The Role of Focus Particles in Wh-Interrogatives: Evidence from a Southern Ryukyuan Language

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1. Introduction

This paper examines the role of the focus particle du in the formation of wh-interrogatives in the Miyara variety of Yaeyaman, a Ryukyuan language spoken on and around Ishigaki island in Okinawa prefecture, Japan. In Miyaran wh-interrogatives, wh-phrases are often marked with du. In assertive responses to wh-questions, the constituent corresponding to the wh-phrase also shows a strong tendency to be marked by du. This is illustrated by the examples in (1).

(1) Subject wh-question and answer:
   a. taa=du suba=ba fai.
      who=DU soba=PRT ate
      “Who ate soba?”
   b. kurisu=n=du suba=ba fai.
      Chris=NOM=DU soba=PRT ate
      “Chris ate soba.”

(2) Object wh-question and answer:
   a. kurisu=ja noo=ba=du fai.
      Chris=TOP what=PRT=DU ate
      “What did Chris eat?”
   b. kurisu=ja suba=ba=du fai.
      Chris=TOP soba=PRT=DU ate
      “Chris ate soba.”

It seems that leaving du off of a wh-phrase in a core argument position (subject or direct object) leads to ungrammaticality:

The data in this paper comes from fieldwork by the author with native speakers of Miyaran, to whom I express my heartfelt gratitude. I have received a particularly large amount of help from Shigeo Arakaki. This research was supported in part by a Grant in Aid for JSPS fellows and by JSPS Grant in Aid for Research 24242014. Examples are elicited data from my own fieldwork, except where noted. Data from other sources are modified to fit the transcription and glossing conventions adopted in this paper. All errors are my own.

1 The Ryukyuan language group is spoken from the Amami islands of Kagoshima prefecture to Yonaguni island in Okinawa prefecture, and comprises one of the two major branches of Japonic, alongside (mainland) Japanese. See Uemura (2003) and Shimoji & Pellard (2010) for overviews in English of the Ryukyuan language group. Like all varieties of Ryukyuan, Miyaran is highly endangered, with fluent speakers generally in their 60s or older. Izuyama (2003) and Davis & Lau (forthcoming) provide English-language descriptive overviews of Miyaran grammar.

2 In many of the examples that follow, the direct object of the verb is marked with the particle ba. I leave this particle unanalyzed, glossing it simply as PRT for “particle”. Izuyama (2002, 2003) provides some discussion of this particle, which seems to interact with verbal aspect.

On the other hand, *du*-marking seems to be optional for adverbial or adjunct wh-phrases, as illustrated by the following examples from Izuyama (2003:82):

(4) a. noodi (=du) kaku.
   why (=DU) write
   “Why do you write?”

b. noo=saari (=du) kaku.
   what=with (=DU) write
   “What do you write with?”

The use of *du* is generally limited to one per clause. This is true in both declaratives and in interrogatives. We thus find that in multiple wh-questions only one of the two wh-phrases can be marked with *du*. This holds even in cases where both wh-phrases are in core argument positions that normally require *du*. For example, in a question meaning “who ate what”, marking both the subject and object wh-phrases with *du* leads to ungrammaticality:

   who=DU what=PRT=DU ate
   “Who ate what?”

b. *kurisu=n=du* suba=ba=du fai.
   Chris=NOM=DU soba=PRT=DU ate
   “Chris ate soba.”

Such questions can, however, be asked and answered; this can be done by marking the subject with the topic particle *ja* and marking the object with *du* (6), or by *du*-marking the subject and leaving the object bare (7).

(6) a. taa=ja noo=ba=du fai.
   who=TOP what=PRT=DU ate
   “Who ate what?”

b. kurisu=ja suba=ba=du fai.
   Chris=TOP soba=PRT=DU ate
   “Chris ate soba.”

(7) a. taa=du noo=ba fai.
   who=DU what=PRT ate
   “Who ate what?”

b. kurisu=n=du suba=ba fai.
   Chris=NOM=DU soba=PRT ate
   “Chris ate soba.”

The above data raise several related issues: 1) Why do wh-phrases in argument position require *du*-marking? 2) Why is *du*-marking optional for non-argument wh-phrases? 3) How do wh-questions with multiple argumental wh-phrases satisfy the *du*-marking requirements, given that 4) *du*-marking is generally limited to one per clause? The rest of the paper is an attempt to answer these questions. In §2 it is argued that sentences with *du* require a particular kind of verbal mood that marks the material in its scope as given information. Marking a constituent with *du* is argued to allow that constituent to escape this domain of given information. §3 shows how this account, in conjunction with a Hamblin semantics of questions, can explain why argument wh-phrases require *du*-marking. §4 shows why in multiple wh-questions it is sufficient that only one wh-phrase be marked with *du*, while §5 suggests a
possible explanation for the general restriction against multiple du-marked elements in a single clause. §6 concludes.

2. Givenness Marking and Focus Movement

Particles like du are called kakari particles in traditional Japanese grammar. In Old Japanese, such particles (including zo, to which du is thought to bear a historical relationship) generate requirements on verbal mood morphology, a pattern that is called kakarimusubi in traditional Japanese grammar. Although the phenomenon no longer exists in Japanese, something like it is widely attested in Ryukyuan. In the formal linguistics literature, the pattern has been described and analyzed most extensively for interrogatives, in which a question particle is found on or near an in-situ wh-phrase, and is associated with special verbal mood morphology in the verb heading the clause where the wh-phrase takes scope. Among the Ryukyuan languages, this pattern has been described and analyzed for Okinawan by Sugahara (1996) and Hagstrom (1998). In Okinawan, wh-phrases are marked with the question particle ga, which triggers the kakarimusubi verbal suffix -ra. Okinawan also has a focus construction using the particle du (or its phonological variant ru), but this construction is not used in the formation of wh-questions. Miyaran lacks a question particle corresponding to Okinawan ga. Instead, as seen in the last section, wh-phrases are typically marked with the focus particle du. Like Okinawan ga, the focus particle du has effects on the verbal mood of the clause in which it occurs. In particular, it is incompatible with the suffix -n, which is described by Davis & Lau (forthcoming) as an indicative mood marker. This incompatibility is illustrated by the contrast in grammaticality of the following examples:\(^{3}\)

(8) a. naoja=ja sinbun jumu-n.
   Naoya=TOP newspaper read-IND
   “Naoya reads the newspaper.”

   b. *naoja=ja sinbun=du jumu-n.
   Naoya=TOP newspaper=DU read-IND

With adjectives and verbs with certain kinds of aspectual morphology, the use of du is associated both with the absence of -n and the presence of the suffix -ru.\(^{4}\) This is illustrated by the following examples from Izuyama (2003:39):

(9) a. ziri(=n)=du mmaha-ru.
   which(=NOM)=DU tasty-RU
   “Which is delicious?”

   b. kuri(=n)=du mmaha-ru.
   this(=NOM)=DU tasty-RU
   “This is delicious.”

In those environments where -ru appears, it is in complementary distribution with -n, suggesting that they both fill the same morphosyntactic slot, which in this paper I call mood. Predicates ending in -ru are traditionally described as attributive forms, whose appearance in matrix clause position is triggered by the presence of du. As both Izuyama (2002, 2003) and Karimata (2011) have stressed, however, there are examples of sentences in Miyaran and other Ryukyuan languages in which the -ru form, or the -n-less form in those environments where no overt -ru is found, can appear without du. According to Izuyama (2002, 2003), such sentences in Miyaran are used in contexts where the interlocutors can readily confirm the event/situation described by the sentence, or in which the event described is some kind of habitual or recurring behavior, as illustrated by the examples in (10).

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\(^{3}\) A similar pattern is described for the Irabu variety of Miyako Ryukyuan by Shimoji (2011). Shimoji labels this pattern quasi-kakarimusubi, because the presence of the focus particle seems to block, rather than require, a particular verbal form.

\(^{4}\) See Davis & Lau (forthcoming) for discussion of the morphological environments where -ru can appear.
Examples of -ru without du (adapted from Izuyama 2002)

a. A mother to her son, who reads the newspaper every day:
   you.TOP newspaper reading-RU
   “You’re reading the newspaper (again)??”

b. Everyone is currently listening to the sound of the frogs:
   frog=NOM crying-RU
   “The frogs are croaking.”

The above examples suggest that -ru marks the material in its scope as contextually available to all discourse participants, or given. The details of what exactly counts as “given” for the purposes of these sentences is an open research question. In what follows, I tentatively suggest a simple analysis based on the common ground (CG), in the tradition of Stalnaker (1978). By marking the information in its scope as being already in the contextual common ground, -ru indicates that this information is presupposed, old, or uninformative. I will call such information GIVEN, and refer to material in the scope of -ru as the domain of GIVENness. The idea of explicitly marking certain material GIVEN is inspired by Schwarzschild’s (1999) theory of focus marking in English, but the details of what counts as GIVEN for purposes of -ru-marking is probably different than in English focus marking.

As described by Izuyama (2002, 2003), sentences with -n are used to mark information that in some sense “belongs” to the speaker, and is new or unavailable to the addressee. As seen above, the use of du seems to require the presence of -ru in those environments where -ru is possible, and it quite generally blocks the presence of -n. I will assume in what follows that du is always associated with an abstract mood head that marks the material in its scope as GIVEN. This mood head is in complementary distribution with -n. When overt, it is pronounced -ru. In other environments it is silent, marked only by the absence of an otherwise available -n.\(^5\) I henceforth call all such sentences -ru sentences, and call the morpheme/feature marking GIVENness -ru, even in cases where it is phonologically null.

Semantically, it seems that the use of du in a -ru sentence brings the material it marks outside the scope of GIVENness marked by -ru. This is illustrated in (11).

\[(11)\]
\[
\text{naoja} = \text{ja} \quad \text{sinbun} = \text{du} \quad \text{jumu}.
\]
\[
\text{Naoya} = \text{TOP} \quad \text{newspaper} = \text{DU} \quad \text{read}.
\]

“Naoya reads the newspaper.”

(11) illustrates that by attaching du to the object NP meaning “newspaper”, the sentence is interpreted against the background information “Naoya read something”. That “something” is then identified as a newspaper.

In summary, it seems that sentences with du are characterized by a particular verbal mood, sometimes spelled out as -ru, which marks the material in its scope as GIVEN. Marking a constituent with du brings it outside of the domain of GIVENness. The question is how this happens. For the purposes of this paper, I will adopt an analysis in which du has an uninterpretable focus index. This indexed element heads a phrase, duP, and agrees with an index on the c-commanding -ru, triggering (covert) movement of duP to the specifier of the agreeing -ru. This is illustrated by the tree in (12).\(^6\)

\(^5\) Note that -n is itself incompatible with the past tense suffix -da, as described by Izuyama (2003) and Davis & Lau (forthcoming). I assume that past tense sentences with du also contain a covert GIVENness marking mood head corresponding to -ru. Such examples, however, are not discussed in this paper.

\(^6\) This analysis is similar in some ways to the Q-particle-based analysis of Okinawan interrogatives in Sugahara (1996) and Tlingit interrogatives in Cable (2010). See Davis (in preparation) for further data that complicate this simple picture; these data require some modifications to the analysis presented here, but are left aside for reasons of space.
LF Movement of the *du*-Marked Phrase to Spec of -ru

This structure gives *du*-sentences an informational split into NEW information (marked by *du*) and GIVEN information (marked by -ru). As in Schwarzschild’s (1999) theory of English focus, however, it is only GIVEN information that is explicitly marked semantically. Marking a constituent with *du* simply provides an escape hatch for material that would otherwise be left in the domain of GIVENness determined by -ru.7

In spelling out the semantics of the construction, I follow Kratzer’s (2004) suggestion that the givenness identified in Schwarzschild’s (1999) theory of focus is expressive (Potts, 2005, 2007). The expressive meaning dimension is given by the expressive interpretation function $[[i]]^e$. In the regular dimension, -ru passes its complement up unmodified, while in the expressive dimension it introduces a requirement that the material in its scope is GIVEN, with existential binding of the variable left by movement of the *du*-marked phrase.

The following examples show how this analysis applies to a declarative with *du* and (covert) -ru:

(14) kurisu=n=du biru=ba bari.
     Chris=NOM=DU Bill=PRT hit
     “Chris hit Bill.” (Given: Someone hit Bill.)

Even without a co-indexed *du* in its scope, the meaning of a sentence with -ru can be sensibly calculated, although this involves vacuous quantification, as shown in example (15).

7 This scope-based approach is similar in spirit if not implementation to the theory of contrastive topic marking in Tomioka (2010).
(15) auda=nu naki-ru.
frog= NOM crying- RU
“The frogs are croaking.”

The result is a sentence in which the given component is equivalent to the asserted content of the sentence. Further research is needed to understand exactly what such a situation entails pragmatically, but roughly speaking it seems that such sentences are used when the information they convey is not “news”, being already known or readily knowable by the contextual addressee.

3. Mandatory du-marking of Argument Wh-phrases

Unlike declaratives, wh-questions cannot appear with -n. They instead take the GIVEN-marking forms described in the last section, with -ru appearing where available, and -n-less verb forms without -ru appearing elsewhere. Although for questions where the wh-phrase is marked with du this requirement could be attributed to an incompatibility between du and -n, this will not explain the impossibility of -n in interrogatives with adjunct wh-phrases, where du is optional. I instead take the incompatibility of wh-questions and -n to result from a selectional restriction imposed by the (null) force head associated with wh-questions, F_{whQ}. This head requires a [+given] complement; -ru is marked [+given], while -n is not.

To explain the observation that argument wh-phrases require du-marking in Miyaran, I adopt an alternative semantics of questions (Hamblin, 1973), in which wh-phrases denote non-singleton sets, and in which semantic composition proceeds by point-wise function application. Following Kratzer & Shimoyama (2002), these alternatives are introduced and calculated in the regular semantic dimension (c.f. Beck 2006). Under these assumptions, an in-situ wh-phrase appearing in the domain of GIVENness will end up with all of the derived alternative propositions marked as GIVEN. This gives rise to a question meaning (a set of alternative propositions) all of whose alternatives are labeled as GIVEN, and hence already taken to be true. This would lead to a situation where the wh-question offers alternative propositions for the hearer to choose from, while at the same time saying that each of the alternatives is already GIVEN in the utterance context. This, I suggest, is why such questions are unacceptable. An example and its semantic derivation are given below:

(16) * taa biru=ba bari.
who Bill = PRT hit
Intended: “Who hit Bill?”
Marking the wh-phrase with \textit{du} serves to bring it out of the GIVENness domain; the resulting sentence has a reasonable interpretation, as illustrated below:\footnote{There has been an ongoing discussion in the literature about whether movement is compatible with alternative semantics, with Shan (2004) arguing that they are incompatible, and Novel & Romero (2010) proposing a system that addresses the problems Shan raises. The issue seems to have been generated by a problematic definition given in Kratzer & Shimoyama (2002). Angelika Kratzer has suggested (pc) that these problems are in fact dealt with in the formulation of alternatives in Rooth (1985). I leave discussion of these technical issues aside for reasons of space.}

\begin{enumerate}
  \item \texttt{taa=du biru=ba bari who=DU Bill=PRT hit}
  \begin{verbatim}
  "Who hit Bill?" (Given: Someone hit Bill.)
  \end{verbatim}
\end{enumerate}

The requirement that wh-interrogatives be formed from a GIVEN proposition, in conjunction with an alternative semantics of questions, thus derives the requirement that argument wh-phrases must be marked with \textit{du}. Adjunct wh-phrases, on the other hand, do not require \textit{du}-marking, as shown earlier. This is unexpected if such phrases are in the domain of GIVENness. To explain the difference between argument and adjunct wh-phrases, I suggest that while arguments \textit{require} \textit{du}-marking in order to escape the structurally determined GIVENness domain, non-arguments can escape it by other means. This idea receives independent support from a number of examples given in Izuyama (2003:83), including the following:

\begin{enumerate}
  \item \texttt{baa [fudi=saari] zïï kaku.}
    \begin{verbatim}
    1.SG brush=with letter write
    "I am going to write with a writing brush."
    \end{verbatim}
  \item \texttt{[maasu kai-naa] haru.}
    \begin{verbatim}
    salt buy-for go
    "I’m going out to buy salt."
    \end{verbatim}
\end{enumerate}

Izuyama remarks about these examples that “In all cases, the action itself is perceived and everyone knows it. The speaker’s concern is what the adverbial phrase indicates” (Izuyama 2003:83). Although the exact meaning of “the action itself” is not made explicit, it seems that it is the event \textit{minus the adverbial modifier} that is taken as given to everyone involved, while the adverbial phrase is introduced as new information. In (18a), this leads to an interpretation where it is given that the speaker is going to write, and he is telling the audience that he will do this writing with a brush. In (18b) it seems that it is given that the speaker is going \textit{somewhere}; the new information is that this going event (which everyone present already knows about) is for the purpose of buying salt.

Data like these suggest that adverbial phrases and other adjuncts do not need to be marked with \textit{du} in order to escape the domain of GIVENness. If so, it is natural that the same would hold for adverbial/adjunct wh-phrases. It is an open question \textit{why} this distinction between arguments and adjuncts
should hold. It is also important to determine whether a semantic difference can be discerned when *du* is nevertheless attached to such phrases. Any such semantic difference would provide evidence for semantic effects of *du* above and beyond its role in helping constituents escape the domain of GIVENness. I leave discussion of these issues for future research.

4. Multiple Wh-Questions

We saw earlier that multiple *du*-marking is generally prohibited within a single clause. Questions with multiple argument wh-phrases can, however, be asked, as was seen in examples (6) and (7). The grammaticality of such examples may seem surprising, given the *du*-marking requirement on single wh-phrases in argument position. The semantic account of this requirement presented in the last section, however, predicts the acceptability of such sentences as long as *one* of the wh-phrases is marked with *du*. This is illustrated in (19) below:

(19) taa=*du* taa=ba bari.
    who=DU who=PRT hit
    "Who hit who?"

\[
\begin{array}{c}
\lambda_2 \\
\lambda x \lambda y. \text{hit}(x)(y) \\
\{\lambda y. \text{hit}(x)(y) \mid x \text{ is a salient human}\}
\end{array}
\]

\[
\begin{array}{c}
\forall \text{salient human } x: \text{GIVEN}(\exists y \text{hit}(x)(y)) \\
t_2 \\
\text{hit}(x)(2) \mid x \text{ is a salient human}
\end{array}
\]

\[
\begin{array}{c}
\{\text{hit}(x)(y) \mid x, y \text{ is human}\}
\end{array}
\]

With multiple-wh questions, the wh-phrase that is *not* marked by *du* gets left in the scope of *-ru*. In the above example, the subject wh-phrase is marked with *du*, leaving the object wh-phrase in the scope of *-ru*. We then calculate a GIVENness requirement to the effect that for each of the alternatives generated on the basis of the non-*du*-marked wh-phrase, the proposition obtained by existentially quantifying over the position occupied by the *du*-marked phrase is GIVEN. In (19), this means that for each salient alternative *x*, it is GIVEN that someone hit *x*. Which propositions are given will thus depend on which wh-phrase is marked with *du* and which is left unmarked. The account thus makes predictions about pragmatic contrasts on the basis of which wh-phrase is marked with *du*. Testing these predictions is a goal of future fieldwork. For now, I show merely that it is possible to give a coherent interpretation to multiple wh-questions as long as one of the wh-phrases is marked with *du*.

5. Barring Multiple *du*-Marking

The observation that only one *du* is allowed per clause can be derived under the present account as an *expressive intervention effect*, as described by Kratzer (1999) for the German discourse particle *ja*. Kratzer argues that this particle is expressive, and that this fact explains why it apparently cannot occur as an intervener between a variable and its binder, under the assumption that expressive meanings cannot be “touched” by regular semantic operations once they are built. A similar kind of intervention effect could be what blocks double-*du* sentences like the following:

(20) * kurisu=n=*du* biru=ba=*du* bari.
    Chris=NOM=DU Bill=PRT=DU hit
    Intended: "Chris hit Bill."

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9 See Kaufmann (in preparation) for counterarguments and a different analysis of this particle.
One might expect this sentence to express something like “GIVEN: Someone hit someone,” with “Chris” and “Bill” filling in the two pieces of unknown information. But the expressive analysis of givenness, coupled with the movement analysis of du, leads to an expressive intervention effect blocking any such interpretation, as shown in the following derivation tree (the same reasoning applies if the du-marked phrases are moved in the opposite order, but the tree showing this is left out for reasons of space):

(21) Blocking Double-du:

The idea here is that the λ associated with the higher -ru would need to bind a variable in the expressive meaning dimension. If such binding is generally impossible, then we predict that such structures are uninterpretable.

While this provides a neat explanation, it is unclear at an empirical level just how rigid the ban on multiple du-marking really is. Although the multiple-du examples seen earlier are all ungrammatical, and descriptive studies on Ryukyuan commonly claim that multiple du-marking in one clause is not allowed, my own fieldwork has uncovered other environments where multiple-du marking seems to be acceptable. I thus leave the expressive intervention effect described here as a tentative proposal which may need to be refined or abandoned in light of more subtle patterns of grammaticality whose nature remains to be determined in future fieldwork.

6. Conclusion and Further Issues

I have argued that mandatory marking of argument wh-phrases with the focus particle du in Miyaran can be derived from the fact that wh-interrogatives have a mandatory GIVENness domain, from which the wh-phrase must escape in order to obtain a sensible interpretation. The analysis of Miyaran may provide insight into other languages where wh-questions share structural affinities with focus constructions. Of particular interest are wh-phrases in “focus-fronting” languages like Hungarian, which according to Horvath (1981, 1986) undergo movement to a pre-verbal focus position. The analysis of Miyaran wh-questions and focus particles in this paper may provide insight into why such focus movement occurs. If wh-interrogatives cross-linguistically come with a structurally specified GIVENness domain, then focus movement may be required for semantic interpretation. These motivations for focus-marking and movement should also be compared with those involved in other languages where movement is triggered by a Q particle agreeing with the higher interrogative force head, such as Tlingit wh-questions as analyzed by Cable (2010).

Further research is needed into what additional semantic effects du might have on the constituent to which it attaches. In this paper, it is semantically vacuous, and merely provides a means by which its complement can escape the domain of GIVENness. There are hints, however, that du-marking is associated with exhaustivity effects as well. This suggests the possibility that movement of the du-phrase is driven not (only) by co-indexation with a higher GIVEN-marking operator, but by the quantificational
semantics of *du* itself. Such a reanalysis would be similar in spirit to that of Horvath (2007), where Hungarian focus movement is reanalyzed in terms of an exhaustivity operator. I leave these potential revisions and further cross-linguistic comparison to future research.

**References**


Kaufmann, Stefan (in preparation). Strong and weak presupposition: German *ja* under quantifiers.


