

# On a two-way distinction of questions in Paiwan

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## Abstract

This paper investigates the three conventional types of questions in the Formosan language Paiwan: polar, disjunctive, and *wh*-questions, and seeks to rectify some previous observations and offer some insightful generalizations. Specifically, we demonstrate that polar questions, question tags included, are formed by a rising intonation alone, and that the putative polar question particles (*ui dri*, *pai*, *na*, and *ui lja*) are in fact polar question tags, while both *a* and *ayau* turn out to be interjection particles. There are thus no syntactically or lexically formed polar questions in Paiwan. Crucially, questions formed with the sentence-initial *tuki* and its variants *aki*, *ki*, and *tui* are genuine disjunctive questions, not polar questions. We argue that *manu*, previously seen as a disjunctive interrogative conjunction, is an emphatic adverbial instead, meaning ‘in the end’, which can thus appear in all three types of questions as well as declaratives. Genuine disjunctive questions, in either *A-or-B* or *A-not-A* form, are formed with a silent disjunctive interrogative conjunction. Finally, we demonstrate that disjunctive and *wh*-questions share some fundamental properties and should be recognized as two subcategories of a major category of constituent questions, as opposed to polar questions. A two-way distinction thus obtains for questions in Paiwan.

**Keywords:** Paiwan; polar question; disjunctive question; constituent question

## I • Introduction

While the theme of questions in the Formosan language Paiwan has been explored fairly extensively, existing studies are hardly consistent in their coverage and account. However, a prominent consensus is that Paiwan questions also fall into the widely-accepted three-way distinction observed in most other languages: polar questions, disjunctive questions, and *wh*-questions, though the actual terminology used in different works may vary. In this paper, we review the existing accounts for Paiwan questions and seek to clarify some of the misconceptions, offer some fresh observations, and ultimately propose a more thorough and insightful account for Paiwan questions.

Section 2 first outlines the previous studies and the conventional three-way distinction of questions in Paiwan. In section 3, we demonstrate that Paiwan lacks morphosyntactically-formed polar questions, as genuine polar questions are formed by phonological means alone. Section 4 argues for a silent disjunctive interrogative conjunction and demonstrates that the alleged disjunctive conjunction *manu* behaves like a non-interrogative adverbial instead. Finally, in section 5, we illustrate some of the significant common properties between disjunctive and *wh*-questions in Paiwan, indicating they are two subcategories of a major category, as opposed to polar questions. Section 6 offers some concluding remarks.

## II • Three-way distinction of Paiwan questions

Questions are most commonly classified into three types, as shown in table 1, though the terminology may vary in different studies. Polar questions, or *yes-no* questions, are questions responded with *yes* or *no*; disjunctive, or alternative, questions put forth a set of explicit alternatives to the interlocutor; and *wh*-questions contain specific *wh*-words that indicate the information gap to be filled in by the interlocutor, such as *how*, *when*, *where*, *who*, *what*, *which* in English.

**Table 1:** Conventional three-way distinction of questions

Questions		
Polar Qs <sup>1</sup>	Disjunctive Qs	<i>Wh</i> -Qs

Such a three-way distinction is likewise adopted in previous studies of Paiwan grammar, e.g., A. H.-C. Chang (2000, Tjailjaking; 2006, Tjailjaking; 2018, Tjaljaqavus), Chen (2010,

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<sup>1</sup> A full list of abbreviations used in this article is provided in Abbreviations.

Stimul, Sinvaudjan, and Tjavuali), H.-C. Chang (2017, Makazayazaya); examples are given in **Error! Reference source not found..**

- (1) a. ini=ka<sup>2</sup>          pu-vurasi          pai?<sup>3</sup>  
 NEG1=NEG2    have<sup>4</sup>-sweet.potato QP  
 ‘Does it not grow plenty of sweet potatoes?’ (A. H.-C. Chang 2006: 270)
- b. su=ama                  timadju          manu          su=sinsi          timadju?  
 2SG.GEN=father    3SG.NOM          or          2SG.GEN=teacher    3SG.NOM  
 ‘Is he your father or is he your teacher?’ (A. H.-C. Chang 2018: 103)
- c. ti-ima=sun?  
 NOM.PS.SG-who=2SG.NOM  
 ‘Who are you?’ (A. H.-C. Chang 2018: 107)

In spite of the consensus of a three-way distinction, previous accounts vary greatly in their detailed description of polar questions. A. H.-C. Chang (2006: 270) and Chen (2010) both note that a polar question is formed with a sentence-final, or S-final in short, question particle *pai*, *dri*<sup>5</sup>, or *ayau*. H.-C. Chang (2017: 54) does not mention *dri* and *ayau* but offers several others and further classifies polar questions into three sub-types: intonation questions, tag-questions, and particle questions, as shown in table 2.

**Table 2:** Three types of putative polar questions in Paiwan (A. H.-C. Chang 2017)

Polar Questions		
Intonation Qs	Tag-Qs (formed also with intonation)	Particle Qs <i>na, pai, uii</i> <sup>6</sup> <i>pai, uii lja, uii ri (lji), ri (lji), a-a</i>

A. H.-C. Chang (2018: 99)<sup>7</sup>, on the other hand, only presents an S-initial polar particle *a*. In section 3, we will dispute all these putative polar particles, and argue that there are no morphosyntactically-formed polar questions in Paiwan. More specifically, we demonstrate that

<sup>2</sup> *i=ka* in the original text.

<sup>3</sup> Paiwan orthographies are not consistent among different studies and dialects. In this study, we follow the Romanization orthography of the indigenous languages declared by the Ministry of Education in 2005.

<sup>4</sup> *have.AV* in the original text.

<sup>5</sup> *Di* in A. H.-C. Chang (2006).

<sup>6</sup> Both A. H.-C. Chang (2006, 2018) and our informants suggest that *ui* ‘yes’ should be the right form, which we will adapt.

<sup>7</sup> It should be noted that A. H.-C. Chang (2000) and (2018) are parts of a Formosan Reference Grammar Series meant for Formosan Language teachers and self-learners, and are thus limited in terms of its scope, and shall not be criticized with an academic standard.

these putative polar questions are either formed phonologically or are declaratives instead, and also clarify that putative polar questions formed with *tuki* are in fact disjunctive questions, where *tuki* is an interrogative element like the Mandarin *shifǒu* ‘whether or not’.

Previous studies do seem to agree that disjunctive questions in Paiwan are formed by *manu* ‘or’, the putative disjunctive interrogative conjunction that conjoins two alternatives in the form of A-*or*-B, while A. H.-C. Chang (2000) further notes that *manu* can also appear in front of the first disjunct in an *or*-A-*or*-B form. In section 4, we will demonstrate that *manu* is not an interrogative element at all but an emphatic adverbial, and that Paiwan A-*or*-B and A-*not*-A questions contain a silent disjunctive interrogative conjunction *OR*.

Finally, *wh*-questions are without controversy in terms of their classification, which contain a straightforward *wh*-element. There are, however, variations regarding the status of the *wh*-words. Lists of Paiwan *wh*-elements have been put forth (cf. A. H.-C. Chang 2006; 2018; Hsieh 2019), as in table 3. In A. H.-C. Chang (2006: 275), four categories are proposed: noun, verb, adverbials, and numeral, while in A. H.-C. Chang (2018) and Hsieh (2019), only the first three are enlisted. The auxiliary ‘*aku*<sup>8</sup>’ in A. H.-C. Chang (2006) is treated as an adverbial in Hsieh (2019), and adverbial *inu* ‘which’ in A. H.-C. Chang (2018) is a noun in Hsieh (2019). *pida* and *mapida* are classified as verb and adverbial respectively in A. H.-C. Chang (2018) and Hsieh (2019). Nominal *wh*-words in Paiwan can be marked by the case markers like nouns. Verbal *wh*-words likewise can take on tense markers and pronominal clitics, and focal inflections, while adverbial ones cannot. Hsieh (2019), however, based on this, contends that *pida* and *mapida* are adverbials rather than verbs, since they do not take focal inflections and can only take perfect tense marker =*anga*, but not others. In terms of the positions of the *wh*-words, there is no much disputation. *Wh*-nouns can appear both sentence-initially and sentence-medially (as oblique); *wh*-verbs based on *kuda*, and ‘*aku*’ can only happen S-initially. *Wh*-adverbials can happen in the sentence -initial, -medial and -final positions (Hsieh, 2019). The disputed *pida* and *mapida* usually happen sentence-initially.

**Table 3:** *Wh*-words in Paiwan

Forms	Meaning	A. H.-C. Chang (2006)	A. H.-C. Chang (2018)	Hsieh (2019)
<i>ima</i>	Who?	Personal noun	Noun	Noun
<i>nema</i>	What?	Common noun	Noun	Noun
<i>k<sup>&lt;em&gt;</sup>uda</i>	Do what?	Verb	Verb	Verb

<sup>8</sup> In our informants’ data, there does not seem to be a glottal stop in *aku*.

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<i>kuda-in</i> ( <i>k&lt;in&gt;uda</i> )	Do what?			
<i>si-kuda</i>	What for?/What happens?			
<i>ma-kuda</i> <sup>9</sup>	What is the matter?			
<i>inu</i>	Where?	Locative noun	Noun	Noun
	Which?	-	Adverbial <sup>10</sup>	Noun
( <i>'a</i> ) <i>ku</i>	Why?	Auxilliary <sup>11</sup>	-	Adverbial
<i>nungida</i>	When (irrealis)?	Temporal noun	Adverbial	Adverbial
<i>kangida</i>	When (realis)?	Temporal noun	Adverbial	Adverbial
<i>pida</i>	How many/much?	Numeral	Verb	Adverbial
<i>mapida</i>	How many people?	Sortal classifier & numeral collation	Verb	Adverbial

While the proper status of the *wh*-elements, crucially, *'aku*, *pida*, and *mapida* requires further investigation, it is not immediately relevant to the core discussion of the present study, and will be set aside for now. In section 5, however, we shall point out that disjunctive and *wh*-questions share some significant common properties, suggesting that they are two subcategories of a major category of constituent questions, as opposed to polar questions.

We note that the Paiwan data cited in this paper, if not otherwise specified, are provided by five naïve native informants: one male from Tjavuali, one male from Tadren, one male from Masiljid, Makazayazaya, and one male and one female from Timur. The male from Masiljid is in his 20s. All others are in their 50s–60s.

<sup>9</sup> The *wh*-words here are from the Tjailjaking dialect, recorded in A. H.-C. Chang (2006), which is phonetically different from other Northern Paiwan dialects, but does not show syntactic and semantic discrepancy in terms of the *wh*-words discussed here (Hsieh 2019).

<sup>10</sup> The existence of adverb in Formosan Languages is disputed in the literature. Both A. H.-C. Chang (2018) and Hsieh (2019) thus use the term ‘adverbial’ instead.

<sup>11</sup> The existence of auxiliaries in Paiwan is also unclear, and both Hsieh (2019) and P. J.-K. Li (2008) are doubtful. A. H.-C. Chang (2006) is also uncertain about the status of (*'a*)*ku*.

### III · Investigation of polar questions in Paiwan

Polar questions in Paiwan have been commonly recognized in the literature. In this section, we contend that in Paiwan, polar questions are formed only with a rising intonation and that there are thus no genuine morphosyntactically-formed polar questions.

#### 1. Putative polar question particles in Paiwan

Both A. H.-C. Chang (2006) and Chen (2010) recognize that a declarative sentence in Paiwan can be turned into a polar interrogative by a rising intonation, with the optional addition of one of two S-final polar particles, namely, *pai* and *dri*, as shown in (2) and (3). A. H.-C. Chang (2006) also notes that Paiwan declaratives can likewise be turned into polar questions without rising intonation, with the obligatory S-final polar particle *ayau*, as in (4), taken from A. H.-C. Chang (2006)<sup>12</sup>.

(2) ini=ka            pu-vurasi            pai? (Raising)  
    NGE1=NEG2    have-sweet.potato    QP  
    ‘Does it not grow plenty of sweet potatoes?’ (A. H.-C. Chang 2006: 270)

(3) i=tja            i=zuua-zuua            dri? (Raising)  
    LOC=OBL.CM    LOC=RED-there        QP  
    ‘At that place over there, right?’ (A. H.-C. Chang 2006: 272)

(4) mana    i=ka    pu-vu<rasi>rasi,            ayau?  
    COP    NEG1=NEG2    have-sweet.potato<RED>    QP  
    ‘They are the sweet potatoes which do not produce many sweet potatoes, aren’t they?’ (A. H.-C. Chang 2006: 467)

In the data we collected, all three S-final polar particles are attested. However, A. H.-C. Chang (2018) does not mention these S-final polar particles but instead offers an S-initial polar particle *a*, as in (5).

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<sup>12</sup> Specifically, the rising intonation is required for the polar interrogative, with or without *pai* or *dri*; however, when the sentence is formed with *ayau*, a positive response is expected and the intonation thus remains similar to that of a declarative (A. H.-C. Chang 2006: 272). Paiwan *ayau* is thus reminiscent of the Mandarin polar particle *ba*, where the speaker also expects confirmation of the proposition put forth. In section 3.2 we shall argue that they are declaratives and not interrogatives.

- (5) a su=ama timadju?  
 QP 2SG,GEN=father 3SG.NOM  
 ‘Is he your father?’ (A. H.-C. Chang 2018: 99)

A more comprehensive survey is provided in H.-C. Chang (2017), where putative polar questions are classified into three types: intonation questions, tag questions, and particle questions (cf. table 2). Intonation polar questions contain no interrogative lexical elements and come in three types depending on the specific intonation patterns: rhetorical questions expecting no response, questions expecting a positive response, and questions expecting either a positive or negative response. Tag questions are simply *ui* ‘yes’ or *ini* ‘no’ that appear at the end of a declarative sentence and are likewise formed with intonation only, thus also without any lexical interrogative element. Putative particle polar questions are therefore quite different, formed with one of these seven interrogative elements: *na*, *pai*, *ui pai*, *ui lja*, *ui ri (lji)*, *ri (lji)*, *a-a*. Unlike A. H.-C. Chang (2006)’s three S-final question particles, these particles can appear both S-initially and S-finally; H.-C. Chang (2017)’s *pai* can even appear S-medially. Examples are provided in (6).

- (6) a. uri=q<em>avai=mun<sup>13</sup> nutiau ui.lja?  
 FUT=make.rice.cake<AV>=2PL.NOM tomorrow QP  
 ‘You will make rice cake, is it so?’ (H.-C. Chang 2017: 57)
- b. kismulja aravac pai ti Mukai?  
 hard-working very QP NOM.PS.SG. PN  
 ‘Mukai is hardworking, right?’
- c. ui.lji kiljivak-an<sup>14</sup> a su=kinacemkeljan<sup>15</sup>?  
 QP cherish-UV LIN 2SG.GEN=family.member  
 ‘(I should) cherish your family members, is it so?’ (H.-C. Chang 2017: 58)

Note that H.-C. Chang (2017)’s *pai* and *ui pai* are essentially the same, since the latter can be deduced to *pai* only (H.-C. Chang 2017: 57), while the same applies to *ui ri* and *ri*, which is the same element as *dri* in A. H.-C. Chang (2006) and Chen (2010), and we shall use *dri* hereafter<sup>16</sup>. Also, *a-a* and *a* should be identified as the same item; although it is not found in A.

<sup>13</sup> *q<em>avai a mun* in the original text.

<sup>14</sup> Note that *-an* here should not be considered as a locative as in the original text. In A. H.-C. Chang (2006), it is treated as instrumental, with a benefactor; Huang (2012) considers it as a circumstantial undergoer voice marker. We adapt the latter’s view here. We thank an anonymous reviewer for pointing this out.

<sup>15</sup> *su kinacemkeljan* in the original text.

<sup>16</sup> This conclusion was made due to two reasons: 1) *dri* (IPA: dʒi)’s /dʒ/ has the same place of articulation with /tʃ/, and both are rhotic sounds, which share certain articulatory and acoustic features, and 2) our Makazayazaya (where H.-C. Chang 2017’s data are collected) informant reports that he has never heard of the term *lji/ri* or *ui lji/ri* (the author does not specify the difference between *lji* and *ri*), while he is comfortable with *dri*, and has heard of *ui dri*

H-C. Chang (2018) if *a* appears both S-initially and S-finally, as *a-a* does, our informants have identified an *a* that has the same semantic distribution as A. H.-C. Chang (2018)'s *a* and H.-C. Chang (2017)'s *a-a*, which does appear S-finally as well, which allows us to conclude that these three items are the same, and we shall use *a* hereafter. This leaves only six particles to be examined: *ayau*, *dri*, *pai*, *na*, *ui lja*, and *a*. See table 4 for a summary.

**Table 4:** Putative polar question particles of Paiwan in literature

A. H.-C. Chang (2006)	H.-C. Chang (2017)	A. H.-C. Chang (2018)
<i>dri</i>	<i>ri</i>	-
	<i>ui ri</i>	-
<i>pai</i>	<i>pai</i>	-
	<i>ui pai</i>	-
<i>ayau</i>	-	-
-	<i>na</i>	-
-	<i>ui lja</i>	
-		<i>a</i>

Our informants offer four additional candidates: *tuki*<sup>17</sup> and *ki*, *aki*, and *tui*, which appear S-initially, as in (7). These four items have the same syntactic behavior and semantic distribution<sup>18</sup>. Given that Masiljid and Timur informants use only *tuki*, *ki* and *aki* and Tjavualji and Tadren informants use only *tuki*, *ki*, and *tui*, we will use *tuki* in relevant examples hereafter and regard the variant forms as allomorphs of free variation.

- (7) *tuki/aki/ki/tui ma-leva=sun?*  
 QP AV-happy=2SG.NOM<sup>19</sup>  
 ‘Are you happy?’

Egli (1990) finds no evidence of any grammatical device other than intonation for polar questions in Paiwan. We agree, and will demonstrate, in section 3.2, that Paiwan has no

(though he thinks it is outdated).

<sup>17</sup> *tu'i* for the Masiljid informant.

<sup>18</sup> *ki* and *tui* are however informal.

<sup>19</sup> Note that the AV prefix *ma-* is to be differentiated with the AV infix <*em*>. In A. H.-C. Chang (2006), *ma-* is considered as anticausative, while in the literature, it is usually treated as stative, e.g., Wang (2005).



morphosyntactically-formed polar questions. We will deal with the putative polar QPs first and then discuss the S-initial *tuki*.

## 2. Identifying genuine polar questions

We first consider the three kinds of intonation polar questions H.-C. Chang (2017) has identified. Note these are interrogatives formed purely with intonation, which are otherwise declaratives. First, rhetorical questions, paradoxically, are questions, but expect no response, as a positive response is strongly or categorically presumed by the speaker. Nonetheless, in reality, the hearer can of course still redundantly agree or object to the presumption by disagreeing. These are thus intrinsically polar questions. The same is true for questions expecting a positive response, the only difference being the intensity of the speaker's presumption on the proposition being true. Though confirmation is strongly presumed, an overt positive response is expected. Still, in reality, there is nothing preventing the hearer from disconfirming the presumed true proposition. The third kind involves intonation questions that expect either confirmation or disconfirmation with no obvious presumptions; these are thus quite straightforwardly polar questions. In short, setting aside the differences in intonation that attribute to the different degrees of presumption strength, all intonation questions in Paiwan are polar questions by phonological means, not by lexical or syntactic means.

Next, we consider H.-C. Chang's (2017) tag questions, which come at the end of a declarative sentence in the form of *ui* 'yes' or *ini* 'no' with a rising intonation, as in (8). However, such interrogative *ui* 'yes' or *ini* 'no' can stand alone, as shown in (9b), as a response to a statement. The difference between the interrogative use of *ui/ini* and the declarative use is intonation. Tag questions are thus also intonation questions and require (dis)confirmation of a proposition.

(8) ti            Legeai    timadju, ui/ini?  
NOM    PN            3SG.NOM yes/no  
'He is Legeai, yeah/no?'

(9) a.    ti            Legeai    timadju.  
          NOM    PN            3SG.NOM  
          'He is Legeai.'

b.    ui?  
      yes  
      'Yeah?'

Having justified intonation questions and tag questions as phonological polar questions, we now examine putative polar questions by lexical means, that is, particles *ayau*, *dri*, *pai*, *na*, *ui lja*, and *a*. It is important to point out immediately that, except *ayau*, a rising intonation is necessary for the putative particles to form such questions, thus making them intonation questions. More importantly, except *ayau* and *a*, all these particles can stand alone as declaratives or appear in declaratives as part of the confirmation, as shown in (10).

- (10) a. uri q<em>avai                      a    men    nutiau,            ui.lja.  
 will make.rice.cake<AV>    LIN 1PL.NOM tomorrow    UI.LJA  
 ‘We will make rice cake; it is so.’ (H.-C. Chang 2017: 57)
- b. ui,    kisamulja    aravac    ti                      Mukai    pai.  
 yes hard-working very    NOM.PS.SG    PN            PAI  
 ‘Yes, Mukai is hardworking; it is so.’ (H.-C. Chang 2017: 55)
- c.    pai!  
 PAI  
 ‘It’s so!’
- d. t<in>alem<sup>20</sup>-an                      tua            lapanay,    ’a-’aca’aca-an=anga    a            za  
 plant<PEF>-LV    OBL.CM    corn            DIST1-tall-DIST2=COM    NOM.CM    that  
 lapanay,    dri.  
 corn            DRI  
 ‘(As for) the corns that we planted, (they) have all grown tall.’ (A. H.-C. Chang 2006: 469)
- e.    i.    na? (Raising)    izua            su=sala-saladj                      a  
           NA                      have            2SG.GEN=freind<RED>    LIN  
           ki-sutja-sutjau? (Raising)  
           PRO-harvest.peanuts<RED>  
           ‘Your freinds are harvesting peanuts?’ (H.-C. Chang 2017: 53)
- ii.    na! (Raising)    ui    izua            ku=sala-saladj                      a  
           NA                      yes have            1SG.GEN=freind<RED>    LIN  
           ki-sutja-sutjau?  
           PRO-harvest.peanuts<RED>  
           ‘Yes, my friends are harvesting peanuts.’ (H.-C. Chang 2017: 53)

<sup>20</sup> t<in>aLem-an in the original text.

The four elements *dri*, *pai*, *na*, *ui lja* are therefore not polar interrogative particles, which cannot exist on their own, and must concur with a sentence. Instead, these elements are question tags with rising intonation, and as such they are also polar questions by phonological rather than morphosyntactic means.

As for the S-initial element *a*, crucially, polar questions with the optional *a* must have a rising intonation. Thus, *a* does not turn a declarative into a polar interrogative. The example in (11a) without *a* is a polar question only if the intonation is rising; likewise, (11b) with *a* must also have a rising intonation to be a polar question. The difference *a* contributes is the speaker's surprise or disbelief of the proposition put forth. The final and most decisive piece of evidence that *a* is not a polar interrogative particle is the fact that it can also appear in *wh*-questions and declaratives with question tags, as in (12a) and (12b), respectively. We thus treat *a* as an interjection of surprise, which can appear before or after a question.

- (11) a. ma-leva=sun?  
AV-happy=2SG.NOM  
'Are you happy?'
- b. a ma-leva=sun?  
A AV-happy=2SG.NOM  
'You are happy? (with emphasized tone)'
- (12) a. a aku kedri tu ita?  
A why little OBL.CM one  
'Why does there lack one?'
- b. a ma-leva=sun pai?  
A AV-happy=2SG.NOM tag  
'Are you happy?'

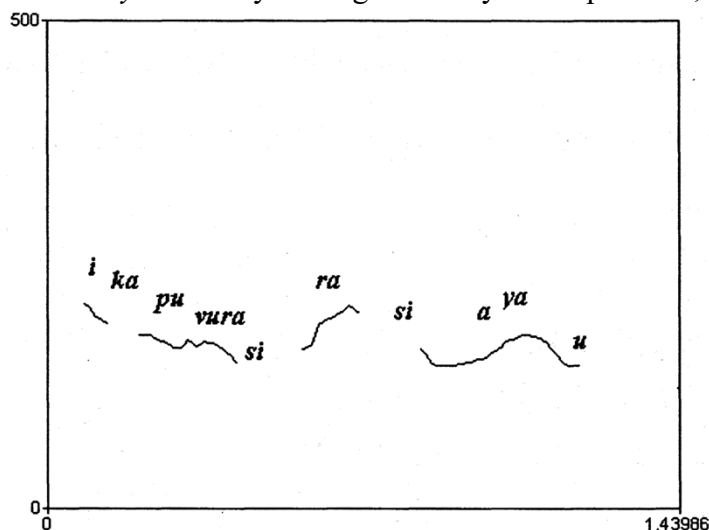
The last putative polar particle to examine is *ayau*. Note first that, unlike the other five candidates, *ayau* does not require intonation to form a question, as shown in figure 1 for the example *ika puvurasirasi ayau?* 'They don't grow many sweet potatoes, do they?' (A. H.-C. Chang 2006: 273).

In addition, *ayau* cannot stand alone; it thus does behave like a particle. The crucial issue is whether it is polar interrogative at all. Consider the meaning *ayau* contributes to the preceding proposition. A. H.-C. Chang (2006) notes that (putative) polar questions with *ayau* carry a high expectation of confirmation. Our informants also indicate that *ayau* implies a strong presupposition of the proposition put forth. *ayau* is thus reminiscent of Mandarin *ba*, an S-final

particle denoting a strong sense of presumption and expecting confirmation. Contra the conventional view, a proposition put forth ending with *ba*, as in (13), is a declarative, not a polar question. Recall that only polar questions are incompatible with the adverbial *nándào* ‘don’t tell me’; the fact that *ba* does not have a rising intonation and is also incompatible with *nándào*, as in (14), indicates that it is a declarative or exclamative, not a polar question. Since *ba* conveys the sense of presumption, pragmatically it does solicit confirmation. The same is true for the expression *I presume* in English.

**Figure 1:** *ayau* without a rising intonation (A. H.-C. Chang 2006: 273)

*ika puvurasirasi ayau?* ‘They don’t grow many sweet potatoes, do they?’



(13) *Mandarin*

nǐ kuàilè ba.  
 2SG.NOM happy BA  
 ‘You are happy, I presume.’

(14) *Mandarin*

\* nǐ nándào kuàilè ba.  
 2SG.NOM don’t.tell.me happy BA  
 ‘Don’t tell me you are happy, I presume.’

The fact that sentences with *ayau* do not have a rising intonation and carry a strong sense of presumption likewise indicates it is a declarative particle, as in (15). And like *ba*, *ayau* also expects confirmation pragmatically. One of our informants also affirms sentences with *ayau* to be declarative, not interrogative. Also, in A. H.-C. Chang (2006), *ayau* is interpreted as ‘I am wondering’, which also, along with the following statement, forms a declarative.

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(15) a. ma-leva=sun ayau.  
AV-happy=2SG.NOM DP  
'You are happy, I presume.'

b. ui, ma-leva=ken.  
yes AV-happy=1SG.NOM  
'Yeah, I am happy.'

Most importantly, *ayau* is not compatible with *palemek* 'perhaps'. The sentential adverb *perhaps* is often considered to be an epistemic marker cross-linguistically, e.g., in Hungarian (Kugler 2010), English (Suzuki 2017), and Mandarin (Tung 2016). Such epistemic adverbs weaken the veridicality of the sentence (Tung 2016), and thus are often incompatible with interrogatives, which are non-veridical by nature (Giannakidou 2013). As can be seen in (16), *palemek* is fine in a declarative but not good in conventional disjunctives and *tuki*-sentences, which are genuine disjunctive interrogatives, as we will show in the next section.

(16) a. ljemita ta qadaw palemek a pacun=sun ta  
every OBL.CM day perhaps LIN see=2SG.NOM OBL.CM  
tiribi.  
television  
'Perhaps you watch television everyday.'

b. palemek ljemita ta qadaw a pacun=sun ta  
perhaps every OBL.CM day LIN see=2SG.NOM OBL.CM  
tiribi manu ini?  
television or NEG  
'Do you perhaps watch television everyday or not?'

c. tuki ljemita ta qadaw palemek a pacun=sun ta  
TUKI every OBL.CM day perhaps LIN see=2SG.NOM OBL.CM  
tiribi?  
television  
'Do you perhaps watch television everyday?'

*palemek* 'perhaps' is, however, fine in *ayau*-sentences, just as in declaratives like (16a). See (17). We thus conclude that *ayau* is a declarative particle rather than a polar QP.

(17) ljemita ta qadaw palemek a pacun=sun ta tiribi, ayau.  
every OBL.CM day perhaps LIN see=2SG.NOM OBL.CM television DP  
'Perhaps you watch television everyday, I presume.'

### 3. Rejecting *tuki* questions as polar questions

Having refuted putative polar QPs proposed in literature, we now turn to a possible S-initial polar interrogative element we have come across in the data we have collected, that is, *tuki* and its free variants *aki*, *ki*, and *tui*. First of all, in terms of meaning, our informants unanimously agree that *tuki* turns a declarative into a question without any presumption and expects the respondent to either confirm or disconfirm the statement following *tuki*; for example, *aki malevasun?* ‘Are you happy or not?’. Yet, crucially, a *tuki* question has a falling intonation, not a rising intonation, as shown in figure 2, which is produced based on the recording of the female Timur informant. This is very different from the rising intonation in genuine prosodic polar questions identified thus far; see figure 3 for an example from A. H.-C. Chang (2006: 272).

Figure 2: S-initial *tuki* questions without a rising intonation  
*aki malevasun?* ‘Are you happy or not?’

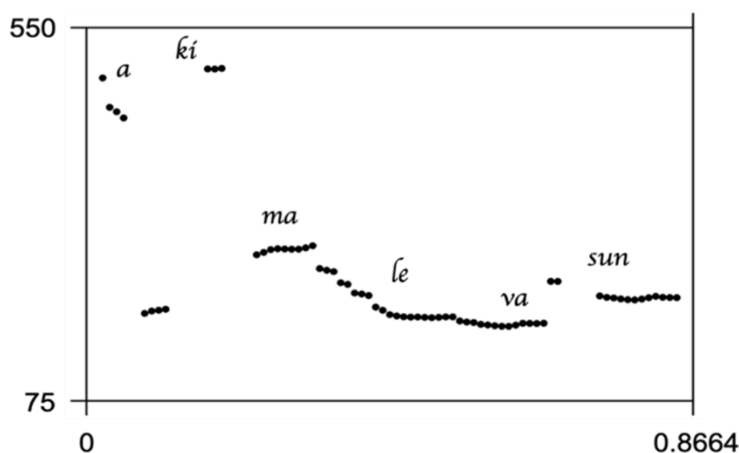
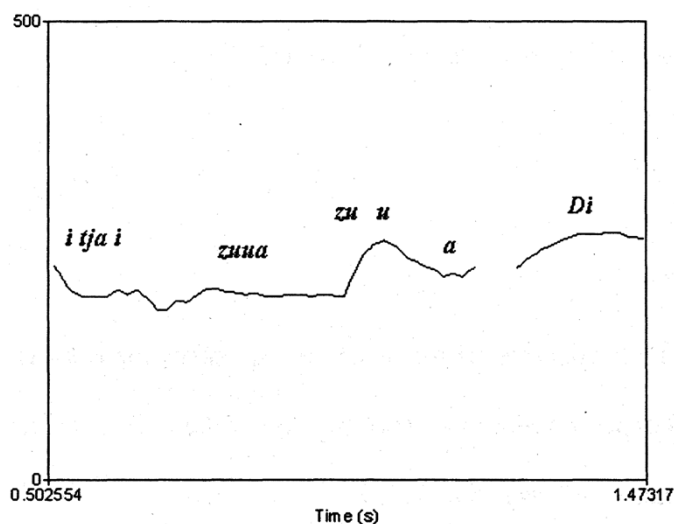


Figure 3: S-final tags with a rising intonation  
*itjai zuua zuua dri?* ‘At the place over there, right?’



The evidence available indicates two facts: *tuki* does create a question, but such a question is not a phonological polar question. These two facts point to two viable accounts: *tuki* questions are either genuine morphosyntactic polar questions or in fact disjunctive questions, which are different from polar questions semantically and syntactically but are similar pragmatically, and *tuki* is thus a disjunctive interrogative element.

We now put this analysis to test. C. T. J. Huang et al. (2009: 240) observe in Mandarin that a polar question is “restricted to be the matrix clause” and thus does not form indirect questions, while non-polar questions, namely, disjunctive and *wh*-questions, can easily serve as indirect questions. Mandarin examples are provided in (18). Likewise, Bhatt & Dayal (2020) further contend that this restriction is universal, and point out the same restriction for Hindi polar questions formed with the polar QP *kya:*, as in (19).

(18) *Mandarin*

- a.\* wǒ zhīdào tā kuàilè ma.  
 1SG.NOM know 3SG.NOM happy QP  
 Intended: ‘I know whether he is happy.’
- b. wǒ zhīdào tā kuàilè háishi bēishāng.  
 1SG.NOM know 3SG.NOM happy or sad  
 ‘I know whether he is happy or sad.’
- c. wǒ zhīdào tā wèishénme kuàilè.  
 1SG.NOM know 3SG.NOM why happy  
 ‘I know why he is happy.’

(19) *Hindi*

- \* Anu ja:n-ti: hai ki kya: tum ca:I piyoge.  
 PN know.HAB.F be.PRS.SG that QP you tea drink.FUT.2M.PL  
 Intended: ‘Anu knows whether you will drink tea.’

Turning back to Paiwan, as seen in (20a), a question with a tag cannot serve as an indirect question, nor can a prosodic polar question, as in (20b). However, an indirect question with an S-initial *tuki* is well-formed, as in (21), suggesting that the second account is more plausible.

- (20) a.\* ini=ka=ken a kemeljang tu ma-leva=sun dri.  
 NEG1=NEG2=1SG.NOM LIN know COMP AV-happy=2SG.NOM tag  
 Intended: ‘I do not know whether you are happy.’

On a two-way distinction of questions in Paiwan

b.\* ini=ka=ken                      a    kemeljang    tu            ma-leva=sun. (Raising)  
 NEG1=NEG2=1SG.NOM    LIN   know                      COMP    AV-happy=2SG.NOM  
 Intended: ‘I do not know whether you are happy.’

(21) ini=ka=ken                      a    kemeljang    tu            tuki  
 NEG1=NEG2=1SG.NOM    LIN   know                      COMP    whether.or.not  
 ma-leva=sun.  
 AV-happy=2SG.NOM  
 ‘I do not know whether or not you are happy.’

A similar restriction is seen in Isbukun Bunun, another Formosan language. Like Paiwan *tuki*, Isbukun Bunun *adu/au* also changes the intonation from raising to falling in forming an interrogative; see (22) for example.

(22) *Isbukun Bunun*

adu/au    ta<ta>ngis    a            ’isuu    a    ’uvaaz=a    mais  
 ADU/AU    AV.cry<RED>    NOM            2SG.NOM    LIN    child=DET<sup>21</sup>    during  
 hanian? (Falling)  
 day  
 ‘Is your child crying during the day or not?’ (H.-J. Huang & Shih 2018: 167)

It can also form indirect questions, while the indirect reading of questions formed with S-final regular question particle *ha* is not viable<sup>22</sup>. Compare (23a) and (23b).

(23) *Isbukun Bunun*

a.    as=ik                      haiap    tu            adu na-masipul    a    Subali    as  
       want=1SG.NOM            know    COMP            ADU FUT-read            NOM PN            ?  
       ahil=tan            kutun.  
       book=DET            tomorrow  
       ‘I want to know whether Subali will read the book or not.’ (ILRDC<sup>23</sup>)

b.    as=ik                      haiap tu            na-masipul    a    Subali    as    ahil=tan  
       want=1SG.NOM            know COMP            FUT-read                      NOM PN            ?  
       book=DET  
       kutun            ha.

<sup>21</sup> This is based on the analysis of Zeitoun (2000) and H.-J. Huang & Shih (2018).

<sup>22</sup> Grammaticality test done by a male Bunun informant from Hunhungaz, who is in his 20s.

<sup>23</sup> Indigenous Languages Research and Development Center.



tomorrow QP

Intended: 'I want to know whether Subali will read the book or not.'

These cross-linguistic evidences suggest that *tuki* questions are not polar questions and that *tuki* shall not be regarded as a polar question particle.

The properties of some adverbs may also shed light on this issue, as Law (2006) suggests that some adverbials are exclusive to certain types of questions. The *nándào/dàodǐ* distinction in Mandarin is an excellent example. C. T. J. Huang et al. (2009: 237) and Xu (2012) both note that the adverb *nándào* 'don't tell me' can only appear in polar questions, while C. T. J. Huang et al. (2009: 237) note that *dàodǐ* 'after all' can only appear in non-polar questions, namely, disjunctive and *wh*-questions, as shown in (24). Taiwan Southern Min also has such a pair of adverbials, that is, *kámkóng* 'don't tell me' and *tàuté* 'after all', as in (25) from Hsiao & Her (2019).

(24) *Mandarin*

- a. nǐ nándào/\*dàodǐ kuàilè ma?  
 2SG.NOM don't.tell.me/after.all happy MA  
 'You are happy? Don't tell me.'
- b. nǐ \*nándào/dàodǐ kuàilè háishì bēishāng (ne)?  
 2SG.NOM don't.tell.me/after.all happy or sad (NE)  
 'Are you happy or sad, after all?'
- c. nǐ \*nándào/dàodǐ wèishénme kuàilè?  
 2SG.NOM don't.tell.me/after.all why happy  
 'Why are you happy, after all?'

(25) *Taiwan Southern Min*

- a. Lí kámkóng/\*tàuté beh tsiah' gû-bah nih?  
 2SG.NOM don't.tell.me/after.all want eat beef Q  
 'You want to eat beef? Don't tell me that you do.'
- b. I \*kámkóng/tàuté ē lâi buē/bē?  
 3SG.NOM don't-tell-me/after-all can come cannot  
 'After all, will he come or not?'
- c. Lí \*kámkóng/tàuté sī-án-tsuánn beh tsiah' gû-bah  
 2SG.NOM don't-tell-me/after-all why want eat beef  
 'After all, why do you want to eat beef?'

Yet, such a distinction by an adverb is not observed in Paiwan. This fact is suggestive in itself. If Paiwan indeed does not have syntactically or lexically formed polar questions, then naturally it does not have a lexical adverb exclusive to polar questions. All the evidence presented regarding *tuki*, including its intonation, embeddability, and lack of adverbial distinction for polar questions and disjunctive/*wh*-questions, leads to the conclusion that *tuki* questions are not polar questions but disjunctive questions.

After placing previous putative question particles as either tags, declarative particle, interjection, or disjunctive elements, we can conclude that Paiwan forms polar questions with intonation only. Lou (2013) surveys the polar questions of 138 languages, including some Formosan languages, and identifies a group of languages that use phonological prosody as the sole means to form polar questions, called intonation interrogative only (IIO) languages. A hierarchy of IIO usage is proposed, as in (26), where the highest ranking IIO languages never combine intonation strategy with other morphosyntactic strategies, e.g., polar question particles, verb inflection or inversion, and the second highest sometimes use intonation with other formal strategies.

(26) IIO in complementary distribution with other strategies > IIO (common > less common)  
> Distinctive intonation and others strategies > No distinctive intonation

Under this classification, Paiwan is one of the highest-ranking IIO languages, since it never uses prosodic variation with other morphosyntactic means to form polar questions. In fact, Paiwan does not seem to have morphosyntactic polar questions at all. The same result is autonomically borne out in L. M.-J. Huang et al. (1999), where, after surveying 7 Formosan languages, it is suggested that Formosan languages may form polar questions via two means, i.e., phonological, and lexical/morphological devices, and that Paiwan and Tsou are amongst those who only use prosodically-formed polar questions. The same conclusion is made by Egli (1990), as mentioned earlier. These typological findings further support the view that none of the previously discussed items are genuine polar question particles.

#### 4. Section summary

Various putative polar particles have been proposed in the literature and several additional candidates are found in the data we have collected. However, upon careful examination, none is a genuine polar particle. It turns out that (*ui*) *pai*, (*ui*) *dri*, *na*, and *ui lja* are question tags with a rising intonation, that *a/a-a* is an interjection with emphasis of the speaker's tone, which is applicable to all questions, and that *ayau* is a declarative or exclamative particle that denotes a strong presupposition. Finally, questions led by S-initial disjunctive elements *tuki*, *aki*, *ki*, and *tui* are not polar questions.

## IV · Disjunctive questions in Paiwan

We now turn to disjunctive questions. In section 4.1, we offer further evidence that S-initial interrogative element *tuki* and its variants form disjunctive questions, and, importantly, we identify two forms of *tuki*: one is a disjunctive interrogative element similar to English *whether or not*, and the other, a sentential interrogative particle similar to Mandarin *dàodǐ* ‘after all’. In section 4.2, we reject the conventional putative disjunctive *manu* as a disjunctive conjunction, and argue for a covert disjunctive interrogative conjunction that conjoins the alternatives to form disjunctive questions in Paiwan. In section 4.3 we discuss the proper status of *manu* as an adverbial<sup>24</sup> and its shared properties with the adverbial *tuki*.

### 1. Disjunctive questions with S-initial disjunctive interrogative elements

Recall that a declarative sentence can be turned into a question with the addition of the S-initial element *tuki*, *aki*, *ki*, and *tui*; compare (27), and (28), repeated from (7).

(27) ma-leva=sun.

AV-happy=2SG.NOM

‘You are happy.’

(28) tuki/aki/ki/tui ma-leva=sun?

QP AV-happy=2SG.NOM

‘Are you happy or not?’

We have demonstrated in section 3 that such a question is unlike an intonation polar question, and in fact behaves like a disjunctive question. Given the fact that questions like (28) do anticipate *yes* or *no* as answers, the only remaining logical explanation is that they are disjunctive questions due to *tuki/aki/ki/tui*, which can be translated as ‘whether or not’ in English, except that *whether or not* cannot appear in a matrix clause. Paiwan *tuki* is therefore like Mandarin *shìfǒu* ‘whether or not’, which appears after the subject canonically but also S-initially in a more literary style, as in (29a) and (29b), respectively, both with the optional particle *ne*, thus unlike polar questions, which require the particle *ma*, as in (30).

(29) *Mandarin*

a. nǐ shìfǒu kuàilè (ne)?

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<sup>24</sup> As mentioned, the existence of adverbs in Formosan languages is disputed. We therefore refrain from the term *adverb*.

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2SG.NOM whether.or.not happy NE  
'Are you happy or not?'

b. shifǒu nǐ kuàilè (ne)?  
whether.or.not 2SG.NOM happy NE  
'Are you happy or not?'

(30) *Mandarin*

nǐ kuàilè ma?  
2SG.NOM happy MA  
'Are you happy?'

The Paiwan example of (28) and the Mandarin example of (29b) are thus very much alike, where the two alternatives put forth are two identical propositions with opposite polarity. Note that a polar question puts forth a single proposition and seeks agreement or confirmation. The difference is subtle but crucial, as the two types of questions behave drastically different as we have seen in Mandarin as well as in Paiwan.

However, a very interesting fact regarding *tuki* is that it can appear twice at the beginning of a question, as shown in (31), where the % sign indicates that some speakers accept it to be well-formed but others do not. We thus propose that *tuki* is a homophone of two lexical items with different meanings: a disjunctive interrogative element meaning 'whether or not' and an adverbial meaning 'after all, on earth'.

(31) (%tuki) tuki ma-leva=sun?  
after.all whether.or.not AV-happy=2SG.NOM  
'After all, are you happy or not?'

Recall that in Mandarin the adverb *dàodǐ* 'after all' is compatible with non-polar questions only, that is, disjunctive and *wh*-questions. Similarly, the adverbial *tuki* meaning 'after all' in Paiwan can also appear in *wh*-questions, as in (32) and (33). Ferrell (1982) thus also treats this *tuki* as an adverbial meaning 'after all' and A. H.-C. Chang (2006: 438) similarly glosses it as 'on earth'.

(32) (tuki) se-nema?  
after.all belong-what  
'After all, where is he from?'

- (33) (aki) uri tja=kuda-in a icu?  
on.earth will 1PL.GEN=do.what-GV NOM.CM this  
'After all, are you happy or not?'

This analysis is also reminiscent of M. C.-Y. Chang (2010)'s analysis of the previously mentioned Isbukun Bunun *adu*, where *adu* is treated as an irrealis adverbial.

## 2. Disjunctive questions with disjunctive conjunction

We now focus on disjunctive questions formed with the putative disjunctive conjunction *manu*. Recall the two Mandarin disjunctive conjunctions: the declarative *huòshì* and the interrogative *háishì*. Paiwan also has a declarative disjunctive conjunction *kata*. The question is whether *manu* is a genuine disjunctive interrogative conjunction like *háishì*. The accepted view in previous studies, such as, A. H.-C. Chang (2006: 307, 2018: 101), is that Paiwan disjunctive questions are formed with *manu* in the conventional A-or-B form, as in (34). An additional pattern *or-A-or-B* is found in A. H.-C. Chang (2000: 122), as in (35).

- (34) ma-culja=sun manu ma-zeli=sun<sup>25</sup>?  
AV-hungry=2SG.NOM or AV-tired=2SG.NOM  
'Are you hungry or are you tired?'

- (35) manu ma-culja=sun manu ma-zeli=sun?  
or AV-hungry=2SG.NOM or AV-tired=2SG.NOM  
'Are you hungry or are you tired?'

However, *manu* in fact enjoys much more freedom than previous studies have described. It can appear alone in front of the first disjunct only, as in (36), and the putative pattern is thus *or-A-B*. It can also not appear at all, as in (37), thus allowing the simple pattern of A-B. Consequently, all four logically available patterns of A-not-B disjunctive questions, shown schematically in table 5, are attested.

- (36) manu ma-culja=sun ma-zeli=sun?  
or AV-hungry=2SG.NOM av-tired=2SG.NOM  
'Are you hungry or are you tired?'

- (37) ma-culja=sun ma-zeli=sun?  
AV-hungry=2SG.NOM AV-tired=2SG.NOM  
'Are you hungry or are you tired?'

---

<sup>25</sup> *maculasun* and *mazeLisun* in the original text.

**Table 5:** Four attested patterns of A-or-B disjunctive questions

	<i>manu</i>	Conj.-1	<i>manu</i>	Conj.-2
1	<i>manu</i>	A	<i>manu</i>	B
2	-	A	<i>manu</i>	B
3	<i>manu</i>	A	-	B
4	-	A	-	B

The facts presented above strongly suggest that the freely occurring optional *manu* is a non-essential element such as an adverbial in disjunctive questions, which are formed by a silent, or covert, disjunctive interrogative conjunction instead, as shown in (38).

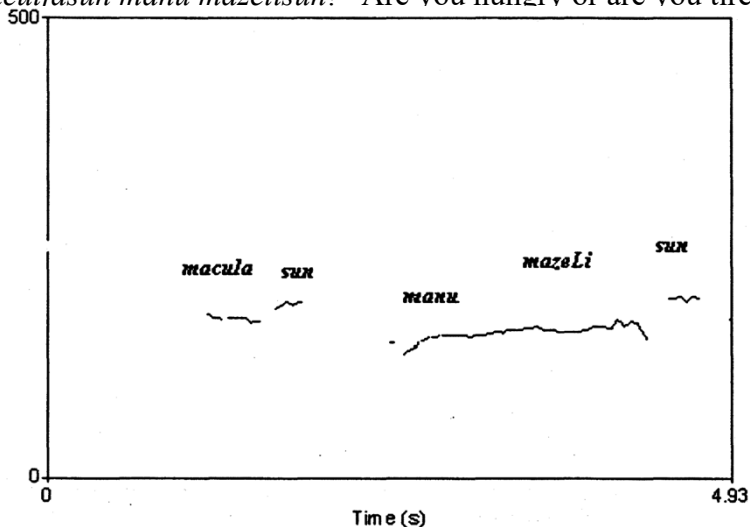
- (38) ma-culja=sun                    Ø            ma-zelji=sun?  
 AV-hungry=2SG.NOM    CONJ    AV-tired=2SG.NOM  
 ‘Are you hungry or are you tired?’

Phonological evidence from (38) supports this view, as both disjuncts in the question receive a rising intonation regardless of the presence and position of *manu*. One such example is shown in figure 4 (from A. H.-C. Chang 2006: 274). The silent *wh*-conjunction thus conjoins two phonologically formed polar questions and forms a disjunctive question.

Furthermore, we know (38) is a disjunctive question and not a polar question because it has an indirect question counterpart, as in (39). Recall that polar questions do not have indirect question counterparts.

- (39) ini=ka=ken                    a    kemeljang    tu            ma-culja=sun                    Ø  
 NEG1=NEG2=1SG.NOM    LIN    know                    COMP    AV-hungry=2SG.NOM            CONJ ma-  
 zeli=sun.  
 AV-tired=2SG.NOM  
 ‘I do not know whether you are hungry or tired.’

**Figure 4:** Intonation of disjunctive questions in paiwan  
*maculiasun manu mazelisun?* ‘Are you hungry or are you tired?’



In short, the four *A-or-B* disjunctive question patterns are merely variants of a simple form [(*manu*) A OR (*manu*) B], where *OR* in capital letters indicates that it is a silent element (cf. Her & Tsai 2015). We will discuss the proper status of *manu* in section 4.3.

Another important fact overlooked in previous studies is the *A-not-A* form of disjunctive questions in Paiwan. Given the two disjuncts, A and B, in a disjunctive question, B of course can be *not-A*. Thus, if *A-or-B* is attested, then *A-or-not-A* should be attested as well. In most Chinese languages, such as Mandarin and Sothern Min, *A-or-not-A* can be further reduced to *A-or-not*, with the second instance of A ellipsized. Given the four patterns in table 5, the second disjunct B in each pattern entails two more variants, *not-A* and *not*. Logically, twelve patterns obtain, as shown in table 6.

**Table 6:** Four attested patterns of *A-or-B* disjunctive questions

	<i>manu</i>	Conj.-1	<i>manu</i>	Conj.-2
	<i>manu</i>	A	<i>manu</i>	B
1	<i>manu</i>	A	<i>manu</i>	<i>not-A</i>
2	<i>manu</i>	A	<i>manu</i>	<i>not</i>
	-	A	<i>manu</i>	B
1	-	A	<i>manu</i>	<i>not-A</i>
2	-	A	<i>manu</i>	<i>not</i>
	<i>manu</i>	A	-	B

1	<i>manu</i>	A	-	<i>not-A</i>
2	<i>manu</i>	A	-	<i>not</i>
	-	A	-	B
1	-	A	-	<i>not-A</i>
2	-	A	-	<i>not</i>

Given the simple form of A-or-B disjunctive questions, [(*manu*) A OR (*manu*) B], the eight additional patterns of A-not-A disjunctive questions can likewise be reduced to a simple form [(*manu*) A OR (*manu*) not(-A)], as shown in (40).

- (40) (*manu*) ma-culja=sun                      (*manu*) ini=ka(=sun                      a    ma-culja)?  
 MANU    AV-hungry=2SG.NOM    MANU    NEG1=NEG2=2SG.NOM    LIN    AV-hungry  
 ‘Are you hungry or are you not hungry?’

### 3. Proper status of *manu*

Having rejected *manu* as a disjunctive interrogative conjunction, we will now discuss its proper status. The first important fact to point out is that *manu* can easily appear in a declarative sentence, as in (41), bearing the meaning ‘in the end’. Also, with a rising intonation, (41) can be a polar question, as in (42), and (42) can likewise appear with a question tag like *pai*, as in (43).

- (41) *manu*                      ma-leva=sun.  
 in.the.end                      AV-happy=2SG.NOM  
 ‘In the end, you are happy.’
- (42) *manu*                      ma-leva=sun?  
 in.the.end                      AV-happy=2SG.NOM  
 ‘In the end, are you happy?’
- (43) *manu*                      ma-leva=sun                      *pai*?  
 in.the.end                      AV-happy=2SG.NOM                      QP  
 ‘In the end, you are happy, right?’

Moreover, *manu* can appear in *wh*-questions; two examples are given in (44) and (45). Thus, as expected, besides the A-or-B disjunctive questions discussed in section 4.1, *manu* can also appear in disjunctive questions formed with the *wh*-element *tuki* ‘whether or not’, as in (46).



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(44) manu ta anema ma-leva=sun?  
in.the.end OBL.CM what AV-happy=2SG.NOM  
'In the end, for what are you happy?'

(45) manu ti-ima=sun?  
in.the.end NOM.PS.SG-who=2SG.NOM  
'In the end, who are you?'

(46) manu tuki ma-leva=sun?  
in.the.end whether.or.not AV-happy=2SG.NOM  
'In the end, are you happy or not?'

*manu* thus behaves like an adverbial, which appears freely in both declaratives and interrogatives, and is reminiscent of the adverbial *tuki*. Recall the two forms of *tuki*: one is a disjunctive interrogative element, as in (46), and the other is an adverbial meaning 'after all', which can only appear in non-polar questions. In contrast, *manu* as an adverbial with a similar meaning as the adverbial *tuki* can appear in declarative as well as interrogative sentences. This means that the adverbial *tuki* can replace *manu* in non-polar questions, A-or-B disjunctive questions included, as in (47).

(47) (tuki) ma-culja=sun (tuki) ma-zeli=sun?  
after.all AV-hungry=2SG.NOM after.all AV-tired=2SG.NOM  
'Are you hungry or are you tired?'

Interestingly, Isbukun Bunun also seems to support the analysis of an covert disjunctive interrogative conjunction and *tuki/manu* as adverbials in sections 4.2 and 4.3. Huang & Shih (2018) mention that there is no overt *or* in Isbukun Bunun, just like what we conclude from the present Paiwan data. In addition, as mentioned, Isbukun Bunun *adu* is similar to Paiwan *tuki*, and optionally appears in front of each alternative in a disjunctive question, behaving like a free adverbial instead of a genuine disjunctive interrogative element; see (48) from H.-J. Huang & Shih (2018).

(48) (adu) 'isuu tu tama saia adu 'isuu tu masnanava?<sup>26</sup>  
ADU 2SG.NOM LIN father 3SG.NOM ADU 2SG.GEN LIN teacher  
'Is he your father or your teacher?'

---

<sup>26</sup> Note that *adu* is more restricted than Paiwan *tuki* and *manu*. H.-J. Huang & Shih (2018) observe that the second *adu* is indispensable. This may be due to the fact that Isbukun Bunun does not apply raising intonation in disjunctives, which makes the presence of *adu* as the indicator of interrogative attitude necessary, while in Paiwan disjunctives, raising intonation is already indispensable, which makes the presence of *tuki/manu* less important.

This supports an adverbial analysis of *manu/tuki*, and suggests that the covert disjunctive interrogative element and interrogative adverbials may not be exclusive to Paiwan, but may be shared with other Formosan languages. Further investigation is needed to draw this conclusion.

#### 4. Section summary

To summarize, two forms of *tuki* are identified, a disjunctive interrogative element similar to Mandarin *shìfǒu* ‘whether or not’ and an adverbial similar to Mandarin *dàodǐ* ‘after all’. *manu* in an A-or-B disjunctive question is an adverbial similar to the adverbial *tuki*, and the two disjuncts are conjoined by a silent disjunctive interrogative element.

### V · Unifying disjunctive questions and *wh*-questions

We now discuss the semantic and syntactic similarities between Paiwan disjunctive questions and *wh*-questions, which are not shared by polar questions. As mentioned earlier, a polar question puts forth a single proposition for confirmation, but questions such as disjunctive and *wh*-question provide a set of two or more propositions for the interlocutor to choose from. Disjunctive and *wh*-questions can thus form indirect questions, as in (49).

- (49) a.   ini=ka=ken                      a   kemeljang       tu       ti-ima=sun.  
           NEG1=NEG2=1SG.NOM   LIN   know                COMP   NOM.PS.SG-who=2SG.NOM  
           ‘I do not know who you are.’
- b.   ini=ka=ken                      a   kemeljang       tu       ma-culja=sun  
           NEG1=NEG2=1SG.NOM   LIN   know                COMP   AV-hungry=2SG.NOM  
           manu     ma-zeli=sun.  
           or        AV-tired=2SG.NOM  
           ‘I do not know whether you are hungry or tired.’

Secondly, unlike polar questions, Paiwan disjunctive questions and *wh*-questions are all compatible with the adverbial *tuki* ‘after all’, as in (50).

- (50) a.   (%tuki)   tuki                      ma-leva=sun?  
           after.all   whether.or.not AV-happy=2SG.NOM  
           ‘After all, are you happy or not?’
- b.   tuki                      ma-culja=sun                      tuki                      ma-zeli=sun?  
           after.all   AV-hungry=2SG.NOM   after.all   AV-tired=2SG.NOM  
           ‘After all, are you hungry or are you tired?’

- c. tuki uri tja=kuda-in a icu?  
 after.all will 1PL.GEN=do.what-GV NOM.CM this  
 ‘What on earth will we do about this?’

These shared properties suggest strongly that polar questions are fundamentally different from disjunctive and *wh*-questions. That the latter two types belong to a single major category of constituent questions can be further supported by seeing both the disjunctive interrogative element *tuki* and the silent disjunctive interrogative conjunction *OR* as disjunctive *wh*-elements. Constituent questions thus all require a *wh*-element, while polar questions do not. The conventional three-way distinction can thus be reduced to a more revealing two-way distinction, as shown in table 7.

**Table 7:** Taxonomy of questions in Paiwan

Polar Questions  (with rising intonation)	Constituent Questions		
	Disjunctive Questions		<i>Wh</i> -Questions  (with conventional <i>wh</i> -elements)
	With the S-initial disjunctive interrogative element <i>tuki</i>	With the silent disjunctive interrogative conjunction	

## VI • Conclusions

In this paper, we critically examine previous accounts for the three conventional types of questions in Paiwan: polar, disjunctive, and *wh*-questions. We argue that genuine polar questions in Paiwan are formed by phonological means alone, that is, a rising intonation, and that all the alleged sentence-final polar interrogative particles are either polar question tags by intonation or interjection particles. Furthermore, the alleged sentence-initial polar interrogative particle *tuki* is in fact a disjunctive interrogative element, similar to Mandarin *shìfǒu* ‘whether or not’. On the other hand, the putative disjunctive conjunction *manu* widely recognized previously turns out to be an emphatic adverbial that can occur in all types of questions as well as declarative sentences. Thus, *A-or-B* and *A-not-A* disjunctive questions contain a silent disjunctive interrogative conjunction *OR*. Finally, we point out the shared similarities overlooked previously between disjunctive questions and *wh*-questions, which suggest that they are two subcategories of a single category of constituent questions. Consequently, the conventional three-way distinction can be reduced to a more revealing two-way distinction of polar and constituent questions.

## Abbreviations

AV = actor voice, CM = for common noun, COM = completive aspect, COMP = complimentizer, COP = copula, DET = determiner, DIST = distributive, FUT = future tense, GEN = genitive, GV = goal voice, HAB = habitual, LIN = linker, LOC = locative, LV = locative voice, M = masculine, NEG = negator, NOM = nominative, OBL = oblique, PEF = perfect tense, PL = plural, PN = person name, PRS = present, PRO = progressive, PS = for person, QP = question particle, RED = reduplication, S = sentence, SG = singular, UV = undergoer voice.

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