Interrogatives as Polarity Items in Kucapungan Rukai[1]

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In this paper we examine polarity licensing of the interrogatives in Budai Rukai (Kucapungan variety). It is shown that in certain morphosyntactic environments interrogatives are licensed as polarity items and are interpreted as indefinites. We specifically investigate two types of polarity licensing, the first with overt triggers and the second without overt triggers. By providing typological analyses along the line of Tsai (1997a, 1997b), our examination of syntactic and morphological properties concludes that Rukai exhibits characteristics of polarity licensing at the syntactic, morphological and phrasal levels.

Key words: Budai Rukai, Kucapungan variety, interrogatives, polarity items, polarity licensing, indefiniteness

1. Introduction

The issue of interrogatives being used as polarity items has been investigated for various languages in the literature. In cases where interrogatives are used as polarity items, they are argued to lack quantification force and are thereby treated as indefinite in essence (see Heim 1982, Cheng 1991, Li 1992, Cheng 1994, Tsai 1994, Lin 1996, Giannakidou 1998, and Giannakidou 2001, among others). The use of interrogatives as indefinites is discussed extensively for Tagalog in Schachter and Otanes (1972). Studies of interrogatives as indefinites in Formosan languages are made in Chang (1996) and Tsai (1997a, 1997b, 2003).[2] Chang (1996) provides a systematic analysis of Seediq interrogatives on the morphological, syntactic and semantic basis. Tsai (1997a, 1997b) and Tsai (2003) offer respectively a comparative study by patterning some Formosan languages with distinctive language types. This paper investigates how interrogatives are licensed as polarity items and used as indefinites in Rukai.

[2] See Chang (1996) for Seediq; Tsai (1997a, b) for Kavalan, Tsou and Seediq, and Tsai (2003) for Tsou and Seediq.

The voice system of Rukai is observably distinct from other Formosan languages. Its dialects have been reported to have an active versus passive voice system in the literature (Li 1973, 1977, 1997a, and 1997b, Zeitoun 1997).[3] The dialect investigated in the present paper is a dialectal variety of Budai Rukai, spoken in Kucapungan (Wutai Township, Pintung County); unless otherwise noted, we use Rukai to refer to this variety throughout the paper. Besides, we use the two terms, polarity licensing and indefinite interpretation, rather loosely in this paper by assuming that while polarity licensing induces a semantic change, the consequence is of indefiniteness.

According to Tsai (1997a, 1997b), languages are grouped into three types based on how their interrogatives can be used as indefinites.   These three types include the Chinese-type, the English-type and the Japanese-type.   In the Chinese-type, licensing occurs in accordance with the existence of a sentential operator such as in conditionals, modality sentences or donkey sentences (see also Lin 1996, Lin 1998).   In the English-type, the way for an interrogative to be interpreted as an indefinite is to employ morphological affixation.   Affixation can result in universal, existential or polarity interpretations.   In the Japanese-type, polarity licensing occurs at the phrasal level and operates across word boundaries.   The three Formosan languages examined in Tsai's (1997a, 1997b), Kavalan, Seediq and Tsou, exhibit properties of the forementioned language types in a distinctive way, as summarized in the following:

(1)   English-type: Kavalan (e.g. reduplication: *tiana* 'who' > *tiana-tiana*)
      Japanese-type: Kavalan (e.g. conditional *kia* 'probably') and Seediq
                     (e.g. *ani* 'any')
      Chinese-type: Seediq and Tsou (e.g. donkey sentences)

This paper presents data and shows that Rukai exhibits all three types of polarity licensing at the syntactic, morphological and phrasal levels.

The organization of this paper is as follows: Section 2 discusses various syntactic environments in which interrogatives are interpreted as indefinites; section 3 addresses the issue of polarity licensing of the interrogatives in certain morphological and phrasal circumstances; section 4 provides a typological comparison and concludes this paper.

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[3] Chen (2005) provides a different view toward this analysis.   It is argued that Rukai has another kind of voice formation that cannot be accounted for as either active or passive voice; yet, this voice formation shows some properties of non-agent(actor) voice in other Formosan languages.

2. Syntactic-level indefiniteness

In the literature of polarity licensing, polarity items are defined as expressions that are restricted, limited or sensitive to the presence of certain grammatical elements that carry some semantic property (e.g. Ladusaw 1979, Szabolcsi 2002). In this section, we show that the interrogatives are licensed as polarity items and are interpreted as indefinites in four syntactic constructions (section 2.1); they are conditional constructions, negation, modality constructions and donkey sentences.[4] The former three involve syntactic environments in which overt triggers license interrogatives as polarity items. Interrogatives in donkey sentences, on the other hand, can be interpreted as indefinites without being licensed by an overt trigger (section 2.2). Additionally, we discuss one interrogative that does not seem to require a syntactic device to be licensed, which we attribute to its idiosyncratic use (section 2.3). Before we start the discussion, we shall look at the basic structures.

Rukai interrogatives can be grouped into nominal, adverbial and verbal categories based on their grammatical nature (ref. Huang et al. 1999). Consider the examples in (2). Nominal interrogatives bear grammatical properties of nouns, such as being used as arguments and case-marked (2a); adverbial interrogatives basically have a freer distribution in a sentence, according to the way they modify (2b); verbal interrogatives generally occur as predicates and are used as verbs, in that they can attract bound pronouns, and inflect for voice and/or tense/aspect/mood (2c).

(2) a. w-a-sena-senay   ka   Kineple ku   **manemane**?
         ACT-NF-RED-sing NOM   ACC   what[5]
         'What is Kineple singing?'
     b. [**kuygane**] w-a-kela   [**kuygane**] ka   lasu   [**kuygane**]?
                       ACT-NF-come   when(NF)   NOM   guy
         'When did the guy come?'
     c. w-a-**tumane**-su?
         ACT-NF-do what-2S. N
         'What did you do?'

2.1 Syntactic environments with overt triggers

Polarity licensing environments in Rukai include several kinds of syntactic constructions.   These constructions provide different devices from the interrogatives to be interpreted as indefinites, and in this section we examine three such kinds.

In conditional constructions, antecedent clauses and consequence clauses are connected by expressions such as *ana* 'if', *alaiyasi* 'if', *luiyasi* 'if', and *aDavane* 'no matter'.[6]   They generally occur in the clause-initial position and precede the verb. Consider the following examples.

(3) a. alaiyasi ngi-a-buale   ku   **manemane**, maza-ukuluDu.

　　　　if　　　REF-NF-appear NOM   what　　　　NEG-be afraid

　　　　'If something appears, do not be afraid.'[7]

　　b. alaiyasi ikay ku   **manemane** ku   ngi-a-buale,   maza-ukuluDu.[8]

　　　　if　　　exist NOM what　　　REL REF-NF-appear NEG-be afraid

　　　　'If there is something appearing, do not be afraid.'

In example (3a) and (3b), the conditional expression *alaiyasi* functions as a polarity licenser that licenses the interrogative *manemane* 'what' to be interpreted as an indefinite.   The sentences are not interpreted as information questions, and *manemane* has an existential meaning similar to 'something'.

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[6] Although they are glossed similarly, these conditional expressions make subtle differences which are believed to involve tense/aspect/mood and the speaker's belief.

[7] *Manemane* has an existential interpretation, instead of universal (cf. Chen 1999:79-80).

[8]   Three case relations, nominative, accusative and oblique, are distinguished in the Kucapungan variety of Budai Rukai.   This is exemplified by a double-object sentence.   While the subject is marked with nominative (*ka*), the direct object is marked with accusative (*ku*) and the indirect object with oblique (*ki*).   Contrast (i) and (ii).   The ungrammaticality of (ii) is due to a grammatical reason that case relation needs to be maintained.

　　(i) w-a-bayi   **ku**   Laimay   **ki**   Cegaw   ka   Kineple.
　　　　ACT-NF-give   ACC   clothes   OBL   NOM
　　　　'Kineple gave clothes to Cegau. '
　　(ii) *w-a-bayi   **ki**   Laimay   **ki**   Cegaw   ka   Kineple.
However, the grammatical relation is oftentimes overridden by semantic factors such as definiteness and specificity.   For example, both direct and indirect object can be specific, as being marked by *ku* [+SPEC].
　　(iii) w-a-bayi   **ku**   Laimay   **ku**   Cegaw   ka   Kineple.
　　Subtle differences have been observed in the case system of Budai Rukai and that of Kucapungan Rukai.   They involve definiteness/specificity and the way of marking person and (in)animate objects. Also see Saillard (1995), Li (1997a, 1997b), Huang et al. (1998) and Zeitoun (2000) for different analyses of Rukai nominal case system.
　　Besides identifying case relation, these markers are used as relativizers or complementizers.   For example, when used as a relativizer, a marker introduces a relative clause that serves as a modifier to its head noun (cf. Kuo 1979).   When used as a complementizer, it introduces a complement, subordinate or embedded clause.   Glosses are thus made accordingly.

Negative constructions provide a polarity-licensing environment in Rukai. Negative expressions occur in the clause-initial position and precede the verbs. Interrogatives being licensed in this kind of construction generally have an existential reading.   Contrast (4) and (5).

(4) kay   ngi-a-buale   ku   **manemane**   ikay   ki   angatungatuane.
     NEG   REF-NF-appear   NOM what   exist OBL forest
     'Nothing appears in the forest.'

(5) ngi-a-buale   ku   **manemane**   ikay   ki   angatungatuane?
     REF-NF-appear   NOM what   exist ki   forest
     'What appears in the forest?'

While *manemane* is licensed as an indefinite in (4), it is not in a sentence where there is no licensor (5).   The whole construction must then be interpreted as an information question.

    In Rukai, modality is expressed by elements such as *taliya* 'probably'.   Like conditional and negative expressions, modality elements occur in the clause-initial position and precede verbs, and they serve as proper polarity licensers.   Consider (6).

(6) taliya   ngi-a-buale   ku   **manemane** ikay   ki   angtungtuane.
     probably   REF-NF-appear   NOM what   exist OBL forest
     'Probably something appears in the forest.'

    While the examples are all about *manemane*, it is not the only instance among the interrogatives.   The personal interrogative *aneane* 'who' can be interpreted as an indefinite as well.   As shown in (7a-b), *aneane* is licensed as a polarity item by *alaiyasi* and interpreted as an indefinite.   However, if without the licensing of a trigger such as *alaiyasi*, then the interrogative *aneane* cannot be licensed and be interpreted (8).

(7) a. alaiyasi Li-kela   ku   **aneane**, tara-pelaela nakuane.
         if   FUT-come   NOM who   must-tell   1S.OBL
         'If someone comes, you must tell me.'

     b. alaiyasi ikai   ku   **aneane** ku   Li-kela,   tara-pelaela   nakuane.
         if   exist NOM who   REL FUT-come   must-tell   1S.OBL
         'If there is someone coming, you must tell me.'

(8) * Li-kela   ku   **aneane**, tara-pelaela   nakuane.
       FUT-come NOM who   must-tell   1S.OBL

Similar to the nominal interrogatives, the locative interrogative *inu* 'where' can be licensed as a polarity item. Example (9a) shows that *inu* is licensed with the co-occurrence of *alaiyasi*. By contrast, (9b) shows that *inu* exhibits distinctive syntactic behavior in that it does not occur in an argument position.[9]

(9) a. alaiyasi ikay **inu**   ku   ta-katharir-ane[10],   tara-pelaela nakuane.
        if   exist where REL   MOOD-beautiful-ANE must-tell   1S.OBL
        'If there is somewhere beautiful, you must tell me.'
    b. *alaiyasi ma-thariri   ku   **inu**,   tara-pelaela nakuane.
        if   ACT-beautiful NOM   where must-tell   1S.OBL
        'If somewhere is beautiful, you must tell me.'

The temporal interrogative *luigane* 'when (future)' has a rather flexible syntactic distribution and occurs in adjunct positions in a sentence.[11] It can be licensed as a polarity item if given suitable triggers, such as *aDavane*, as exemplified by (10a). Without a licenser, *luigane* must be otherwise interpreted as an interrogative, as shown in (10b).

(10) a. aDavane lu   kela   **luigane**, ma-dalam-aku.[12]
        no matter COMP come   when   ACT-like-1S.N
        'No matter when he comes, I am fine with it.'
    b. lu   kela **luigane**, ma-dalam-su?
        COMP   come when   ACT-like-2S.N
        'When is the time that you like that he comes?'

The foregoing discussion has shown that in Rukai there are at least three syntactic environments in which interrogatives are interpreted as polarity items, and

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[9]   This is believed to be related to the argument structure of verbs. While *inu* does not seem to occur with verbs that denote states, it co-occurs with verbs that denote actions, such as *ravase* 'seize'. Consider the following example with the verb in its passive form.
    (i) kia-ravase-nga   ku   **inu**   ku   cekele?
        PASS-conquer-PERF   NOM where   REL   village
        'What place in the village has been conquered?'
    See Zeitoun (2000) for a description of verb types in Mantauran Rukai.
[10]   *Ta-* is tentatively analyzed as an aspect/mood prefix that indicates the viewpoint of the speaker; *-ane* is a grammaticalized voice marker, which is usually used to derive nominals from verbs (Chen 2005).
[11] The non-future counterpart of *luigane* is *kuigane* 'when (non-future)'.
[12] As one reviewer has pointed out, *lu* may have a meaning of *when* or *if* and is used in temporal or conditional clauses. However, in our examples, *lu* is not used in such way to mean *when* or *if*; given that there is an interrogative *luigane* 'when' in the sentence, *lu* is only used as a grammatical complementizer that introduces an infinitival clause.

they are conditional, negative and modality constructions. Interrogatives in these constructions generally have an existential interpretation, especially for the nominal interrogatives *manemane* 'who' and *aneane* 'who'. However, it is worthy to note that in many of the instances there does not exit a c-commanding relation, as pointed out by one of the reviewers. It is not straightforward why an interrogative should be licensed if it is not c-commanded by its licenser. For example, *manemane* in (3) is outside of the scope of negation (marked by *maza-*) and on the surface is not licensed by it. While we do not have a convincing explanation, it seems that the absence of c-commanding relation may be accounted for by a free-choice analysis (Giannakidou 2001),[13] in which case polarity licensing must be then treated with underlying scoping of the licenser. We leave this issue for further research.

2. 2 Syntactic environments with non-overt triggers

Polarity licensing with non-overt triggers is special among the languages in the world. One particular case of this kind of licensing can be found in donkey sentences, such as the English examples 'If a man owns a donkey, he beats it' and 'Every man who owns a donkey beats it'. According to Heim (1982), sentences like these contain an indefinite noun phrase inside some specific environments like a conditional clause or a relative clause. For Mandarin Chinese, Tsai (1997a) argues that one type of donkey sentences is of universality. In sentences of this type, each of the antecedent and the consequence clause has one indefinite interrogative. For example, in *Ni zhu* **shenme**, *wo chi* **shenme** 'I will eat whatever you cook', both *shenme* 'what' are bound by a universal quantifier, as shown in (9) (Tsai 1997a).

(9)　$\forall x$ [x is a thing & you cook x] (I eat x)

Tsai (1997a) provides a comparative study in which donkey sentences occur in some Formosan languages. Having this specific sentence type, these languages share linguistic features with Mandarin Chinese and are grouped as Chinese-type languages. To be discussed in the following, Rukai is another Formosan language that has donkey sentences, and they provide a polarity-licensing environment.

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[13] A free choice item is characterized by its being interpreted as a universal quantifier. An example is like *any* in,

　　(i)　Anybody can solve this problem. (Giannakidou 2001: (1b))

Giannakidou (2001) argues that free choice items are not necessarily universal quantifiers. If this analysis is applicable to the non-c-commanded interrogative with an indefinite interpretation in Rukai, then it may be the case that interrogatives can be polarity items as well as free choice items, only that the syntactic distributions must be treated firstly and separately. We thank Dylan Tsai for bringing this paper to our attention.

In a Rukai donkey sentence, an occurring interrogative is found basically in both of the antecedent and the consequence clause.   Consider the following example (11).

(11) lu   kane ki   **manemane**, puauta ki   **manemane**.
    COMP eat   ACC what   vomit   ACC   what
    'Whatever he eats, he vomits it.'

In (11), the interrogative *manemane* is the object of *kane* 'eat' in the antecedent clause and the object of *puauta* 'vomit' in the consequence clause.   With the parallel appearances in both clauses, the interrogative is licensed.   Instances as such are observed on the locative interrogative *inu*.   Consider (12).

(12) lu   ravase-su   **inu**,   Li-ravase-aku   **inu**.
    COMP conquer-2S.N where   FUT-conquer-1S.N where
    'Wherever you conquer, I will conquer it.'

Tsou patterns with Rukai as to how a donkey sentence can be constructed by an interrogative.   Consider (13).

(13) **sia** na   te   mueu, **sia** na   te   oueu.   (Tsai 1997b, 404:59)
    who NOM FUT come   who NOM FUT   eat
    'Whoever comes first, s/he eats first.'[14]

Occurrence in donkey sentences does not seem to be limited to nominal interrogatives in Rukai.   As previously stated, *ngitumatumane* and *ngituatumane*, both having a meaning similar to English 'what kind', behave like verbs.[15] They are located in the verb position of a sentence and attract bound pronominal clitics. When they occur in polarity environments, both of them are sensitive to the presence of a possible trigger.   This is also true when they occur in donkey sentences. Consider example (14).

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[14] Glosses and translation are originally in Chinese and are modified slightly when translated into English, with some details omitted.

[15] The two interrogatives *ngitumatumane* and *ngituatumane* are morphologically related and are created by a combination of the reflexive prefix *ngi-*, the verbalizer *-tu-* and the nominal stem *-mane*.   Having the shared form of *ngi-tu-mane, each has undergone a slightly different way of reduplication (CVCV vs. CVV).   One grammatical property that distinguishes them is that *ngitumatumane* is used as a verbal element whereas *ngituatumane* can function as a modifier of nouns.   *Ngituatumane* seems to be a fixed form that is only used to express figures, personality or mental/physical characteristics.   In the examples only partial and relevant glosses are made for these two interrogatives.

(14) **ngituma-tumane**-su, si   **ngituma-tumane**-aku.

　　what kind-RED-2S.N   CONJ   what kind-RED-1S.N

　　'I am the same kind of person as you are.'

　　(lit. What kind of person you are, and I am the same kind of person (as you

　　are).)

Another example in (15) shows that *ngituatumane* only appears in the antecedent clause and does not appear in the consequence clause, possibly for a reason of redundancy.

(15) lu　　kane-su　**ngituatumane**　ku　　kange, i-kane-aku.

　　COMP eat-2S.N　what kind　　　ACC　fish　　FUT-eat-1S.N

　　'Whatever kind of fish you eat, I will eat the same kind.'

　　　Donkey sentences in Rukai provide a syntactic environment in which interrogatives are licensed as polarity items by its specific structure. Supposing that the interrogatives in the antecedent and the consequence clause are licensed by a universal quantifier, Rukai donkey sentences provide similar licensing as in Mandarin Chinese. Additionally, our study shows that polarity licensing in donkey sentences co-operates with nominal incorporation of interrogatives in Rukai, which we discuss in the following.

　　　In a general case of nominal incorporation, an internal argument is incorporated into the verb, which in turn forms a verbal complex. A significant consequence of this process is that the resulting constituent attracts pronominal clitics. In Rukai, a bound pronominal clitic is attached to the primary predicate of a sentence. And, when the clitic is attracted by a verbal complex of incorporation, it occurs as the rightmost element. Contrast (16a) and (16b).[16]

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[16] One reviewer points out that in an instance of incorporation, two elements are separate in one construction but merge with each other in another, in which they form a lexical complex. Hence, the examples in which *inu* attaches to the verbs may be simply a realization of affixation, because of the lack of two alternating counterparts. However, a few points are worthy of noted. First, *inu* 'where' is not a function word and it does not always attach to any host; for example, verb types (motion verbs, possession verbs, etc.) and the phonological structure they have seem to matter. Second, that the locative interrogative *inu* attaches to a verb patterns alike with locative cliticization in French (Baker 1988). Consider the examples in (i) (from Baker 1988:467).

　　(i)　a.　　Jean a dormi **dans ce lit**.

　　　　　　'Jean slept **in this bed**.'

　　　　b.　　Jean **y** a dormi.

　　　　　　'Jean slept **here**.'

　Nevertheless, this issue deserves a detailed investigation for sure.

(16) a. Li-kay-su   **inu**   apece?
       FUT-exist-2S.N   where sleep
       'Where will you sleep?'

    b. Mu-a-**inu**-su?
       go-NF-where-2S.N
       'Where did you go?'

The application of nominal incorporation depends on the kind of verbs. While it is not well-known how many verbs allow nominal incorporation in Rukai, it is the case that these verbs have shorter syllables, generally one (e.g. *mu* 'go' > *mu*-inu 'where to go'; *pi*- 'causative of location'[17] > *pi*-inu 'where; at what place') or two (e.g. *papi* 'head for' > *papi*-inu 'where to head for'). It could be this phonological factor that triggers nominal incorporation. Other verbs do not undergo incorporation and such verbs are like *ravase* 'conquer' and *muarikay* 'want', as shown in (17).

(17) a. *w-a-ravase-**inu**-su?
       ACT-NF-conquer-where-2S.N
       'Where do you conquer?'

   b. * mu-a-rikay-**piya**-su?
       want-NF-want-how many-2S.N
       'How many do you want?'

Having seen how incorporation operates morphologically, consider (18) for how incorporation comes into play with syntactic polarity licensing in donkey sentences. In the morphology of the verbal complexes we find that the locative interrogative *inu* is incorporated into the verb, followed by the personal pronouns -*su* and -*aku*. This verbal complex occurs in both of the antecedent and the consequence clauses, only with different person marking.

(18)   lu   mu-**inu**-su,   i-mu-**inu**-aku.
       COMP   go-where-2S.N FUT-go-where-1S.N
       'Wherever you go, I will go.'

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[17] Here we follow Blust (2003) to treat *pi*- as a causative morpheme that indicates 'causative of location'.

Another instance can be found with the quantity interrogative *piya* 'how many', which expresses number and quantity in Rukai.[18] As shown in (19), *piya* is incorporated by *ngu-* 'take' and is followed by personal pronouns.

(19)　　lu　　ngu-**piya**-su　　　ku　　paysu,　Li-ngu-**piya**-ku.
　　　　COMP　take-how-many-2S.N　ACC　money　FUT-take-how many-1S.N
　　　　'How much money you take, I will take the same amount.' (lit.　How much
　　　　money you take, how much I take.)

2.3 Indefinite interpretation without polarity licensing

Although Rukai interrogatives generally require a certain form of licenser in their polarity-licensing environments, one of the interrogatives seems to behave distinctively from the others. *Manemane* 'what' as the one can be used as an indefinite in affirmative sentences, an environment where there is no morphological or syntactic licenser. Consider example (20), in which *manemane* is the object of the verb *kane* 'eat'. This sentence is not used as an information question, and the interrogative is interpreted as an indefinite, having a meaning similar to a universal quantifier, like *every(thing)* in English.

(20)　w-a-kane-nga　　ki　**manemane**　ka　　lasu.
　　　ACT-NF-eat-PERF　ACC　what　　　　NOM　guy
　　　'The guy has eaten all things.'

As we might wonder whether other interrogatives, such as the personal interrogative *anenae*, would work this way, the result is unfortunately not as expected. As shown in example (21), *aneane* cannot be interpreted as an indefinite in affirmative sentences.

(21)　w-a-kane-nga　　　ki　**aneane**　ka　　cumai?
　　　ACT-NF-eat-PERF　ACC　who　　NOM　bear
　　　'Who did the wild boar eat?'
　　　≠ 'The wild boar ate everyone.'

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[18] For example:
　　(i)　kay-naku　　w-a-thingale　　lu　　ka　　ta-**piya**　　　　ku　　w-a-kela.
　　　　NEG-1S. N　　ACT-NF-know　COMP　REL　PL-how many　NOM　ACT-NF-come
　　　　'I did not know how many (people) came.'
　In (i), *piya* is attached by the [+animate, +plural] prefix *ta-*.

As shown above, between *manemane* and *aneane* only the former can be interpreted as an indefinite in an affirmative sentence.   Also consider (22), in which *manemane* has a generic reading 'things in general'.

(22) ma-kaLa-kaLa   **manemane**-su.
    ACT-abundant-RED what-2S.G
    'You have many things.' (lit.   Your thing is abundant.)

When occurring in affirmative sentences, interrogatives other than *manemane* call for a licenser, such as a universal quantifier like *sana* 'all'.   Consider example (23).   *Sana* licenses *aneane* as a polarity item and contributes universal quantification to it.

(23) sana   ka **aneane**,   w-a-kane   ki   kange.
    all   REL who   ACT-NF-eat ACC fish
    'All people eat fish.'

Contrast (24a) and (24b).   In (24a), *ngituatumane* is licensed by the universal expression *demedeme* 'all'.   Without such a kind of universal expression, the sentence is otherwise uninterpretable, as shown in (24b).

(24) a. lu   puaLe-su   ku   **ngituatumane** ku   kange, ma-thariri *demedeme*
        COMP catch-2S.N ACC   what kind   ACC fish   ACT-good all
        '(No matter) what kind of fish you catch, all are good.'
    b. *lu puaLa-su ku **ngituatumane** ku kange, ma-thariri.

As such, since there is no licenser, either overt (a licensing element) or covert (a syntactic licensing environment), that co-occurs with *manemane* to commit polarity licensing, the indefinite interpretation of *manemane* should not involve polarity at all. What contributes to this indefinite interpretation of *manemane* in affirmative constructions may be a consequence of its lexical idiosyncratic property.[19]

Interestingly, *manemane* is not found to occur independently in an affirmative sentence.   That is, *manemane* usually occurs as a grammatical object (20), and by assuming that an object usually carries old information, *manemane* shall be used only when some entities have been mentioned previously in the discourse.   *Manemane*

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[19] As suggested by one reviewer, this indefinite use of *manemane* is very likely a result from a lexicalized operation that detaches the interrogative property from *manemane*.   Additionally, this reviewer also observes a similar case in Tsou.

can occur as a grammatical subject, but usually marked with a genitive case pronoun, with there being set up a possessive relation (22).   We may infer from such cases that *manemane* is actually used as a discourse-linked interrogative in Rukai; that is, *manemane* must be used as an indefinite after some entities have been established in the context, and as such, it is related to these pre-established entities in the discourse (Pesetsky 1987).[20]   We expect discourse-linking on the indefinite interpretation of *manemane* to be necessary to maintain semantic felicitousness.   A detailed discussion of this issue is beyond the scope of this paper and will be left for further research.

2.4 Summary

In this section, we have examined various constructions in which interrogatives are licensed as polarity items.   They are conditional constructions, negative constructions, modality constructions, and donkey sentences.   Polarity licensing as such suggests that Rukai patterns with Chinese at the syntactic level.   We then have examined affirmative constructions where only *manemane* can occur as an indefinite, which we attribute to its lexical property.   As discussed, its interpretation ranges over existentiality, free choice or a discourse-linked use; significance of such behavior suggests that instances of *manemane* cannot be treated uniformly, and *manemane* deserves a more detailed study.

In the following section, we shall turn to scrutinize the polarity licensing issue at the two other levels, morphological and phrasal levels.

3.   Polarity licensing at the morphological and phrasal level

In section 2.1, we have shown that interrogatives in Rukai can be used as indefinites in various syntactic constructions.   The existence of an overt trigger in licensing an indefinite reading patterns Rukai with Chinese-type.   In the following, we show that Rukai exhibits licensing at two other levels.   Firstly we examine two kinds of morphology, affixation and reduplication, to show that Rukai exhibits properties of English-type licensing.   Then we discuss licensing of two universal quantifiers *ani* 'every' and *sana* 'every', which occurs at the phrasal level, a property of Japanese-type licensing.

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[20] Such use of *manemane* differs from that of a free choice item.   Also see footnote 12.

3.1 Affixation

In Tsai (1994), it is argued that there are two set of interrogative indefinites in English, the free relative *wh*'s and the *wh*-adverbials, as listed in (25a-b).

(25) (from Tsai 1994)
    a. <u>free relative *wh*'s</u>   b. <u>*wh*-adverbials</u>
        wh-o-*ever*   wh-en-*ever*   *some*-wh-at
        wh-om-*ever*   wh-er(e)-*ever*   *some*-wh-ere
        wh-at-*ever*

Tsai (1994) claims that the suffix *-ever* in (25a) contributes universal force to the indefinites. As for the *wh*-adverbials in (25b), the existential operator *some* has a binding relation with the indefinite morphemes, *-at* and *-ere*. Assuming this morphological binding relation, Rukai exhibits a similar morphological distribution. In Rukai, the suffix *-nga* behaves like English *-ever/some-* in that it can be attached to a morphological host.[21] Consider (26). (26a) is an interrogative construction where the interrogative *manemane* is located at the subject position. In (26b), the attachment of the suffix *-nga* gives a universal quantification reading to *manemane*.

(26) a. ngi-a-buale   ku   **manemane**   ikay   ki   angatungatuane?
       -NF-appear   NOM   what   exist   OBL   forest
       'What appears in the forest?'
     b. ngi-a-buale   ku   **manemane**-*nga*   ikay   ki   angatungatuane.
       -NF-appear   NOM   what-NGA   exist   OBL   forest
        'Anything (animals) appears in the forest.'

Attachment of *-nga* to an interrogative results in a licensing condition by which the interrogative is interpreted as an indefinite. This applies to the personal interrogative *aneane* as well. In (27a), *aneane* has no attachment and the sentence is an

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[21] This *-nga* is homonymous with the perfective suffix *-nga*, and they should be distinguished. It is not clear as to what grammatical properties the non-perfective *-nga* has, but it is known that *-nga* seems to attach to noun phrases only and does not always trigger polarity licensing. In such case, *-nga* is used as an enforcement of the manner of speaking, possibly a conversational focus marker. Consider the following examples.
     (i) sana   ka   umaumas-nga,   tara-saDusa   ku   tayi.
        every   REL   people-NGA   MOD-two   NOM   taro
        'Every PERSON has two taros. '
     (ii) manemane-nga   ku   pakatula   ki   lasu?
        what-NGA   NOM   bite   ACC   guy
        'WHAT bite the guy?'

information question.   In (27b), the attachment of *-nga* changes *aneane* into an indefinite with universal quantification.

(27) a. w-a-kane   ki   kange   ku   **aneane**?
         ACT-NF-eat   ACC   fish   NOM   who
         'Who eats fish?'
    b. w-a-kane   ki   kange   ku   **aneane**-nga.
         ACT-NF-eat   ACC   fish   NOM   who-NGA
         'Everyone eats fish.'

3.2 Reduplication

Reduplication is a productive morphological process in Rukai and has various grammatical properties, one of which is to license interrogatives as polarity items.

In example (28), the root of the interrogative *aneane* 'who' undergoes disyllabic reduplication, in which the first two syllables **ane* are reduplicated **aneane > aneaneane*.   Along with the suffix *-nga*, which seems obligatory with reduplication, the resulting indefinite has a universal reading.[22]

(28) w-a-thingal-aku   ki   **ane-aneane**-*nga*.
     ACT-NF-know-1S.N   ACC   who-RED-NGA
     'I know everyone.'

Compare (29a) and (29b).   Given as the non-reduplicated counterexample, (29a) is a case of syntactic licensing with which the locative interrogative *inu* is licensed by the conditional expression *aDavane*.   By contrast, *inu* undergoes reduplication in (29b). This process results in a universal reading of the interrogative.

(29) a. aDavane   lu   mu-**inu**-su,   Li-tara-tupa-paL-aku   musuane.
         no matter   COMP   go-where-2S.N   FUT-must-follow-RED-1S.N   2S.OBL
         'No matter where you go, I will follow you.'
    b. aDavane   lu   mu-**ini-inu**-su,   Li-tara-tupa-paL-aku
         no matter   COMP   go-where-RED-2S.N   FUT-must-follow-RED-1S.N
         musuane.
         2S.OBL
         'No matter (every)where you go, I will follow you.'

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[22] It is not clear why the attachment of the suffix *-nga* is required in this case.   For the limit of understanding we leave this issue for further study.   Also see footnote 21.

Compared to Rukai, Kavalan exhibits a similar property of polarity licensing by reduplication (Tsai 1997b, 389:23b).

(30) tiana-tiana / tia-tiana   ŋil-an-ku.
      RED-who / RED-who   want-PF-I.GEN
      'I like anyone.'[23]

The discussions of affixation and reduplication provide a picture that morphology is significant in polarity licensing of interrogatives in Rukai. Word-internal licensing such as affixation and reduplication operates morphologically. Therefore, Rukai and English are typologically similar in this respect.

3.3 Phrasal polarity licensing

Polarity licensing can operate at the phrasal level, and its manifestation can be observed in modification of universal or existential quantification across a phrase boundary. As mentioned in Tsai (1997b), Japanese uses the affix -*ka* to mark existential quantification, and -*mo* to mark negative polarity, both of which not only modify nouns but also modify noun phrases. Consider example (31) and (32) (Kuroda 1965, Nishigauchi 1990; via Tsai 1997b). In these two examples, -*ka* and -*mo* scope over the entire noun phrase *dono gakusei* respectively.

(31)   [**dono** gakusei]-*ka*-ga   rakudai-si-ta.   (Tsai 1997b, ex. 3a)
        which   student-KA-NOM   fail-PAST
        'There is a student who failed.'
(32)   [**dono** gakusei]-ni-*mo*   A-o   age-nakat-ta.   (Tsai 1997b, ex.3b)
        which   studemt-DAT-MO   A-ACC   give-NEG-PAST
        'I didn't give anyone A.'

In Rukai, two quantifiers, *sana* 'every' and *ani*' any', can license interrogatives as polarity items.[24]   The element they modify can be small as a single word or large as a clause. The syntactic property is that when, for example a noun phrase, is modified by *sana* or *ani*, this phrase is usually a topic that is located in the

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[23] English glosses and translation are originally in Chinese.
[24] The semantics of *sana* and *ani* is not well understood.   Our observation is that native speakers use *sana* to pick out individuals from a set provided in the context, a use that is very close to *every* or *each* in English.   *Ani* is used as a free choice marker, roughly meaning *any*.   Unlike *sana*, *ani* does not pick out individuals from an established set.

sentence-initial position, as shown in (33a-b). The difference between the two examples is that *sana* modifies the DP *ka babuy* 'boar' in (a), whereas it modifies the DP *ka umaumas* 'people', with the relative clause *ka Dele-su* 'that you see' intervening in-between. It is thus the case that by modifying across the phrase boundary, *sana* does not need to be adjacent to a modified element, like the head noun.

(33) a. sana [ka babuy], Li-tulu-su kane.
         every REL boar FUT-MOD-2S.N eat
         'You can eat every boar.' (lit. As for every/each bear, you can eat it.)

    b. sana [ka Dele-su ka umaumas], daula liniane.
         every REL see-2S.G REL people call over 3P. OBL
         'Call over everyone you see.'

Consider the topicalized construction in (34a) and the cleft in (34b).[25] In both constructions *sana* licenses the interrogative *manemane*, which is then interpreted with universal quantification, having a meaning similar to *everything*. In all the examples we have, we find that the interrogatives seem to be always following the determiner in the DPs modified by *sana*; that is, there is no intervening element between *sana* and the interrogative DPs it modifies. However, given instances like (33b), we should not exclude the possibility that *sana* modifies non-adjacent interrogatives.[26]

(34) a. sana [ka **manemane**], Li-kane-ta.
         every REL what FUT-eat-1P.N
         'We will eat everything.'

    b. sana [ka **manemane**], ka yakay kay.
         every REL what NOM exist here
         'Everything is here.'

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[25] In a topicalized construction, a grammatical argument, generally the subject, is located in sentence-initial position and precedes the matrix predicate. This argument has a determiner, which may be a case marker or a demonstrative, and is in form of **Det NP**. The topicalized argument is usually of given information while the following predicate provides new information. In a cleft construction, the cleaved argument is used as a predicate that is followed by a headless relative clause, in form of **NP Det Clause** (ref. Chang 1998; Aldridge 2002, among others).

[26] Thus, we would expect examples like (i) to be possible:

    (i)? [sana ka Dele-su ka **aneane**], daula liniane.
        every REL see-2S.G REL who call over 3P.OBL
        'Call over everyone you see.'

On the other hand, *ani* also licenses interrogatives as polarity items, as shown in (35). Interestingly, *ani* can license a nominal interrogative that follows, as in (a), or it can modify a verbal complex *ara-manemane-aku* 'what I use', as in (b), by licensing the nominal interrogative that is incorporated in the verb. Example (35b) shows that *ani* licenses across the phrase boundary.

(35) a. ani [ka **manemane** ka w-a-gulaw-gulay] kay-naku w-a-pana.
      any REL what REL ACT-NF-be alive-RED NEG-1S.N ACT-NF-hunt
      'I cannot hunt any animal.'

   b. ani [ara-**manemane**-aku] kay-naku maka w-a-pana ku babuy
      any use-what-1S.N NEG-1S.N MOD ACT-NF-hunt ACC boar
      'I cannot hunt a boar whatever (instrument) I use.'

Compared to Rukai, Seediq exhibits a similar condition in phrasal polarity licensing, as has been argued in Chang (1996) and Tsai (1997b).

(36) ani-su m-usa inu, maha-ku smnegun isu. (Chang 1996)
     any-2. N AF-go where go-1. N follow 2. ACC
     'Wherever you go, I will follow you.'

As mentioned in section 2.3, *aneane* 'who' is more limited than *manemane*, and in order for it to be licensed, the co-occurrence of a universal quantifier is necessary. Contrast (37a) and (37b).

(37) a. **aneane** ku w-a-kane ki kange?
      who NOM ACT-NF-eat ACC fish
      'Who ate fish?'

   b. sana [ka **aneane**] w-a-kane ki kange.
      each REL who ACT-NF-eat ACC fish
      'Everyone ate fish.'

In point of polarity licensing on the phrasal level, quantification expressions such as *sana* and *ani* are used in Rukai. These expressions modify interrogatives across the phrase boundary and hence there exhibits a typological similarity between Rukai and Japanese.

    The discussion in this section shows that polarity licensing occurs in various morphosyntactic environments in Rukai. Reduplication and affixation patterns

Rukai with English-type languages, and polarity licensing by quantifiers across word boundaries patterns Rukai as a Japanese-type language on the other hand.

4.   Conclusion

This paper deals with the issue of polarity licensing and indefinite interpretations of the interrogatives in Rukai.   It is shown that Rukai interrogatives are licensed at the syntactic level (Chinese-type); with respect to affixation and reduplication Rukai interrogative are licensed at the morphological level (English-type); with the consideration of quantification expressions, Rukai exhibits properties at the phrasal level (Japanese-type).   The conclusion argues that, along the line of Tsai's (1997b) typological analysis, Rukai is distinctive from Kavalan, Seediq and Tsou in that while these three languages only exhibit either one or two of the properties of the English-, Japanese- and Chinese-type languages, Rukai shows properties of all of the three language types.   The observation is summarized in table 1.

Table 1.   Mixed Typology of Formosan Languages (adopted from Tsai 1997b)

	Rukai	Kavalan	Seediq	Tsou
English-type	√	√		
Japanese-type	√	√	√	
Chinese-type	√		√	√

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好茶魯凱語疑問詞的無定用法

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本篇文章探討魯凱語霧台方言（好茶村變體）疑問詞的極性用法。我們發現，在特定的構詞或句法環境中，魯凱語的疑問詞能夠作爲極性詞項並當作無定詞來使用。這些環境可歸結爲兩類，一類具有顯著的構詞或句法標記，而這些標記能夠認可疑問詞以作爲無定詞。另一類則無類似標記，於此環境中出現的無定用法可歸因於疑問詞項本身的獨特屬性。總括來說，本文之援例說明了魯凱語疑問詞的無定用法表現在句法、構詞以及詞組三個層面，此現象符合蔡維天教授（1997a, 1997b）對其他台灣南島語所提出的類型分析。

關鍵詞：魯凱語、霧台方言、好茶村變體、疑問詞、極性詞項、極性認可、無定詞