

Lexical Courtesy Revisited:
Evidence from Tsou and Seediq *Wh*-Constructions

Wei-Tien Dylan Tsai
National Tsing Hua University & UC Irvine
tsaiw@uci.edu

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0. Introduction

This paper explores a correlation between the presence of extensive indefinite *wh*-construals and the absence of island effects in single *wh*-questions. It is well known that long-distance *wh*-dependencies do not display locality effects in Chinese (Huang 1982). As illustrated by (1a,b), the wide scope interpretation of *shei* 'who' observe neither the *wh*-island constraint nor the complex-NP constraint:¹

- (1) a. Akiu xiangzhidao [_{*wh*-island} **shei** lai-le mei-you] ne?
Akiu wonder who come-Prf have-not-have Q_{wh}
'Who is the person such that Akiu wonders whether s/he has come?'
- b. Akiu zui xihuan [_{complex-NP island} **shei** xie de shu] ne?
Akiu most like who write Rel book Q_{wh}
'Who is the person such that Akiu likes the book which s/he wrote most?'

Similar construals are blocked in English (Ross 1967), but partially licensed in Japanese on the part of complex-NP islands (Lasnik & Saito 1984, Nishigauchi 1990, Watanabe 1992), as summarized in the table below:

Table 1.

	English-type	Japanese-type	Chinese-type
Complex-NP island effects	yes	no	no
<i>Wh</i> -island effects	yes	yes	no

The three-way asymmetry inspires Tsai's (1994b, 1999a) proposal that the operator height should be parametrized according to the morphological makeup of individual languages, based upon the following minimalist assumption:

(2) *Lexical Courtesy Hypothesis (LCH)*

If a language may introduce an operator by Merge, it will not resort to Move.

¹ The abbreviations used in this paper are glossed as follows: AV: actor voice; Comp: complementizer; Dur: durative aspect; Exp: experiential aspect; Gen: genitive case; Ger: gerundive; Hab: habitual aspect; Inc: inchoative aspect; IR: irrealis; NAV: non-actor voice; Neg: negation; Nom: nominative case; Obl: oblique; Past: past tense; Pres: present tense; Prf: perfective aspect; Prg: progressive aspect; PV: patient voice; Q_{wh}: *wh*-question particle; RC: result clause; Rel: relative clause marker; Res: resultative aspect; R: realis; Top: topic marker.

With the theoretical status of D-structure nullified, Merge competes directly with Move in building operator-variable pairs on the grounds of Economy. By granting the "courtesy" of considering Merge costless, we turn the table around by taking (unselective) binding as the fundamental operation in forming A'-dependencies. To recapitulate the idea in Chomsky's (1998) terms, we are essentially saying not only that Merge or Agree preempts Move, but also that Merge and Agree as a whole preempt Move.

In light of the LCH, we differentiate the three types of language in terms of the syntactic position where Merger applies: i.e., it applies at a sentential level in Chinese, at a phrasal level in Japanese, and at a word level in English (also cf. Aoun & Li 1993, Cole and Hermon 1997):

(3) *Lexical Merger Parameter (LMP)*

- a. Chinese-type: merging operators into CP or IP
- b. Japanese-type: merging operators into PP or DP
- c. English-type: merging operators into D⁰ or N⁰

According to the LCH, it is necessary for an operator-variable pair to be built before any movement actually takes place. The parameter-settings of (4a-c) thus provide a straightforward account of the above three-way asymmetry in the following manner:

- (4) a. Chinese-type: [CP Op_x [IP ... [DP [NP ... wh(x) ...]]]]
- b. Japanese-type: [CP Op_x [IP ... [DP t [NP ... wh(x) ...]]]]
- c. English-type: [CP [Op_x-wh(x)] [IP ... [DP [NP ... t ...]]]]

In Chinese, the question operator is merged into [Spec, CP], and thereby licenses the *wh*-in-situ through unselective binding in the vein of C. L. Baker (1970), Pesetsky (1987) and Nishigauchi (1990). Hence the absence of island effects of (1a,b), as illustrated by (5) and (6) respectively:

- (5) Op_{x[+Q]} (Akiu xiangzhidao [_{wh-island} shei(x) lai-le mei-you] ne)?
 Akiu wonder who come-Prf have-not-have Q_{wh}

- (6) Op_{x[+Q]} (Akiu zui xihuan [_{complex-NP island} shei(x) xie de shu] ne)?
 Akiu most like who write Rel book Q_{wh}

In Japanese, it is [Spec, DP] that accommodates the question operator, which binds into a Complex-NP island in the same way as its Chinese counterpart. On the other hand, the operator must undergo invisible *wh*-movement to [Spec, CP] (Watanabe 1992), and cannot escape from *wh*-islands. As for English, where unselective binding applies word-internally as in *what-ever* and *some-what*, the whole operator-variable pair must be "pied-piped" to [Spec, CP], evading neither Complex-NP islands nor *wh*-islands.

There are two pieces of evidence which turns out to be crucial in setting the Chinese-type value in regard to (3). One has to do with the fact that Chinese construe *wh*'s as polarity items without employing overt markers such as *-ever* in English and *-mo* in Japanese. Instead, the licensing factors are strictly sentential. Following are some typical constructions which license indefinite *wh*'s:

- (7) *Conditional clauses:*
 ruguo **shei** mei shang ke, ni jiu gaosu wo.
 if who have-not attend class you then tell me
 'If someone didn't go to school, then you should tell me.'
- (8) *Modality sentences:*
 Akiu dagai chi-le **shenme**, suoyi duzi tong.
 Akiu probably eat-Prf what so stomach ache
 'Akiu probably ate something, so (his) stomach ached.'
- (9) *A-not-A questions:*
 shi-bu-shi **shei** lai-guo zheli, suoyi men kai-zhe?
 be-not-be who come-Pst here so door open-Dur
 'Isn't it the case that someone came here, so the door is open?'
- (10) *Concessive-conditional clauses:*
 (wulun) ni qu **nali**, wo dou hui gen-zhe ni.
 no-matter yougo where I all will follow-Dur you
 'Wherever you go, I will follow you.'

The same intuition lies behind the prevailing view that Chinese *wh*-expressions are best analyzed as variables rather than operators (cf. Lee 1986, Cheng 1991, Li 1992, among many others). The other evidence concerns the fact that Chinese allows so-called *wh*-donkey sentences, where a pair of identical *wh*-phrases are employed to construct a conditional structure (Cheng & Huang 1996):²

- (11) [antecedent clause **shei** xian lai], [consequence clause **shei** xian chi].
 who first come who first eat
 'If anyone comes first, s/he eats first.'

As illustrated above, there is a *wh*-phrase *shei* 'who' in the antecedent clause, paired with another *shei* in the consequence clause. Both of them are bound by a universal quantifier merged to a sentential projection, resulting in the following conditional construal:

- (12) \forall_x [*x* is a person & *x* comes first] (*x* eats first)

By contrast, this type of construal is blocked in English and Japanese. It is these two attributes that substantiate our claim that unselective binding works at a sentential magnitude in Chinese, as opposed to a phrase-level binding in Japanese and to a word-level binding in English.

In this paper, we would like to pursue the issue further on the empirical front. To explore the full potential of the LCH, it is imperative to show that the correlation between the absence of island effects and the presence of extensive indefinite *wh*-construals can be established on independent grounds. Two Austronesian languages spoken in Taiwan, Tsou and Seediq, present an interesting

² For an interesting alternative to approach the *wh*-donkey phenomena in Chinese, see Lin (1996).

case in this context, in that both languages sports extensive indefinite *wh*-construals, while only the latter allow a Japanese-type morphology. Section one examines how indefinite *wh*'s behave in Seediq and Tsou. Section two demonstrates that the above correlation indeed exists for the two Austronesian languages. In section three, we move on to a dilemma caused by the morphological makeup of Seediq, and provide a solution from the point of view of language acquisition.

1. *Wh*-expressions as variables

1.1. Tsou

Let's start with some typical environments where indefinite *wh*'s occur. (13a) is a typical subject *wh*-question in Tsou. It appears that the subject *wh sia* is fronted to the sentence-initial position, akin to *wh*-movement in English-type languages. This observation, however, is only apparent: (13a) has exactly the same configuration as (14a), a typical declarative sentence with an agentive subject. Since Tsou, like typical Austronesian languages, is head-first, it is possible to analyze *sia* 'who', as well as the proper name *Pasuya* a matrix nominal predicate, as illustrated by (13b) and (14b) respectively (cf. Tsai 1997, 1998):

- (13) a. **sia** no mo o'te tmopsu?
 who Nom R.AV not go to school
 'Who (is the person who) didn't go to school?'
- b. [_{predicate} **sia**] na-_{[subject} e [Op_i [mo o'te tmopsu t_i]]]?
 who Nom R.AV not go to school
- (14) a. pasuya no mo o'te tmopsu?
 Pasuya Nom R.AV not go to school
 '(The person who) didn't go to school (is) Pasuya.'
- b. [_{predicate} pasuya] na-_{[subject} e [Op_i [mo o'te tmopsu t_i]]].
 Pasuya Nom R.AV not go to school

Accordingly, the remaining constituent is analyzed as a headless relative clause with a null relative operator, which as a whole serves as the subject of the sentence.³ In other words, the nominative case *na* is a prefix to the headless relative, not a suffix to *sia*. We therefore treat (13a) and (14a) as an (predicational) pseudocleft construction in Williams's (1983) sense (cf. Georgopoulos 1991).⁴

Now note that once we embed (13a) as a conditional clause, as in (15), *sia* is construed as existential rather than interrogative, hence an instance of indefinite *wh*-construals:

³ An analysis in the same spirit has been proposed by Georgopoulos (1991) for Palauan, and by Cole, Herman, and Aman (1996) for Malay. As for issues concerning Tsou syntax in general, see Tung (1964), Zeitoun (1992), and M. Chang (1998).

⁴ Note that this analysis only applies to subject questions. For issues concerning the subject sensitivity of Austronesian languages, see Keenan (1976), Keenan & Comrie (1977), Guilfoyle, Hung & Travis (1992), Kroeger (1993), Y.-L. Chang (1997).

- (15) (hoci) **sia** na mo o'te tmopsu te-ko eusvata a'o.
 if who Nom R.AV not go to school will-you tell.NAV I
 'If someone did not go to school, I shall be told by you.'

The same observation applies to *wh*'s-in-situ in Tsou, which typically appear in nonsubject *wh*-questions. Take (16) for example: the locative argument *nenu* 'where' stays in situ, and does not involve pseudo-cleft constructions:

- (16) moh-ta-la yo-**nenu** 'e pasuya?
 R.AV-he-Hab live-where Nom Pasuya
 'Where did Pasuya live?'

Just like *sia* 'who' in (15), *nenu* receives an existential interpretation within a conditional clause, and should be read as 'somewhere', as evidenced by (17):

- (17) hoci-ko aiti no **nenu** 'o pasuya te-ko eusvata a'o.
 if-you see.NAV Obl where Nom Pasuya IR-you tell.NAV I
 'If Pasuya is seen somewhere, I shall be told by you.'

Another construction licensing indefinite *wh*'s involves modal operators such as *asonu* 'probably':

- (18) mo asonu **sia** na mo mayao to poyave,
 R.AV probably who Nom R.AV take Obl sword
 ko'ko o'a-s'o elua.
 so not-I find.NAV
 'Probably someone took the sword, so it can not be found by me.'

As shown by (18), *sia* 'who' is a cleft subject *wh*. *Cuma* 'what' in (19), on the other hand, is an object *wh*-in-situ:

- (19) mo asonu bonu no **cuma**,
 R.AV probably eat.AV Obl what
 ko'ko mi-ta coŋo 'e buyo.
 so R.AV-it ache.AV Nom stomach
 'S/he probably ate something, so her/his stomach ached.'

Both *sia* and *cuma* get existentially quantified under the licensing of *asonu*, and interpreted as 'someone' and 'something' respectively.

Furthermore, *sia* can be paired with another *sia* in forming a *wh*-donkey sentence, which is a positive sign for sentential unselective binding:

- (20) [antecedent clause **sia** na temueu], [consequence clause **sia** na teoueu].
 who Nom IR come-first who Nom IR eat-first
 'If anyone comes first, s/he eats first.'

Wh-expressions not in a cleft (predicate) position are also subject to *wh*-donkey construals, as exemplified by the following pair of *cuma* 'what':

- (21) [antecedent clause **te-ko bonu cuma**], [consequence clause **te-ko maezo bonu cuma**].
 IR-you eat.AV what IR-you also.AV eat.AV what
 'I will eat whatever you eat.'

The same observation applies to *homna* 'when', as in (22), and *nenu* 'where', as in (23):

- (22) [antecedent clause **homna na te-ko 'eohu**],
 when Nom IR-you mountaineer
 [consequence clause **te-ko maezo 'eohu ho homna**].
 IR-I also.AV mountaineer and when
 'I will go mountaineering whenever you go.'

- (23) [antecedent clause **te-ko yo-nenu ho oehutu**],
 IR-you live-where and sleep
 [consequence clause **te-'o maezo yo-nenu ho oehutu**].
 IR-I also.AV live-where and sleep
 'I will sleep wherever you sleep.'

Predicative *wh*'s (i.e., *wh*'s taking voice inflections) also occur in *wh*-donkey constructions: *Mainenu* 'how.AV' and its passive voice counterpart *yainenu* 'how.NAV'

- (24) [antecedent clause **mi-'o mainenu 'o hia uhta tapanu**],
 R-I how.AV Nom way go.AV Dabang
 [consequence clause **ta-'o mainenu 'o ta-'o hia maine'e**].
 IR-I how.AV Nom IR-I way return.AV
 'I will return by whichever means/way I went to Dabang.'

- (25) [antecedent clause **te-ko yainenu a'o**],
 IR-you how.NAV I
 [consequence clause **te-'o yaeza yainenu su**].
 IR-I also.NAV how.NAV you
 'I will treat you in whatever way you treat me.'

In contrast, there is no corresponding *wh*-donkey construal to a *why*-question in Tsou. The only way to express a causal concessive-conditional is to single out a head noun like *cuma* 'what' in the following sentence:

- (26) [antecedent clause **cuma na kua su yutasufku**],
 what Nom reason you protest
 [consequence clause **te-'o maezo yutasufku no cuma**].
 IR-I also.AV protest Obl what
 'I will protest for whatever reason you protested.'

This is because unselective binding requires an in-situ variable, which can be introduced by a noun, but not by a genuine adverb. This provides a straightforward account of why English never allows concessive-conditionals like (27a,b):

- (27) a.* I will protest *whyever* you protested.
 b.* *Whyever* you protested, I will protest for that reason.

This noun-adverb asymmetry shows up in Chinese, just as it should be. This is illustrated by comparing (28) with (29), where *shenme* 'what' is singled out to pave the way for unselective binding:⁵

- (28)* Akiu **weishenme** hui zi-sha, wo jiu **weishenme** hui zi-sha
 Akiu why will self-kill I then why will self-kill
 'For every reason x, if Akiu will kill himself for x, then I will kill myself for x.'

- (29) Akiu hui wei(-le) **shenme** zi-sha, wo jiu hui wei(-le) **shenme** zi-sha
 Akiu will for(-Prf) what self-kill I then will for(-Prf) what self-kill
 'For every purpose x, if Akiu will kill himself for x, then I will kill myself for x.'

Everything being taken into account, we should expect no less than the Chinese-type behavior in construing Tsou *wh*'s.

1.2. Seediq

Indefinite *wh*-construals of a sentential magnitude are also found in Seediq. For instance, *wh*-expressions get existentially quantified in the following modality sentences:

- (30) yee **ima** m-un-eyah hini, kiyaka m-udulaqux neluk.
 whether who AV-Perf-comehere so AV-open door
 'Isn't it the case that someone came here, so the door is open?'

- (31) ini-kela m-ne-kan (ani) **maanuheya**,
 not-know AV-Perf-eat any what s/he
 kiyaka m-unarux nubuyas.
 so AV-sick stomach
 'It might be case that s/he ate something, so her/his stomach is sick.'

Both the above constructions have their roots in creating polarity-licensing contexts: The *yes-no* question of (30) has become rhetoric, expressing estimation, while the negative epistemic verb of (31) functions as a possibility operator. Furthermore, *wh*-expressions such as *ima* 'who' and *inu* 'where' may appear in *yes-no* questions and concessive conditionals, as illustrated by (32) and (33)

⁵ For a more comprehensive discussion of the relevant issues, see Tsai (1999c).

respectively:⁶

(32) yee (ani) ima m-un-eyah hini?
whether any who AV-Perf-come here
'Does anyone come here?'

(33) m-usa-su (ani) inu, maha-ku smnegun isu.
AV-go-you.NS any where go-I.NS follow you
'Wherever you go, I will follow you.'

With an optional affixal operator *ani* 'any', *ima* and *inu* get polarity readings and interpreted as 'anyone' and 'anywhere' respectively, just like their Chinese counterparts in (9) and (10).

In addition, it is instructive to note that, as pointed out by C.-L. Chang (1996), *ani* can be separated from its variable *inu*, as evidenced by the following example:

(34) ani-su m-usa inu, maha-ku smnegun isu.
any-you.NS AV-go where go-I.NS follow you
'Wherever you go, I will follow you.'

This curious behavior of *ani* is reminiscent of its Japanese counterpart *-mo* in a concessive conditional (Nishigauchi 1990):

(35) [CP dare-ga ki-te]-mo, boku-wa aw-a-nai.
who-Nom come all I-Top meet not
'No matter who comes, I will not meet her/him.'

It is in this respect that Seediq distinguishes itself from Tsou, in that it employs an affix to mark the indefinite usage in question, which may attach to a phrase instead of a word. It thus appears that Seediq falls under the category of Japanese-type language in terms of *wh*-construals.

Finally, *wh*-donkey sentences are also found in Seediq. Take (36a) for example. *Ima* 'who' in the antecedent clause is paired with another *ima* in the consequence clause under universal quantification, resulting in the conditional reading. The same observation applies to the pair of *maanu* 'what' in (36b):

- (36) a. [antecedent clause (ani) ima m-eyah], [consequence clause (ani) ima m-aŋan sunaru].
any who AV-come any who AV-take prize
'If anyone comes, s/he takes the prize.'
- b. [antecedent clause m-aruy-su (ani) maanu], [consequence clause m-aruy-ku (ani) maanu uli].
AV-buy-you.Nom any what AV-buy-I.Nom any what too
'I will buy whatever you buy.'

⁶ To our knowledge, Tsou does not allow constructions like (21) and (22), thus barring polarity *wh*-construals from its repertoire.

It should be further pointed out that C.-L. Chang (1996) actually argues that Seediq allows only E-type donkey sentences like (37a) and (38a), but not their *wh*-donkey counterparts like (37b) and (38b):

(37) a. **ani ima** snkuxun gakac nii, bege-mu **heya**.
 any who want.AV table this give-I.Gen he.Nom
 'No matter who wants this table, I will give (it) to him.'

b.^{??} **ani ima** snkuxun gakac nii, bege-mu **ani ima**.
 any who want.AV table this give-I.Gen any who

(38) a. m-kan-su **ani maanu**, puq-un-mu **kiya**.
 AV-eat-you.Nom any what eat-PV-I.Gen that
 'No matter what you eat, I will eat it.'

b.^{??} m-kan-su **ani maanu**, puq-un-mu **ani maanu**.
 AV-eat-you.Nom any what eat-PV-I.Gen any what

However, a closer look into relevant constructions reveals that, once we align the voices of the two clauses, *wh*-donkey construals improves dramatically, as in (36a,b). In other words, (37b) and (38b) are out simply because their antecedent clauses are active, and their consequence clauses passive. But what is responsible for this alignment requirement remains unclear.

To sum up, it seems that the LCH-driven typology in the form of the LMP has become less clear-cut on the part of Seediq. We will return to this "mixed typology" puzzle in section 3.

2. Island Lost

2.1. Tsou

Given what we have said about Chinese at the beginning of this paper, it is natural to expect that island constructions should be transparent for long-distance construals of Tsou *wh*'s-in-situ. This is because, to account for the extensive indefinite *wh*-construals discussed in section 1.1, it is imperative to maintain that *wh*'s-in-situ are construed as variables in Tsou, hence subject to existential closure in intensional contexts, and to universal quantification in *wh*-donkey sentences, as schematized in (39a,b) respectively:⁷

(39) a. modality sentences:

$\diamond \exists_x (\dots wh(x) \dots)$

⁷ Under the choice function approach to *wh*'s-in-situ a la Reinhart (1993), the construals of (39a,b) can be translated respectively into the following schemata:

- (i) a. $\diamond \exists_f (\dots f(wh) \dots)$
 b. $\forall_f [\dots f(wh) \dots] (\dots f(wh) \dots)$

Accordingly, question formation discussed below may have the following representation:

- (ii) $[_{CP} Q_f [_{IP} \dots [_{island} \dots f(wh) \dots]]]$

We do not distinguish the two types of *wh*-construals, as the contrast is not directly relevant here.

b. *wh*-donkey sentences:

$\forall_x [\dots wh(x) \dots] (\dots wh(x) \dots)$

Under the LCH, Chinese-type value of the LMP (3) is then set for Tsou, owing to the fact that the *wh*-donkey construal is fully operational, and the fact that there is no Japanese-type morphology indicating otherwise. By the same token, the unselective binding strategy should apply to question formation as well. This is indeed the case. First consider the *wh*-island construction in (40), where either the nominal predicate *sia* 'who' or the locative argument *nenu* 'where' may get a wide scope reading, i.e., interpreted as a direct question:

(40) i-si ucia-cohivi to Pasuya [*wh*-island **sia** na
 R.NAV-s/he want-know Obl Pasuya who Nom
 mo uh-**nenu**]?
 R.AV go-where

- a. 'Who is the person such that Pasuya wonders [where s/he went]?'
- b. 'Where is the place such that Pasuya wonders [who went there]?'

The answer to (40a) could be (41a), whereas the answer to (40b) could be (41b):

- (41) a. 'o Mo'o. (*sia* 'who' taking the wide scope)
 Nom Mo'o
- b. mo uhne Tapon̄. (*nenu* 'where' taking the wide scope)
 R.AV go Dabang
 '(He) went to Dabang.'

Since in principle Merger should apply freely to the two scopal domain of (40) (i.e. the matrix clause and the embedded clause), there are altogether four interpretive possibilities, assuming that the Q(uestion)-operator is a X^0 merged as the head of CP, rather than an XP merged as the specifier of CP:

- (42) a. [CP [IP ... [CP Q_{x,y} [NP ... who(x) ... where(y) ...]]]] (indirect question)
- b. [CP Q_x [IP ... [CP Q_y [NP ... who(x) ... where(y) ...]]]] (= (29a))
- c. [CP Q_x [IP ... [CP Q_y [NP ... who(x) ... where(y) ...]]]] (= (29b))
- d. [CP Q_{x,y} [IP ... [CP [NP ... who(x) ... where(y) ...]]]] (nonexistence)

(42a) surfaces as a paired indirect question, which reading is available across languages. (42b), on the other hand, is construed as a direct question for *sia* 'who', and (42c) that for *nenu* 'where'. In contrast, the derivation of (42) crashes, since it involves a paired direction question, failing to satisfy the selection restriction imposed by *ucia-cohivi* 'wander' on the lower CP.

Complex-NP constructions do not create problems for in-situ questions, either. As shown by (43a,b), the Agent *sia*, here an oblique argument due to the passive voice, takes the widest scope in spite of the intervening island:

- (43) a. mafe 'o [_{complex-NP} f'ue ci-[i-si emə'a no **sia**]]?
delicious Nom yam Rel R.NAV-s/he grow Obl who
'Who is the person x such that [the yams [which was grown by x]] are delicious?'
b. [_{complex-NP} [i-si emə'a no **sia**] ci f'ue] na mo mafe?
R.NAV-s/he grow Obl who Rel yam Nom R.AV delicious
'Who is the person x such that [the yams [which was grown by x]] are delicious?'

The word order of (43b) is relatively marked in Tsou, which is reminiscent of specificational pseudoclefts (vs. predicational pseudoclefts) in Palauan (cf. Georgopoulos 1991). Furthermore, the change of voice in (44) does not have influence on the long-distance construals:

- (44) [_{complex-NP} [mo emə'ə no **cuma**] cileaezoi] na mo atavaesi eapeisu?
R.AV grow Obl what Rel farmer Nom R.AV most rich
'What is the thing x such that [the farmers [who grow x]] are richest?'

Here the voice has shifted into active, and it is the Theme *cuma* 'what' that undergoes question formation. The unselective binding construals of (43) and (44) are relatively straightforward in comparison with those of (40), as schematized below:

- (45) [CP Q_x [IP ... [DP [NP ... wh(x) ...]]]]

The nonexistence of island effects mentioned above thus qualifies Tsou a Chinese-type language in Huang's (1982) sense.

The long-distance *wh*-dependencies in Tsou presents an interesting comparison with those in Palauan, Chamorro, and Selayarese (cf. respectively Georgopoulos 1991, Chung 1994, and Finer 1997). The latter employs the resumptive pronoun strategy, involving a base-generated (merged) *wh*-phrase and an in-situ *pro* a la Cinque (1990), as opposed to the unselective binding strategy adopted by the former, involving an implicit question operator and an in-situ *wh*-phrase, as illustrated by the contrast between (46a,b):

- (46) a. wh_x ... [_{island} ... pro(x) ...]
b. Q_x ... [_{island} ... wh(x) ...]

In a way, what happens in Tsou is a mirror image of those found in Palauan, Chamorro, and Selayarese. This in turn may account for the fact that Tsou lacks systematic *wh*-agreement, as no cyclic operation (Move or not) is ever involved in its question formation.

2.2. Seediq

The above pattern of Tsou is also found in Seediq, not only in terms of extensive indefinite *wh*-

construals, but also in terms of long-distance *wh*-dependencies: (47) is an instance of *wh*-island constructions, where either the subject *ima* 'who' or the object *maanu* 'what' can be construed as a wide scope question:

- (47) kukula-an-su [_{*wh*-island} **ima** m-un-ari **maanu**]?
 wonder-LF-you.Gen who AV-Perf-buy what
 a. 'Who is the person such that you wonder [what s/he bought]?'
 b. 'What is the thing such that you wonder [who bought it]?'

The answer to (47a) could be (48a), whereas the answer to (47b) could be (48b):

- (48) a. (kukula-an-mu) Walis m-un-ari maanu.
 Wonder-LF-I.Gen Walis AV-Perf-buy what
 '(I wonder) what Walis has bought.' (*ima* 'who' taking wide scope)
 b. (kukula-an-mu) ima m-un-ari patis.
 Wonder-LF-I.Gen who AV-Perf-buy book
 '(I wonder) who has bought the book.' (*maanu* 'what' taking wide scope)

Again, no island effect is detected in the following complex-NP construction, where *nima* 'who', an oblique argument, takes the widest scope:

- (49) [_{complex-NP} [p-un-uhuma **nima**] ka bulebun] malu puq-un?
 PV-Perf-grow who.Gen Rel banana good eat-PV
 'Who is the person x such that [the bananas [which was grown by x]] are delicious?'

Moreover, the *wh*-in-situ subject to question formation could be either an adjunct, such as the temporal phrases of (50a,b) and the locative phrase of (51):

- (50) a. [_{complex-NP} [p-un-uhuma **sukunuwan**] (ka) bulebun] malu puq-un?
 PV-Perf-grow when Rel banana good eat-PV
 'What is the time x such that [the bananas [which was grown at x]] are delicious?'
 b. [_{complex-NP} [p-un-uhuma **sun maanu**] (ka) bulebun] malu puq-un?
 PV-Perf-grow time what Rel banana good eat-PV
 'What is the time x such that [the bananas [which was grown at x]] are delicious?'
 (51) [_{complex-NP} [p-un-uhuma **inu**] (ka) bulebun] malu puq-un?
 PV-Perf-grow where Rel banana good eat-PV
 'What is the place x such that [the bananas [which was grown at x]] are delicious?'

Even a predicate (capable of taking a voice inflection) can undergo long-distance *wh*-construal:

- (52) [_{complex-NP} [**huwa**-su-**mesa** m-uhuma] bulebun] ini beyo mudakin?
 how-you.Nom-saying.AV AV-grow banana not slow grow

'What is the method x such that [the bananas [which you grow with x]] grow up quickly?'

The bottom line is that the *wh*-expressions must contain a head noun, which introduces a variable by default (Tsai 1994b, 1999a). It is this nominal property that makes unselective binding possible throughout (47-52), as we have sketched in (46b). To be more specific, *skunuwan* 'when' and *inu* 'where' count as nouns (cf. Huang 1982, Tsai 1994a), while *sun maanu* contains the head noun *sun* 'time'. The gerund part of *huwa-mesa* 'how-saying' too provides a "window" to the long-distance construal in question.⁸ In contrast, a genuine adverb like *huwa* 'why' is blocked from unselective binding, as evidenced by the deviance of (53):

(53)* [_{Complex-NP} [**huwa**-su m-uhuma] bulebun] ini beyo mudakin?

why-you.Nom AV-grow banana not slow grow

'What is the reason x such that [the bananas [which you grow for x]] grow up quickly?'

The only way for *huwa* to realize its quantificational force is to raise covertly over the Complex-NP island.

Here we would like to try out a version of Subjacency in terms of Chomsky's (1998) phase theory (Tsai 1999c). The central idea is to define the notion of barriers as categories corresponding to a phase, based on the following assumptions:

- I. By exploring the intuition that phases are propositional, we extend the inventory of phase to include propositional DPs (e.g., Complex-NPs and derived nominals) and propositional PPs (e.g., adjunct clauses). Accordingly, the inventory of barriers now includes CP, vP, DP, and PP.
- II. We adopt the phase-impenetrability condition, allowing only a head and its edge accessible to outside operations.
- III. Following Chomsky, we maintain that only Core Functional Categories (CFCs, including C, T, v) allow an extra Spec.

Now consider the LF derivation of (53), as schematized below:

(54) [_{TP} *huwa* ...]

→ [_{CP} *huwa* [_{TP} t ...]]

→ *[_{DP} [_{CP} *huwa* [_{TP} t ...]] ...]

Once we pick a lexical subarray from the enumeration and form the relative clause of (53), *huwa* 'why' is allowed to move to [Spec, CP], as C by definition licenses an extra Spec (cf. III). As a matter of fact, *huwa* must move to [Spec, CP]. Otherwise, it will not be on the edge of C when the CP phase ends, and no further cyclic movement is allowed (cf. II). The next step is to merge a head noun to the CP, forming a DP. Now recall that a propositional DP constitutes a phase, and hence a

⁸ Similar morphological constructs can be found in Japanese *doo-yat-te* 'how-do-ing' and Chinese *zenme-yang* 'how-manner'.

barrier (cf. I). Moreover, since D is not a member of CFCs, there is no way to "debarrierize" DP. As a result, *huwa* is not on the edge when the DP phase ends, and can never check its operator feature on the matrix CP. The derivation thus crashes, and (53) is ruled out.

Problems arise when we consider the morphological makeup of Seediq, which seems to encourage a Japanese-type setting for the LMP, as sketched below ((4a) repeated here):⁹

(55) [CP Op_x [IP ... [DP t [NP ... wh(x) ...]]]]

This means that we should not have found long-distance construals out of Seediq *wh*-islands, which is not borne out in view of (47a,b). We therefore have a dilemma at hand. In the following discussion, we will explore the issue further, and show how this discrepancy can be accommodated by the typology presented at the beginning of this paper.

3. A Typological Paradox

First a recapitulation of our problem. While Tsou patterns with Chinese, Seediq displays mixed behavior: It patterns with Chinese in terms of syntax (e.g., allowing *wh*-donkey sentences, and lacking island effects), but patterns with Japanese in terms of morphology (e.g., employing an affixal operator *ani-* 'any' to license indefinite *wh*'s). Consequently, the typological distinction is not as clear-cut as we might want it to be:

Table 2.

	Seediq	Tsou
English-type	no	no
Japanese-type	yes	no
Chinese-type	yes	yes

Since children essentially learn from positive evidence, the learning paths for a Seediq child seem to be conflicting in this particular instance, as sketched below:

- (56) a. Presence of the affixal operator *ani-* → Japanese-type setting
 b. Presence of *wh*-donkey sentences → Chinese-type setting

When Seediq children hear (20-26) or sentences of similar sort, they would assume that Seediq is a phrasal binding language, rather than a sentential or lexical binding language, as in (56a). On the other hand, when Seediq children hear *wh*-donkey sentences, they are bound to take Seediq as a sentential binding language, rather than a phrasal or lexical binding language, as in (56b).

One way to think about this dilemma is to suggest that a parameter can be ambiguously to the extent that there is no conflicting outcome. Namely, when Seediq children finally learn that *ani-* is

⁹ This partial movement analysis is adapted from Watanabe's (1992) view that Japanese merges a Q-operator to a phrasal projection, which in turn undergoes subsequent *wh*-movement in overt syntax. A treatment in the same spirit has been proposed by Finer (1997) to account for some unexpected behavior of Selayarese resumption, which seems to provide a good reason to parametrize the resumptive pronoun strategy along the line of the LMP.

not obligatory, they reconcile the conflict by hypothesizing that Seediq is alternatively a Chinese-type language.¹⁰ This decision in itself opens the avenue for sentential unselective binding. Since the range of *wh*-construals allowed in Japanese is actually a subset of that allowed in Chinese, Seediq emerges as a Chinese-type language with a Japanese-type morphology.

All in all, we should not be surprised to find a language with mixed behavior in regard to a particular parameter, as the input to language acquisition is heavily influenced by language contacts and drastic social-economic changes, which are exactly what happened to Tsou, Seediq, and other minority languages spoken in Taiwan. On the other hand, the principles of construing operators and variables, as far as we can see, never fail to account for peculiarities of an individual language. Given that we have a proper understanding of its morphological makeup, that is.

4. Concluding Remarks

We have demonstrated that one of the central ideas in the minimalist program, i.e., Merge preempts Move, is well-founded on empirical grounds, by arguing for a typological correlation between the presence of extensive indefinite *wh*-construals and the absence of syntactic island effects. Conditional, modality, and *wh*-donkey constructions of Tsou and Seediq are examined to substantiate our earlier finding in Chinese and Japanese in regard to the LCH (2): On the one hand, the existential and polarity construals show that *wh*'s count as variables. On the other, the universal-conditional construals show that implicit operators are merged to a sentential projection. Together, they guarantee the long-distance unselective binding without resorting to Move, hence the absence of island effects in the two languages.

On the technical front, we propose to account for the residue of unselective binding, i.e., covert adjunct extraction from an island, by redefining barriers in terms of the notion of phases, in conjunction with the phase-impenetrability condition and a restricted set of CFCs (Chomsky 1998).

Finally, an empirical challenge to the LMP (3) arises due to a typological paradox on the part of Seediq. Namely, its morphological makeup is very similar to Japanese, but its syntactic behavior is of the Chinese-type. We then suggest that the optional occurrence of *ani* 'any' is the key to set the LMP ambiguously in Seediq: As long as the outcome of one setting subsumes that of the other, and as long as no morphological cue dictates one particular setting, a parameter should in principle be able to receive multiple values in the process of shaping a mature grammar.

¹⁰ The mixed typology discussed here should not be confused with the coexistence of different types of strategies in forming A'-dependencies, as attested in Malay (Cole & Hermon 1997, i.e., movement vs. unselective binding) and in Selayarese (Finer 1997, i.e., movement vs. resumption).

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