Superiority and Wh-Movement without D:
A view from multiple wh-fronting in Mi’gmaq∗

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Abstract: This paper analyzes Mi’gmaq, an Eastern Algonquian language, in the context of Bošković’s (2008, 2012) generalizations. Bošković (2008, 2012) presents various syntactic and semantic differences between languages with and those without overt indefinite/definite articles. These differences are summarized as generalizations specific to each of the two language groups, those with and those without overt articles. Mi’gmaq is a language without articles and patterns similar to other languages without overt articles, specifically in regards to generalizations on scrambling, numeral classifiers and quantifier scope. However, Mi’gmaq also patterns identically with languages that do have overt articles, specifically with respect to a generalization on multiple wh-fronting with superiority effects. Due to this contradiction, I propose that there is in fact no relationship between the presence or absence of articles and obligatory multiple wh-fronting with superiority effects.

Keywords: Superiority effects, Determiner Phrase, Noun Phrase, Multiple wh-fronting, Syntax

1 Introduction

In this paper I analyze multiple wh-fronting with superiority effects in Mi’gmaq as it pertains to Bošković’s (2008, 2012) generalizations between languages with and those without the presence of overt articles, either definites or indefinites. Bošković (2008, 2012) proposes that those languages that do not have overt articles do not have a determiner phrase (DP) but rather only a nominal phrase (NP). As Mi’gmaq does not have definite or indefinite articles, shown in (1), and has been understudied in the literature, it is an ideal case for testing how Bošković’s generalizations pattern in other article-less languages.

(1) a. mui’n maqumapn nme’j
    bear eat.3>3’ SG.PST.AN fish
    ‘(a/the) bear ate (a/the) fish.’

     b. ’lpatuj nemiapn e’pite’-jij
     boy see.3>3’ SG.PST.AN girl-young
     ‘(a/the) boy saw (a/the) young girl.’

∗Also spelled Mi’gmaw, Mi’kmaq, Mi’kmaw, Micmac. Many thanks to Janine Metallic, MaryAnn Metallic, and Janice Vicaire for sharing their knowledge of Mi’gmaq. Also thanks to the McTgill Mi’gmaq Research Group for their invaluable feedback. All Mi’gmaq data comes from speakers of the Listuguj dialect and uses the Listuguj orthography. All unreferenced data is from personal elicitation sessions. This work is supported by a Joseph-Armand Bombardier Canada Graduate Scholarship from the Social Sciences and Humanities Research Council of Canada.

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However, when the data from Mi’gmaq is compared to generalizations on scrambling, numeral classifiers, quantifier scope, and multiple wh-fronting with superiority effects, problematic contradictions arise, specifically with the latter generalization. According to Bošković’s predictions from the generalizations, Mi’gmaq should be both an NP-only language based on scrambling, numeral classifiers, and quantifier scope and a DP language based on multiple wh-fronting with superiority effects. As this is not theoretically possible, I propose the following: there is no relationship between the presence of articles, the D feature, and appearance of superiority effects in obligatory multiple wh-fronting languages.

I consider data from the Listuguj dialect of Mi’gmaq, an Eastern Algonquian language spoken in Maritime Canada and Eastern Quebec. The data is from my own fieldwork and from Hamilton (2015), both using speakers from the Listuguj community.

In Section 2, I outline the generalizations from Bošković (2008, 2012) on scrambling, numeral classifiers, and quantifier scope and compare the generalizations to the Mi’gmaq data. Section 3 presents the generalization on multiple wh-fronting with superiority effects and the complications that arise with the Mi’gmaq data. In Section 4 I outline my proposal and discuss the theoretical implications that arise. Finally, Section 5 concludes the paper.


Bošković (2008) argues that languages without articles do not have a null DP, but rather are structurally different by only having an NP layer. Bošković contrasts languages that have articles with languages that do not have articles, producing ten generalizations where the presence (or lack thereof) of an article is claimed to play a crucial role. Bošković (2012) continues in the same vein producing another nine generalizations, for a total of nineteen generalizations. These generalizations are mostly one-way correlations focusing on various syntactic and semantic phenomena. This paper will focus on four generalizations, namely:

1. Only languages without articles may allow scrambling.

2. Obligatory numeral classifier systems occur only in NP languages.

3. Inverse (quantifier) scope is unavailable in NP languages.

4. Multiple wh-fronting languages without articles don’t show superiority effects.

These generalizations will be compared to the Mi’gmaq data to determine how this article-less language patterns in respects to the article-less languages used by Bošković (2008).

2.1 Scrambling

Bošković (2008) claims there is a correlation between the lack of an article and the potential presence of scrambling. Scrambling for Bošković refers to the type of movement seen in Japanese not German. Scrambling in Japanese refers to long-distance scrambling, where the scrambled element

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1These four generalizations are the only generalizations used due to several reasons, the main one being that as there has been little study done on Mi’gmaq, it is unclear if Mi’gmaq even contains many of the syntactic properties used by Bošković for a large number of the generalizations.

2Scrambling has traditionally been used to refer to any type of unexpected or unexplained movement seen in a language. Bošković (2008) uses the following definition:
moves from within a finite clause to a higher position. In (2), *sono hono* has been scrambled from the embedded clause VP-internal position, to a higher IP position.

(2) \[
\text{[IP Sono hon-o]} \quad \text{[IP John-ga]} \quad \text{[CP [IP Mary-ga} \quad \text{[VP t-katta]} \text{] to]} \quad \text{omotteiru}].
\]

\[\text{that book-ACC John-NOM Mary-NOM bought that thinks}
\]

‘That book, John thinks that Mary bought.’

(Bošković 2004)

Unlike Japanese, German only has clause internal scrambling, it does not permit scrambling out of a finite CP. This is seen in (3) where *einander* has scrambled to an IP projection, but has remained within the CP clause.

(3) \[
\text{dass [IP } \text{einander}\text{i]} \quad \text{[IP die beiden immer noch t, lieben]}].
\]

\[\text{that each-other.ACC the both.NOM still}
\]

‘The two still love each other.’

(Grewendorf & Sabel 1999)

In languages that have long-distance scrambling, such as Serbo-Croatian, Latin, Japanese, Turkish, and Chukchi, there is also a lack of articles. This leads Bošković (2008) to posit a generalization that:

1. **Only languages without articles may allow scrambling.**

Bošković (2008) then further defines the generalization by taking a stronger position, where: only NP languages may allow scrambling. Bošković claims there is a correlation between a DP and scrambling, that is, if a language has scrambling, then it cannot have a D, therefore it must have an NP only.

Mi’gmaq has long-distance scrambling of the same type that Japanese has, seen in (4), where *mui’naq* moves from a position within the finite clause, in (4a), to a phrase initial position within the matrix clause, seen in (4b).

(4) a. welta’si \quad mui’n-aq \quad maqguma’tipni \quad nme’-ji-g

be.happy.1>3PL \quad bear-PL \quad eat.3>3’PL.PST \quad fish-small-PL

‘I am happy that (the) bears ate (the) small fish.’

b. mui’n-aq \quad welta’si \quad maqguma’tipni \quad nme’-ji-g

bear-PL \quad be.happy.1>3PL \quad eat.3>3’PL.PST \quad fish-small-PL

‘(the) bears I am happy that they ate (the) small fish.’

The conclusion drawn from scrambling show that Mi’gmaq patterns like other languages that have been posited to not have DP arguments. Therefore it should not have DP arguments as per Bošković (2008).

By scrambling I mean the kind of movement referred to as scrambling in Japanese, not German, whose ‘scrambling’ is a very different operation with very different semantic effects from Japanese scrambling. One of the defining properties of scrambling for the purpose of [Bošković’s example—MS] (11) is taken to be the existence of long-distance scrambling from finite clauses, which German lacks (for German see also Bošković 2004). (Bošković 2008, footnote 5).
2.2 Numeral Classifiers

Numeral classifiers are morphemes that co-occur with numerals, however there is no agreement relationship between the classifier and the noun. There are several properties of numeral classifiers: (i) they are often independent lexemes, but can also be affixes to numerals, (ii) there appears to be a mutual exclusivity between articles and numeral classifiers, as outlined in Cheng (2013). In his thesis, Cheng (2013) uses data from Mandarin Chinese and claims there is a correlation in languages that have an obligatory numeral classifier systems and the absence of articles. Bošković (2012) relies upon this claim to posit the generalization that:

2. Obligatory numeral classifier systems occur only in NP languages.

Bošković (2012) argues that if a language has an obligatory numeral classifier system then it does not have a DP; there is an incompatibility between a classifier system and DP. As illustrated in Bale & Coon (2014), Mi’gmaq has an obligatory numeral classifier system. Numerals one through five, along with numerals morphologically built from one through five, do not appear with classifiers, as in (5). The presence of the classifier te’s- in (5b) with the numeral five, is ungrammatical.

(5) a. na’n-ijig ji’nm-up
   five-AGR man-PL
   ‘five men’

b. *na’n te’s-ijig ji’nm-up
   five CL-AGR man-PL

However, numerals six and higher must appear with a classifier, seen in (6).

(6) a. *asugom-ijig jinm-ug
   six-AGR man-PL

b. asugom te’s-ijig ji’nm-ug
   six CL-AGR man-PL
   ‘six men’

The conclusion drawn from Bošković’s generalization on numeral classifiers is that since Mi’gmaq patterns like other languages that have been posited to not have DP arguments, it should not have DP arguments.

2.3 Quantifier Scope

Bošković (2012) also posits a correlation between quantifier scope and a DP layer. In languages such as English, (7) is ambiguous with both a surface and an inverse scope interpretation available.

(7) ‘Someone loves everyone.’
    Surface Scope: A particular person loves everyone. ∃∀
    Inverse Scope: Everyone is loved by someone, but not necessarily the same person. ∀∃
Based on a cross-linguistic study, Bošković (2012) states that inverse scope is impossible in languages without articles such as Japanese, Chinese, Russian, Slovenian, and Serbo-Croatian. This leads to the following generalization:

3. **Inverse scope is unavailable in NP languages in examples like (7).**

Mi’gmaq patterns like the other article-less languages in that inverse scope is unavailable in a similar example with an existential and a universal quantifier. In (8), the surface scope interpretation is one where all the boys saw the same group of fish, ∃∀, while the inverse scope interpretation, where all the boys saw a fish, such that every fish in the group was seen by a boy, but not every boy saw the same fish, is unattested.

(8) ‘ms’t ‘lpatuj-g nemia’tipni te’s nme’j-l
   all boy-Pl see.3>3’ PST every fish-OBV
   ‘All the boys saw every fish.’

The conclusion from quantifier scope is that as with scrambling, since Mi’gmaq patterns like other languages that have been posited to not have DP arguments, it should not have DP arguments. As such, Mi’gmaq must have an NP not a DP, as it does not have any instances of overt articles and patterns in the same manner as NP-only languages. So far the generalizations from Bošković (2008, 2012) appear to apply to Mi’gmaq as well. However, there is a problematic generalization, namely the generalization on multiple wh-fronting with superiority effects, discussed in the following section.

### 3 Multiple wh-fronting

In languages with obligatory multiple wh-fronting, languages may show superiority effects. Superiority effects refer to situations where there is a phrase containing two wh-arguments. In languages that front both or one of the wh-arguments, if there are superiority effects, then the argument that will move to the highest position is the one that is initially the structurally highest argument. When fronted, the initial order of the wh-arguments is maintained. In languages with articles and multiple wh-fronting (Romanian, Bulgarian, Macedonian, Basque, Yiddish) superiority effects arise, while in those languages without articles (Serbo-Croatian, Mohawk, Polish, Czech, Russian, Slovenian) superiority effects do not arise, as seen in (9).

(9) a. **Koj kogo vižda / *Kogo koi vižda?**
   **who whom** sees
   ‘Who sees whom?’
   +Article (Bulgarian)

   b. **Ko koga vidi / Koga ko vidi?**
   **who whom** sees
   ‘Who sees whom?’
   -Article (Serbo-Croatian)

In Bulgarian, (9a), the subject wh-argument must appear phrase initially, if the object wh-argument is initial, the phrase is considered ungrammatical. However, in Serbo-Croatian, either

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3Following Hamilton (2015) I take te’s to be a universal quantifier, with a English translation similar to ‘every’. 189
the subject or the object wh-argument can appear phrase initially, and the phrase is still considered grammatical, seen in (9b). As, Bulgarian has articles and Serbo-Croatian does not, Bošković posits the generalization that:

4. *Multiple wh-fronting languages without articles don’t show superiority effects in cases like (9).

The previous data leads Bošković to posit a correlation between multiple wh-fronting, the presence of articles, and superiority effects.

3.1 Bošković’s Analysis

Based on proposals from Bošković (2002), Bošković (2008) claims that superiority effects arise in multiple wh-fronting from movement to spec-CP (wh-movement). When multiple wh-fronting does not occur, this is due to the wh-arguments fronting not to spec-CP, but rather to a lower syntactic position. The arguments put forth in Bošković (2002) are as follows. First, multiple wh-fronting languages must front all wh-phrases; the wh-phrases in (9) cannot stay in-situ. Second, multiple wh-fronting languages without superiority effects use focus driven movement, not wh-movement, to front wh-phrases. Finally, languages that have wh-movement disallow single-pair responses. These facts allow for a restating of 4.

4. * Article-less multiple wh-fronting languages move wh-phrases to a position below spec-CP.

Bošković (2008) also assumes the D feature is crucially involved in movement to spec-CP. The lack of a DP then prevents NP multiple wh-fronting languages from having wh-movement, therefore the wh-phrases must move to a lower syntactic position. As superiority effects only arise with multiple wh-fronting to spec-CP, it follows that multiple wh-fronting languages with an NP will not show superiority effects. Since languages without articles do not have superiority effects and move to lower position, they must not have the D feature; therefore, they do not have a DP, but rather an NP.

3.2 Mi’gmaq data (Hamilton 2015)

Hamilton (2015) demonstrates that Mi’gmaq has obligatory multiple wh-fronting showing superiority effects, in an identical context to the Bulgarian example in (9). In (10), the only grammatical reading with multiple wh-fronting is one where the subject wh-argument is phrase initial; where superiority effects arise. This is shown in (10a). When the object is phrase initial, as in (10b), the phrase is ungrammatical. This fact is unexpected given that Mi’gmaq does not have articles, based on Bošković’s generalization, there should be no superiority effects. Furthermore, when the object wh-argument remains in-situ, as in (10c), the phrase loses its interpretation of ‘Who brought what’. The wh-arguments must be fronted to retain a wh-interpretation for both wh-arguments.

(10) Context: I tell you that I went to a pot-luck yesterday. You ask me:

a. *wen goqwei pegis-it-oq-s’p?
   who what bring-DFLT-3-PST
   ‘Who bought what?’ [triggers multiple pair-list response]

b. *goqwei wen pegis-it-oq-s’p?
   what who bring-DFLT-3-PST
c. **wen pegas-it-oq-s’p goqwei?**
   **who bring-DFLT-3-PST what**
   ‘Who brought anything?’; ‘*Who brought what?’ (Hamilton 2015)

Hamilton (2015) proposes that fronted wh-phrases move to spec-CP – not a lower XP – as the phrase in (10a) triggers a multiple pair-list response providing evidence that it is not a focus driven movement but standard wh-movement. The following section outlines the standard process of multiple wh-fronting using wh-movement.

### 3.3 Standard multiple wh-fronting account

Hamilton (2015) uses the standard account, involving a 2 part process wherein movement is triggered by a wh-feature shared by the wh-phrases and the presence of a probe-goal AGREE relationship (Chomsky 2000, 2001).

**Part one:**

(i) A probe can only enter into an AGREE relation with, and raise one DP at a time, into the closest position relative to the probe.

(ii) A probe will AGREE with the closest structural DP.

(iii) \(C^0\) has a wh-feature that probes and enters into an AGREE relationship with the closest wh-phrase, the subject.

**Part two:**

(iv) \(C^0\) probes a second time, enters into an AGREE relationship with the object wh-phrase and "tucks in" the wh-phrase in an inner specifier of CP. (Richards 1997)

This process, schematized below in (11), ensures that in the CP, the subject wh-argument will always be higher than the object wh-argument, causing superiority effects to occur.

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4 Additionally, based on Dayal (2005), Hamilton proposes that the statement in (10a) also does not involve an echo question or a REF question (a type of echo question; see Dayal 2005 for further detail), all of which would elicit a single pair-list response.
The conclusion naturally following from the generalization on multiple wh-fronting is that: (i) since there are superiority effects shown and (ii) since wh-fronting is obligatory in Mi’gmaq, then both wh-arguments move via wh-movement to spec-CP as opposed to a focused driven movement to a lower position. According to Bošković (2008), these two aspects demonstrate that Mi’gmaq patterns with languages with a DP layer, not simply an NP layer, despite not having any instances of overt definite/indefinite articles. However, this results in two conflicting conclusions in respects to whether Mi’gmaq should have an NP or a DP layer.

a. Mi’gmaq has no articles and since it has scrambling, an obligatory numeral classifier system, and a lack of inverse quantifier scope, it must therefore have an NP not a DP.

b. Mi’gmaq shows superiority effects with multiple wh-fronting, therefore it must have a DP.

4 Proposal

If one assumes that the proposal from Bošković (2008, 2012) is correct in that there is a structural difference between languages with articles and those without, then there cannot be a relationship between the presence of definites, the D feature, and superiority effects in multiple wh-fronting languages. The claim put forth in this paper is that the proposal that article-less languages do not have wh-movement does not and cannot apply to Mi’gmaq, as per Hamilton (2015). Mi’gmaq has wh-movement, which predicts the superiority effects seen in Mi’gmaq, regardless of whether or not the language has articles. There is no relationship between the presence of articles, the D feature, and appearance of superiority effects in obligatory multiple wh-fronting languages.

The decoupling of superiority effects from the presence of the D feature seems to raise the problem of how to explain the lack of superiority effects with multiple wh-fronting in other article-less languages. However, the proposals seen in Bošković (1998, 2002) that superiority effects do not occur with non-wh-movement, focus movement, can still apply. A stronger proposal for multiple wh-fronting is to eliminate any reference about articles in the generalization entirely, and rephrase it as:
5. Multiple wh-fronting languages that do not show superiority effects do not involve wh-movement but rather focus driven movement.

Crucially, in the discussion surrounding whether or not all languages have a structural DP layer, superiority effects with multiple wh-fronting should not be used as evidence for a NP-only layer for article-less languages.

5 Conclusion

If we assume an NP analysis for article-less languages, the only way to reconcile the data seen in Mi’gmaq, is by removing the presence of D feature as a causation of the presence of superiority effects. There cannot be a correlation between D and wh-movement with superiority effects in multiple wh-fronting.

References


