to foci blocking covert movement of wh-words also predicts that the should be no intervention (Pesetsky, 2000).
2 Mixtec and the Locality Problem

In this section, I provide the necessary background on focus in SMPM (§2.1), as well as its interaction with wh-movement (§2.2). Then, I identify a problem of locality if we assume the Identity Hypothesis: in SMPM, wh-words will always be attracted instead of foci, even if they are non-local (§2.3). Additionally, I show that this is a more general cross-linguistic pattern (§2.4).

SMPM (ISO: JMX) is an Otomanguean language spoken by approximately 10,000 people in western Oaxaca, Mexico, near the state of Guerrero (Instituto Nacional de Estadística y Geografía, 2010). SMPM is one of roughly 25-35 Mixtecan languages (Egland and Bartholomew, 1983). All uncited data in this paper comes from my own fieldwork since 2017 with one speaker who lives in California, as well as four speakers who live in the town of Ahuejutla, Mexico. All elicitation was conducted in Spanish.

2.1 Focus in Mixtec

I assume, broadly speaking, that the focus of a sentence is the information that the speaker assumes the listener does not share (Jackendoff, 1972). Additionally, I assume that there are different types of focus which can have different properties, including foci that create a congruent answer to a wh-question, and foci that contribute an additional contrastive or corrective meaning (É. Kiss, 1998a). I assume that these types of focus are semantically distinguished by the scope of the focus operator (see §5.1 for discussion) (Rooth, 1992).

Like other Mixtec languages, SMPM has a default VSO word order in out-of-the-blue contexts, as shown in (7) (Ostrove, 2018; Macaulay, 2005).

(7) Kotô Agustina chichí
    likes A. avocado
    ‘Agustina likes avocados.’
While there has been little formal theoretical work on focus in Mixtec languages, it has been consistently observed that foci move to a preverbal position (see, e.g. Alexander, 1988; DiCanio et al., 2018; Farris, 1992; Hedding, 2019; Hills, 1990; de Hollenbach, 2013; Johnson, 1988; Kuiper and Oram, 1991; Shields, 1988; Small, 1990; Zylstra, 1991).

In SMPM, all types of foci are obligatorily fronted to a preverbal position. First, consider a case of wh-congruence focus. Here, the word corresponding to the wh-word in the question must move (8a). It is ungrammatical for it to remain in situ (8b).

**Context:** What did the dog eat?:

(8)  

a. **KÔÑÙ** shishi ri __  
   meat ate AML  
   ‘It (an animal) ate the MEAT.’

b. *Shishi ri **KÔÑÙ**  
   ate AML meat  
   Intended: It ate the MEAT.

Hedding (2019): 32

This generalization also applies to contrastive foci, including corrective foci. Both foci in subject positions (9a) and object positions (10a) must front to a preverbal position, and cannot be left in situ (9b, 10b).

**Context:** I am eating in the house of my friend Juan and he serves me some very delicious tortillas that he says his daughter Rosa made. Pedro’s wife tells him that he is wrong and that his other daughter made them:

(9)  

a. **MARIA ÑÁ** tseyä __ shitä  
   M. she made tortilla  
   ‘MARIA made the tortillas.’

b. *Tseyä **MARIA ÑÁ** shitä  
   made M. she tortilla  
   Intended: MARIA made the tortillas.

**Context:** One day, I invite my friend Pedro to my house and he eats all of my tomatoes. Later on, my brother is recounting this story, but he mistakenly says that Pedro ate all my avocados. I correct him:
(10)  

a. **NTSÌNANA RÌ²**  
      tomato AML ate all he  
      ‘He ate all of the TOMATOES.

b. *Shàshi nts’i rà NTSÌNANA RÌ  
      ate all he tomato AML  
      Intended: He ate all of the TOMATOES.

Note that contrastive foci in SMPM have an additional requirement that they must be doubled by a clitic pronoun that agrees with their noun class. Simple congruence focus does not require clitic doubling (cf., 8a), however, congruence focus *can* be doubled by a pronoun if the context explicitly introduces alternatives, such as following an alternative question. In this way, the pattern resembles other languages where clitic doubling signals d-linking, such as Inuit languages (Yuan, to appear), Romanian (Dobrovie-Sorin, 1990), and languages where a contrastive focus is followed by a pronoun that it agrees with in noun class, such as Babine-Witsuwit’en (Denham, 1997). In this paper, I will set aside the question of doubled clitics, as it is orthogonal to my main point, and focus on the fact that all foci undergo obligatory movement to a preverbal position.

Finally, focus sensitive particles such as *even* and *only*, which require a focus within their scope, also front to a preverbal position in SMPM.

(11)  

a. **Nina KWÌ’I** sháshi rà lo’o yo’o __  
      only fruit eats he small here  
      ‘This boy eats only FRUIT.’

b. *Sháshi rà lo’o yo’o nina KWÌ’I  
      eats he small here only fruit  
      Intended: This boy eats only FRUIT.

Because foci are cross-linguistically realized with prosodic prominence, some researchers have proposed that they receive that prominence by undergoing movement in

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²Most round fruit are in the “animal” noun class in SMPM. For simplicity, and following the intuitions of speakers, I refer to the pronoun that doubles these fruit as the animal pronoun.
the phonology to a prominent position, such as to the edge of a intonational phrase (Féry, 2013; Truckenbrodt, 1999; Büring, 2013, a.o.). Under this analysis, movement of foci is not syntactic, but is driven by a need for foci to be realized prominently in the phonology. In order for this type of analysis to succeed for a particular language, two conditions must hold: (i) foci must be prosodically prominent relative to non-foci, (ii) foci must surface in a position that is independently prosodically prominent, i.e. constituents that surface there will be prominent regardless of whether or not they are foci. Only when these two conditions are met can we reasonably propose that movement is driven by a need for foci to surface in a position where the phonology assigns prominence, rather than foci having two independent needs: to move and to be realized prominently.

As demonstrated in (Hedding, to appear), SMPM satisfies the first condition, but not the second condition. That is, fronted foci are realized prominently relative to non-foci (by raising the pitch of final high tones), however, preverbal constituents that are not foci are not realized with the same prominence. Thus, it is not the case that foci move to a position that is prominent per se, as other fronted constituents that appear in the same prosodic position are not prominent in the same way. Thus, I follow Hedding (2019) in assuming that focus fronting in SMPM is syntactically, not prosodically, driven.

2.2 Interactions with Wh-Movement

Wh-words also must move to a preverbal position in SMPM, regardless of whether they are the subject (12a) or object (13a). It is ungrammatical for them to remain in situ (12b, 13b), as in other Mixtec languages (Caponigro et al., 2013).

(12)  a.  [\text{	extit{Yo}}] shàshi  _ kwì’i?  
    who  ate  fruit
    ‘Who ate the fruit?’

    b.  *Shàshi  [\text{	extit{Yo}}] kwì’i?
    ate  who  fruit
    Intended: Who ate the fruit?
Furthermore, focus fronting and wh-movement are in complementary distribution, suggesting that they are in competition for a single position (cf. Rizzi, 1997). Movement of a focus to a position between a wh-word and the verb is completely ungrammatical.

While the opposite order—a focus above a wh-word—is ostensibly possible, there are two reasons to believe that this higher constituent is not a focus, but actually functions as a contrastive topic (Büring, 2016). First, unlike focus fronting, movement to a position above the wh-word is always optional. In sentences with both a wh-word and a contrastive constituent, the wh-words will always move, and the contrastive constituent will either stay in situ\(^3\), or will be moved to a position above the wh-word.

**Context:** My friend Benjamin and I had a party and everyone at the party brought some food or drink to share, but we didn’t see what Pedro brought. We go to our friend that was also at the party and Benjamin asks him, “What did Pablo bring?” I turn to Benjamin and say, No:

\[^3\text{in situ} \text{ contrastive foci differ from fronted contrastive foci in that they are optionally doubled by a pronoun.}\]
Context: My friend Benjamin and I had a party and everyone at the party brought some food or drink to share, but we didn’t see who brought the tortillas.

We go to our friend that was also at the party and Benjamin asks him, “Who brought the meat?” I turn to Benjamin and say, No:

(16) a. (Yò) shini’ì  SHITÁ (YA)
   who brought  tortilla NEUT
   ‘Who brought the TORTILLAS?’

   b. SHITÁ  YÁ (Yò) shini’ì  _
   tortilla  NEUT who brought
   ‘The tortillas, who brought them?’

Second, this movement is restricted in at least two important cases. Both universal quantifiers (17) and negative indefinites (18)⁴ cannot undergo this type of movement.

Context: Some friends are sleeping in my house. During the night, 3 dogs come into the house at different times. The next morning, my brother asks my friends if they saw a dog come in. I ask:

(17) *NTSI’I  tsinà  ri  (Yò) shini  _
   all  dog  AML who saw
   Intended: Who saw ALL the dogs?

Context: I had a potluck at my house and everyone was supposed to bring a dish to share. However, there were 10 people at the party, but only 9 dishes.

My friend Benjamin begins to ask dish by dish, “Who brought the meat? Who brought the salsa...” I interrupt him impatiently and ask:

(18) *?KO-ÑÂ’A  ÑÂ (Yò) nishini’i
   NEG-thing  NEUT who brought
   Intended: Who brought NOTHING?

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⁴Eischens (2019) argues that negative indefinites in SMPM must surface in the position of negation. Thus, an alternative explanation for the ungrammaticality of (18) would be that the negative indefinite is not in the position of negation, which is below wh-words.
This restriction would be surprising if movement to a position before the wh-word was an
optional type of focus movement, as both can undergo focus fronting with no restriction.

**Context:** I had a party at my house and everyone was supposed to bring a dish
to share. However, my friend Maria didn’t bring anything. My friend Benjamin
notices that I am frustrated about something and tries to cheer me up, saying:

“Well, at least Maria brought her delicious salsa.” I respond, No:

(19) KO-ÑÀ‘A ÑÀ nishini’i Maria
    NEG-thing NEUT brought M.
    ‘Maria brought NOTHING.’

This suggests that the ability to front to a position above the wh-word has nothing to do
with whether something is focused, but rather whether it can be interpreted as a con-
trastive topic.

Thus, I assume the left-peripheral structure for SMPM shown in (20). Both foci and
wh-words move to a preverbal position, which I assume to be the specifier of a null C.
There is at least one more peripheral position that is reserved for topics. Macaulay (1996)
proposes a similar structure for Chalcatongo Mixtec (cf. Aissen, 1992, on Mayan).

(20)

```
{Topics}
/   
\ / 
{Wh-words, Foci}
/  
C    ...
```

### 2.3 The Locality Problem

In SMPM, like many other languages, wh-words and foci appear to move to the same
syntactic position. The goal of this paper is to understand how they are represented in the
syntax in order to derive this pattern. Let us begin with the simplest view on the relationship between wh-words and foci that has been proposed in the literature: wh-words and foci are both marked with a feature, [FOC], which triggers their movement (Horvath, 1986; Aboh, 2016). Under this view, which I refer to as the Identity Hypothesis, wh-words and foci are formally identical in the syntax and the motivation for focus movement and wh-movement is the same.

This view makes a concrete prediction about movement that will be fruitful to explore. Specifically, it predicts that in languages where there is one designated position for foci and wh-words, and only one thing can move to that position, the structurally highest constituent marked [FOC] should move—a type of superiority effect. If we assume that wh-words and foci are attracted by a probe, then we expect the probe to attract the most local goal within its domain (Chomsky, 2000, 2001; Pesetsky, 2000; Rizzi, 1990). If the probe’s needs are satisfied, then it will stop probing. But, a probe should not be able to skip any potential goals in order to find a non-local goal.

As an example, consider the case of wh-movement in English. In multiple wh-questions, the highest wh-word corresponding to the subject must front (21a). However, there is only one position for fronted wh-words, so fronting the object wh-word in addition to the subject is ungrammatical (21b). Fronting the object instead of the subject wh-word is also impossible (21c), given that the probe will find the subject first.

(21) a. [Who] ate [what]?
    b. * [Who] [what] ate __?

Consequently, under the view that wh-words and foci are attracted by the same feature, then we expect to find languages where wh-words and foci display the same pattern. That is, we expect wh-words to move if they are the subject, but not if they are the object
and the subject is a focus. Conversely, we expect this hypothetical language to move foci if they are in subject position, but to leave them in situ if they co-occur with a wh-word in subject position.

(22)  
\begin{enumerate}
\item Subject Wh-word Moves, Object Focus Remains in situ
\begin{align*}
\text{WH} & \quad \ldots \quad \text{FOC}
\end{align*}
\item Subject Focus Moves, Object Wh-word Remains in situ
\begin{align*}
\text{FOC} & \quad \ldots \quad \text{WH}
\end{align*}
\end{enumerate}

Assuming the Identity Hypothesis, we don’t predict that either the focus or the wh-word will always be attracted, regardless of its position in the clause. That is, we don’t expect, for example, an object wh-word to move instead of a focus in subject position (23).

(23) Object Wh-Word Moves, Subject Focus Remains in situ
\begin{align*}
\star \text{WH} & \quad \ldots \quad \text{FOC}
\end{align*}

If we assign the same feature to both wh-words and foci, then we expect that the syntax will treat them the same. We don’t expect there to be a general preference for moving one or the other—rather, we expect locality to determine which moves (see e.g. Rizzi, 1990; Chomsky, 1993, 1995; Pesetsky, 2000, a.o.).

Let’s scrutinize this prediction. As we have seen, SMPM is a language with obligatory wh-movement and obligatory fronting of foci to a position before the verb. Furthermore, the fact that these movements are in complementary distribution suggests that they move to the same position. However, there is a puzzle that arises when we consider clauses with more than one of these elements: wh-movement always takes precedence over focus movement, even if the focus would be a more local goal to the probe (25).
Thus, there is a “Locality Problem” that arises when we consider how wh-words and foci interact in SMPM: namely, attraction to the preverbal position does not seem to respect locality. Instead, there seems to be a general preference to move wh-words.

2.4 Beyond Mixtec

This pattern is not restricted to SMPM. For instance, Hungarian is a language where both wh-words (26a) and contrastive foci (26b) move to an immediately preverbal position.

This apparent similarity has lead many researchers to argue that these are a unified phenomenon (Horvath, 1986; É. Kiss, 1998a).5

5This is not a universally held position, however. Cable (2008) notes that there is an interpretive difference between preverbal wh-words and preverbal foci. Preverbal foci receive an exhaustive interpretation in Hungarian (É. Kiss, 1998a), yet wh-words in that position do not necessarily receive an exhaustive interpretation in the language, as demonstrated by the fact that “mention-some” questions are possible. This leads Cable to conclude that wh-words cannot simply be moved because they are foci.
‘It was ITALY where I went.’  

É. Kiss (1998a): 249-250

Furthermore, in clauses with multiple foci, one must remain in situ (27a). Multiple foci are not possible in the preverbal position (27b), suggesting that there is only one position to which foci can move.

(27)  

a. JÁNOS evett meg CSAK KÉT SÜTEMÉNYT  
   J. ate PREV only two cookies-ACC  
   ‘It was John who ate only two cookies.’  

b. *JÁNOS CSAK KÉT SÜTEMÉNYT evett meg  
   J. only two cookies-acc ate PREV  
   Intended: It was John who ate only two cookies.  

Surányi (2002): 26

As there is only one preverbal focus position in Hungarian, the Identity Hypothesis leads us to expect that the highest element marked [FOC] will move there, be it a wh-word or a contrastive focus. This prediction is not borne out, however. In sentences with both a wh-word and a focus, only wh-words can move to the preverbal position, regardless of whether they originate as the subject (28) or the object (29). Foci will never move instead of a wh-word, even if they originate in a structurally higher position.

(28)  

a. [Ki] látogatta meg CSAK MARIT  
   who visited PREV only M.ACC  
   ‘Who visited only Mary?’  

b. *CSAK MARIT látogatta meg [ki]  
   only M.ACC visited PREV who  
   Intended: Who visited only Mary?

(29)  

a. [Kit] látogatott meg CSAK MARI  
   whom visited PREV only M.NOM  
   ‘Who did only Mary visit?’  

b. *CSAK MARI látogatott meg [kit]  
   only M.NOM visited PREV whom  
   Intended: Who did only Mary visit?  

É. Kiss (1998b): 16-17
The pattern in (29) is precisely what we don’t expect to happen under the view that wh-fronting and focus fronting are both triggered solely by a [FOC] feature. Instead of the highest focus moving to the preverbal position in Hungarian, it is always the wh-word that moves, even if the wh-word is structurally lower in the clause.

A very similar situation is found in Basque. Basque, like Hungarian and SMPM, has a single preverbal position in which both foci and wh-words appear (de Rijk, 1978). In the case that they co-occur, only wh-words can occupy the pre-verbal position (30a). It is ungrammatical for foci to move instead of wh-words (30b).  

\[(30) \]
\[a. \ \boxed{\text{Nork}} \ \text{erosi} \ \text{MIRENI} \ \text{liburua?} \]
\[\text{who.ERG} \text{ buy } \text{AUX M.DAT} \text{ book} \]
\[\text{‘Who bought MARY the book?’} \]
\[b. \ \text{**MIRENI} \ \text{erosi} \ \text{dio} \ \boxed{\text{nork}} \ \text{liburua?} \]
\[\text{M.DAT} \ \text{buy} \ \text{AUX who.ERG book} \]
\[\text{Intended: Who bought MARY the book?} \]

Hualde and Ortiz de Urbina (2003): 495

Finally, a similar restriction is reported for Georgian by Borise and Polinsky (2018). They show that focus sensitive particles, which normally are immediately preverbal, must be post-verbal when they co-occur with a wh-word, which also appear preverbally. It should be noted, however, that Borise and Polinsky argue for a prosodic motivation for this pattern.

So, comparing four unrelated languages, we can identify the following generalization:

\[(31) \ \textbf{The Wh-over-Focus Preference:} \text{ In languages where wh-words and foci are in competition for a single position, only wh-words can appear in that position when they co-occur.} \]

---

\*6There is some variation in Basque as to whether wh-words and foci can co-occur within the same clause. Ortiz de Urbina (1999) claims that foci and wh-words are “incompatible” (pg. 315). However, Hualde and Ortiz de Urbina (2003) report that, for at least some speakers, they can grammatically co-occur. It is not clear to me whether this is inter-speaker or inter-dialectal variation.
That is, we find an asymmetry that is unexpected if we adopt the Identity Hypothesis: in cases where both foci and wh-words could in theory move, wh-words take precedence. This strongly suggests that there is something about wh-words that makes them special, and that makes them more likely to move than foci. I have not yet found the predicted language where only the highest constituent moves, be it a focus or a wh-word. I take this as evidence that the Identity Hypothesis cannot be maintained for SMPM, nor for other languages which display this preference.

3 Disjoint Features

In the previous section, I outlined a generalization about the interaction between wh-words and foci: in several unrelated languages, wh-movement takes precedent over focus movement when the two are in competition for a single position. There is, however, another hypothesis that should be considered: wh-words and foci are not attracted by the same head, but are instead attracted by two distinct heads which are in complementary distribution with one another. This analysis could feasibly provide an explanation for the preference of wh-movement over focus movement in SMPM, if we assume that the Wh-over-Focus Preference actually reflects a preference to select the head that triggers

---

7 One language that may display this pattern is Amahuaca, a Panoan language spoken in Peru and Brazil (Clem, 2019). Clem reports that is is possible for transitive subjects to move to a position in front of an interrogative particle (analyzed as the head of C) instead of a wh-word in object position.

(32) Jan hinan=ra tzova vuchi=hax
    3sg.gen dog.erg=int who find=tam
       ‘Who did his dog find?’

(Clem, 2019)

Clem notes that the context in which (32) appears plausibly allows the subject to be interpreted as a focus, possibly instantiating the prediction of the Identity Hypothesis. However, she cautions that she has not specifically investigated the interaction between wh-movement and focus movement in the language.

If further investigation of Amahuaca indicates that movement of foci and wh-words depends on the structural position of each, then it might be an example of a language where they are indeed represented identically. Alternatively, anticipating the proposal in §4, it might be the case that the probe on C in Amahuaca is only relativized to [FOC], thus making foci and wh-words an equally good match for the needs of the probe.
wh-movement. This hypothesis is especially important to consider given the rich literature which argues for an articulated left-periphery, where the domain of complementizers does not consist of a single head C, but rather a series of functional projections—among them TopicP, FocusP, and InterrogativeP—each of which has a designated function (e.g. Rizzi, 1997, 2001; Aboh, 2016; Frascarelli and Puglielli, 2007a,b; Shlonsky and Bocci, 2019). Broadly speaking, the consensus within the cartographic literature has been that wh-words and foci are attracted by the same head, given the strong correlation between them and the fact that they are in complementary distribution (Rizzi, 1997; Aboh, 2016; Frascarelli and Puglielli, 2007a). However, the logic of the Cartographic Program allows us to consider the possibility that SMPM has multiple attracting heads within the C domain, one which moves wh-words and one which moves foci.

In this section, I explore this alternative hypothesis as a means to explain the complementarity of wh-words and foci, as well as the general preference to move wh-words within SMPM. This hypothesis—which I refer to as the Disjoint Hypothesis—accounts for the locality problem outlined in the previous section by proposing that wh-words and foci do not share any features, nor are they attracted by the same head, despite the fact that they appear to surface in similar syntactic positions. Instead, this hypothesis points to differing licensing conditions as the source of their differing behaviors. As I will show, this alternative can account for some of the facts of SMPM, but it encounters two problems, one empirical and one typological. Empirically, this analysis struggles to explain the fact that focus movement is obligatory in SMPM when no wh-word is present. Typologically, the analysis offers no principled explanation for the robust syntactic correlation between wh-words and foci. Such an account would be forced to conclude that their connection is epiphenomenal—that is, both wh-words and foci are independently attracted by two distinct probes on C, creating the illusion that they are connected with one another. Consequently, I believe that this analysis would force us to abandon a deeper generaliza-

20
tion about the connection between wh-words and foci, and thus should be dispreferred to an analysis that offers a principled explanation for the connection between the two.

### 3.1 Two Heads in the C Domain

Under the Disjoint Hypothesis, SMPM has two distinct probe-bearing heads in the C domain which are in complementary distribution with one another. One of these probes searches for foci and one searches for wh-words. Under this analysis, foci bear a feature [FOC] which can enter into an agreement relationship with a focus probe, while wh-words bear a distinct feature [WH] which can enter into agreement with a wh-probe. These two distinct probes, along with the disjoint features of foci and wh-words, ensure that there is no single probe that is searching for both foci and wh-words, and thus neither will act as an intervenor for the other.

Under this analysis, the apparently non-local movement of wh-words is attributable to the fact that the probe which attracts wh-words does not interact in any way with foci. Anything that is not a wh-word will not intervene due to the relativization of the probe. The fact that a wh-word moves instead of a more local focus is unsurprising—the focus simply doesn’t have the feature that the probe is looking for.

(33)
Under this analysis, focus movement is driven by a different probe, which is relativized to \([uFOC]\). When the focus probe is merged, it will move the most local constituent marked as \([FOC]\), ignoring any constituent that doesn’t bear a focus feature.

\((34)\)

\[
\text{FocP}\ [uFOC] \quad \downarrow \quad \begin{array}{c}
\text{v} \\
\text{DP} \\
\text{DP} \quad [FOC]
\end{array}
\]

In order to account for the complementarity of wh-words and foci in the left-periphery, this hypothesis would have to stipulate that the probes which target foci and wh-words respectively are in complementary distribution with one another. Assuming that either of the two probes could be merged in any given derivation, then there must be some mechanism to ensure that the wh-probe is always merged when a wh-word is present, forcing it to be attracted instead of the focus. Put differently, the derivation needs to be ruled out where the focus probe is merged, attracting a focus in subject position and leaving an object wh-word \textit{in situ}, a configuration which is ungrammatical in SMPM \((35)\).

\((35)\)

\[
\begin{array}{c}
\text{FocP}\ [uFOC] \\
\downarrow \text{v} \\
\text{DP} \\
\text{DP} \quad [FOC] \\
\text{DP} \quad [WH]
\end{array}
\]
One reasonable way to rule out this configuration would be to say that wh-words have a licensing requirement which forces them to enter into an agreement relationship with a wh-probe (cf. the *wh-criterion* May, 1985; Rizzi, 1996). The effect of this licensing requirement is that a wh-probe must be merged in any derivation that has a wh-word, or else the wh-word will not be properly licensed. Merging the focus probe instead will cause the derivation to crash, as the wh-word will not have its licensing needs met (cf. the *Greed Principle*, Chomsky, 1995; Bošković, 1995). Thus, wh-words will be attracted when they are present in a derivation, while foci can either be attracted or left *in situ*, depending on which probe is merged.

A crucial assumption of this analysis then is that foci do not have the same licensing needs as wh-words in SMPM. That is, foci can surface in a derivation with a wh-probe (as in 33 above), but wh-words cannot appear in a derivation with a focus probe, as they will be unlicensed (35). Thus, on this account, the locality problem outlined in the previous section is due to the difference in licensing requirements between wh-words and foci: because wh-words have stricter licensing requirements than foci, they will be attracted in derivations where both occur.

This assumption encounters an empirical problem, however, when we recall that focus movement is obligatory in SMPM (§2.1). If the focus probe and the wh-probe are in free variation, and only wh-words are subject to a licensing requirement, then we expect focus fronting to be optional—in general a focus will move if the focus probe is merged (36a) and will remain *in situ* if the wh-probe is merged (36b). Crucially, the assumption required to explain the preference for wh-words—the difference in licensing requirements between wh-words and foci—forces us to conclude that there should be no problem if a focus does not co-occur with a focus probe (36b). It is, however, always ungrammatical to leave a focus *in situ* if there is no wh-word in the clause.
Thus, assuming disjoint features confronts an empirical problem: how can we ensure that focus movement will be obligatory if there is no wh-word present in the derivation, but prohibited if there is one? The Disjoint Hypothesis can explain the preference for movement of wh-words, but the necessary assumptions for that analysis lead us to predict that focus movement should be optional in cases with no wh-words, contrary to fact.

3.2 Missing a Deeper Generalization

Recall the robust cross-linguistic generalization that we began with: in languages where wh-words and foci both move, they seem to move to the same position. Thus, a desideratum of any analysis should be to explain this correlation in a principled way. The alternative analysis sketched in the previous subsection supposes that the reason that wh-words and foci move to the same position is because there happen to be two attracting heads in the C domain in SMPM: one that targets foci and one that targets wh-words. That is, the connection between these two elements boils down to the particular lexical items and probes that are available in SMPM.

However, when we consider a wider variety of languages, we see that although wh-words and foci consistently move to the same position, the position within the clause that they move to varies from language to language. In addition to the left-periphery, cross-
linguistic investigation has revealed clause-medial positions where both focused and wh-phrases move in some languages. Thus, in some languages foci and wh-words move to a position before a left-peripheral particle (37), sometimes immediately pre-verbally (38), sometimes they move immediately post-verbally (39), and even after the direct object in some Chadic languages (40).

(37) a. \[
\text{[Mɛnʊ]\text{we’ dà Æsìábá?}} \quad \text{(Gungbe)}
\]
   who FOC marry A.
   ‘Who married Asiaba?’

   b. \[
\text{SESINÛ we’ dà Æsìábá} \quad \text{Aboh (2007): 289}
\]
   S. FOC marry A.
   ‘SESSINOU married Asiaba.’

(38) a. \[
\text{Eskutitza,[nɔr̥k] irakurri du’?} \quad \text{(Basque)}
\]
   letter who read AUX
   ‘Who has read the letter?’

   b. \[
\text{Eskutitza, JONEK irakurri du?} \quad \text{Ortiz de Urbina (1999): 312}
\]
   letter J. read AUX
   ‘JON has read the letter.’

(39) a. \[
\text{Á mò zi [ndůgho]’bे’ i’kó nè ’à} \quad \text{(Aghem)}
\]
   EXPL PST eat who fufu DET today Q
   ‘Who ate fufu today?’

   b. \[
\text{Á mò zi TIBV’GHA bè i’kó nè} \quad \text{Hyman (2010): 97}
\]
   EXPL PST eat dogs two fufu DET today
   ‘The TWO DOGS ate fufu today.’

(40) a. \[
\text{Taatkọ dāan [tai] i’i magorafcin} \quad \text{(Ngizim)}
\]
   showed town who to visitors
   ‘Who showed the town to the visitors?’

   b. \[
\text{dɔbdɔ kareen AUDU aa aasɔk} \quad \text{Tuller (1992): 308}
\]
   sold goods A. in market
   ‘AUDU sold the goods in the market.’
Each of these languages instantiates the correlation between wh-movement and focus movement, yet there is no consistent position to which they move. This is important, because it indicates that the connection between wh-words and focus is not epiphenomenal. That is, it is not the case that they are both connected to a particular position (say, spec-CP), and that these two independent connections create the illusion that they are correlated with one another. Rather, wh-words and foci seem to be tightly connected to one another.

Given the fact that wh-words and foci can, in principle, appear throughout the clause—especially in the C domain and v domain—if we adopt the Disjoint Hypothesis then we expect to find languages where the two probes that attract them are separate from one other. In actuality, the generalization that wh-words and foci move to the same position is quite cross-linguistically robust. I believe it is unlikely the case that it is merely a coincidence that in so many languages the probe searching for wh-words and the probe searching for foci happen to be merged in the same position. Adopting any analysis that cannot explain that larger generalization is, it seems to me, theoretically unsatisfying.

Given this desideratum—to explain the syntactic connection between wh-words and foci in a principled way—in the following section, I propose an analysis arguing that movements of both are triggered by the same head. As I will show, this analysis attributes the fact that wh-words and foci seem to move to the same position by supposing that they are attracted by the same head, which can surface in different positions throughout the clause in different languages. Furthermore, I claim that the features associated with each can account for the fact that wh-words move instead of more local foci.
4 The Proposal

In this section, I present my main proposal. I aim to solve the problems of the Identity and Disjoint Hypotheses by positing a single articulated probe on C that can attract both foci and wh-words. Foci and wh-words can be attracted by the same probe because they share the feature [FOC], though wh-words additionally bear [WH]. This, I claim, accounts for the generalization that wh-words and foci move to the same position. While the probe is searching for a feature geometry containing both [FOC] and [WH], I argue that there is a preference for the probe to be valued by the goal which matches in the most features (Best Match), following proposals made to account for morphological agreement in the A-domain (cf. Oxford, 2014, 2019; Coon and Bale, 2014; van Urk, 2015). Thus, in cases where both a wh-word and a focus are candidates for movement, the wh-word will be attracted instead of the focus. This proposal is based on the idea that syntactic Agreement can be separated into two component parts: a search process and a valuation process (Chomsky, 2000). While the search process is local, the probe does not have to be valued by the most local goal, and thus the subsequent Internal Merge operation does not have to be local.

Furthermore, I propose that focus movement in SMPM is movement of a phrase headed by a focus sensitive particle that bears [FOC], and which can be phonologically null. Phrasal movement of this particle and its sister can create the illusion that focus movement pied-pipes material that is not in focus (cf. Cable, 2008).

4.1 Features

There are a number of papers that argue that wh-words bear a [FOC] feature, as well as a [WH] or [Q] feature, which distinguishes them from other foci (e.g. Lee, 1999; Bošković, 2002; Sabel, 2000; Kim, 2006; Boci et al., 2020). Though these papers assume this fea-
ture specification to account for distinct phenomena, at their core they share the intuition that wh-words and foci form a natural class, formalized by the fact that they share the [FOC] feature. In Lee (1999) and Kim (2006), this is used to account for interaction between foci and wh-words. Specifically, it is used to understand the complementary distribution of foci and wh-words in San Lucas Quiavini Zapotec (Lee, 1999), and the fact that foci can act as intervenors for licensing of wh-words (Kim, 2006). For Bošković (2002) and Sabel (2000), this feature specification is used to account for different properties of wh-words across constructions.

Here, I adopt this basic proposal, but I further assume that these features are arranged in a feature geometry (cf. Harley and Ritter, 2002). That is, they are not independent of one another, but instead the feature [WH] entails the feature [FOC], meaning that the presence of a [WH] feature will always rely on the presence of a [FOC] feature.

(41) 

\[
\text{Wh-Words} \\
[FOC] \\
| \\
[WH]
\]

Feature geometries have often been used in syntax and morphology to capture the intuition that syntactic features are not unstructured, but in fact can be related to one another in principled ways (see e.g., Harley and Ritter, 2002; Béjar, 2003; Béjar and Rezac, 2009; Foley and Toosarvandani to appear; Coon and Keine, to appear, a.o.) For instance, if we accept that the features [SPEAKER] and [PARTICIPANT] are part of the grammar of a particular language, then we want our theory of features to capture the fact that all speakers are necessarily participants (Harley and Ritter, 2002; Béjar, 2003, a.o.). The organization of feature geometries as entailment relationships can be represented as in (42), where the lower nodes on the geometry entail the higher nodes.
By the same logic, the small feature geometry that I propose for wh-words captures the intuition that wh-words are necessarily focused. Furthermore, as I show in the following two subsections, assuming this feature geometry lets us adopt several tools that have been used to account for hierarchy-based effects in the A-domain, bringing them to the Ā-domain to account for non-local movement of wh-words.

I assume that both [WH] and [FOC] are formal syntactic features (Horvath, 1995; Frascarelli, 2000; Frascarelli and Puglielli, 2007a; Aboh, 2016). By this I mean that syntactic objects labeled with these features can be manipulated by the syntax and can enter into checking relationships (Chomsky, 1995). I make this assumption on the basis of SMPM, following a long line of research showing that both wh-words and foci can be targets for movement.

The status of [FOC] as a formal feature is disputed within the literature (see, e.g. Horvath, 2007; Fanselow, 2006, 2008; Reinhart, 2006; Chomsky et al., 2019). Those that favor including [FOC] as a formal feature do so based on the fact that foci are often the target of obligatory syntactic movements. However, there are both empirical and conceptual reasons to be skeptical of a formal [FOC] feature. First, Horvath (2007) and Fanselow (2006, 2008) note that so-called “focus-movement” in many languages may actually be driven by non-syntactic mechanisms, such as prosodic movement of foci, in order to be realized with prominence (Szendrői, 2001; Féry, 2013; Büiring, 2013; Truckenbrodt, 1999, cf. Zubizarreta, 1998). Though details differ, these authors identify non-syntactic
movements in some languages which seem to be driven by a need for foci to be prosodically prominent. Second, Horvath (2007) points out that the constituent in focus that moves often pied-pipes additional material that is not in focus. This is unexpected if we assume that the focused constituent is marked with [FOC] and that it alone will be the target of movement. Third, on conceptual grounds, Fanselow (2006) notes that the focus of a sentence is determined based on context and that foci can be multi-word constituents. He claims that this is at odds with the Inclusiveness Condition proposed in Chomsky (1995), because [FOC] is not a property of a lexical item.

To help assuage these concerns, in the following subsection I propose that focus movement in SMPM (an perhaps other languages) is movement targeting a focus sensitive particle, triggering movement of its entire c-command domain. This analysis allows us to understand cases of non-isomorphism between the interpretation of focus and syntactic focus fronting, as well as attributing [FOC] to a set of lexical items, rather than it being assigned dependent on context.

4.2 ~ Particles

First, recall that focus fronting in SMPM in not triggered by a need to align the focus with a position in which it will receive prosodic prominence (§2.1). Foci, unlike other constituents in the same prosodic position, are prosodically prominent. This suggests that it is the fact that they are foci that makes them prominent, not the fact that they are in a given prosodic position (say, at the edge of an intonational or phonological phrase). This fact, coupled with the fact that foci move obligatorily, even across clauses, suggests that fronting of foci in SMPM is syntactic, not phonological (Hedding, 2019). These facts pose a serious challenge to any analysis that tries to account for focus movement in SMPM purely prosodically. Thus, I argue that inclusion of [FOC] as a formal feature
which can trigger movement is warranted. In fact, both Horvath (2007) and Fanselow (2008) are clear that their proposal that [FOC] is not a formal feature depends on all purported focus movement being reducible to prosodic movement.

However, SMPM does display pied-piping-like behavior with respect to focus movement. If, for instance, the focus is an adjective, the entire DP that contains the focus will front to a preverbal position.

**Context:** I have a black dog and a brown dog. My friend and I see a dog drinking water in the distance, but my friend doesn’t see too well without his glasses.

He asks if it is the brown dog drinking water and I tell him no:

(43) Tsinå TOHÜ ri shì’i tsikwìi
dog black AML drinks water
‘The BLACK dog is drinking water.

That is, there is the potential for non-isomorphism between the constituent that is moved and the element that is interpreted as the focus.

To account for this behavior, and given the conceptual desire to associated formal features with lexical items, I propose that [FOC] is a formal feature that is associated with a class of focus sensitive particles that I refer to as ~ Particles. I assume that the semantics of Squiggle Particles closely mirror Rooth (1992)’s ~ Operator, though I assume that different Squiggle Particles may have subtly different meanings (for instance, regarding exhaustivity). I assume that these particles can head a phrase (~P) which can be the target of movement, an analysis inspired by Cable (2010)’s Q particle and Horvath (2007)’s Exhaustivity Operator. I avoid calling this phrase FocP, in order to avoid confusion with the proposed left peripheral position to which foci might move (e.g. Bródy, 1990; Rizzi, 1997, a.o.).

One example of a Squiggle Particle is only, which obligatorily moves to a preverbal position in SMPM and takes a focus within its scope (Jackendoff, 1972). In SMPM,
movement of *only* triggers movement of its entire scope, not simply the constituent in focus.

(44) Nina kwi’i KWÁ’A sháshi rà lo’o yo’o __
only fruit red eats he small here
‘This boy eats only RED fruit.’

As focus fronting moves the ~ Particle and everything it c-commands, it is sometimes the case that a larger constituent than the one interpreted as the focus is fronted.

(45)

It is important to distinguish between the formal syntactic feature [FOC], which I assume is the target of movement and associated with the set of Squiggle Particles, and the constituent that is interpreted as the focus, marked here as +Focus. I assume, following Rooth (1992), that alternative sets are generated by substitution of the +Focus constituent for a variable of the same semantic type. Furthermore, I assume that the interpretation of Squiggle Particles requires that they have a +Focus marked within their c-command domain (cf. Rooth, 1992; Jackendoff, 1972; Tancredi, 1990; Toosarvandani, 2010).
In addition to overt ~ Particles like *only*, I propose that SMPM also has a phonologically null ~ Particle which is used in contrastive focus movement. I propose this null focus particle for two principle reasons. First, assuming that the particle is the target for movement, as opposed to the focus itself, we can explain why focus movement in SMPM (and other languages) sometimes moves a larger constituent that the one interpreted as the focus. In SMPM, for instance, possessa must also move when a possessor is focused and focusing the complement of a preposition forces fronting of the preposition as well. These facts follow if Squiggle particles can take DPs and PPs as complements. In this sense, the analysis is parallel to Cable’s analysis of wh-movement. Second, Squiggle Particles allow us to assign a formal [FOC] feature to a particular lexical item, assuaging a legitimate concern that formal features should not be dependent on context.

This analysis is also inspired by Horvath (2007)’s analysis of Hungarian as having a null Exhaustive Operator which is the target of movement. I do not adopt her analysis of the movement being triggered by an exhaustive operator, however, because unlike Hungarian, SMPM focus fronting does not necessarily trigger an exhaustive interpretation (46). Instead, I assume that SMPM has a more general particle which associates with foci.

**Context:** The dog ate some tortillas, right?:

(46) Ū’ũ, KÔNÛ YÂ shàshi ri ___ra shàshi ti ri chíchí bà
    no meat NEUT ate AML and ate also it.AML avocado EMPH
    ‘No, it ate the MEAT, and it also ate an avocado.’

This hypothesized null focus particle, then, behaves identically to overt focus particles in SMPM, such as *only* and *even*. Thus, I propose that all focus movement in SMPM is triggered by agreement with a focus sensitive particle, either a phonologically null particle or an overt particle such as *only*. Agreement with this ~P constituent will trigger movement, potentially of more material than the focus itself.
4.3 Agreement

I assume that movement is the product of two component parts: Agreement and Internal Merge (Chomsky, 2001; Starke, 2001; van Urk, 2015, a.o.). Furthermore, I assume that Agreement is also split into two distinct operations: i) a search operation MATCH (that finds features matching the probe’s needs) and ii) a valuation operation (that transfers features to the probe) (Chomsky, 2000). I assume that the search operation is strictly local, but that a probe need not necessarily be valued by the most local goal which it has matched with. Thus, I assume that a probe relativized to some feature will match with the most local syntactic constituent in its domain that is specified for that feature (Attract Closest, Chomsky, 2000, cf. Relativized Minimality, Rizzi, 1990). However, as I will argue in the following subsection, the goal that values the probe need not be the first goal that it has matched with, but is rather the goal which constitutes its Best Match.

I assume that Internal Merge is not inherently constrained by Attract Closest, and is a ‘free’ operation which simply combines two syntactic objects (Chomsky, 2001). Internal Merge is, however, constrained by economy, and only combines objects that have entered into an Agree relationship with one another (Chomsky, 1995). For our purposes, I assume
that Internal Merge can only apply to goals which have valued the probe, not those that have simply matched with the probe. Thus, phrasal movement occurs when a copy of a phrase that has valued the probe is Internally Merged as a specifier of the probing head.

I assume that probes can be articulated (Béjar, 2003; Béjar and Rezac, 2009)—that is, a probe relativized to multiple features, which may or may not be arranged in a feature geometry—and that a probe can continue to interact with other goals if it has not found a match for all of its features after interacting with the most local goal (cf. Béjar & Rezac, 2009). In their work on Agreement by articulated probes, Béjar and Rezac (2009) look at cases where a single Agreement slot can be controlled by the subject or the object depending on the person features of each. Specifically, they analyze cases where the object controls Agreement when the subject and object are the same on some grammatical hierarchy or in contexts where the internal argument is higher on the hierarchy than the subject (inverse contexts). The same Agreement slot can be controlled by the subject when it outranks the object on the relevant hierarchy (direct contexts). This agreement pattern can be seen, for instance, in Basque. Here an auxiliary-initial morpheme (underlined) is controlled by the object if the object outranks the subject on the person hierarchy (48a), or if the subject and object are equal on the hierarchy (48b-c).\(^8\) However, in the case that the subject outranks the object on the person hierarchy, then the subject will control agreement (49).

(48)  
\begin{align*}
\text{a. Ikusi n-ind-u-en} & \quad 3 > 1 = 1 \\
\text{seen} & \quad 1-x\text{-have-PST} \\
\text{‘He saw me.’}
\end{align*}

\begin{align*}
\text{b. Ikusi z-in-t-u-da-n} & \quad 1 > 2 = 2 \\
\text{seen} & \quad 2-X\text{-PL-have-1-PST} \\
\text{‘I saw you.’}
\end{align*}

\(^8\)Béjar and Rezac (2009) argue that person hierarchies are subject to cross-linguistic variation. They propose that in Basque local persons outrank 3rd person, but are unranked with respect to one another (1,2>3).
Ikusi n-ind-u-zu-n
seen 1-X-have-2-PST
‘You saw me.’

Ikusi n-u-en
seen 1-have-PST
‘I saw him.’

Béjar and Rezac (2009): 37

Béjar and Rezac (2009) account for this agreement pattern by arguing that Agreement by articulated probes can proceed in cycles. That is, if any features on the probe remain unvalued after the first cycle of Agreement, these features can probe again, possibly finding a different goal within the clause to value them. In the case of Basque, they propose that a probe on \( v \) is relativized to [PERSON] and [PARTICIPANT] features. \( v \) will probe and find the internal argument. If this argument is a local person then the probe will be completely valued (cf. \textit{satisfied} in the terms of Deal, 2015). If, however, the internal argument is 3rd person, it will not completely value the probe. Under their proposal, any unvalued features on the probe will probe again, potentially agreeing with the external argument.\textsuperscript{9} If the external argument is more highly specified than the internal argument and is able to value some feature of the probe that is not valued by the internal argument (i.e. it has a superset of the features of the internal argument), then the external argument will control agreement. As Béjar and Rezac put it, the external argument controls agreement if it “[adds] to the value contributed by the [internal argument]” (pg. 37).

To account for the data of SMPM, I adopt a similar, though subtly different under-

\textsuperscript{9}A crucial component of the system proposed in Béjar and Rezac (2009) is the notion that any unvalued features on the probe are reprojected to a structurally higher position. This is important for their analysis because they consider cases where the probe is located on \( vP \), and can only find the internal argument on the first cycle of Agreement. In the cases they consider, the external argument is only within the search domain of the probe once it reprojects (termed \textit{Cyclic Expansion}). While there is nothing inconsistent about the concept of reprojecion with the facts of SMPM, the configuration that I am considering is different. Specifically, I am considering cases where the probe is located on \( C \) can find the subject on the first search cycle. Because the probe is located on \( C \), reprojecting the probe will not allow access to any goals that were not previously accessible. Lacking any empirical motivation for this aspect of their analysis, for simplicity sake I do not adopt it here. However, I do not intend to make any claims about whether features can reproject in general.
standing of Agreement. Leveraging the decomposition of Agreement into a search operation and a valuation operation, I assume that only the search process proceeds in cycles, and that valuation of the probe occurs after the probe has exhausted all of its possible matching goals within its domain. This distinction is difficult to see in cases of morphological agreement, such as in Basque, where the exponent of feature valuation is Vocabulary Insertion, because it is not clear whether the probe has been valued by one or more than one goal. However, because I assume that valuation is a necessary step for a goal to be Internally Merged, SMPM shows that a non-local goal can completely value the probe (and subsequently move). I thus argue that the Wh-over-Focus Preference suggests that valuation is deferred until all the features of the probe have been matched. As I will discuss in the following subsection, valuation of the probe is subject to a constraint—Best Match—which determines which of the goals that the probe has matched with will value it.

In SMPM, I propose an articulated probe on C that is relativized to the feature geometry [uFOC-uWH] that can initiate a search, finding any goals within its domain that have matching features. If the first goal provides a complete match for the probe’s features the search will halt and that goal will value the probe and move to the specifier of CP. This is the case if a wh-word appears in subject position.

(50)
If, however, there are unmatched features at the end of the first search cycle, a second search is initiated, which can potentially find goals lower in the search domain. This means that a single probe can match the features of both the subject and the object, as long as the subject does not exhaustively match its features (cf. Feature Gluttony, Coon and Keine, to appear). Concretely, in SMPM this means that if the probe on C does not find a wh-word in subject position, it will search again, potentially finding a wh-word in object position. If there is a wh-word in object position, then the [uWH] feature on the probe will match with it.

(51)

Under this analysis, whether C matches with only the subject or both the subject and the object is similar to other hierarchically dependant phenomena in the A-domain, such as Dependent Agreement (Béjar and Rezac, 2009), and PCC Effects (Coon and Keine, to appear). However, unlike in those cases, in SMPM the Agreement probe triggers phrasal movement. In the next subsection, I describe how the probe is valued in SMPM.

4.4 Best Match

Because articulated probes have more than one feature that they need to match and value, it is possible that some goals will only partially satisfy their needs, while other goals will
completely satisfy their needs. In the previous subsection, I showed how an articulated probe relativized to \([uFOC-uWH]\) can match with two goals in SMPM. If the first constituent that it matches with is not a wh-word, then another search cycle will be triggered, potentially finding a wh-word lower in the clause. The question remains, however: if a probe requires that something move to its specifier and it matches with multiple goals, by what mechanism does the probe determine which of the goals will move?

I propose that in SMPM, when an articulated probe requires something to be merged into its specifier and it has matched with multiple goals, the goal that more completely satisfies the needs of the probe will value it and be Internally Merged. Formally, I propose the constraint BEST MATCH, defined in (52) (cf. Oxford, 2014, 2019; Coon and Bale, 2014; van Urk, 2015):

\[(52) \text{ BEST MATCH: A probe } P \text{ that Matches with a set of goals } S \text{ is Valued by goal } G \text{ in } S \text{ such that the number of features on } G \text{ relevant to } P \text{ is greater than the number of features for any other } G' \text{ in } S.\]

As a concrete example, consider the tree in (53). Here a hypothetical probe is relativized to the feature geometry \([uF-uG-uH]\), such that \([H]\) entails \([G]\), which in turn entails \([F]\). This probe will match \([uF]\) with the first DP in its domain. At this point, the remaining features have not been matched, and thus a second search cycle will be triggered. In this case, the second search cycle finds the lower DP, which will match the feature \([uG]\) on the probe. Finally, the remaining unmatched feature \([uH]\) will probe. As there is no constituent within the search domain that has that feature, that search will fail, indicated here with a dashed line (cf. Preminger, 2014). According to BEST MATCH, DP\(_2\) will value the probe and be internally merged into the specifier of CP, even though it was not the first goal to enter into a matching relationship with the probe. As DP\(_2\) has a greater number of features (two) relevant to the probe than DP\(_1\) (one), it constitutes the Best Match,
despite the fact that it is not a perfect match. I thus consider BEST MATCH to be a constraint that applies to the Valuation component of Agree. Because I assume that only the Matching component of Agreement is subject to locality, this conception of BEST MATCH allows us to avoid introducing a mechanism into Agreement whereby probes can skip goals, just in case there is a better match later in the clause.

(53)

The conception of BEST MATCH that I advance here is inspired by, though slightly different, than several recent proposals which attempt to account for patterns of morphological agreement. First, a very similar version of BEST MATCH is proposed in Oxford (2014, 2019) to account for agreement in Algonquin, an Algonquian language spoken in Canada. Like Basque, Algonquin has agreement slots on the verb that can be controlled by the subject or the object based on a person hierarchy. Local persons will control agreement over 3rd person proximate arguments, and 3rd person proximate arguments will control agreement over 3rd person obviative arguments. In order to account for this pattern, Oxford argues that object agreement in Algonquin triggers movement to the specifier of vP. This movement leads to a configuration where both the moved object and the subject are
each in a specifier of vP, which he assumes are equidistant from higher probes. He proposes that a higher probe on Infl will agree with either the subject, the object, or both, depending on which is a better match for the needs of the probe. That is, the probe, which is relativized to [uPERS-uPROX-uPART], will track the subject or the object, depending on which shares more of its features.

Oxford’s conception of Best Match differs from mine in an important way. Based on data from Algonquin, Oxford assumes a narrow role for Best Match in the grammar: it can only adjudicate between two equidistant goals. Evidence from SMPM shows that equidistance is not a prerequisite for Best Match to have an influence, suggesting that its role is more general. Unlike in Algonquin, there is no evidence in SMPM that objects move to spec-vP, creating equidistance between subjects and objects with respect to higher probes. Though important for deriving certain patterns in Algonquin, equidistance is orthogonal to Best Match—a probe will internally merge whichever goal has valued it, even if that goal is non-local.

Two other important conceptions of BEST MATCH assume that Agreement can skip a local goal in just those cases where a non-local goal would be a better match for the probe (Coon and Bale, 2014; van Urk, 2015). The conception of BEST MATCH that I advance here suggests that only the search component of Agreement is strictly local, but that a probe will be valued by its Best Match, even if that is a non-local goal. The distinction I draw allows us to maintain locality of the Match component of Agreement, by recognizing that Valuation is not subject to locality. This, in turn, allows us to avoid introducing into the grammar a means by which a probe can skip a potential goal.
4.5 Interim Summary

My analysis provides an explanation for why wh-words and foci move to the same position in SMPM (and perhaps other languages): they are targeted by the same articulated probe and move to the same position. Furthermore, given the two tools introduced in the previous subsections—multiple searches within the same domain and Best Match—my analysis can account for the fact that wh-movement will always be preferred over focus movement: wh-words are a better match for the needs of the probe, and thus will move instead of foci. In fact, given the entailment relationships I propose, my analysis predicts that a focus will never be a better match for a probe than a wh-word, because wh-words have a proper superset of the features of foci. Thus, under my analysis, there is no way that a probe could target a focus without also targeting wh-words. I propose that this fact accounts for the cross-linguistic asymmetry in movement preferences that we find. Foci simply cannot take precedence over wh-words, due to the features of each.

5 Focus Intervention and the Identity Hypothesis

Recall that in §2, I considered and rejected the Identity Hypothesis, which proposes that foci and wh-words are formally identical in the syntax. In part, I rejected that hypothesis because assuming standard syntactic locality, it predicts that in languages where foci and wh-words are in competition for movement, only the highest one will move. In fact, evidence from several languages, including SMPM, suggests that in clauses where wh-words and foci co-occur, a wh-word will front across a focus (54a). Fronting a structurally higher focus, predicted to be possible by the Identity Hypothesis, is impossible (54b).
In this section, I consider whether it is possible to maintain the Identity Hypothesis by identifying an independent constraint that would rule out the configuration in (54b). One reasonable hypothesis is that (54b) is impossible because it triggers a Focus Intervention Effect, sometimes called a “Beck Effect.” (Beck, 1996, 2006; Hagstrom, 1998; Pesetsky, 2000; Kim, 2002; Li and Law, 2016; Branan, 2018, a.o.). Broadly speaking, in many languages, there is a surface representational constraint against a focus or quantificational element intervening between a wh-word in situ and its licensing complementizer. For example, in Korean, wh-words are normally left in situ (55a), however, when a focus sensitive operator like only c-commands the wh-word, the sentence becomes ungrammatical (55b). In order to express the meaning intended in (55b), the wh-word must scramble to a position where it is no longer c-commanded by the focus sensitive operator (55c).

This effect has been demonstrated for a wide range of wh-in situ languages, and has also been claimed to hold in circumstances when wh-words are left in situ in languages with wh-movement (Beck, 2006; Pesetsky, 2000).
It is worth considering, then, whether (56) is ungrammatical in SMPM because a focus intervenes between the wh-word *in situ* and its licensing complementizer.

(56)  

\[ \text{*PEDRO RÀ kishashi}_\text{ }\text{P. he brought }\text{ }\text{what} \]

\[\text{Intended: What did PEDRO bring?}\]  

Under this analysis, movement of a focus instead of a wh-word would be impossible in SMPM because of a Focus Intervention Effect, and instead the wh-word would have to scramble in order to not be c-commanded by the focus. An advocate of this analysis might argue that the Identity Hypothesis can be maintained, as the difference between foci and wh-words is their semantic properties, not their syntactic features. That is, the reason that syntactic movement of local foci is impossible is explainable by other means.

While there is no consensus about what causes the ungrammaticality of Focus Intervention Effects, there are prominent accounts in both the semantic and syntactic literature. In the following two subsections, I show that regardless of which approach one adopts, a combination of Focus Intervention Effects and the Identity Hypothesis cannot account for the movement pattern that we find in SMPM. I show that two particular properties of SMPM suggest that the ungrammaticality in (56) is not due to a Focus Intervention Effect. First, as we have seen, the preference for wh-movement over focus movement applies when contrastive foci are the subject. This is an important fact. I will show that in SMPM, as in English, contrastive foci can take narrow DP level scope. A prominent semantic account of Focus Intervention predicts that there should only be ungrammaticality when a wh-word is in the scope of a focus operator, thus a focus that takes narrow scope should be unproblematic (Beck, 2006). This claim is, in fact, supported by cross-linguistic evidence showing that contrastive foci do not seem to act as intervenors triggering FIE (Kim, 2002, 2006; Beck, 2006). Second, unlike in Korean, there is an independent need for foci to front to a preverbal position in SMPM. Once again this small dif-
ference will be important. Several syntactic accounts of Focus Intervention Effects argue that their ungrammaticality is due to foci blocking covert movement, thereby breaking the necessary link between wh-words and their licensing complementizer. In (56), however, the focus phrase has moved to the specifier of C, and thus should not act as an intervenor for Agreement or covert movement between that complementizer and a lower wh-phrase.

5.1 Semantic Account

According to Beck (2006), Focus Intervention Effects occur when a wh-word appears in the scope of a focus operator (OP). A focus operator is an expression, such as *only* or *even* which requires a focus within its scope.

\[(57) \quad \text{Focus Intervention:} \]
\[\left[ Q \ldots [\text{OP }] \left[ \phi \ldots X P_F \ldots wh \ldots \right] \right] \]

Beck (2006): 12

Intuitively, this configuration is ungrammatical because the wh-word is in the scope of two operators, a question operator (Q) and a focus operator (OP), both of which need the alternatives generated by the wh-word in order to be interpreted. However, because the focus operator uses up the alternatives generated by the wh-word, there are no alternatives remaining for the question operator to interpret.

Beck’s account relies on the notions of ordinary semantic value and focus semantic value. The ordinary semantic value of a phrase (notated \([\alpha]^o\)) is its denotation, and its focus semantic value (notated \([\alpha]^f\)) is a set of alternatives that is generated by replacing the focus with anything of the same type (Rooth, 1992). Thus, the ordinary semantic value of a phrase like \([\text{American}]_F \text{ farmer}\) is a function which maps some individual \(x\) to the proposition that \(x\) is both American and a farmer (58a). The focus semantic value of the same phrase is a set of propositions, stating that \(x\) is a farmer, and that is has some other property \(P\).
Ordinary Semantic value of $[\text{American}]_F \text{farmer}$:
\[
\lambda x[\text{American}(x) \land \text{farmer}(x)]
\]

Focus Semantic Value of $[\text{American}]_F \text{farmer}$:
\[
\{\lambda x[P(x) \land \text{farmer}(x)] | P : E \to \text{propositions}\}
\]
Rooth (1992): 76-77

Beck (2006)’s main proposal is that wh-words have a focus semantic value, but do not have an ordinary semantic value. That is, they generate alternatives, but do not have a denotation. In normal circumstances, they can be interpreted by the question operator, which converts the focus semantic value of its scope directly to an ordinary semantic value. Thus, a question like (59a) has the focus semantic value in (59b), which is directly converted by the question operator into an ordinary semantic value. This is consistent with the hypothesis that the meaning of a question is the set of propositions which could answer that question (Hamblin, 1973).

Who introduced ice to Macondo?

Focus operators, on the other hand, use the focus semantic value of their scope to introduce a variable that can be coindexed with other semantic objects. In the process, the focus operator “uses up” the focus alternatives of its scope, returning only the ordinary semantic value of its scope for use by higher operators. Because wh-words do not have an ordinary semantic value to return, according to Beck’s analysis, they cannot be within the scope of a focus operator.

Therefore, according to Beck’s analysis, Focus Intervention Effects should only arise when the wh-word is in the scope of the focus operator. If the focus takes narrow scope,
no ungrammaticality should arise, as the alternatives of the wh-word will not be used up by the focus operator and therefore will remain accessible to the question operator.

(60) **No Focus Intervention:**

\[ Q \ldots [O \phi \ldots X P_{\ell}] \ldots \text{wh} \ldots \]  

(cf. 57)

So, in order to determine if the configuration that we are considering might trigger a Focus Intervention Effect, we need to establish the scope of the focus operator in SMPM. If the wh-phrase is within the scope of the operator, then we expect ungrammaticality. If the wh-phrase is outside the scope of the focus operator, then we expect no problem.

I assume, following Rooth (1992), that contrastive foci are interpreted using the ~ operator. This operator introduces a variable, which can be coindexed with other semantic objects. However, only semantic objects whose ordinary semantic value is part of the set of alternatives of the phrase within the scope of the focus operator can be coindexed with the variable introduced by the focus operator. Put differently, this restriction forces the variable to be coindexed with a phrase that contrasts with the phrase in the scope of the focus operator.

(61) **Contrasting Phrases:** Construe a phrase \( \alpha \) as contrasting with a phrase \( \beta \), if

\[ [\beta] \in [\alpha]^{f} \].  

Rooth (1992): 81

In a famous example, Rooth shows how *American farmer* and *Canadian farmer* are contrasted with one another in (62).

(62) An ~[AMERICAN farmer] met a ~[CANADIAN farmer].  

Rooth (1992): 86

A ~ operator takes *American farmer* in its scope, and introduces a variable that could be contrasted with anything that is part of its alternative set, e.g. Canadian farmer, Mexican farmer, French farmer, etc. A second ~ operator introduces another variable that can be coindexed with anything that is part of the alternative set of *its* scope, e.g. American
farmer, Mexican farmer, French farmer, etc. Because each type of farmer is part of the alternative set of the other, they can be interpreted contrastively.

Because of the way that alternative sets are generated, altering the scope of the focus operator will change the set of phrases that can be construed contrastively with the focus. (62) shows that in English, contrastive foci can take narrow scope. If the operator took sentential scope, then the alternatives generated would be of the shape $A \times farmer \; met \; a \; y \; farmer$. In other words, we would expect (62) to contrast with another meeting event, such as between a Mexican farmer and a Guatemalan farmer. Intuitively, however, this is not the interpretation. Instead, it is meant to convey a contrast between the American and the Canadian. In short, if the focus operator takes DP level scope, then DPs can be contrasted with one another (as in 62). If, however, it takes sentential level scope, then the sentence will only contrast with another sentence.

In SMPM, fronted contrastive foci can be contrasted with other DPs, analogously to contrastive foci in English, as shown in (63).

\[(63) \quad \sim[\text{Ts} \text{ina TOH]\text{ ri]} \; \text{ntsi} \sim[\text{ts} \text{ina YÅ}] \text{dog} \; \text{black} \; \text{AML} \text{chases} \; \text{dog} \; \text{white} \quad \text{‘The BLACK dog is chasing the WHITE dog.’} \]

If the fronted focus took sentential scope, then we would not expect the two dogs to contrast with one another. The fact that fronted contrastive foci can take narrow scope suggests that (64) would have the scope structure in (65). The fronted contrastive focus takes narrow scope, as in English, and the rest of the sentence is not within the scope of the focus operator.

\[(64) \quad *\text{PEDRO RÅ kishashi } \bar{n}a] \quad \text{P. he brought what} \quad \text{Intended: What did PEDRO bring?} \quad (=5) \]

\[(65) \quad [Q [\sim \text{PEDRO} \text{brought what}]] \]
So, according to the analysis proposed in Beck (2006), fronted contrastive foci in SMPM should not trigger Focus Intervention Effects, and thus the ungrammaticality of (64) can not be attributed to that effect. This is consistent with the fact that contrastive foci are not listed as cross-linguistic triggers of FIE (Kim, 2002, 2006; Beck, 2006).

5.2 Syntactic Accounts

Despite the fact that Beck (2006) is likely the most prominent account of Focus Intervention Effects, several syntactic accounts have also been proposed. Both Beck (1996) and Pesetsky (2000) argue that the Focus Intervention Effect is due to blocking of covert movement. According to Beck (1996), this is covert movement of in situ wh-phrases at LF (Huang, 1982). For Pesetsky (2000), it is covert feature movement of wh-phrases. Under both accounts, this required covert movement is blocked by an intervening focus or quantificational element, leading to ungrammaticality.

(66) Covert Movement Blocked By Focus Intervenor

\[ \ldots \cdots \text{X} \cdots \text{X} \]
\[ \downarrow \ldots \quad \text{FOC} \quad \text{WH} \]

There is a crucial difference, however, between the sentences in SMPM and the ones considered by Beck (1996) and Pesetsky (2000). In SMPM, the focus which has the potential to act as an intervener is moving for independent reasons to the left-periphery. Crucially, if we assume the Identity Hypothesis, then the head that attracts the focus will be the same head that is covertly attracting the wh-word. Thus, once the focus in subject position has moved to the specifier of this head, it should not block subsequent Agreement between that head and the wh-phrase. Thus, even if the wh-phrase must undergo some kind of covert movement or Agree with a complementizer in order to be licensed, the focus will no longer be in a position where it can intervene between the attracting
Thus, I argue that syntactic accounts, which were developed to deal with covert movement across an intervenor, do not predict a Focus Intervention Effect in cases where the focus itself must move.

To summarize: Two independent properties of SMPM indicate that Focus Intervention Effects cannot explain the fact that foci in subject position cannot be moved instead of wh-words in object position. Thus, I conclude that the challenge to the Identity Hypothesis identified in §2.3 remains.

6 Conclusion

In this paper, I have considered several possible formal representations of wh-words and foci. First, I considered the possibility that they might be formally identical. The predictions of this hypothesis, however, are not borne out. In several languages, including San Martin Peras Mixtec, wh-words will always move instead of a focus, even if they are non-local. Second, I considered the possibility that they might have disjoint features, each being attracted by a separate head. This analysis faces empirical problems within SMPM, and also provides no explanation for why wh-words and foci should be attracted to the same apparent position in so many languages.

Instead, following previous work, I proposed that wh-words have both a [WH] feature and a [FOC] feature. Additionally, I proposed a feature geometry which allows us to maintain the generalization that wh-words and foci are attracted by the same head, while giving us a means of explaining the preference for wh-movement over focus movement.
By adopting two proposals from the A-domain—multiple searches and Best Match—I proposed that an articulated probe could match with both the subject and the object under certain configurations. Furthermore, I claimed that the attracting head would always prefer to move a wh-word over a focus, due to the fact that it has a superset of the features. In this way, I showed that a feature geometric analysis can account for the apparent non-local movements of wh-words.

If this analysis is on the right track, then we may find analogies of hierarchy-based phenomena in the Ř-domain. In a sense, Best Match captures the intuition that a head may prefer to attract a constituent that is higher on some hierarchy, just as some agreement slots preferentially agree with constituents that are higher on some hierarchy. We might, for example, expect to find languages that ban certain configurations of wh-words and focus, analogous to a PCC effect (e.g. Perlmutter, 1971; Bonet, 1991), or languages which use special morphology to mark the structural relationship between wh-words and focus, analogously to inverse morphology in Algonquian (e.g. Oxford, 2019; Aissen, 1997). Going forward, more needs to be done to investigate hierarchy effects in the Ř-domain. If this analysis is on the right track, then the preference for wh-movement over focus movement may be just one of many ways in which feature geometries in the Ř-domain manifest themselves.

References


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