Subjecthood and Temporal Adjuncts in Atayal, Seediq and Tsou[*]

Wei-Tien Dylan Tsai
National Tsing Hua University

Abstract: In a number of Formosan languages, temporal adjuncts pattern with subjects in undergoing relativization, topicalization, question and focus movement. In other words, these temporal expressions, in contrast to oblique arguments and other types of adjuncts, display the so-called "subject sensitivity" in the sense of Keenan (1976). This paper proposes that both nominative arguments and temporal adjuncts possess a T-feature on D á la Pesetsky & Torrego (2001), which in turn checks off an uninterpretable T-feature (*u*T) on C. This explains why they share the property in licensing A'-construals. But nominative arguments and temporal adjuncts also differ in one crucial respect: The T-feature carried by a nominative argument is uninterpretable, whereas the one on a temporal adjunct is interpretable (i.e., *i*T). It then follows that while the former typically occupies a sentence-final position, the latter appears much freely.

Keywords: subjecthood, temporal adjuncts, feature checking, Minimalist syntax, Formosan languages

1. Introduction

In some of the Formosan languages, Tkdayan Seediq and Tsou in particular, temporal adverbials pattern with nominative arguments in undergoing focus movement, topicalization, and relativization. All of them involve A'-movement or A'-dependencies of some sort.[1] The pattern is even more striking in Squliq Atayal, which I will choose as a target language in this study, with supporting evidence from Tkdayan Seediq and Tsou when necessary.

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[1] This phenomenon has been noted, and studied quite extensively in a series of MA theses and PhD dissertations produced in National Tsing Hua University in Taiwan (C.-L. Chang 1996, Y.-L. Chang 1997, M. Chang 1998, 2004).

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Let's start with a rundown of basic facts about this "temporal-nominative parallel". In Squliq Atayal, nominative *wh's* cannot stay in-situ, as in (1), and they must undergo A'-movement of some sort, as in (2) and (3):[2]

(1) *m-usa Sincik suxan qu-ima? (**wh*-in-situ)
AV-go Hsinchu tomorrow NOM-who
'Who will go to Hsinchu tomorrow?'[3]

(2) ima qu-[$_{DP}$ e_i [$_{CP}$ Op_i [m-usa Sincik suxan t_i]]]? (*wh*-pseudo-cleft)
who NOM AV-go Hsinchu tomorrow
'Who is (the person who) go to Hsinchu tomorrow?'[4]

(3) ima(*-ga) m-usa Sincik suxan? (focus movement)
who-TOP AV-go Hsinchu tomorrow
'Who will go to Hsinchu tomorrow?'

In declarative sentences with actor voice (AV), the nominative arguments may either stay at the sentence-final position, as in (4), or undergo A'-construals such as pseudo-cleft, as in (5), and topicalization, as in (6):

(4) m-usa Sincik suxan qu-Temu. (AV declarative)
AV-go Hsinchu tomorrow NOM-Temu
'Temu will go to Hsinchu tomorrow.'

(5) Temu qu [$_{DP}$ e_i [$_{CP}$ Op_i [m-usa Sincik suxan t_i]]]. (pseudo-cleft)
Temu NOM AV-go Hsinchu tomorrow
'(The person who) goes to Hsinchu tomorrow is Temu.'

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[2] The abbreviations of this paper follow those of the Leipzig Glossing Rules. Other abberviations not included there are: AV: actor voice; IV: instrumental voice; LV: locative voice; PRF: perfective aspect; PV: patient voice; REA: realis mood; REL: relativizer.

[3] The basic word order of Squliq Atayal is VOS. The declarative counterpart of (1) is fully grammatical, as shown below:

(i) m-usa Sincik suxan qu-Temu.
AV-go Hsinchu tomorrow NOM-Temu
'Temu will go to Hsinchu tomorrow.'

[4] For one thing, (2) may look like an instance of *wh*-movement. But the thing is that there is a nominative case marker in between *ima* 'who' and the rest of the sentence. So it is more likely that (2) is an equational sentence, where the subject is a headless relative. Therefore, it is an empty relative operator that undergoes A'-movement in (2). The same observation applies to its declarative counterpart in (5). In a sense, Formosan languages lend further support to the pseudo-cleft approach to this type of constructions (Paul 2001, Pearson 2001, Potsdam 2004, among others), in that there is a nominative case marker after the wh-phrase, serving to mark the rest of the sentence as its subject.

(6) Temu-ga m-usa Sincik suxan. (topicalization)
Temu-TOP AV-go Hsinchu tomorrow
'Temu, (he) will go to Hsinchu tomorrow.'

As for non-nominative arguments, (7) shows that the locative object *inu* 'where' must remain in-situ, whereas (8) and (9) show that it can not undergo either pseudo-cleft formation nor focus movement:

(7) m-usa suxan inu qu-Temu? (*wh*-in-situ)
AV-go tomorrow where Nom-Temu
'Where will Temu go tomorrow?'

(8) *inu qu [m-usa suxan qu-Temu]? (*wh*-pseudo-cleft)
where NOM AV-go tomorrow NOM-Temu
'Where is (the place) Temu will go tomorrow?'

(9) *inu m-usa suxan qu-Temu? (focus movement)
where AV-go tomorrow NOM-Temu
'Where will Temu go tomorrow?'

The declarative counterparts of *inu* 'where' are also blocked from A'-construals, as evidenced by the deviance of (10-12):

(10)*Sincik qu [$_{DP}$ e_i [$_{CP}$ Op_i [m-usa t_i suxan qu-Temu] (pseudo-cleft)
Hsinchu NOM AV-go tomorrow NOM-Temu
'(The place where) Temu will go tomorrow is Hsinchu.'

(11)*Sincik-ga m-usa suxan qu-Temu. (topicalization)
Hsinchu-TOP AV-go tomorrow NOM-Temu
'To Hsinchu, Temu will go tomorrow.'

(12)*[[m-usa suxan qu-Temu] ka slaq] ga krahu yal. (relativization)
AV-go tomorrow NOM-Temu REL wet.field TOP big very
'As for the wet field where Temu will go tomorrow, (it) is very big.'

How about adverbial expressions? The instrumental *how*, *m-ha-nanu* 'with what', behaves more like a predicate. Sentence (13) shows that it is inflected with voice morphology, and remains in-situ in a verbal position:

(13) m-ha-nanu b<m>ihiy ume qu-Temu? (*wh*-in-situ)
AV-with-what <AV>strike plum NOM-Temu
'How will Temu knock down plums?'

Moreover, it resists all kind of A'-construals, as evidenced by the deviance of (14-15):

(14)*(m-)ha-nanu qu [b<m>ihiy ume qu-Temu]? (*wh*-pseudo-cleft)
AV-with-what NOM <AV>strike plum NOM-Temu
'What is (the way) Temu will knock down plums?'

(15)*(m-)ha-nanu-ga b<m>ihiy ume qu-Temu? (focus movement)
AV-with-what-TOP <AV>strike plum NOM-Temu
'How will Temu knock down plums?'

Again, its declarative counterparts are not compatible with pseudo-cleft, topicalization, and relativization, as exemplified in (16-18) respectively:

(16)*ruma' qu [b<m>ihiy ume qu-Temu]. (pseudo-cleft)
bamboo.stick NOM <AV>strike plum NOM-Temu
'(The instrument with which) Temu will knock down plums is a bamboo stick.'

(17)*ruma'-ga b<m>ihiy ume qu-Temu. (topicalization)
bamboo.stick-TOP <AV>strike plum NOM-Temu
'With a bamboo stick, Temu will knock down plums.'

(18)*[[b<m>ihiy ume qu-Temu] ka ruma'] krahu yal. (relativization)
<AV>strike plum NOM-Temu REL bamboo.stick big very
'As for the bamboo stick with which Temu will knock down plums, (it) is big.'

As a matter of fact, this nominative/non-nominative asymmetry is just an instance of a much broader generalization concerning the subjecthood of Austronesian languages, often dubbed as "subject sensitivity" (Keenan 1976, Keenan & Comrie 1977, Guilfoyle, Huang & Travis 1992, Huang 1995, Y.-l. Chang 1997, among many others).

Nevertheless, there is an exception to this picture: In Squliq Atayal, temporal expressions are subject to A'-construals, as in (19-21):

(19) suxan qu [m-usa Sincik qu-Temu]. (pseudo-cleft)
tomorrowNOM AV-go Hsinchu NOM-Temu
'(The time when) Temu will go to Hsinchu is tomorrow.'

(20) suxan-ga m-usa Sincik qu-Temu. (topicalization)
tomorrow-TOP AV-go Hsinchu NOM-Temu
'Tomorrow, Temu will go to Hsinchu.'

(21) [[m-usa Sincik Temu] ka riax] ga byacing-ka-nial. (relativization)
AV-go Hsinchu Temu REL time TOP month-of-coming
'The time Temu will go to Hsinchu is the coming month.'

Furthermore, just like *inu* 'where' of (8, 9) and *m-ha-nanu* 'how' of (14, 15), a temporal *wh* may stay in-situ, as in (22). But unlike them, *knwan* 'when' may actually undergo A'-movement, as in (23, 24):

(22) m-usa Sincik knwan qu-Temu? (*wh*-in-situ)
AV-go Hsinchu when NOM-Temu
'When will Temu go to Hsinchu?'

(23) knwan qu [m-usa Sincik qu-Temu]? (*wh*-pseudo-cleft)
when NOM AV-go Hsinchu NOM-Temu
'When is (the time) Temu will go to Hsinchu?'

(24) knwan m-usa Sincik qu-Temu? (focus movement)
when AV-go Hsinchu NOM-Temu
'When will Temu go to Hsinchu?'

The same pattern is attested in another two Formosan languages Tsou and Tkdayan Seediq as well (cf. C.-L. Chang 1996, and M. Chang 2004).[5] The following table summarizes all the facts from the three languages:

(25)

	AV interrogative		AV declarative	
	in-situ	A'-movement	in-situ	A'-movement
nominative argument	*	ok	ok	ok

[5] But see Y.-l. Chang (1997) for a marginal contrast between nominative and temporal *wh's* in Tkdayan Seediq.

temporal adverbial	ok	ok	ok	ok
accusative/oblique argument	ok	*	ok	*
instrumental adverbial	ok	*	ok	*

Putting this temporal-nominative parallel in perspective, I would like to address the following issues: Firstly, what is the common property shared by nominative arguments and temporal adverbials? Secondly, what factors are responsible for the subject sensitivity effects? Can we provide a coherent account in terms of economy principles? Lastly, why does nominative *wh's* behave differently from other *wh's*-in-situ?

2. A Working Hypothesis

To solve the first puzzle, I would like to pursue a line laid out by Pesetsky & Torrego (2001), as stated in (26), where nominative case is analyzed as an uninterpretable Tense feature on D:

(26) Nominative case is an instance of an uninterpretable Tense feature (*u*T) on D.

Under this approach, a nominative *wh* in English bears both uninterpretable *wh*- and T-feature, i.e., [*u*Wh, *u*T]. It then raises to check [*u*Wh, *u*T] on C, as illustrated in (27a). As a result, T-to-C movement is blocked, which accounts for the deviance of (27b):

(27) a. Who read the book?
[$_{CP}$ who$_{[\sout{uT},\ \sout{uWh}]}$ [$_{C'}$ C$_{[\sout{uT},\ \sout{uWh}]}$ [$_{IP}$ ___ read the book]]]

b. * Who did read the book?
[$_{CP}$ who$_{[\sout{uT},\ \sout{uWh}]}$ [$_{C'}$ did$_{[\sout{uT}]}$ C$_{[\sout{uT},\ \sout{uWh}]}$ [$_{IP}$ ___ read the book]]]

The head movement is blocked because the derivation of (27a) use lesser number of movement operations than (27b). Namely, (27a) only involves *wh*-movement, while (27b) employs both *wh*-movement and T-to-C movement. As for non-subject *wh's* which bears only [*u*Wh], T-to-C movement must apply to check off the T-feature on C, as illustrated in (28):

(28) What did Mary read?

[$_{CP}$ what$_{[\text{~~}uWh\text{~~}]}$ [$_{C'}$ did$_{[\text{~~}uT\text{~~}]}$ C$_{[\text{~~}uT\text{~~}, \text{~~}uWh\text{~~}]}$ [$_{IP}$ Mary read ___]]]

The problem here is that the object *wh* is not the closest XP to C. Pesetsky and Torrego then resort to the principle of Minimal Compliance proposed by Richards (1997), according to which, one instance of movement can save another by observing locality principles minimally.[6] As a result, after T-to-C movement applies in (28), the object *wh* is free to check the *wh*-feature on C. Following this dichotomy between subject and object *wh*'s, I would like to propose that temporal adverbials, just like nominative arguments, bear Tense features. The difference is that the T-feature encoded by a nominative case is uninterpretable, whereas the one on a temporal adverbial is interpretable, i.e., *i*T.

It follows that a nominative argument must raise to [Spec, TP] to check off its *u*T, as illustrated below:

(29) [$_{TP}$ [$_{T'}$ T$_{[\text{~~}uT\text{~~}]}$ [$_{VP}$ . . .]] DP$_{[\text{~~}uT\text{~~}]}$]

By contrast, the interpretable T-feature cannot be checked off, and therefore need not to be checked. Temporal adverbials are therefore not required to raise. If a temporal adverbial did occupy [Spec, TP], then the closest T-feature to C is the *i*T in [Spec, TP]. As a result, there will be no way for a nominative DP to check off its *u*T, which would crash the derivation:

(30)*[$_{TP}$ [$_{T'}$ T$_{[\text{~~}uT\text{~~}]}$ [$_{VP}$ . . . DP$_{[uT]}$ . . .]] XP$_{[iT]}$]

This distinction between nominative arguments and temporal adverbials is supported by their distinct syntactic distributions: That is, while nominative arguments typically occupy a sentence-final position, presumably [Spec, TP], temporal adverbials such as *suxan* 'tomorrow' occur much more freely, as in (31a-c). Note that the only place they cannot occur is in between the predicate and the locative object *Sincik*, as in (31d). We will come back to this issue below.

(31) a. **suxan** m-usa Sincik qu-Temu.
tomorrow AV-go Hsinchu NOM-Temu
'Temu will go to Hsinchu tomorrow.'

b. m-usa Sincik suxan qu-Temu.

[6] Following is a simplified version of Minimal Compliance formulated in Pesetsky & Torrego (2001):
(i) Once T-to-C movement applies, the attracted XP need not to be the closest one

	AV-go	Hsinchu	tomorrow	NOM-Temu
c.	m-usa	Sincik	qu-Temu	suxan.
	AV-go	Hsinchu	NOM-Temu	tomorrow
d. *	m-usa	suxan	Sincik	qu-Temu.
	AV-go	tomorrow	Hsinchu	NOM-Temu

Here I follow Pesetsky & Torrego (2001) in assuming that the *u*T on D remains active till the completion of the CP phase. Otherwise, the nominative *wh* would be frozen in [Spec, TP] once its *u*T is checked off. Furthermore, I would like to suggest that sentences involving A'-construals are headed by C with a *u*T, very much in line with Rizzi's (1997) proposal that there is a head expressing finiteness in the CP layer. As a result, we have two options to check off the *u*T on C: one is to raise a nominative argument with the *u*T-feature, and the other is to raise a temporal adverbial with the *i*T-feature.[7]

To deal with the second puzzle, suppose further that there is no T-to-C movement in Squliq Atayal, which seems to be a plausible assumption in view of the fact that a tensed verb cannot raise across a temporal adverbial, as evidenced by the contrast between (31a) and (31d).[8] Then it follows from the Minimal Compliance account that non-nominative arguments, as well as instrumental adverbials, are blocked from A'-construals.

Now the last puzzle. Let me first point out that *wh*'s-in-situ in these languages behave like polarity items. Just like in Chinese, they allow extensive indefinite usages when scoped over by modals, negation, yes-no question, and conditional operators (cf. Tsai 1997, 2003). Therefore, we may safely assume that, in these Formosan languages,

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[7] An anonymous reviewer points out a technical issue given Chomsky's (2001) characterization of feature agreement, where a Probe-Goal relation is established between an uninterpretable feature on the probe and an interpretable feature on the goal. The system is designed as such so that Full Interpretation can be met (that uninterpretable feature can be erased/checked through a matching interpretable one). Since under our approach both C and T carry *u*T, it becomes problematic as to how they pair with *u*T on a nominative argument.

One way to tackle this issue, as proposed by the reviewer, is to adopt Pesetsky & Torrego's (2007) later proposal, which dissociates interpretability from feature valuation. Under the new design, one may assume that C and T both carry interpretable T-feature (or some type of EPP feature), but the T feature of C is not valued. A nominative argument carries *u*T with no value, and a temporal adjunct carries *u*T with a value. When T probes, the nominative DP is the only Goal (under feature complementariness), hence valued after agreement and movement to [Spec, TP]. Due to the valuation, when C probes, both the nominative argument and the temporal adjunct are equally valued (assuming multiple agreement in the sense of Hiraiwa (2005) and Chomsky (2008)), but one of them then raises to [Spec, CP] to value the unvalued T-feature on C.

[8] Another way to look at the impossibility of (31d), as noted by an anonymous reviewer, is to say that the VOS order results from remnant VP raising, hence blocking further construals of the temporal adjunct within.

wh-nominals do not have intrinsic operator features. It follows that they are subject to unselective binding from an implicit Q-morpheme on C (cf. Baker 1970, Pesetsky 1987, Nishigauchi 1990, Tsai 1994), by virtue of being able to introduce a choice function variable in situ (cf. Reinhart 1998), as sketched in the following schema:

(32) $[_{CP}\ \ [_{C'}\ Q_f\ [_{IP}$ ... f(wh) ...]]]

On the other hand, a nominative *wh* cannot remain in-situ, because it must raise to check off the *u*T on C. In which case, the polarity *wh* would raise beyond the scope of the question operator on C, which may well bleed the configuration of unselective binding, as shown below:

(33)*$[_{CP}$ f(wh) $[_{C'}\ Q_f\ [_{IP}$ ... t ...]]]

This results in vacuous quantification. Consequently, the only way to ask a subject *wh*-question in these languages is to employ either pseudo-cleft formation or focus movement. By contrast, a temporal *wh* enjoys the freedom of either remaining in-situ, or raising to [Spec, CP].

To sum up, nominative arguments and temporal adverbials pattern together in forming A'-dependencies because both are endowed with T-features. Their distinct distributions are reduced to a difference in the interpretability of their T-features, namely, *u*T vs. *i*T.

3. Typological Correlations

There are also a couple of typological correlations which might be regarded as the supporting evidence for our proposal. A point of interest has to do with the fact that there is no temporal voice throughout the Formosan languages, whereas there are often voices for patients, instruments, and locations. The following examples are from Squliq Atayal:[9]

(34) b<m>ihiy ume qu-Temu. (Actor Voice)
<AV>strike plum NOM-Temu
'Temu will knock down plums.'

(35) bhy-un na-Temu qu-ume. (Patient Voice)

[9] The verb root for 'strike' is *bihiy*. The various forms in (34-37) are resulted from different combinations of the root and voice/aspect affixes.

strike-PV OBL-Temu NOM-plum
'Plums will be knocked down by Temu.'

(36) bi<n>hy-an ume na-Temu qu-slaq. (Locative Voice)
<PRF>strike-LV plum OBL-Temu NOM-wet.field
'Plums was knocked down by Temu in the wet field.'

(37) s-bihiy ume na-Temu qu-ruma'. (Instrumental Voice)
IV-strike plum OBL-Temu NOM-bamboo.stick
'Plums will be knocked down by Temu with a bamboo stick.'

This means that temporal expressions can never be a subject. The reason is very simple from our perspective: they bear an interpretable T-feature by default, and thus in the same league as nominative arguments in their ability to license A'-construals. We may therefore correlate the absence of temporal voice with the extractability of temporal *wh*-expressions.

Another relevant fact is that temporal *wh*-phrases sometimes carry realis/irrealis morphology. A good example comes from Tsou: There is a contrast between *ne-homna* 'realis when' of (38a) and *ho-homna* 'irrealis when' of (39a), which must agree with their respective tense modals, as evidenced by the deviance of (38b) and (39b) (cf. M. Chang 2004):

(38) a. m-o baito ta- mo'o ne-homna 'o- pasuya?
AV-REA AV.see OBL-Mo'o REA-when NOM-Pasuya
'When did Pasuya see Mo'o?'

b. * m-o baito ta- mo'o ho-homna 'o- pasuya?
AV-REA AV.see OBL-Mo'o IRR-when NOM-Pasuya

(39) a. te baito ta-mo'o ho-homna 'o- pasuya?
IRR AV.see OBL-Mo'o IRR-when NOM-Pasuya
'When will Pasuya see Mo'o?'

b. * te baito ta-mo'o ne-homna 'o- pasuya?
IRR AV.see OBL-Mo'o REA-when NOM-Pasuya

The same pattern is attested in Seediq, as shown by the contrast between *knuwan* 'irrealis when' of (40a) and *sknuwan* 'realis when' of (41a) (cf. C.-L. Chang 1996):

(40) a. knuwan ka [mi-imah sino tama]?
when.IRR NOM IRR-drink wine father
'When is (the time) Father will drink wine?'

b. * sknuwan ka [mi-imah sino tama]?
when.REA NOM IRR-drink wine father

(41) a. sknuwan ka [m<n>atak tunux na laqi ka-payi]?
when.REA NOM AV<PRF>cut head of child NOM-grandmother
'When is (the time) Grandmother cut the child's hair?'

b. * knuwan ka [m<n>atak tunux na laqi ka-payi]?
when.IRR NOM AV<PRF>cut head of child NOM-grandmother

Again, they must agree with the tense morphology of the main predicate. This strongly recalls the future morphology marked on nominative DPs in Pittapitta (cf. Hale 1998, Pesetsky & Torrego 2001):

(42) a. ngapiri-ngu thawa paya-nha.
father-FUT kill bird-ACC
'Father will kill the bird (with missile thrown).'

b. thithi-ngu karnta pathiparnta.
elder.brother-FUT go morning
'My elder brother will go in the morning.'

We therefore have a good reason to group temporal adverbials and nominative arguments together in view of their ability to take tense morphology.

4. Concluding Remarks

If our analysis is on the right track, it becomes possible to give a more precise characterization of at least some of the peripheral/EPP features. Our proposal provides yet another reason for relating tense features to A'-construals in the left periphery.

Moreover, subject sensitivity is reduced to checking the *u*T-feature on C. Temporal adverbials form a natural class with nominative arguments in both syntactic

and morphological terms: As IP-adverbials, they can be merged *after* the completion of the vP phase. As temporal expressions, they bear interpretable Tense features.

Given the extension of the *u*T analysis to accusative/oblique arguments in Pesetsky & Torrego (2004), the subject sensitivity effects can be accommodated in two ways: Either accusative/oblique arguments check their *u*T with T, or they bear interpretable T-features as a legacy of inherent case-marking. Just like temporal adjuncts merged *before* the completion of the vP phase, they cannot undergo further A'-movement.

References

Baker, C. L. 1970. Notes on the Description of English Questions: the Role of an Abstract Question Morpheme, *Foundations of Language* 6.2.

Chang, Chung-Liang. 1996. *A Study of Seediq Interrogatives*. National Tsing Hua University: MA Thesis.

Chang, Yung-li. 1997. *Voice, Case and Agreement in Seediq and Kavalan*. National Tsing Hua University: PhD Dissertation.

Chang, Y.-Y. Melody. 2004. *The Architecture of the Tsou Grammar*. National Tsing Hua University: PhD Dissertation.

Cheng, Lisa L.-S. 1991. *On the Typology of Wh-questions*. MIT: PhD Dissertation.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist Inquiries: The framework. In *Step by step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On Phases. *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, ed. by Freidin, Robert, Carlos Otero and Maria Luisa Zubizarreta, 133-166. MA.: MIT Press

Guilfoyle, Eithne, Henrietta Huang, and Lisa Travis. 1992. Spec of IP and Spec of VP: Two Subjects in Austronesian Languages, *Natural Language and Linguistic Theory* 10: 375-414.

Hale, Ken. 1998. A note on the Pittapitta nominative case and the future tense. Ms, MIT.

Hiraiwa, Ken. 2005. *Dimensions of Symmetry in Syntax: Agreement and Clausal Architecture*. MIT: Ph.D. dissertation.

Holmer, Arthur J. 1996. *A Parametric Grammar of Seediq*. Sweden: Lund University Press.

Hsiao, I.-L. Stella. 2003. A Preliminary Investigation on Temporal Adverbials in Squliq Atayal. Ms. National Tsing Hua University.

Huang, Lillian M. 1995. *A Study of Mayrinax Syntax*. Taipei: Crane Publishing Co.

Keenan, Edward L. 1976. Remarkable Subjects in Malagasy. In *Subject and Topic*, ed. by Charles N. Li, 247-301 . New York: Academic Press.

Keenan, Edward and Bernard Comrie. 1977. Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8: 63-99.

Mei, Kuang. 1994. Word order, case, and theta-agreement in Mayrinax Atayal. Paper presented at the First Symposium on Austronesian Languages of Taiwan, Academia Sinica, Taipei, Taiwan. [in Chinese]

Nishigauchi, Taisuke. 1990. *Quantification in the Theory of Grammar*. Dordrecht: Kluwer.

Paul, Illeana. 2001. Concealed Pseudo-clefts. *Lingua* 111: 707-727.

Pesetsky, David. 1987. *Wh* in situ: Movement and Unselective Binding. In *Representation of (In)definiteness,* ed. by E. Reuland and A. Ter Meulen. Cambridge, MA: MIT Press.

Pesetsky, David, and Esther Torrego. 2001. T-to-C Movement: Causes and Consequences. In *Ken Hale: A Life in Language,* ed. by Michael Kenstowicz, 355-426. Cambridge, MA: MIT Press.

Pesetsky, David and Esther Torrego. 2004. Tense, case, and the nature of syntactic categories. In *The Syntax of Time,* ed. by Jacqueline Guéron and Jacqueline Lecarme, 495-537. Cambridge, Mass.: MIT Press.

Pesetsky, David and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: Syntactic derivation and interpretation,* ed. by S. Karimi et al. Amsterdam: John Benjamins.

Pearson, Matthew. 2001. *The Clause Structure of Malagasy: A Minimalist Approach*. UCLA: PhD Dissertation.

Potsdam, Eric. 2004. *Wh*-Questions in Malagasy. ~~Paper presented in AFLA 11, ZAS, Berlin.~~ In, Proceedings of AFLA 11. ZAS Papers in Linguistics 34, 244-258, ed. by Paul Law. Berlin: Zentrum für Allgemeine Sprachwissenschaft.

Reinhart, Tanya. 1998. *Wh*-in-situ in the Framework of the Minimalist Program. *Natural Language Semantics* 6: 29-56.

Richards, Norvin. 1997. *What Moves Where in Which Language?* MIT: Ph.D. dissertation.

Rizzi, Luigi 1997. The Fine Structure of the Left Periphery. In *Elements of Grammar,* ed. by L. Haegeman. 281-338. Dordrecht: Kluwer.

Tsai, Wei-Tien Dylan. 1994. *On Economizing the Theory of A-bar Dependencies*. MIT: PhD Dissertation.

Tsai, Wei-Tien Dylan. 1997. Taiwan Nadaoyu Yiwencide Wudinyongfa [Indefinite *Wh*-construals in Formosan languages: A Typological Study of Kavalan, Tsou, and Seediq]. *Tsing Hua Journal of Chinese Studies,* New Series 27: 381-422.

Tsai, Wei-Tien Dylan. 2003. Lexical Courtesy Revisited: Evidence from Tsou and Seediq *Wh*-Constructions. *Gengo Kenkyu* 123: 331-361.