The syntax of *wh*- and polar questions in Marshallese*

Michaël Gagnon   Alexis Wellwood
University of Maryland-College Park

1 Introduction

In this article, we are concerned with the syntactic structure of questions in Marshallese. We explore both *wh*- and polar questions in turn: Section 2 is dedicated to *wh*-questions, where, applying diagnostics suggested by Adger and Ramchand (2005, henceforth AR), we conclude that a base generation analysis is more empirically adequate for Marshallese than a movement account. In Section 3 we discuss polar questions with the particle *ke*, first considering an analysis offered by Willson (2005), and concluding that, despite accounting for the grammatical polar questions, the analysis overgenerates and thus is not descriptively adequate. We then propose our own analysis of *ke*-questions which builds on crucial insights from Willson’s work while also blocking ungrammatical derivations. Overall we find that polar questions are more syntactically complex than *wh*-questions, which in turn are more syntactically complex than, but built on a similar structure as, clefts; forming, in some sense, a hierarchy of syntactic complexity1. Finally, in Section 4 we briefly discuss an additional puzzle pertaining to the *wh*-adjuncts *ia* and *ewi*.

2 Wh-questions

Marshallese2 has both *wh*-in situ (1) and what appear to be *wh*-fronting (2) constructions. When the *wh*-element appears ‘fronted’, a particle appears between it and the rest of the clause, which is illicit if present with the in situ *wh*-(3).

(1)  *Kw-ar komman-e ta?*
     Ilsg-PERF do-TR what
     ‘What did you do?’(Zewen, 1977, p113)

(2)  *Ta ne kwō-j ba?*
     what sg Ilsg-PROG say

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1Where complexity is quantified in terms of number of projections.

2Warning: the various data sources for Marshallese have wildly different orthographic practices, which we have not regularized here.
2.1 A base generation vs. MOVE account

‘What are you saying?’ (Abo et al., 1976, p25)

(3) *Kidu ko re-kar kŋkkure ta eo?
dog pl.nonhuman IIIpl-PAST destroy what sg
‘What did the dogs destroy?’ (Willson, 2008, p 61)

The types of wh-constituents which may appear both high and low in the structure include all arguments of the verb, as well as adjuncts. In this section, we investigate the syntactic structure of questions with a (putatively) fronted wh-element, specifically addressing whether this surface structure is the result of base generation or the application of MOVE. Concluding this section we discuss implications for the syntax of Marshallese.

2.1 A base generation vs. MOVE account

AR consider data from Scots Gaelic, and ultimately argue for a base generation as opposed to a MOVE analysis of ‘fronted’ wh-questions in that language. They argue that these two types of analyses can be clearly distinguished, in a theory that admits of pro and that has copies rather than traces, by analyzing the behavior of the bottom element in a given dependency.

Here, we apply some of AR’s diagnostics to ultimately conclude that a base generation analysis provides a descriptively adequate account of the syntax of wh-questions in Marshallese.

2.1.1 Diagnostic 1: (Anti-)Identity effects

If a given wh-question has been derived via movement, we expect selectional restrictions that are in place when the wh word is in situ to be the same as when the wh- is dislocated to a position higher in the structure.

In Marshallese, restrictions on the item selecting for the low position do not remain the same in both the high and low wh-constructions. This is most evident when we consider intransitive/transitive alternations. The verb ‘to spank’ has an intransitive from deŋeŋe derived from a transitive stem deŋeŋ. When the wh- appears low, the transitive form surfaces:

(4) Rikāki eo e-kar deŋeŋ wōn?
Teacher sg IIsg-T[PAST] spank.TR who
‘Who did the teacher spank?’ (Zewen, 1977)

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3 Although see Section 4 for complications on this point.
4 Marshallese has a host of ways to mark transitivity on its verbs, a situation which has not been entirely worked out (see e.g. Hale (2008)). The cases we discuss, making use of verbs that have suppletive transitive and intransitive forms, are the clearest available.
2.1 A base generation vs. MOVE account

The verb ‘to eat’ has suppletive transitive kaŋ and intransitive mōnā form. When the
wh- appears high, the intransitive form is evident:

(5) Ta kaŋ armej raŋ re-j mōnā?
what pl,nonhuman person those.human IIipl-PROG eat.INTR
‘What are those people eating?’ (Willson, 2008)

These examples show that the wh-word triggers transitive morphology when it is spelled
out in the verbal domain, which is not the case when the wh- surfaces in the high position.
In the latter case, it cannot be that whatever occupies the low position is identical to the
wh-word, or we would expect transitive marking on the verb in these cases as well.

2.1.2 Diagnostic II: Resumptive pronouns

AR argue that, in Scots Gaelic, a null pro occupies the variable position in an operator-
variable configuration, which is syntactically derived when the low position is not inside an
island. However, an overt resumptive pronoun is found in adjuncts as well as other syntactic
islands, which cannot form a syntactic dependency with any operator outside of the island.

It is generally agreed that movement of or from within an adjunct is illicit. Like Scots
Gaelic, Marshallese never has overt resumptive pronouns as verbal arguments, but it does
have them in adjunct positions and within adjuncts.

In (6), the low position is an adverbial phrase, and in (7) it is the object of a preposition;
in both cases, the resumptive agrees in φ-features with the particle following the high wh-
element.

(6) La eo e-deor iē?
where sg IIIsg-leave.unnoticed there
‘Where did he slip off to?’ (Abo et al., 1976)

(7) Ta ko e-ar komīnā ū eo jen i?
what pl,nonhuman IIIsg-PERF make fishtrap that from them
‘What (pl) did he make the fishtrap from?’ (Zewen, 1977)

The resumptive pronoun present in adjunct positions and within islands necessarily
bears the same φ-features as the particle following the wh- in (7), although this agreement
cannot be the result of a syntactic dependency between the two.5

5We assume that the necessary agreement which holds in these cases is not due to AGREE or MOVE but rather
emerges from referential requirements at the interpretative component; that is an LF dependency holds between
these elements, and the dependency requires some extensional identity. This agreement is then semantic; the
PF interface would accept a derivation in which the resumptive pronoun and the C0 disagree, but the derivation
would crash at LF.
2.2 An analysis of *wh*-questions in Marshallese

However, we also see this type of agreement in \( \phi \) features between the particle and the null *pro* in cases where a syntactic dependency is licit. In (8), we see that the Agr\( S^o \) must have the same number features as the particle following the *wh*-element.

(8) a. *Ta ko re-kar buktak-e jiki-n kallib eo a-m?*  
   what pl IIIpl-PAST dig.up-TR place-of plant the.sg gen.poss-IIsg  
   ‘What (pl) dug up your garden?’

b. *Ta eo re-kar buktak-e jiki-n kallib eo a-m?*  
   what sg IIIpl-PAST dig.up-TR place-of plant the.sg gen.poss-IIsg  
   ‘What (sg) dug up your garden?’

c. *Ta ko e-kar buktak-e jiki-n kallib eo a-m?*  
   what pl IIIsg-PAST dig.up-TR place-of plant the.sg gen.poss-IIsg  
   ‘What (pl) dug up your garden?’ (Willson, 2008, p62)

By virtue of the syntactic dependency that holds between the particle (which we will analyze as C\( o \) in the next section) and *pro*, the \( \phi \) features on the particle determine the number features of Agr\( S^o \). We assume that the \( \phi \) features on *ta* (‘what’) are the same across examples, and it is only the features of C\( o \) and Agr\( S^o \) that (co)vary. In the island examples, the resumptive is a full pronominal that comes to the derivation \( \phi \)-valued, whereas in the non-island cases, *pro* is interpreted as having the \( \phi \)-features of the complementizer it enters into a (syntactic) agreement relation with.

2.2 An analysis of *wh*-questions in Marshallese

Following AR, we propose that the high *wh*-constructions in Marshallese are derived via a cleft construction. Specifically, the *wh*- is generated in the specifier of a small clause (FP) projection which takes CP as its complement, as in (9).

In line with such an analysis, we propose that the particle following the *wh* when it appears high in the structure is C\( o \), which is the element that enters into an AGREE relation with *pro*. The structure in (9) delivers an interpretation like ‘Who is it that *pro* saw a possum?’, when the *wh*- ranges over the subject of the relative clause.
Thus, ‘fronted’ *wh*-questions in Marshallese are formed on the basis of a copular construction\(^6\), where the relationship between the *wh*-element and the lower position in the structure is indirect: the *wh*- is base generated in a matrix FP and is predicated of its CP complement, which is itself interpreted as predicate abstraction with a null *pro* as the variable abstracted over.

### 2.3 Section conclusions

In this section, we have provided a number of arguments for a base generation analysis of Marshallese *wh*-questions. First, we have seen that if the high *wh*-construction in Marshallese were derived via movement, where (under the copy theory of movement) copies have the same internal structure as their dislocated counterparts, we would expect the transitive form of the verb to surface whether the overt *wh*- element appears high or low in the structure, which it does not. We also saw that the behavior of resumptive pronouns in Marshallese parallels that found in a language argued to be a base generation language by AR. We will see in the next section that the cleft syntax proposed for *wh*-questions in Marshallese plays a role in the analysis of polar questions.

### 3 Polar questions

Marshallese has a question particle, *ke*, which may appear in one of a number of positions in a sentence. In (10), the various grammatical and ungrammatical positions of *ke* in affirmative polar questions is shown.

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\(^6\)Note that the copula is never overtly expressed in Marshallese, e.g. *Kabua iroj* [Kabua chief], ‘Kabua is a chief’, and *Kum-ro ia?* [Ipl-two where], ‘Where are you (two)?’ (Zewen, 1977, p82, p128).
3.1 Willson (2005)’s account

This seeming flexibility of location, however, is not mirrored in negative contexts. The distribution of *ke is restricted to sentence-final position negation, as in (11).

(11) (*ke) Kwo-j (*ke) jab (*ke) etal (*ke) ŋan Rita (ke)?
    (*Q) IIsg-T[PRES] (*Q) NEG (*Q) go (*Q) to Rita (Q)
    ‘Aren’t you going to Rita?’ (ibid., 13)

We briefly evaluate Willson (2005)’s account of these data. Following that, we construct a novel account of (10) and (11), building on core observations of Willson: specifically, that *ke projects InterrogationP, and that the material surfacing to the right of *ke is interpreted as Focus.

3.1 Willson (2005)’s account

The main features of Willson’s analysis that concern us here are the syntactic hierarchy she proposes, as well as two main movements, the first corresponding to focalisation and the second to topicalisation. The analysis successfully generates the grammatical surface positions of *ke that we saw above.

To see how her proposal works\(^7,8\), consider a possible surface position for *ke:

(12) Leddik ro re-j *ke jelâ kajin Majêl?
    girls the.pl.human IIIpl-T[PRES] Q know language.of Marshalls
    ‘Do the girls know Marshallese?’

After the subject DP has moved to the specifier of the subject agreement phrase, the structure is as in (13).

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\(^7\)We illustrate how the proposal derives one of the grammatical surface positions for *ke in an affirmative context, and focus in the next section on an ungrammatical derivation with negation.

\(^8\)Note that Willson does not explicitly encode movement as feature-driven, but we have coded [Foc] and [Top] for ease of exposition.
Next, focalisation. $\text{Foc}^o$ is merged, and attracts the $[\text{Foc}]$-bearing VP to its specifier.

Finally, topicalisation. $\text{Int}^o$ and then $\text{Top}^o$ are merged, and the $[\text{Top}]$-bearing AgrSP is attracted to spec-TopP.

The result is the grammatical string in (12). The other grammatical surface positions for $\text{ke}$ in affirmative contexts are derived on the basis of which phrases are focalised and which topicalised.
3.1 Willson (2005)’s account

3.1.1 Overgeneration

Willson’s proposal does generate the grammatical surface positions for \( ke \), yet it also generates ungrammatical surface positions. For example, (16) is ungrammatical when negation is present.

\[(16) \quad *Kwo-j \quad ke \quad jab \quad etal \quad ñan \quad Rita?\]

IIsg-T[PRES] Q NEG go to Rita

‘Aren’t you going to Rita?’

Following Willson’s proposal that Neg\(^o\) inherently bears [Foc], movement of any [Foc]-bearing phrase across NegP would result in a relativized minimality violation\(^9\).

So, when Foc\(^o\) is merged, it is NegP that raises to spec-FocP.

\[(17) \quad FocP\]

\[\quad jab \quad etal \quad ñan \quad Rita\quad AgrSP\]

\[\quad Kwo \quad TP\]

\[\quad j \quad t_{NegP}\]

As any phrase may in principle be topicalised\(^{10}\), for the purposes of this evaluation AgrS bears [Top]. Thus, the second movement is of the remnant AgrSP to spec-TopP (18).

\[(18) \quad TopP\]

\[\quad Kwo-j\quad IntP\]

\[\quad ke \quad FocP\]

\[\quad jab \quad etal \quad ñan \quad Rita\quad t_{AgrSP}\]

\(^9\)While this is true, there is nothing in her system to prevent AgrSP from bearing [Foc], and thus raising first without a resulting minimality violation. We do not illustrate this point here, yet simply note that such a derivation will always result in ungrammaticality.

\(^{10}\)We assume that exceptions are limited to phrases headed by phonologically null material, as well as TP. With respect to the latter, we assume that the derivation will crash for independent reasons if TP is topicalised or focalised and separated from AgrS in some relevant sense—i.e., the clitic AgrS\(^o\) may only be hosted by certain categories, which do not include Int.
3.2 A new analysis

The result of this derivation is the ungrammatical string in (16).

Although Willson’s analysis is able to successfully generate the grammatical surface positions for *ke*, we have shown that it cannot block other ungrammatical derivations. Concluding that the analysis overgenerates, we attempt a unique account of the data in (10) and (11) in the next section.

3.2 A new analysis

Here we provide a novel account of the data in (10) and (11) that builds on insights and proposals from Willson’s original analysis, as well as on the clause structure discussed in Section 2. In particular, we propose that the structure of polar questions in Marshallese is slightly more complex than that of *wh*-questions; the additional complexity corresponds to the fact that IntP is projected in the matrix clause of a cleft structure.

(19)

```
  IP
    └── IntP
        └── YP
            └── *ke*
                └── VP
                    └── BE
                        └── FP
                            └── XP
                                └── CP
                                    └── IP
                                        └── NegP
                                            └── VP
                                                . . .
```

Crucially for our purposes, NegP is generated in the embedded clause, as well as the semantically ‘informative’ verb and its objects, while the overt subject, AgrS and T are generated in the matrix higher than *ke*. Like Willson, we posit two relevant movements: the first is focalisation (capturing the fact that any material linearly following *ke* is interpreted in Focus), and the second corresponding to the attraction of a constituent to the specifier of IntP. Crucially for our purposes, the second movement is driven by a feature which we label Polarity, or [Pol], borne solely by C and Neg. A polar question in Marshallese (structured as in (19)) will thus always be one in which the subject is outside of the cleft.

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11See Gagnon and Wellwood (2008) for more details and derivations.
3.2 A new analysis

3.2.1 Derivation of ke-questions

To illustrate our proposal\(^\text{12}\), we derive the word order where \textit{ke} occurs between T and the VP.

\((20)\) \textit{Herman e-n ke kōmmon pade eo ūnan ir?}

In this example, the VP \textit{(kōmmon pade eo ūnan ir)} bears [Foc], and so moves to spec-FP.

\((21)\)

Next, the copula and \textit{ke} (Int\(^{o}\)) are merged. We propose that \textit{ke} bears a [Pol] feature which attracts the next closest [Pol]-bearing category to its specifier. In this derivation, the remnant CP moves to spec-IntP.

\((22)\)

Finally, the remaining lexical items are merged, and the result is the grammatical surface position for \textit{ke} shown in \((20)\).

\(^{12}\)For reasons of space, the tree structures in the following are oversimplified. In particular, our analysis assumes a VP projection to be present in at least some Marshallese sentences (see the table in (24)), but we have not included this in our diagrams.
3.2 A new analysis

(23)

\[
\begin{align*}
\text{AgrSP} & \quad \text{Herman} \quad e \quad \text{TP} \\
\text{IntP} & \quad n \\
[CP [IP t_{VP}]]^{Pol} & \quad ke^{Pol} \quad \text{VP} \\
\text{BE} & \quad \text{FP} \\
[VP kōmmon pade eo ūnan ir]^{Foc} & \quad F^{0}[Foc] \quad t_{CP}
\end{align*}
\]

All remaining grammatical surface positions for \textit{ke} are derived by similar process, depending on which phrase in the embedded clause bears [Foc], e.g.:

<table>
<thead>
<tr>
<th>Derivation</th>
<th>Structure</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>... e-n \textit{ke} ūnommon ...</td>
<td>[AgrS-T \textit{ke} VP]</td>
<td>vP bears [Foc]</td>
</tr>
<tr>
<td>... ūnommon \textit{ke} pade eo ...</td>
<td>[V \textit{ke} DP]</td>
<td>VP bears [Foc]</td>
</tr>
<tr>
<td>... pade eo \textit{ke} ūnan ir</td>
<td>[DP \textit{ke} PP]</td>
<td>PP (indirect object) bears [Foc]</td>
</tr>
<tr>
<td>... ūnan ir \textit{ke}?</td>
<td>[PP \textit{ke}]</td>
<td>CP (relative clause) bears [Foc]</td>
</tr>
</tbody>
</table>

3.2.2 Derivation of \textit{ke}-questions with negation

The only grammatical position for \textit{ke} in negative contexts is sentence finally, e.g. in (25).

(25) \textit{Kwo-j jab etal ūnan Rita ke}?

We follow Willson in assuming that \textit{jab} (Neg\textsuperscript{o}) inherently bears [Foc], and so the first phrase to may raise to spec-FP is NegP\textsuperscript{13}.

(26)

\[
\begin{align*}
\text{FP} & \quad \text{NegP jab etal ūnan Rita}^{Foc}^{Pol} \\
\text{CP} & \quad F^{0}[Foc] \\
\text{IP} & \quad t_{NegP}
\end{align*}
\]

\textsuperscript{13}If any phrase lower than NegP bore [Foc], movement of that phrase would result in a relativized minimality violation.
3.2 A new analysis

Next, copular BE and ke are merged, followed by movement of the closest [Pol]-bearing phrase. Given NegP’s position higher than the other [Pol]-bearer, CP, it is NegP which raises to spec-IntP.

(27)

As above in Section 3.2.1, the remaining lexical items are merged, and the result is the grammatical string in (25).

(28)

3.2.3 Blocked derivations

Because the contentful subject, subject agreement and tense markers are generated higher than ke, it will never arise that ke surfaces higher than these phrases. Further, the restricted
distribution of [Pol] ensures that the remnant CP always raises to spec-IntP in affirmative contexts, and forces a sentence-final derivation for ke in negative contexts.

### 3.3 Section conclusions

We have shown how the distribution of the question particle ke in Marshallese can be accounted for by positing a middlefield interrogation projection, which is sensitive to a feature which we label [Polarity]. The analysis posits a cleft-like construction for yes/no interrogatives, and allows us to generate all and only the grammatical sentences with ke in Marshallese. The previous analysis of such structures, that proposed in Willson (2005), correctly generates the grammatical surface positions for ke, yet we have shown that it overgenerates. Our analysis, utilizing two main movements (with the latter remnant movement) agrees in spirit with that of Willson, however our modifications facilitate an account of ke’s distribution which, otherwise, appears quite opaque.

### 4 Remaining issues: Wh-adjuncts, low wh-in situ

We have not addressed a further puzzle concerning Marshallese questions, which was first identified by Willson (2008, these examples pp60-64). Marshallese has a number of wh-words that correspond to English ‘where’: of them, ia may appear low (30) and high (with a particle which encodes at least number\(^\text{14}\); (29)), taking a resumptive pronoun in the latter case.

\[(29)\]  
\[
\begin{array}{l}
I-j \quad am\text{\textit{win}} \quad ia?
\end{array}
\quad \begin{array}{l}
Isg-T[PRES] \quad wash\text{.hands} \quad \text{where}
\end{array}
\quad \begin{array}{l}
\text{‘Where do I wash my hands?’}
\end{array}
\]

\[(30)\]  
\[
\begin{array}{l}
Ia \quad eo \quad i-j \quad am\text{\textit{win}} \quad ie?
\end{array}
\quad \begin{array}{l}
\text{where sg} \quad Isg-T[PRES] \quad wash\text{.hands} \quad \text{there}
\end{array}
\quad \begin{array}{l}
\text{‘Where do I wash my hands?’}
\end{array}
\]

\(Ewi\) (‘where’), which encodes singular number, must appear high (without a particle), and does not cooccur with a resumptive pronoun:

\[(31)\]  
\[
\begin{array}{l}
Ewi \quad pinjel \quad eo?
\end{array}
\quad \begin{array}{l}
\text{where.sg} \quad \text{pencil} \quad \text{the.sg}
\end{array}
\quad \begin{array}{l}
\text{‘Where is the pencil?’}
\end{array}
\]

\(^{14}\)It seems some of these items encode a human/nonhuman distinction as well, just as the particles we label \(C\) do when they occur following the \(wh\)-.
This latter particle seems to behave just like English adjunct \textit{wh}-words. In various works, Reinhart (1998, 2006) discusses the unusual behavior of adjunct \textit{wh}-phrases; within the government and binding approach to syntax, Huang (1982) provided a compelling analysis of various ill-formed constructions involving \textit{wh}-adjuncts, in terms of the ECP. However, it is unclear whether the ECP can be reformulated within the minimalist framework adopted here; further, Reinhart argues that, given minimalist assumptions, \textit{wh}-words which appear in situ overtly do not in fact raise covertly before the interpretative component. This leaves us with an interesting puzzle. Take for instance the following examples:

(33) *Who fainted when you behaved how?

(34) Who fainted when you behaved what way?

The string in (33) which contains an adjunct \textit{wh}-phrase is unacceptable; whereas its counterpart in (34) is acceptable. Reinhart suggests that this falls out of her analysis in terms of choice functions: an adverbial \textit{wh}-phrase ranges over higher order entities, and thus cannot be interpreted by means of a choice function.

If this is on the right track, the \textit{wh}-adjuncts in (31) and (32) could thus differ in the type of entities they range over: \textit{ia} would range over entities of type \textit{e} allowing an in situ choice function analysis; whereas \textit{ewi} would range over higher order entities not amenable to such an interpretation. \textit{Ewi} would thus need to raise to the Spec of CP, just like English \textit{how}, in order to yield a construction licit for the interpretative component. It is still unclear to us, whether such an analysis would work for Marshallese, but this seems like a promising line of thinking.\footnote{One conceptual problem of this approach is that it is unclear exactly why choice function couldn’t range over higher order entities. This causes no direct discredit to this view, but rather requires further work.}

Notwithstanding, determination of precisely what syntactic and semantic properties account for the distribution of these adjunct \textit{wh}-elements will help us discover the finer-grained syntactic/semantic properties of Marshallese \textit{wh}-questions.

5 Conclusion

We have provided a syntactic analysis for ‘fronted’ \textit{wh}- and polar questions in Marshallese, arguing that both are fundamentally constructed on a cleft structure. Specifically, we have argued that the \textit{wh}-element is base generated in the FP complement of a copular verb, and that the question particle \textit{ke} projects an InterrogationP which, when present, takes the same
copular VP as its complement. This analysis accounts for the particular properties of both types of questions in Marshallese, while providing a similar structural basis for both. Finally, we discussed a puzzle concerning wh-adjuncts in Marshallese, an account of which could help determine the adequacy of the preceding analyses, as well as shed light on the range of possible interrogative structures in language more generally.

References


