

Questions and Word Order in Polynesian*

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1 Introduction

The Polynesian languages, which belong to the Oceanic branch of the Eastern Malayo-Polynesian family, are spoken in Polynesia, a large triangular area of the Pacific Ocean bounded by Hawaii in the north, Easter Island in the east, and New Zealand in the south. There are some 38 languages together spoken by less than a million people (Gordon 2005). Despite their areal and genetic proximity, these languages show intriguing micro-variation in a number of domains, including question formation. The goal of this paper is to use the Polynesian languages as a stepping stone for the typological investigation of *wh*-question formation strategies in verb-initial languages. We show that a number of structural options are available for *wh*-question formation—displacement, clefting, and pseudo-clefting—and our initial analytical efforts are aimed at clarifying and developing the methodology needed for distinguishing these options both within Polynesian and more generally.

Our starting point is a set of typological observations originating with Greenberg (1963). Greenberg, in his Universal 12, first observed that there was a connection between VSO basic word order and the position of *wh*-phrases in constituent questions:

- (1) *Greenberg's (1963) Universal 12*
If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions

Keenan (1978) proposed nearly the same generalization for VOS languages.¹ Hawkins (1983) combined both of these observations into what we call Hawkins' Generalization: among languages with basic verb-initial word order there is a cross-linguistic tendency for interrogative phrases to appear first within interrogative clauses. We use the abbreviations V1 and Wh1 to refer to verb-initial and interrogative-phrase-initial word orders.

* This project was supported by the NSF grants BCS 0131993 and BCS 0131946, and Harvard University Dean of Faculty and Arts and Sciences fund. We would like to thank our Tongan consultant Sisilia Lutui for help with the data. We are grateful to Doug Ball, Winifred Bauer, Ivano Caponigro, Yuko Otsuka, the audience at COOL7 and two anonymous reviewers for helpful comments on various aspects of this project. All errors are our responsibility.

¹ Keenan differed only in recognizing that interrogative-first word order could be optional. Such languages often allow *wh*-phrases to appear “in place” as *wh*-in-situ in addition to appearing clause-initially.

(2) *Hawkins' (1983) Generalization*

If a language has dominant verb-initial (V1) word order in declarative sentences, it tends to put interrogative phrases first (Wh1) in interrogative questions

Many Polynesian languages have dominant verb-initial word order and are consistent with Hawkins' Generalization. However, Wh1 is a surface, linear word order description that does not necessarily correspond to a single structural analysis. The question we will explore in this paper is what exactly "putting interrogative phrases first" means.

Cross-linguistically, there are at least four strategies that languages use to form wh-questions. Well known from English, (3a), French, (3b), and other languages is a process of DISPLACEMENT, where a wh-phrase is moved to some privileged position, typically the front of a clause:

- (3) a. *What did you see ~~what~~?*
b. *Qu' as- tu vu ~~quoi~~?*
what have 2SG seen
'What did you see?'

Other languages use SUBSTITUTION, or wh-in-situ, in which the wh-phrase remains in place, as in the following Japanese example. (4b), where the wh-word appears in the same place as the object, (4a):²

- (4) a. *Taro-ga ringo-o mottekita*
Taro-NOM apple-ACC brought.DECLARATIVE
'Taro brought an apple.'
b. *Taro-ga nani-o mottekita-ka*
Taro-NOM what-ACC brought-Q
'What did Taro bring?'

In languages that use the substitution strategy such questions are real information-seeking questions and not echo questions as they are in English. Two further strategies found across languages involve complex constructions. A PSEUDO-CLEFT is a biclausal equative construction in which the wh-phrase is the predicate and the subject is a nominalized relative clause:

- (5) a. *[The thing you saw] is what?*
b. *What is [the thing you saw]?*
- (6) a. *[La personne que tu as vue] est qui?*
the person that 2SG have seen is who
b. *Qui est [la personne que tu as vue]?*
who is the person that 2SG have seen
'Who is the person you saw?'

² The verb also changes to mark whether the sentence is declarative or interrogative, but this is irrelevant to the discussion here.

A similar construction is the CLEFT, a biclausal impersonal construction in which the *wh*-phrase is a focused part of the predicate and the subject is an expletive:

- (7) a. *[What] is it [that you saw]?*
b. *Qu' est- ce que tu veux?*
 what is it that 2SG want
 ‘What is it that you want?’

In predicate-initial languages, the displacement, pseudo-cleft, and cleft strategies may all yield Wh1 word order. Thus, although Hawkins’ Generalization holds true, it does not acknowledge the potential for structural differences among languages that comply with the generalization. Below we will explore the issues surrounding the determination of the Wh1 strategy within particular languages, in order to move beyond Hawkins’ Generalization.

The paper is organized as follows. Section 2 further discusses the three of the *wh*-question strategies introduced above: displacement, cleft, and pseudo-cleft. We show that in languages with grammatical properties like those of the Polynesian languages all three strategies can yield Wh1. At the same time, it is often difficult to determine the exact strategy being used in particular cases. To this end, section 3 discusses differences and diagnostics that can be used to distinguish these strategies. We use Polynesian data to illustrate. Section 4 concludes with a summary of the major patterns and some questions for further investigation.

2 *Wh*-questions: structural possibilities

This section shows that within a grammar with the characteristics of the Polynesian languages, Wh1 word orders are structurally ambiguous. As we noted above, Wh1 can correspond structurally to displacement, cleft, or pseudo-cleft constructions. The relevant characteristics of Polynesian languages, which we illustrate below, are: 1) they are more accurately described as PREDICATE INITIAL than as verb initial once non-verbal predicates are taken into account, 2) there is no copula in equative clauses, and 3) they do not have an overt expletive subject.

The predicate-initial character and the lack of a copula are seen in various equative clauses, as in (8).³ The predicate (bracketed) is in initial position, regardless of its phrasal complexity, and is followed by the subject of predication.

³ Abbreviations used in glossing follow the Leipzig glossing conventions unless noted here: AGT—agent, DEP—dependent, DIR—directional, EMPH—emphasis, GEN—generic, KO—Pan-Polynesian predicate marker, PREP—preposition, RP—resumptive pronoun, TNS—tense.

- (8) a. *[ko e faiako] ia* Tongan
 KO DET teacher 3SG
 ‘She is a teacher.’
- b. *[‘e ‘i fale] toku ‘ohoana* Wallis
 PRES at/in house my spouse
 ‘My spouse is in the house.’ (Nguyen 1998: 310)
- c. *[ma te po] te koika* Marquesan
 PREP DET night DET feast
 ‘The feast will be during the night.’ (Cablitz 2006: 58)

A second instance of predicate-initial word order according to Massam (2001) is the phenomenon of (pseudo-)noun incorporation (PNI). Under PNI the predicate consists of the verb and a reduced object. (9) and (10) illustrate examples from Niuean and Futuna. The (a) examples illustrate canonical VSO word order. In the PNI examples in (b), the object loses its determiner and case and appears immediately adjacent to the verb, yielding VOS order. PNI indicates predicate-initial word order if we take VO to be the initial predicate.⁴

- (9) a. *takafaga tūmau nī e ia* Niuean
 hunt always EMPH ERG 3SG
e tau ika
 ABS PLURAL fish
 ‘He is always fishing.’
- b. *takafaga ika tūmau nī a ia*
 hunt fish always EMPH ABS 3SG
 ‘He is always fishing.’ (Massam 2001: 157)
- (10) a. *e taki e le fafine le motokā kula Futuna*
 IPFV drive ERG DET woman DET car red
 ‘The woman is driving a red car.’
- b. *e taki motokā le fafine*
 IPFV drive car DET woman
 ‘The woman drives.’ (Moyse-Faurie 1997b: 239)

The lack of an expletive in Polynesian languages is seen in impersonal constructions, shown in (11).

⁴ Here and below, the absolute marker has a different form depending on whether it occurs with a noun or a pronoun.

- (11) a. *na'e 'uha expl* *Tongan*
 PAST rain
 'It rained.' (Churchward 1953: 17)
- b. *na'e mofuike expl* *Tongan*
 PAST earthquake
 lit. "It earthquaked."
 'There was an earthquake.' (Churchward 1953: 70)
- c. *'o le lo'omatua expl ...* *Samoan*
 KO DET old.woman
 'There was an old woman ...' (Mosel & Hovdhaugen 1992: 500)

These three characteristics conspire to make a Wh1 word order structurally ambiguous. To see this, consider the Tongan wh-question in (12). In what follows, we will call the initial wh-phrase of such questions the wh-constituent, or just WH, and we will call the remaining overt material the REMAINDER when we do not wish to make any claims about its internal structural makeup.⁵

- (12) *ko hai [na'e tā 'e Mele]?* *Tongan*
 KO who PAST hit ERG Mele
 WH REMAINDER
 'Who did Mele hit?'

Such a wh-question can be analyzed in three ways shown in (13).

- (13) a. *displacement*
ko hai na'e tā 'e Mele hai?
 WH PREDICATE SUBJECT
 'Who did Mele hit?'
- b. *pseudo-cleft*
ko hai na'e tā 'e Mele?
 WH PREDICATE SUBJECT
 who 'the one that Mele hit'
 'Who is the one that Mele hit?'
- c. *cleft*
ko hai na'e tā 'e Mele expl?
 who 'that Mele hit'
 PREDICATE SUBJECT
 'Who is it that Mele hit?'

Under a displacement analysis, shown in (13a), the wh-phrase *hai* 'who' is fronted from the object position. The initial VSO word order after the displacement of the wh-phrase yields WhVS. (13b) illustrates a possible pseudo-cleft analysis. The wh-phrase is the (initial) main predicate of the clause and the subject is a HEADLESS RELATIVE CLAUSE (HRC) with the

⁵ Initial wh-phrases and some predicates in numerous Polynesian languages are obligatorily preceded by the particle *ko*. Although its status is probably informative of the structure of such questions, we will not hypothesize about its analysis. Numerous analytical options have been proposed (Bauer 1991, Massam, Lee, and Rolle 2006, and references therein).

meaning “(the) one that Mele hit”. There are thus two clauses here, the main clause and the clause contained in the subject. Finally, the question also has a possible cleft parse, in (13c). The *wh*-phrase is the PIVOT, a focused element in the main clause, which is related to a position in the remainder, a RELATIVE-CLAUSE LIKE CONSTITUENT (RCC) following the pivot. As in the pseudo-cleft analysis, the cleft structure is biclausal, with the pivot typically showing a syntactic connection to some position inside the RCC. There is also a null expletive subject, as shown in (13c). These three options are available because Tongan is a predicate-initial language without a copula and there is no overt expletive.

Given that multiple analyses are possible for Polynesian Wh1 questions, it remains to be determined which analysis is best for each particular language. The next section discusses how to go about achieving this.

3 Distinguishing properties

The structural ambiguity of Wh1 sentences, as shown above, means that it is not always easy to decide which analysis of Wh1 sentences is correct. As a result, it would be desirable to find systematic ways of determining which analysis is appropriate in a given situation. The following subsections discuss the kinds of evidence that one can appeal to in order to help make this determination. Sections 3.1 and 3.2 provide diagnostics to distinguish clefts and pseudo-clefts from displacement. Section 3.3 offers diagnostics to distinguish clefts from pseudo-clefts.

3.1 Evidence for clefts and pseudo-clefts

Consider the following schematic pseudo-cleft and cleft structures that yield Wh1. They share a number of characteristics that distinguish them from displacement structures.

- (14) a. *pseudo-cleft*
 [WH]_{predicate} [HRC]_{subject}
 What is (the) one he saw?
- b. *cleft*
 [WH RCC]_{predicate} [*expl*]_{subject}
 What is it that he saw?

First, the *wh*-phrase is the predicate or is contained in the predicate; it is not in an argument position. Second, the non-*wh* material consists of a dependent clause: in the pseudo-cleft analysis, it is a headless relative clause in the subject position, while in the cleft, it is a relative clause-like constituent (RCC) attached to the *wh*-phrase. To some degree or another, then, we expect the overt remainder in both cases to have relative clause-like properties. These characteristics, summarized in (15), can help determine whether a *wh*-question is a (pseudo-)cleft or not.

- (15) a. WH is, or is part of, the predicate
 b. REMAINDER (HRC OR RCC) has dependent clause characteristics
 c. REMAINDER (HRC OR RCC) has relative clause-like properties

Several Polynesian languages are in fact analyzed in the literature as using a cleft or pseudo-cleft structure: Niuean (Seiter 1980), Tongan (Otsuka 2000, Custis 2004), Tuvaluan (Besnier 2000), Maori (Bauer 1991, 1993). We suspect that the (pseudo-)cleft analysis is appropriate for a number of other Polynesian languages as well. We will accordingly illustrate the characteristics in (15) using a variety of Polynesian languages.

The first characteristic is that the wh-phrase is, or is part of, the predicate. If this is correct, then its position in the predicate should be indicated by particles of various kinds that associate with predicates, such as TAM (tense-aspect-mood) markers, question particles, or adverbs. Various TAM markers associating with a wh-phrase are shown in the (b) examples below. The use of the particles with non-wh-predicates is shown in the (a) examples.

- (16) a. *ne'e sugulu a ia* *Wallis*
 PAST snore DET3 SG
 'He snored.'
 b. *ne'e ko ai ['ae ne'e 'alu ai]*
 PAST KO who that PAST go there
 'Who went there?' (Nguyen 1998: 313)

- (17) a. *e sau 'o ia i Hawai'i* *Samoan*
 TNS come ABS 3SG OBL Hawai'i
 'He will come to Hawaii.' (Chung 1978: 88)
 b. *e fia le pasese?*
 TNS how.much DET fare
 'How much is the fare?' (Mosel & Hovdhaugen 1992: 489)

- (18) a. *ne tiakina nee tena aavaga* *Tuvaluan*
 PAST leave ERG her spouse
 '[She] was left by her husband.' (Besnier 2000: 454)
 b. *ne aa ana pati?*
 PAST what her word
 'What did she say?' (Besnier 2000: 19)

Question particles may also follow the wh-phrase predicate, as in the Tongan example in (19b). (19a) shows that the question particle follows the predicate in a non-wh-question.

- (19) a. *na'e lau tohi nai 'a e leka?* *Tongan*
 PAST read book Q ABS DET child
 'Did the child read?'
 b. *ko hai nai na'e 'alu?*
 KO who Q PAST leave
 'Who left?'

Lastly, (20) shows that, like other predicates, wh-phrases may be modified by adverbials.

- (20) a. *he a foki te mea na lea mai ai Tokelauan*
 ART what **again** DET thing PAST say DIR RP
koe ananafi?
 2SG yesterday
 ‘What was it again that you told me yesterday?’
 (Hovdhaugen et al. 1989: 53, 54)
- b. *o fea foi na e sau ai? Samoan*
 KO where**also** PAST 2SG come RP
 ‘... and where did you come from?’
 (Mosel & Hovdhaugen 1992: 489)
- b. *ko ai la to faiakoga? Tokelauan*
 KO who **EMPH.ADV** 2SG.POSS teacher
 ‘Who is your teacher then?’ (Hovdhaugen et al. 1989: 53, 54)

In addition to appearing with predicate-related particles, we expect the wh-phrase to show any morphological, syntactic, and semantic restrictions associated with predicates in the language.

The second characteristic of clefts and pseudo-clefts in (15) is that the remainder has dependent clause characteristics. Niuean is helpful in illustrating this claim as it makes a distinction between independent and dependent TAM markers. Independent markers appear in main clauses, as in (21a) and (22a), while dependent markers appear in some (but not all) subordinate clauses, as in (21b) and (22b).⁶

- (21) a. *ø filifili e hai a koe ke vagahau? Niuean*
 NFUT choose ERG who ABS 2SG SBJV speak
 ‘Who chose you to speak?’
- b. *ko hai ne/*ø filifili a koe ke vagahau?*
 KO who NFUT.DEP choose ABS 2SG SBJV speak
 ‘Who chose you to speak?’ (Seiter 1980: 109)
- (22) a. *to tā e lautolu e fale haaku Niuean*
 FUT build ERG 3PL ABS house my
 ‘They’re going to build my house.’
- b. *ko e hiegoa ka/*to tā e lautolu?*
 KO ABS what FUT.DEP build ERG 3PL
 ‘What are they going to build?’ (Seiter 1980: 109-110)

Clefts and pseudo-clefts also often evidence subordinators such as relativizers and complementizers in the remainder:

⁶ An anonymous reviewer suggests that dependent clauses have special marking only if they contain an operator.

- (23) a. *tefeā teelaa e too kiaa koe?* *Tuvahuan*
 whichREL NPAST fall to 2SG
 ‘Which is on your land?’ (Besnier 2000: 23)
- b. *ne’e ko ai ‘ae ne’e ‘alu ai* *Wallis*
 PAST KO who COMP PAST go there
 ‘Who went there?’ (Nguyen 1998: 313)

The third characteristic of clefts and pseudo-clefts is that the remainder has relative clause-like properties. We thus expect that relative clauses and wh-questions will be subject to similar restrictions and grammatical processes. Niuean again provides two excellent illustrations of this claim. Seiter (1980) shows that there are parallel strategies in relativization and wh-question formation in Niuean. Two relativization strategies exist: deletion and pronominalization (Seiter 1980: 93-97). In deletion the relativized noun is deleted. This applies to core arguments (subjects of a one-place verb, ergative subjects, and absolutive objects), illustrated in (24a-c):

- (24) a. *e tama ne hau (*a ia) i Makefu Niuean*
 ABS child NFUT come ABS he from Makefu
 ‘the child who comes from Makefu’
- b. *e tagata ne hoka (*e ia) a Maka*
 ABS man NFUT stab ERG 3SG ABS Maka
 ‘the man who stabbed Maka’
- c. *e tagata ne moto e koe (*a ia)*
 ABS person NFUT punch ERG 2SG ABS 3SG
 ‘the person who you punched’ (Seiter 1980: 94-96)

Pronominalization reduces the relativized noun to a resumptive pronoun, and applies to obliques, time nominals, stative agents, benefactives, and other non-core arguments, as shown in (25). The resumptive pronoun in each relative clause is bold-faced.

- (25) a. *e taga ne tuku **ai** e ia e uga Niuean*
 ABS bag NFUT put **RP** ERG 3SG ABS crab
 ‘the bag in which he put the coconut crab’
- b. *e maga-aho ne kua makona **ai** a ia*
 ABS moment NFUT PFV full **RP** ABS 3SG
 ‘the moment he was full’
- c. *e fakamatalaaga ne fanogonogo a au ki **ai***
 ABS speech NFUT listen ABS 1SG to **it**
 ‘the speech which I listened to’ (Seiter 1980: 94-95)

Seiter shows that comitatives cannot be relativized with either strategy:

- (26) **e tama ne fakatau ō hifo a Maka (mo ia)*
 ABS child NFUT together go down.PL ABSMaka with it
 (‘the child who Maka came down with’) (Seiter 1980: 95)

The same kinds of constituents are questioned in Niuean using the same strategy. Deletion is used for core arguments, as in (27). Pronominalization

is used to question non-core arguments, as shown in (28). Comitatives cannot be questioned at all, even with pronominal resumption, as shown in (29).

- (27) a. *ko hai ne nofo (*a ia) he fale kō? Niuean*
 KO who NFUT live ABS 3SG in house that
 ‘Who lives in that house?’
 b. *ko hai ka kini (*e ia) e māla?*
 KO who FUT clear ERG 3SG ABS plantation
 ‘Who’s going to clear the plantation?’
 c. *ko hai ne fahi e Sione (*a ia)?*
 KO who NFUT beat ERG Sione ABS 3SG
 ‘Who did Sione beat?’ (Seiter 1980: 110)
- (28) a. *ko fē ne nofo ai a Moka?*
 KO whereNFUT live RP ABS Moka
 ‘Where does Moka live?’
 b. *ko hai ne matakutaku ai e tama mukemuke?*
 KO who NFUT frightened RP ABS child infant
 ‘Who is the child afraid of?’
 c. *ko fē ne fina atu a Tale ki ai?*
 KO whereNFUT go DIR ABS Tale to there
 ‘Where did Tale go off to?’ (Seiter 1980: 110-111)
- (29) **ko hai ka kini e Pita (mo ia) e māla?*
 KO who FUT clear ERG Pita with 3SG ABS plantation
 (‘Who will Pita clear the plantation with?’) (Seiter 1980: 111)

A second grammatical parallel between relative clauses and wh-questions in Niuean is the availability of the so-called GENITIVE RELATIVE construction. In this construction, the highest subject in a relative clause may optionally be expressed as the possessive of the head noun.⁷ (30a) illustrates an ordinary relative clause whose subject is the ergative third singular pronoun *e koe* ‘2SG.ERG’. (30b) is the genitive relative variant in which this pronoun appears as *haau* ‘2SG.GEN’, a possessor of the head noun. The relative clauses are otherwise identical.

- (30) a. *e mena ne tuni ai e koe e moa Niuean*
 ABS thing NFUT cook RP ERG 2SG ABS chicken
 b. *e mena haau ne tuni ai e moa*
 ABS thing 2SG.POSS NFUT cook RP ABS chicken
 ‘the thing you cooked the chicken in’ (Seiter 1980: 97)

The genitive relative is also possible in wh-questions. (31a) is a normal object question with *e koe* ‘2SG.ERG’ as the subject. In (31b), this subject is

⁷ See Herd et al. 2004, Otsuka 2008 and references therein for analyses and discussion of the genitive relative construction in Polynesian.

expressed as a possessor. The variation strongly suggests that the remainder in Niuean questions is relative clause-like in its syntax.

- (31) a. *ko hai ne lagomatai e koe?* Niuean
 KO who NFUT help ERG 2SG
 b. *ko hai haau ne lagomatai?*
 KO who 2SG.POSS NFUT help?
 ‘Who did you help?’ (Seiter 1980: 114)

In summary, clefts and pseudo-clefts typically have clear evidence of a biclausal structure, with the remainder constituting a dependent clause.

3.2 Evidence for displacement

In contrast to clefts and pseudo-clefts, displacement structures lack evidence for biclausality and do not have the characteristics in (15). Instead, they are monoclausal, with the following properties:

- (32) a. WH is not a predicate
 b. REMAINDER does not have dependent clause characteristics
 c. the left periphery is “activated”

We discuss these characteristics with respect to Rapanui, the Polynesian language spoken on Easter Island. We tentatively analyze Rapanui as using a displacement structure. Data are sparse however (Fuentes 1960, Chapin 1974, 1981, Alexander 1981, du Feu 1996, Makihara 2001) and alternative analyses may be possible.⁸

The first characteristic is that the *wh*-phrase does not behave like a predicate. The support for this in Rapanui comes from the absence of evidence. We found no examples in which the *wh*-phrase is preceded or followed by predicate-related particles such as TAM markers, adverbs, or question particles. Even the predicate marker *ko*, commonly found in Polynesian, does not occur with any of the *wh*-phrases except *koai* ‘who’, which is probably a merger of the particle *ko* and ‘*ai* ‘who’:

- (33) a. *koai i tikea ena e koe* Rapanui
who PAST see DEM AGT 2SG
 ‘Who did you see there?’ (du Feu 1996: 23)
 b. *‘a‘ai i toke te maika?*
who PAST steal DET banana
 ‘Who stole the bananas?’ (du Feu 1996: 22)
 c. *he úha kóe he káta éna?*
DET what 2SG TNS laugh DEM
 ‘What are you laughing about?’ (Fuentes 1960: 633)

Prepositional phrases that do not generally make good predicates can appear initially in Rapanui:

⁸ The language allows pseudo-clefts with the relative clause modifying an overt head noun *me‘e* ‘thing’ or *taŋata* ‘person’. This might be the reason to explore a more general pseudo-cleft analysis.

- (34) a. *ki a ai koe ka 'avai ena i te puka?*
to DET who 2SG FUT give DEM OBJDET book
 'Who are you going to give the book to?' (du Feu 1996: 19)
- b. *i a ai koe i ma'a ai?*
from DET who 2SG PAST learn RP
 'From whom did you learn this?' (Chapin 1981: 157)
- c. *hai kahu aha au ana uru?*
 with dress what 1SG MODAL put.on
 'Which dress shall I put on?' (du Feu 1996: 27)
- d. *hai aha ro i 'a'aru ai i te 'ura?*
 with what DEM PAST catch RP OBJ DET lobster
 'What did he catch lobsters with?' (du Feu 1996: 28)
- e. *ki a ai a koe i 'ui ai?*
to DET who DET 2SG PAST ask RP
 'Who did you ask?'
- f. *hora aha ro e o'o ena ararua ki te hapi?*
 time what DEM IMFV DU go 3PL to DET school
 'What time are they two going to the class?'
 (Makihara 2001: 218)

As noted above, unlike (pseudo-)clefts, displacement structures do not show signs of biclausality. The wh-phrase displaces to the front of the same clause in which it originates.⁹ Thus, there is a lack of evidence that the remainder material has dependent or relative clause characteristics because the wh-phrase has displaced to a position in the same clause. Unlike in Niuean and other Polynesian languages, there is no evidence of limitations on tense-aspect marking and no special dependent marking.

Finally, one expects an active left periphery in displacement structures. By LEFT PERIPHERY, we mean a zone of the clause that is higher than the inflectional layer (Rizzi 1997) and that typically occurs at the left edge. In English, the left periphery contains wh-phrases, negative phrases, preposed constituents, complementizers, and inverted auxiliaries. In a number of constructions, displacement to the left periphery is obligatory to mark the construction. Polynesian languages that do not use displacement have been argued to lack an active left periphery (Massam 2003). Returning to Rapanui, displacement there seems to be obligatory, unlike in other Polynesian languages, which allow wh-in-situ.¹⁰

Languages with an activated left periphery generally allow more than one element to appear in the left edge area, with the order of constituents subject to linearization constraints, discussed in much detail in the literature on linguistic cartography (Belletti 2004, Rizzi 2004a, b). In

⁹ We are ignoring long-distance questions in which the wh-phrase originates in a subordinate clause.

¹⁰ In multiple wh-questions, only the first wh-phrase fronts. Others remain in-situ, as in English:

- (i) *puka he i va'ai ai koe ki a ai? Rapanui*
 book whichPAST give DIR 2SG to DET who
 'Which book did you give to whom?' (du Feu 1996: 29)

Rapanui, the SVO word order appears quite regularly, and fronted wh-phrases appear before the subject in such word orders:

- (35) a. *kihē* koe ka oho ena apō? Rapanui
where 2SG FUT go DEM tomorrow
 ‘Where will you go tomorrow?’ (Chapin 1981: 156)
- b. *‘iajahé* te pahí i tu’u mai ai?
when DET ship PAST come DIR RP
 ‘When did the ship arrive?’ (du Feu 1996: 20)
- c. *kī a ai* koe ka ‘avai ena i te puka?
to DET **who** 2SG FUT give DEM OBJ DET book
 ‘Who are you going to give the book to?’ (du Feu 1996: 19)
- d. *e aha’a* koe i haka-complica ai?
 DET why 2SG PFV CAUS-complicate RP
 ‘Why are you complicating this?’ (Makihara 2001: 199)

Focused expressions do not seem to be confined to the left periphery; there are some cases where they appear there, (36), but in many other instances they can occur elsewhere, as in (37) where focus is on the right. In our opinion, this suggests that focus in Rapanui is not constructional. In many Austronesian languages using (pseudo-)clefts, focus and wh-questions are often expressed the same way; thus, the absence of a dedicated focus position in Rapanui would be unexpected under a biclausal analysis. Under the displacement analysis, focus and wh-expressions are more likely to be separate, and focus can be encoded by different means, including pitch.

- (36) *a Maria te to’o, ‘ina he me’e kē pa’i*
 POSS Maria DET take NEG DET thing different EMPH
mo to’o
 COMPL take
 ‘MARIA must have taken (it), there was no one else to have taken (it).’ (lit. “the taker is Maria...”) (Makihara 2001: 209)
- (37) *te hika i te rapanui he me’e aña kupeña*
 DET hika PRP DET Rapanui DET thing make net
 ‘In Rapanui, “hika” is the thing to make nets.’
(Makihara 2001: 219)

Finally, we speculate that there might be an interpretive difference between pre- and post-verbal subjects in Rapanui, with pre-verbal subjects interpreted as definite or given and post-verbal subjects being unspecified for definiteness, (38). This may further indicate the activation of the left periphery, just as in effects seen with pre- and post-verbal subject in Romance (Rizzi 1990, 1997). Unfortunately, since we did not have access to speakers, we do not have more conclusive evidence on the interpretive contrasts between pre-verbal and post-verbal subjects.

- (38) a. *o te atua i agaai i te rahi*
 KO DET God PAST make ACC DET sky
 ‘And God made the heavens.’ (Englert 1938: 12)
- b. *te tahi no te atua*
 DET one EMPH DET God
 ‘There is only one God.’ (Englert 1938: 56)

Although our analysis of Rapanui must remain preliminary at this point, it serves to illustrate the differences that we expect to see between wh-questions built on a (pseudo-)cleft and those built with displacement. Wh-questions in Rapanui look rather different from those in the Polynesian languages discussed above.

3.3 Distinguishing clefts from pseudo-clefts

The biclausality of clefts and pseudo-clefts makes it relatively easy to distinguish them from monoclausal displacement structures. Distinguishing clefts from pseudo-clefts is more difficult.¹¹ The pseudo-cleft, illustrated in (39), is a biclausal equative construction in which the wh-phrase is the predicate and the subject is a relative clause or contains a relative clause.

- (39) *pseudo-cleft*
 [WH]_{predicate} [HRC]_{subject}
 a. What is [what he saw]?
 b. [La personne que tu as vue] est qui?
 the person that 2SG have seen is who

A cleft is also a biclausal construction that, in contrast, is impersonal; the wh-phrase in a cleft is a focused element in the main clause. The remaining material is a relative clause-like constituent.

- (40) *cleft*
 a. [WH RCC]_{predicate} [*expl*]_{subject}
 b. [it]_{subject} [is what that he saw]_{RCC}]_{predicate}?

In English and French, pseudo-clefts look rather different from clefts because expletives are overt and there is no null copula. However, in a language without an overt copula, expletive, or relative clause heads and with a predicate-initial order, clefts and pseudo-clefts are largely indistinguishable, as we have already seen. Nonetheless, there are in principle ways to tell them apart, summarized in (41) and discussed in further detail below. It is usually claimed that Polynesian wh-questions are pseudo-clefts as opposed to clefts, so we will illustrate these differences showing what we expect for pseudo-clefts. Clefts should not have these characteristics.

¹¹ See Law 2007 for a discussion of a cleft vs. a pseudo-cleft analysis in Malagasy.

(41)	clausal organization	PSEUDO-CLEFT pred+subj	CLEFT pred+expletive
a.	parallels between remainder and headless relative clauses	yes	no
b.	“dummy” head possible in remainder	yes	no
c.	pied-piping in wh	no	yes
d.	remainder has nominal properties	yes	no
e.	remainder has subject properties	yes	no

The syntactic differences between clefts and pseudo-clefts derive from their distinct clausal organizations. Pseudo-clefts have a subject-predicate structure while clefts are impersonal constructions. In a pseudo-cleft, the remainder constitutes the subject and is a headless relative clause. Clefts lack a semantically contentful subject altogether. A clear expectation, then, for pseudo-clefts is that the language will independently have headless relative clauses—relative clauses that can stand on their own as arguments. Examples of HRCs in Tahitian and Tuvaluan are bracketed in the examples below.

- (42) *e raverahi ho'i [te i parau-hia]_{HRC} Tahitian*
 PRES many really DET PAST call-PASS
e iti rā [te i mā'iti-hia]_{HRC}
 PRES small but ART PAST choose-PASS
 lit. “The ones who are called are many, the ones who are chosen are few.”
 ‘Many are called, but few are chosen.’
 (Académie tahitienne 1986: 288, after Matthew 22:14)

- (43) *ko tino maattua o te fenua Tuvaluan*
 KO people old of DET island.community
[kolaa e fakannofō ki pou]
 REL NPAST CAUS.sit to post
 ‘Elderly people of the island are the ones who are made to sit
 against the posts.’ (Besnier 2000: 72)

For several Polynesian languages, HRCs do not exist widely outside of wh-questions and the related focus construction—for example, Niuean (Seiter 1980: 113), Tuvaluan (Besnier 2000: 23, 71-73), Maori (Bauer 1991, 1993: 57). This is unexpected if wh-questions are built with HRCs. In other languages, HRCs exist but are formally distinct from the remainder in wh-questions. In Samoan, HRCs have a determiner and a relativizer, as in (44a), but the remainder in wh-questions does not, as shown in (44b). In Tongan, HRCs have a pronominal element of some kind which is absent in wh-questions (compare (45a) and (45b)).

- (44) a. 'o ai [l-e na fasia a'u]_{HRC?} Samoan
 KO who DET-REL PAST hit 1SG
 'Who is the one who hit me?' (Mosel & Hovdhaugen 1992: 633)
- b. 'o ai [na fasia le maile]_{REMAINDER?}
 KO who PAST hit DET dog
 'Who hit the dog?' (Mosel & Hovdhaugen 1992: 633)
- (45) a. ko Mele [ia na'a ne kaiha'asi 'a e ika]_{HRC} Tongan
 KO Mele 3SG PAST 3SG steal ABS DET fish
 'Mele is the one who stole the fish.'
- b. ko hai [na'a ne kaiha'asi 'a e ika]_{REMAINDER?}
 KO who PAST 3SG steal ABS DET fish
 'Who stole the fish?' (Custis 2004: 125)

The absence of clear headless relatives in wh-questions could be offered as an argument against a pseudo-cleft analysis for these languages.

In some cases however it is evident that there is a pseudo-cleft because a "dummy" head noun (boldfaced) is present in the HRC:

- (46) a. *kooi ttino ne ffutinee ia te atu? Tuvaluan*
 KO.who **the.person** PAST pull ERG 3SG DET bonito
 lit. “Who is the person who caught the bonito?”
 ‘Who caught the bonito?’ (Besnier 2000: 10)
- b. *se aa te mea ne iita ei? Tuvaluan*
 a what DET **thing** PAST angry RP
 ‘lit. “What is the thing that they are angry about?”
 ‘What were [they] angry about?’ (Besnier 2000: 11)
- c. *po ‘o fea tonu le mea na pa‘ū ai Samoan*
 Q KO whereright DET **place** PAST fall RP
le va‘alele?
 DET plane
 lit. “Where exactly is the place that the plane had fallen down?”
 ‘Where exactly did the plane fall down?’
 (Mosel & Hovdhaugen 1992: 490)
- d. *e aha te tumu i hee mai ai Marquesan*
 DET what DET **reason** PAST go DIR RP
hua vehine?
 that woman
 lit. “What is the reason that that woman came?”
 ‘Why did that woman come?’ (Mutu 2002: 69)
- e. *ko e hā e ‘uhinga ‘okú ke Tongan*
 KO DET what DET **reason** PRES 2SG
fie ‘aluai?
 want go RP
 lit. “What is the reason that you want to go?”
 ‘Why do you want to go?’ (Churchward 1953: 170)
- f. *he aha ro te me’e a Rui Rapanui*
 DET what REALIZEDDET **thing** DET Rui
i rava’a?
 PAST catch
 lit. “What is the thing that Rui caught?”
 ‘What did Rui catch?’ (du Feu 1996: 30)

Such examples occur in many of the Polynesian languages. They are unsurprising given the availability of non-verbal equative clauses like (8). It is not entirely clear whether this is the same construction as when there is no visible head however.

Some of the examples above point to another property of pseudo-clefts that distinguishes them from clefts. In clefts, a PP can be the pivot, but in a pseudo-cleft, a non-locative PP cannot occur in the predicate position. A similar contrast obtains in English where pied-piping in specificational pseudo-clefts is highly marginal (see Heggie 1988, Collins 1991, den Dikken 2005 for a discussion):¹²

¹² We are grateful to an anonymous reviewer for pointing out this contrast to us.

- (47) a. *They worry about their income.*
 b. *It is about their income that they worry.* cleft
 c. **About their income is (about) what they worry.*
 d. *Their income is what they worry about.* pseudo-cleft

In Polynesian languages other than Rapanui, prepositional phrases generally resist fronting, even with resumption. For instance in Tuvaluan, only NPs can front under KO-topicalization (Besnier 2000: 239-242) and only animate NPs corresponding to benefactive and directional expressions can head a relative clause which contains a resumptive pronoun (Besnier 2000: 73). In the Tuvaluan data below, the *wh*-phrase can occur in-situ as the object of a preposition, (48), or can be relativized with a copy (48b). Besnier's description leads us to expect that other possibilities are ungrammatical.

- (48) a. *e faipai koe kia ai?* Tuvaluan
 NPAST talk you about who
 'Who are you talking about?' (Besnier 2000: 22)
 b. *kooi ttino e faipati koe ki ei?*
 KO+who DET+person NPAST talk you about RP
 'Who are you talking about?' (Besnier 2000: 21)

Inasmuch as the Tuvaluan data are representative of a more general Polynesian pattern, it seems that fronted PPs (with or without an in-situ PP containing a resumptive pronoun) are impossible, similar to the English situation in (47c,d). This may be an indication that Polynesian questions and focus constructions are pseudo-clefts, not clefts. It would be desirable to obtain consistent empirical data on PP fronting (or lack thereof) across Polynesian languages to further explore this prediction.

Two further expected properties of the pseudo-cleft remainder are that it will have nominal properties and subject properties. For example, it should have the distribution of a nominal and appear in other nominal positions such as direct object, object of a preposition, or topicalized position. It should show nominal morphosyntax such as overt determiners and trigger agreement on the subject. Subject properties include case marking appropriate for subjects and any other language-specific restrictions that subjects may have. For Polynesian, we are not aware of consistent data that support these predictions but the expectations seem well-founded.

4 Conclusion

Three structural options—displacement, clefts, and pseudo-clefts—can all yield Wh1 word order in languages, like the Polynesian languages, with the right grammatical properties. Thus, while the Polynesian languages conform to Hawkins' Generalization, the range of options available for achieving Wh1 should be taken into account in a more fine-grained analysis of particular languages.

(49) *Hawkins' (1983) Generalization*

If a language has dominant verb-initial (V1) word order in declarative sentences, it tends to put interrogative phrases first (Wh1) in interrogative questions

We have suggested that in such cases it may be difficult to determine which structure is being employed and we have offered some morphosyntactic diagnostics to help with the determination. Table 1 summarizes differences between the three analyses that serve as the basis for our diagnostics. These diagnostics have been presented here for Polynesian but they should be applicable to other V1/Wh1 languages.

	WH-PHRASE IS A PREDICATE	REMAINDER IS A DEPENDENT CLAUSE	SUBJECT EXPRESSED BY
Displacement	No	no	same constituent as in declarative
Cleft	Yes	yes	expletive
pseudo-cleft	Yes	yes	headless relative clause

Table 1. Properties of different Wh1 structures

Distinguishing displacement from (pseudo-)clefts is relatively straightforward because of the biclausal nature of cleft constructions. In (pseudo-)clefts, the wh-phrase is part of the main clause while the remainder constitutes a separate, dependent clause. Distinguishing clefts from pseudo-clefts can be more difficult because their syntaxes are rather more similar. We proposed that the primary detectable difference between clefts and pseudo-clefts lies in the status of the remainder. For pseudo-clefts, the remainder is a nominal headless relative which serves as the subject; this is not true for clefts. Further, the predicate of a pseudo-cleft cannot be a prepositional phrase while that in a cleft can be. The reasons for the latter restriction are not entirely clear even for well-studied languages (cf. den Dikken 2005) and require further investigation.

We have used various diagnostics to investigate the structure of wh-questions in Polynesian. The majority of Polynesian languages are widely believed to use a (pseudo-)cleft—a claim that we support. We tentatively proposed that Rapanui uses displacement. Evidence for a pseudo-cleft analysis (as opposed to a cleft analysis) in Polynesian was not unambiguously supported because, in large part, the remainder did not look like a headless relative clause. This is a recurring problem for pseudo-cleft analyses (Law 2007). It may indicate that the pseudo-cleft analysis is not by and large appropriate or it may indicate a lack of understanding of the construction cross-linguistically.

Other challenges, which we have not discussed, may also make the analytical choice more difficult for the Polynesian languages. For example, it may be the case that not all of the diagnostics may be applicable. It will almost certainly be the case that not all of the relevant data will be available in traditional grammars. It is also possible that more than one strategy may be available in a given language. We have not distinguished different kinds

of questions, particularly questioning of arguments vs. adjuncts or DPs vs. non-DPs; however, it is possible that they do not use a unified strategy.

Our list of strategies of wh-question formation also includes displacement and wh-in situ: the wh-phrase remains in the place of the constituent that is questioned. While such a strategy is generally available for nominal constituents in Polynesian, it does not usually yield Wh1 word orders. However, there is a class of wh-expressions that occur in situ but lead to Wh1 orders—these are interrogative verbs,¹³ illustrated here with the Tuvaluan ‘how many’, which takes a sentential complement:

- (50) ne fakafia o vau kkonei? *Tuvaluan*
 PAST how.many.times COMP come to+here
 ‘How many times did he come this way?’
 (lit.: (It) happened how many times that he came here?)
 (Besnier 2000: 19)

For Tuvaluan, Besnier identifies interrogative verbs on the basis of two characteristics: they can occur only as verbs and only in questions, and they do not appear in situ as wh-words for nominal constituents. However, the boundary between verbs per se and predicates is rather vague in Polynesian; some researchers even suggest that these languages lack the noun-verb distinction (Tchekhoff 1979, 1984, Broschart 1998) or have a special lexical class of “universals” (Biggs 1971, 1974), a category that can appear as predicates. The difficulty in identifying verbs would make it difficult to distinguish substitution (with a verbal wh-expression) from biclausal structures such as (pseudo-)clefts.

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¹³ Wh-verbs seem typologically infrequent but not impossible. See Hagège 2003, Cysouw 2004, and Idiatov and van Auwera 2004.

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