

Variability and Stability in Squliq Atayal Syntax*

Shuanfan HUANG
National Taiwan University

In this paper, I examine natural discourse data in the Pear and Frog narratives in Squliq Atayal to look for variations and processes that lead to change as well as stabilized forms. In the process, I provide a careful look into various components of Squliq grammar, with a special focus on case marking, relative clause constructions, TAM interpretation, the nature of [S/A] vs. [S/P] inter-clausal linkage patterns, the syntax of LV2 voice construction, emergence of a passive format, and multiverb constructions. Based on narrative data, I show that, for each of the grammatical categories or constructions examined, there is usually one or at most two favored and stabilized verbalizations, with variability around the stability. While these variations enrich our understanding of Squliq syntax, the stabilized forms are the preferred states of the system and they may be thought of as strong attractors that model the development of new constructions. Since language change arises out of variation and also gives rise to it, it is a demonstrably productive and central research strategy to probe into both variability and stability in Squliq syntax situated within a cognitive-functional linguistic paradigm.

Key words: Squliq Atayal, case marking, TAM marking, multiverb constructions, complexity perspective

* I am grateful to Maya Yeh, Paul Li and two anonymous reviewers for careful reading of earlier versions of the manuscript resulting in numerous valuable improvements. Any remaining flaws are of course my responsibility.

1. Introduction

In this study, building on previous research on Squliq Atayal syntax (Rau 1992, L. Huang 1993, 1995, Yeh 2013, L. Huang and T. Hayung 2016, among many others), I take a complexity perspective on the structure of language and attempt to come to grips with the question of how variation and structure arise in a language like Squliq Atayal. To that end I have examined the Pear and Frog narrative corpus in Squliq as well as other data sources to look for variation and processes that lead to change and stabilized forms in Squliq syntax.¹ Language in its natural habitat is a complex adaptive system and linguistic structure is the order that emerges from such a system. As a complex adaptive system, language is prone to perturbation by contingent factors, leading to widespread variation and gradience in its grammar, and it is often impossible to discern its underlying pattern by looking at a single small event at a single point in time. A complexity approach to language structure has the virtue of placing central focus on its dynamics, which is why I have found it important to look at the natural discourse data in Squliq narrative corpus. Since the potential for and the precursor of language change lies in its variability, variability in the data is part and parcel of the behavior of the system, and is an important measure of system stability. I hope to demonstrate that, based on the narrative data, either in each of the narrative scenes or the construction type examined, there is usually one or at most two favored and stabilized verbalizations. These favored and stabilized verbalizations, as Larsen-Freeman et al. (2008) show, are the preferred states of the system, which may be thought of as

¹ Seven Pear narratives were collected in May, 2013 during field work in Nahuy (Jianshi), Hsinchu. Of the seven narrators one was female and six male, ranging in age from 48 to 67. P7 was subsequently discarded as his narrative was found to be oversaturated with Mandarin expressions. Five Frog narratives were collected in July, 2004 by Maya Yeh. Three of the Frog narrators were male and two female and they ranged in age from 60 to 73. I am grateful to Maya for making the Frog narratives available to me.

strong attractors in the behavior space in terms of complexity theory. Interplay between variability and stability often provides us useful and valuable information about the nature of the system.

Language as a complex adaptive system, or self-organizing system, is known to observe at least the following features (Lindbloom et al. 1984; Beckner et al. 2009 and many of the papers contained in the issue): (a) It is a system consisting of multiple agents (speakers in a speech community) interacting with one another, hence it is not easily amenable to traditional reductionist cause-effect scientific mode; (b) It shows intrinsic diversity and thus first-order variation, since each idiolect is the product of the individual's unique exposure and experiences of language use, and each usage experience affects construction knowledge following general principles of learning relating to frequency, contingency, and semantic prototypicality; (c) It shows an emergent order—patterns at the global level cannot be attributed to global coordination among agents; rather the global pattern is emergent, resulting from long-term local interactions between individuals (Hopper 1987; Hawkins 2004). In other words, there is in some deep sense no 'grammar' but only 'grammaticization'—movements towards structure that are characterizable as stabilized forms in typical ways.

This paper is organized as follows. Section 2 is a brief survey of various types of variation. I begin by using the Pazih case marking data to illustrate first-order variation. I then turn my attention to case marking in Squliq, noting some of the problems and difficulties that inhere in determining 'the' case system of a language that is always in flux. In Section 3 I examine the interaction between voice marking and TAM interpretations. I suggest aspect is only a secondary distinction in the TAM system of Squliq, and that the bulk of TAM information needed for discourse interpretations rests with voice markers on the main verb. I argue that the reality value of a given voice construction is ultimately lexically specific and sensitive to a number of discourse factors. In Section 4 I examine the syntax of LV2 construction,

and argue that the construction is stored and processed at different levels of abstraction and schematicity and that lower-level constructions are associated with particular lexical items. Section 5 introduces the notion of attractor, which is a favored and stabilized verbalization in a given construction. Attractors often model the development of new forms and it is important to be able to identify attractors in a language. In Section 6 I identify two types of interclausal linkage patterns [S/A] and [S/P], and I stress the significance of the [S/P] pattern in the emergence of a 'passive' format, which is the topic of Section 7. Section 8 investigates a number of different types of multiverb constructions and notes their representational problem. Section 9 is the conclusion.

2. Types of variation

There are three ways variation manifested in language (Croft 2006: 98): (1) first-order variation, which is individual variation in occasions of language use, and often initial indication that language change may be in progress; (2) second-order variation, which is variation in socially valued variants; (3) third-order variation across dialects and languages. In this study, I will have little to say about second-order variation (see Rau 2004 for some findings); instead, I will focus my attention on first-order variation and especially on the locus of first-order grammatical variation, namely constructs. Constructs are empirically attested tokens, and are the locus of variation/change/innovation, and it is the entire construct, not simply the lexical meaning of the words involved, that is the precursor of language change. Variation is always local, while the global pattern is emergent, hence not readily apparent. As an example of first-order grammatical variation, consider case marking in Pazeh. Variation in case marking is pervasive in many of the Formosan languages I have looked into. For example, Li and Tsuchida (2001: 31; 2002: 12) propose a four-term case system for Pazih, as shown below:

nominative: *ki*

genitive: *ni*

oblique: *u*

locative: *di*

I checked through narrative utterances produced by five native speakers in the narrative texts found in Li and Tsuchida (2002) and arrived at the following table on the distribution of case markers, where numbers and the verbs within parentheses indicate tokens used by the speaker, and the verbs that take that specific case marker-marked nominal argument.

Table 1 Distribution of case markers in Pazih

	Nominative	Oblique	Genitive	Locative
王伊底	<i>ki</i>	<i>u</i> (3, see, exist)	<i>u</i> (2, snatch)	<i>di</i>
潘詹梅	<i>ki</i>	<i>u</i> (1, saw); <i>nu</i> (2, tell, smell)	<i>u</i> (2, dissect, wrap)	<i>di</i>
潘萬吉	<i>ki</i>	<i>nu</i> (1, exist); <i>u</i> (3, like, look for)	not attested	<i>di</i>
潘啟明	<i>ki</i>	<i>u</i> (1, eat)	not attested	<i>di</i>
潘金玉	<i>ki</i>	<i>kani</i> (w. proper names); <i>di</i> (1, talk); <i>u/nu</i> not attested	<i>ni</i> (1, embrace)	<i>di</i>

*Based on narrative texts in Li and Tsuchida (2002)

Much can be said about the data in Table 1. First, there is the usual variable case marking characteristic of case marking systems in general: none of the five speakers displays the type of case system proposed by Li and Tsuchida (2001, 2002). On the contrary, they show case syncretism of the familiar kind between oblique and genitive, either in a diachronic perspective, as presumably shown here in Pazih, or in a synchronic sense where combination of multiple distinct case values, oblique and genitive, in a single case form, oblique, is attested in Tsou, Bunun, Siraya and Puyuma, all of them being languages with a two-term case system. Given these results in Table 1, a field linguist would likely balk at simply positing either *ni* as a genitive marker, or *u* as an oblique marker.

Nominative and locative cases seem to be the most stable of the four cases in Pazih since they are retained and distinguished by all of the speakers. Case mergers usually target adjacent ranks on the case hierarchy (Blake 2001: 155), and this seems to be what is happening to Pazih: there is merging of the oblique and the genitive into the oblique, with the oblique being generally retained and the genitive being lost in the language, since the oblique is higher on the case hierarchy. Checking through the narrative texts, it is easy to see that although *di* was indeed used by the five speakers as a syntactic locative case marker, it was also used much more frequently in the narratives as a spatial preposition marking spatial settings in which states and events took place, as in a sentence like *mu-bazu siatu di xuma ki mamais* (AV-wash clothes *di* house NOM female ‘the woman washes clothes at home’). It appears that *di* has extended its function as a preposition to one that marks syntactic locative case relation, and further to one that marks a more abstract oblique relation, as illustrated by the use of *di* as an oblique marker in (1) below replacing the earlier, but now nearly defunct *u/nu*, at least in the language of Pan Jin-yu. (numbers in (1) below refer to the page number and sentence number respectively in Li & Tsuchida (2002)):²

² Glossing conventions used in this study are as follows:

IPI: first person plural inclusive, 1s: first person singular, 2s: second person singular, 3P: third person plural, 3s: third person singular, AUX: auxiliary, AV: actor voice, BEN: benefactive, CAUS: causative, COM: comitative, CONJ: conjunction, CV: Conveyance voice, EMP: emphatic, FP: final particle, GEN: genitive, HORT: hortative, IMP: imperative, INS: instrumental, INTERROG: interrogative, IRR: irrealis, LK: linker, LOC: locative, LV: locative voice, M: masculine, NEG: negation, NMZ: nominalization, NOM: nominative, OBJ: object, OBL: oblique, ONOM: onomatopoeia, PAT: patient, PFV: perfective, PM: pause marker, PRES: present, PREV: preverb, PV: patient voice, QUOT: quotative, QP: quotative particle, RED: reduplication, STIMU: stimulus, TAM: tense, aspect and modality, TOP: topic, TT: transported theme

(1) 71/68

adaŋ a dali, kuah di xuma ki ina.
 one LK day NEG LOC home NOM mother
 liaka ma-kuas di aba'-an,
 then AV-talk OBL father-LOC
 aba, mausay di mu-zakay talima daran. lia atun
 father will.go LOC AV-walk own road ASP PN

‘One day, when his mother was not home, he said to his father, ‘Dad, I would like to lead my own life,’ Atun said.

How should we interpret the seemingly random variations displayed in Table 1? Should we entertain the hypothesis that languages and varieties spoken by small, isolated communities tend to show greater complexity? Note that Pazih had probably lost much of its vibrancy as its speakers dwindled to just a handful well before Li and Tsuchida pooled their field notes and worked together in the 1990’s for a final check on the structure of the language for their dictionary. The question that interests us in the present context is: In a moribund language like Pazih should we also expect to find symptoms of a decaying case system? Based on the distribution in Table 1, the answer seems to be clearly yes. The spatial preposition/locative *di* appears to be alive and well at the time Li and Tsuchida were doing their field work on Pazih, but that is because *di* is best treated as a spatial preposition rather than a syntactic locative case marker, *sensu stricto*, and we know that spatial prepositions are semantic case markers and tend to evolve in a separate trajectory than the more grammatical case markers such as oblique and genitive. In Table 1, both oblique and genitive show extreme variability from speaker to speaker and thus little stability expected in a language with system regularities.³

³ There are now some indications that most, maybe all, of the speakers serving as informants for Li

2.1 Case system in Squliq

Returning to the theme of the present study, consider the case system in Squliq as another example of first-order variation. There have been various competing proposals for the case system in Squliq, including those by L. Huang and T. Hayung (2016) and Yeh (2013). Table 2 is taken from L. Huang and T. Hayung (2016), where broken lines in Nominative and Genitive mean a blurring distinction in case marking between common nouns and personal nouns, and Table 3 from Yeh (2013).

Table 2 Case marking in Squliq (L. Huang & T. Hayung 2016: 61)

case marker \ noun	NOM	GEN	LOC	INSTR	COM
Personal noun	<i>i</i>	<i>ni</i>	<i>ki</i>	-	<i>ki</i>
Common noun	<i>qu</i>	<i>na; nqu</i>	<i>i; sa; te; squ</i>	<i>na</i>	-

Table 3 Case marking in Squliq (Yeh 2013: 23)

set	I	II	III
Case marker	<i>qu'</i>	<i>na'</i> (or <i>ni'</i> or <i>nqu'</i>)	<i>sa</i> (or <i>squ'</i>)
Case type	NOM	GEN	(1)OBL (2) LOC

It is beyond the scope of the present study to evaluate in some detail the two competing analyses of the Squliq case system as shown in Table 2 and Table 3. Suffice it to say that although L. Huang and T. Hayung's (2016) work has the virtue of drawing our attention to the incipient case merger between case markings for personal nouns and for common nouns, Yeh's case system is much to be preferred since it is more consistent with the hierarchies of case marking as established in the functional-typological literature (see Malchukov and Spencer 2009 for a recent synthesis). Yeh's analysis does not directly address the question

and Tsuchida (2002), including Pan Jin-yu, a principal consultant for their field research, were bilingual in both Pazih and Kaxabu, a closely related dialect. Kaxabu is reported to be still spoken by about 30 older people. See kaxabu.weebly.com for more information.

of whether Squliq grammatically distinguishes oblique from locative, though she does distinguish LOC1 from LOC2, where LOC1 refers to adjunct-like locative marker and LOC 2 to the locative case marker required by a predicate. I will show below that Squliq has not evolved an independent syntactic locative case marker distinct from the oblique. Squliq is thus basically a language with a three-term case system, nominative, genitive and oblique. The correct analysis hinges on the grammatical status of *sa/squ'*. Consider first the uses of these two markers in narrative discourse. The distribution of the two case markers *squ'* and *sa* in Squliq based on Pear narratives by six native speakers is shown in Table 4. P1 refers to the speaker of Pear narrative 1, P2 to the speaker of Pear narrative 2 and so on. Note also the unusual use of *ka* by P3 as a 'case marker', as explained immediately below.

Table 4 First-order variation in the use of oblique markers in Squliq

	<i>squ'</i>			<i>sa</i>	<i>ka</i>
	OBL	GEN	LOC (adjunct)	OBL	
P1	9	0	1	0	
P2	7	0	0	0	
P3	0	0	0	0	<i>ka</i> used as NOM and OBL marker as well as linker
P4	6	0	0	2	
P5	9	0	0	0	
P6	6	1	0	3	
Total	40	1	1	5	

As an oblique, *squ'* is vastly preferred over *sa* by all of the six speakers. The P3 speaker, instead of the expected *squ'* or *sa*, used *ka* as both a nominative and oblique marker and also as a linker, and she appears to have simply failed to acquire the case system of her native language, though her control of other aspects of the grammar of the language also show some symptom of abnormality. Genitive use of *squ'* by P6 speaker, who is male and 51 years old, is particularly instructive, as illustrated in (2).

(2) Pear 6

54... cyugal ka laqi' qani ga,
 three LK child this TOP

55 ... nyux trang maniq squ' bowey b<n>iq **squ'** laqi' m<in>takuy qani.
 APS while eat.AV OBL fruit <PFV>give GEN child <PFV> fall this

56 ... si knkux qu' yutas mita'.
 Just startle NOM old.man see.AV

'The three kids are eating the fruit given by the kid who fell and the old man is startled to see (this).'

Genitive often evolves later than nominative and ergative/oblique (Blake 2001). In a language with a two-term case system (Nom, Obl), the oblique is an 'elsewhere case' that covers a range of functions, including marking A(agent) function, as in Tsou and Bunun, before developing a separate genitive case, as in Squliq. It is thus not surprising that some speaker, like the narrator of P6, would recruit the oblique as a case marker for marking A function. It would be wrong to simply dismiss the language of P6 speaker as a mistake; instead, it provides interesting evidence that our language frequently contains seeds of language evolution that were identical to those that create stabilized forms (Bybee 2010: 6).

2.2 Oblique-locative polysemy in Squliq

Sa and *squ'* in Squliq represent an interesting example of oblique-locative case polysemy. *Sa* and *squ'* are commonly known to encode either the object of a semantic transitive verb or the projected location of an event or action. An *sa*- or *squ'*-marked locative NP may be required by the semantics of the verb; hence is part of the argument structure of the verb, or may be external to it; hence is grammatically an adjunct expression. Only those uses of *sa/squ'* that belong in the former category are considered true grammatical case markers in this study; and *sa/squ'* used in the latter function are considered spatial prepositions, but not

grammatical case markers. In (3) *squ'*-marked expressions are adjunct expressions, while in (4) both *sa*- and *squ'*-marked expressions are argument nominals subcategorized for by the main verb of the sentence.

(3) *squ'* as oblique marker/adposition

Pear 3

21. *trang ka' nyux m-luw ritensya' squ' ska tuqiy lga'*,
just.as LK ASP AV-ride bicycle OBL middle road FP.TOP

'When he is riding a bicycle in the middle of the road.'

22. *m-stnaq=nya' qu' qutux ka... laqi' kneril*.
AV-meet=3S.GEN NOM one PM kid female

'He runs into a girl.'

(4) *sa* as oblique marker

Pear 4

7. *m-bzyaq rhzyal ru' san=nya' tkura' sa waya'*.
AV-come.down ground CONJ go.LV=3S.GEN put.in.AV OBL basket

'(He) comes down to the ground and puts (the fruit) into the basket.'

8. *ru' wayal m-karaw lozi'*,
CONJ ASP AV-climb again

'Then he climbed back up (the tree) again.'

Pear 6

3. *wagiq qu' nyux ki'-an na' boway qani*.
tall NOM ASP exist-LV GEN fruit this

'The fruit tree is tall.'

4. *yasa qu' s'-aras=nya' pitan*,
so CV-take=3S.GEN ladder

'So he brings a ladder.'

5. *s-karaw=nya' mamu' sa boway qhoniq qani*.
CV-climb=3S.GEN pick.AV OBL fruit tree this

'And he uses it to pick the fruit.'

Note that since the identification of the locative relation is determined by the nature of the semantics of the verb involved, verbs like *tehuk* ‘arrive’, *mu* ‘bump into’, *hminas* ‘pass through’ etc. also take an object-like locative NP marked by *sa/squ*’.

(5) *sa/squ*’ introducing a locative NP as required by the semantics of a motion verb

Pear 4

32. *mu*’ *squ*’ *btunux kakay na’ zirensya’ ru’ m-takuy la.*
 bump.AV OBL rock leg GEN bike and AV-fall FP
 ‘The tire of the bike bumps into a rock and (he) falls’

Pear 6

14. *nyux mluw squ’ qutux ziransya.*
 ASP ride.AV OBL one bike
15. *tehuk squ’ zik na boway qhoniq ka nyux lmw-an ni yutas*
 arrive.AV OBL under GEN fruit tree LK ASP pick-LV GEN old.man
 ‘He is riding a bike and comes under the fruit tree where the old man is picking fruit.’

What all these sentences show is that there is an oblique-locative polysemy and that object and location, whether it is source or goal, share the same case marking in Squliq. This kind of polyfunctionality is to be expected in a language like Squliq with a relatively impoverished three-term case system (nominative, genitive, oblique), in which the oblique case takes on the functions of marking various types of objects and locations as determined by the nature of predicates. This is a point entailed by the case hierarchy proposed in Blake (2001) (see also a number of chapters in Malchukov and Spencer (2009) for similar points).

2.3 Third-order variation in preverb categories

Third-order variation across languages differs primarily in obligatory categories coded by their grammars: gender, case, epistemic system, classifier system, determiner system, verbs of motion (whether they are satellite-framed vs. verb-framed) etc. As an example of third-order variation, consider the way tense, aspect and modality are marked and distinguished across languages. Many inflectional languages distinguish categories of tense, aspect and modality (TAM) as well as person and number. There are at least four distinct ways these categories are marked in Formosan languages:

- (6) a. Preverbal AUX that attracts clitics (temporal and modality information), and clitic attraction is nearly grammatically obligatory. E.g. Tsou (see Huang and Huang 2003 for discussion on interesting complexities associated with the use of auxiliaries).
- b. Preverbal AUX that attracts clitics (aspect and modality, negation and connective), and clitic attraction is largely optional in natural discourse. E.g. Atayal (Yeh 2013; L. Huang & Hayung 2016).
- c. There is a smaller set of ‘preverb’ categories that codes for aspect information; these preverbs are basically optional, and they do not attract clitics. E.g. Saisiyat (Yeh 2016).
- d. There is no ‘preverb’ category; TAM information is marked on the main verb. E.g. Puyuma (Teng 2008), Paiwan (Chang 2006),⁴ Kavalan, etc. In Puyuma, pronominal agentive and possessive proclitics are argued by Starosta, Pawley and Reid (1981) to have arisen through the loss of the

⁴ The *sa* construction in Paiwan introduced by the connective *sa* ‘and’ must occur in a dependent clause; it is not considered a preverb category as discussed here that marks TAM information. See Chang (2006) and Hsieh (2015) for discussion on the syntax of the *sa* construction.

original preverb, with the subsequent procliticization of the pronominal to the following verb.

Although the literature on the history of the focus system in Austronesian languages is vast, no one has to my knowledge attempted a comprehensive reconstruction of the complex preverb auxiliary system for Proto Austronesian. Pending a careful analysis, it is probably safe to state that the evolutionary pathway of the preverb system goes from (a), one with a more elaborate and obligatory preverbal system through (b) and (c) to (d), one which has lost the preverb category altogether: a>b>c>d. We next turn our attention to a closer look at the preverb categories and TAM marking in Squliq.

3. Verb complexes and TAM marking

Verb complexes in Squliq refer to the complexes of elements comprised of the main verb and a fairly heterogeneous set of preverbal elements that bear information on temporality, aspect, negation, modality, conjunction etc. There appears to be little semantic commonality among these preverbal elements, suggesting the verb complexes represent a diachronically mature system in the language. Possible combinations of preverbal elements are schematized as (7), and they may be realized as in (a) through (e):

- (7) (PREV=clitic) (MODAL) MV
- a. ASP=clitic (MODAL) MV
 - b. NEG/INTERROG=clitic (MODAL) MV
 - c. CONJ=clitic (MODAL) MV
 - d. MODAL=clitic MV
 - e. MV=clitic

Furthermore, voice marking also interacts with the TAM system in complex yet interesting ways, as shown below in Table 5.

Table 5 Voice and TAM marking in Squliq

TAM	Realis			Irrealis Future
	Habitual	Progressive	Perfective	
affix	-	-	< <i>in</i> >/< <i>n</i> >	<i>p</i> -
reduplication	-	-	-	first C
preverb	-	<i>cyux</i> ; <i>nyux</i>	<i>wal</i> / <i>wayal</i>	<i>musa</i> ’/ <i>mosa</i> ’
final particle	-	-	<i>la</i>	-
modal particle				<i>balay</i> ; <i>hazi</i> ; <i>siki</i> ; <i>aki</i> ; <i>ana</i>

*Based on L. Huang & T. Hayung (2016: 97)

An interesting question arises as to whether in Squliq the preverb aspectual categories enjoys greater primacy than the voice affix system in marking TAM information. As shown in Table 5, voice affixes on the verb make a three-way distinction:

- (8) a. realis M-Verb (including PV, LV and CV forms)
- b. perfective <(i)n>Verb
- c. future *P*-Verb

(a) and (b) forms oppose perfective to non-perfective, an aspectual distinction, while (a) and (c) oppose future to non-future, a tense distinction. Note also that (b) forms nearly always occur in subordinate clauses in background portion of a discourse (see below for detail), and that voice affixes on a large number of lexical verbs (PV vs. LV) also distinguish +/- remote future, while aspectual distinctions (imperfective *cyux* and *nyux* and perfective *wal*) are made on the preverb of a verb complex in Squliq. In the following I demonstrate that preverb aspectual categories play only a minor role in the TAM system of Squliq and that the TAM information rests primarily on the voice markers on the main verb.

Realis mood, perfective aspect and past tense are important categories of narrative (Timberlake 2007). In Pear narratives, however, a mere 4% (12/278) of the main clauses occur with a preverb aspect marker, as seen in Table 6. Although in Frog narratives a higher percentage of clauses do so (19.8%; 80/404), with Frog

3 speaker alone accounting for nearly half of the aspect tokens used (47.5%; 38/80), as can be seen in Table 7. Averaging the two corpus percentages, we find that over 85% of the Sqliq clauses are not marked by any preverb aspectual markers (92/682=13.5%), suggesting that the bulk of the TAM information falls instead on the voice markers on the main verbs.⁵ The question that interests us then is how that information on realis mode, perfective aspect or past tense is parceled out among the voice affixes. I return to this question immediately below.

Table 6 Use of preverb aspectual grams in Sqliq Pear narratives

Main clause	P3(59)	P4(69)	P7 (48)	P8 (42)	P9 (60)	total
<i>cyux</i>	0	0	1	0	0	1
<i>nyux</i>	0	0	0	2	3	5
<i>wal</i>	1	2	2	1	0	6
Subordinate clause						
<i>cyux</i>	0	0	0	2	0	2
<i>nyux</i>	7	3	2	5	10	27
<i>wal</i>	0	2	0	1	2	5
M< <i>in</i> >-	0	1	0	1	7	9

*Both main and subordinate clauses counted

⁵ Interestingly, Biber et al. (1999: 461) also find that 90% of verb phrases unmarked for aspect are overwhelmingly the most common in all four discourse registers in the English corpus they examined.

Table 7 Use of preverb aspectual grams in Squliq Frog narratives

Main clause	F1(86)*	F2 (86)*	F3 (85)*	F4 (75)*	F5 (72)*	total
<i>cyux</i>	0	7	4	5	1	17
<i>nyux</i>	2	3	25	2	1	33
<i>wal</i>	2	4	9	5	11	31
M<in>-	1	0	0	0	0	1
subtotal	4	14	38	12	13	81
Subordinate clause						
<i>cyux</i>	0	2	0	4	0	6
<i>nyux</i>	5	0	3	2	0	10
<i>wal</i>	4	0	6	1	0	11
M<in>-	1	0	0	1	0	2
subtotal	10	2	9	8	0	29

*Both main and subordinate clauses in the first 200 IUs only

**Numbers within parentheses indicate numbers of main clauses

The numbers in Tables 6 and 7 contain few surprises other than the expected much higher use of the perfective *wal* in main clauses and the first-order variation among the speakers in the higher or lower use of aspect markers. There was the natural discourse preference for higher use of the immediate *nyux* vs. the remote *cyux*, as the speaker tends to take the immediate present perspective in narration. What is striking, though, is that some speakers (e.g. speaker F2 and speaker F5) would find little need at all for the use of even the imperfective aspect markers in subordinate clauses. Indeed, for speaker 5 part of the reason for her absolute non-use of preverbal grams is correlated with her non-use of subordinate clauses.

A question arises at this point: if the preverb aspect markers are often absent from discourse, and the perfective <(i)n> always occurs in the background portion of a discourse, how does narrative move forward, given that narrating is the function of past or perfective, and that the preverb categories in question primarily encode aspectual information? The answer is that narrative is moved forward through a combination of elements: voice forms in realis mood (AV, PV, LV or CV) plus connectives (e.g. *lru* ‘and then’; *son qasa* ‘and so; as a result’) and use of the perfective marker *wal* or aspectual final particles (*la*, *lga*). In general, the

functions of voice affixes on the verb are highly synthetic, and cannot be formally separated into voice and TAM marking segments, meaning in essence that much of the interpretation of TAM information can be determined only at the discourse level. To see why this must be the case, consider the interaction between voice constructions and the interpretation of TAM in sentences.

Unmarked voice forms in Formosan languages are taken by many researchers to express fixed reality values, independently of discourse considerations. L. Huang (1995) examined the interaction between tense/aspect/modality and voice constructions in Squliq Atayal and concluded that the PV *-un* verbs and the LV *-an* verbs differ in realis/irrealis interpretation, with the former being generally interpreted as irrealis, and the latter as realis. This simple association between *-un* and irrealis and between *-an* and realis is also made in Zeitoun et al. (1996) for Wulai Atayal and Changpin Amis, in Holmer (1996: 39-42) for Seediq and in L. Huang and Hayung (2016) for Squliq. (See also Li & Tsuchida 2001 for unusual functions of *-un* and *-an* in Pazih). However, the interaction between reality interpretations and voice constructions turns out to be much more complex than previously thought. If one takes a look at the Pear narrative data, for example, noting how and where PV *-un* verbs are used, bearing in mind that narrating is the function of past or perfective, the conclusion is inevitable that nearly all the PV *-un* verbs used in the narrative in fact have only realis interpretations. In the following section I examine the interaction between reality interpretations and voice morphology in simple affirmative NAV (non-actor voice) clauses. I show that at least five patterns of interaction must be distinguished. When aspectual auxiliaries (e.g. *wal*) or temporal adjuncts (e.g. *kira* 'later') are thrown into the mix, then further unexpected complexity arises in ways that remain to be sorted out.

First off, six types of NAV voice forms must be distinguished to properly understand the interaction between TAM interpretations and voice forms, namely PV1, PV2, LV1, LV2, CV1 and CV2. PV1 is formed by suffixing *-un* to the verb

base; PV2 is formed by infixing (sometimes prefixing) the perfective-cum-patient voice marker <(i)n> to the verb base; LV2 is formed by the perfective <(i)n > and the locative voice suffix *-an*, namely <(i)n>-V-*-an*. CV1 is formed by prefixing the CV marker *s-* to the verb base, while CV2 is formed by reduplicating the first consonant of the verb base. The LV1 *-an* form has two distinct and presumably unrelated functions, either as a benefactive imperative or as a regular locative voice construction. The benefactive imperative function, illustrated in (9), is so called since the imperative is always performed for the benefit of someone. And that is why in (9) the gloss for *-an* must be left open, since it cannot be strictly speaking a true locative voice marker.

(9) LV *-an* benefactive imperative

bhq-an cikay lukus qu' laqi' qa
 wash-? a.bit clothes NOM kid this
 'Wash clothes for the child.'

Note that there is also always a beneficiary associated with any of the three hortative CV constructions in Squliq: *an* CV construction, *ani-* CV construction or *anay-* CV construction, as illustrated in (10). In all these constructions, the CV marker *s-* may be dropped and the preverb *an* gets suffixed to a verbal root, and the notion of benefaction is shifted completely to the *-an* marker. Compared to *ani-* and *anay-*, the hortative markers *-ani* and *-anay* may have only arisen later (Ross 2002:40).

(10) a. an s-banuq cikay lukus qu' laqi'
 PREV CV-wash a.bit clothes NOM child
 'Please wash clothes for this child.'

b. ani=saku' s-matu' cikay sa sbus=mu
 PREV=1S.NOM CV-send a.bit OBL cotton=1S.GEN
 'Please send my cotton (somewhere) for me.'

- c. ani s-tutu' cikay qhuniq qu' ciwas
 PREV CV-chop a.bit tree NOM PN
 'Please chop down wood for ciwas.'
- d. anay=ta' s-'bul qsya' qu' sbus qani uzi' ay
 PREV=1PI.GEN CV-dip water NOM cotton this also FP
 'Let us dip the cotton into the water.'
- e. ras-ani qu' qaya=nya'
 take-CV.IMP NOM stuff=3s.GEN
 'You bring her/his stuff (for her/him).'
- f. ras-anay=mu qu' s<n>abu'=nya'
 take-CV.HORT=1s.GEN NOM <NMZ>wrap=3S.GEN
 'Let me bring his/her belonging to him/her.'
- g. ras-an qu' qaya'=nya'
 take-? NOM stuff=3s.GEN
 'Bring him/her stuff (for him/her).'

Of the six voice forms, LV2 is most readily accessible to nominalization. In natural discourse LV2 forms nearly always occur in the background portion of a discourse, e.g. in relative clauses (see Section 4 for further discussion). Table 8 illustrates the voice constructional possibilities of a high-frequency verb *qaniq* 'eat', and Table 9 outlines the five patterns of interaction between TAM, voice and morphology in Squliq.

Table 8 Voice constructions and reality interpretations for *qaniq* 'eat'

voice type	PV2	PV1	LV1	LV2	CV1	CV2
voice marker	<(i)n>	-un	-an	<in>..-an	s-	C1-
verb	q<n>aniq	niq-un	niq-an	q<in>niq-an	s-qaniq	q-qaniq
NOM NP	NMZ: food	Patient	Patient/NMZ: table	NMZ: eatery	INS	INS
reality	*	neutral	realis	*	realis	future

PV2 and LV2 for *qaniq* ‘eat’ in Table 8 are used only as a deverbal noun, meaning ‘food’ and ‘eatery’ respectively. While LV1 and CV1 receive a realis interpretation, CV2 (*q-qaniq*) is irrealis and PV1 (*niq-un*) is neutral, meaning that it is either realis or irrealis, depending on discourse factors.

**Table 9 Interaction between TAM, voice and morphology in Sqliq
(Yeh & Huang 2009)**

Construction	PV2	PV1	LV1	LV2	CV1	CV2
Voice form	<(i)n>	-un	-an	<(i)n>...-an	s-	Ca-
Pattern 1	(AV)	X _{Neu}	X _{Re}	(ObjNmz)	Y _{Irr}	Y _{Irr}
Pattern 2	X _{Re}	X _{Neu}	Y _{Irr}	Y _{Re}	Z _{Irr}	Z _{Irr}
Pattern 3	(AV)	X _{Neu}	X _{Irr}	X _{Re}	Y _{Irr}	Y _{Irr}
Pattern 4	X _{Re}	X _{Neu}	BEN IMP	(ObjNmz)	Y _{Irr}	Y _{Irr}
Pattern 5	X _{Re} (/ObjNmz)	X _{Neu}	X _{Irr}	X _{Re} (/ObjNmz)	Y _{Irr}	Y _{Irr}

*Irr=Irrealis, Neu=Neutral, Re=Realis

Pattern 1 says that verbs may appear in PV1 form and LV1 form, and the semantic roles of their NOM NPs in the two clausal types are identical, symbolized by X, but there is a reality distinction between the two voice constructions (X_{Neu} vs. X_{Re}. See Pattern 1 examples below); Pattern 2 says that all voice forms of PV and LV verbs may act as the main predicate in a clause, but the NOM NPs in these two voice types have different semantic roles (X vs. Y), and there is also a reality distinction between the two voice forms in either PV or LV clauses. See Pattern 2 examples below); Pattern 3 says that, except for the PV2 form, a verb may appear in PV1, LV1 or LV2 form, and the semantic roles of the NOM NPs are the same, symbolized by X, and these voice constructions differ in reality interpretation. While PV1 voice constructions describe a remote irrealis event, LV1 voice constructions express an immediate irrealis event, and LV2, a realis event. (See Pattern 3 examples below). In Pattern 4, verbs appear only in two indicative voice forms, and the semantic roles of their NOM NPs are identical, but there is a distinction in reality. (See Pattern 4 examples below). Pattern 5 says that all the voice forms of PV and LV verbs may act as the main predicate of a sentence and

their NOM NPs in these clauses encode the same semantic role, but these four voice constructions differ in reality interpretation: the PV1 form encodes a remote irrealis event, the LV1 form an immediate irrealis event, the PV2 form an immediate realis event, while the LV2 form a remote realis event.

(11) Pattern 1 (other examples: *turing* ‘aim at’, *ngilis* ‘cry; reluctant to give up’, *kita* ‘see’, etc.)

Construction	PV2	PV1	LV1	LV2	CV
Voice form	<(i)n>	-un	-an	<(i)n>...-an	s-
<i>sbes</i> ‘accompany’	(AV)	Goal _{Irr}	Goal _{Re}	*	Cause _{Ben/Irr}
a. <i>sbes-un=mu</i>		qu’	yumin	qa.	
	accompany-PV=1S.GEN	NOM	PN	this	
	‘I will accompany Yumin.’				
b. <i>sbes-an=mu</i>		qu’	yumin	qa.	
	accompany-LV=1S.GEN	NOM	PN	this	
	‘I accompanied Yumin.’				
c. <i>s-sbes=mu</i>		sa	laqi’=mu	qu’	yumin.
	CV-accompany=1S.GEN	OBL	child=1S.GEN	NOM	PN
	‘I’ll ask Yumin to accompany my child (for me).’				

Pattern 2 (other examples: *ksyuw* ‘loan’, *pkyamil* ‘wear shoes’, *pqwas* ‘sing’, *ptzyaw* ‘work’, *htuw* ‘come out’, *pqinah* ‘run’, etc.)

Construction	PV2	PV1	LV1	LV2	CV
Voice form	<(i)n>	-un	-an	<(i)n>...-an	s-
<i>plukus</i> ‘wear clothes’	TT _{Re}	TT _{Irr}	Ben _{Irr}	Ben _{Re}	Cause
a. p<in> <i>lukus=mu</i>		qu’	lukus	qa.	
	<PFV>wear.clothes=1S.GEN	NOM	clothes	this	
	‘I wore the clothes.’				
b. <i>pkus-un=mu</i>		qu’	lukus	qa.	
	wear.clothes-PV=1S.GEN	NOM	clothes	this	
	‘I will wear the clothes.’				

- c. pkus-an=mu qu' unga'=mu.
 wear.clothes-LV=1S.GEN NOM baby=1S.GEN
 'I will dress my baby.'
- d. p<in>kus-an=mu qu' unga'=mu.
 wear.clothes<PFV>-LV=1S.GEN NOM baby=1S.GEN
 'I have dressed my baby.'
- e. s-plukus=mu qu' lukus qa ru blaq-naha' ngay-an
 CV-wear.clothes=1S.GEN NOM clothes this and good-3P.GEN watch-LV
 'I will wear the clothes to make people admire them.'

Pattern 3 (other examples: *s'alu* 'borrow money', *kzyup* 'enter', *s-rangi* 'make friends with', *si* 'put', *scimu* 'salt')

Construction	PV2	PV1	LV1	LV2	CV
Voice form	<(i)n>	-un	-an	<(i)n>...-an	s-
'abi' 'sleep'	(AV)	Loc _{Irr}	Loc _{Irr}	Loc _{Re}	Cause

- a. 'by-un=mu qu' sakaw qa.
 sleep-PV=1S.GEN NOM bed this
 'I will sleep on the bed.'
- b. 'by-an=mu qu' sakaw qa.
 sleep-LV=1S.GEN NOM bed this
 'I will sleep on the bed.'
- c. n-'by-an=mu qu' sakaw qa.
 PFV-sleep-PV=1S.GEN NOM bed this
 'I slept on the bed.'
- d. moye' balay, nanu' yasa qu' s-abi' qu' yumin.
 tired.AV true what that.way NOM cv-sleep NOM PN
 'Yumin was very tired, so he slept.'

Pattern 4 (other examples: *tutu* 'chop', *a'tuk* 'hammer', *zimu* 'console')

Construction	PV2	PV1	LV1	LV2	CV
Voice form	<(i)n>	-un	-an	<(i)n>...-an	s-
<i>suling</i> 'heat'	Pat _{Re}	Pat _{Irr}	(Ben _{Imp})	(ObjNmz)	Ins/Ben

- a. s<n>uling na' yagu' qu' syam qa.
 <PFV>burn GEN PN NOM meat this
 'Yagu' roasted the meat.'
- b. sling-un=ta' qu' btunux.
 burn-PV=1PL.GEN NOM stone
 'We will heat stones.'
- c. s-suling=mu syam qu' silang.
 CV-burn=1S.GEN meat NOM PN
 'I will roast meat for Silang.'
- c'. s-suling=mu syam qu' qhuniq qa.
 CV-burn=1S.GEN meat NOM tree this
 'I will roast meat with wood.'

Pattern 5 (other examples: kamil 'scratch', bihiy 'beat', kut 'kill', gyax
 'open', qļu 'close', pung 'listen to; hear', and paqut 'ask', etc.)

- | Construction | PV2 | PV1 | LV1 | LV2 | CV |
|--------------------------|---------------------------|--------------------|--------------------|---------------------------|--------------------|
| Voice form | <(i)n> | -un | -an | <(i)n>...-an | s- |
| <i>ahang</i> 'take care' | Pat _{Re} /ObjNmz | Pat _{Irr} | Pat _{Irr} | Pat _{Re} /ObjNmz | Pat _{Ben} |
- a. l<n>ahang=mu qu' laqi' sa raral qu' ciwas qa.
 <PFV>take.care=1S.GEN NOM child LOC in.the.past NOM PN this
 'I took care of Ciwas when she was little.'
- b. khang-un=maku' qu' unga' qa.
 take.care-PV=1S.GEN NOM baby this
 'I will take care of this baby.'
- c. khang-an=mu qu' unga' qa.
 take.care-LV=1S.GEN NOM baby this
 'I will take care of this baby.'
- d. k<in>hang-an=mu qu' unga' qa.
 take.care<PFV>-LV=1S.GEN NOM baby this
 'I have taken care of the baby.'

e. s-lahang=maku' qu' unga' na' seta'.

CV-take.care=1S.GEN NOM baby GEN PN

'I will take care of Seta''s baby (for Seta).'

Further complication arises when the perfective aspectual marker *wal* appears in a clause, or if the main predicate is a stative. An LV1 verb may be neutral with respect to reality status and appear in a question-answer exchange where its TAM interpretation is sensitive to the presence of the perfective *wal* or temporal expressions like *kira* 'later'. In the exchange below in (12), the first occurrence of the LV *kut-an* is realis, whereas the second *kut-an* is irrealis. A PV1 voice form or a CV voice form may co-exist with the perfective marker *wal* in a clause, as in (13) and (14). Furthermore, the LV form of a stative verb usually locates states in the present, as in (15). In all these voice forms, their reality interpretations differ from any of the five patterns identified above and a number of new patterns must be countenanced for a fuller account of the lexically specific nature of TAM interpretations. Given these kinds of complexity, then, one may begin to suspect that verbs in the Squliq lexicon and the grammatical voice constructions they participate in are in fact the very same phenomenon: Verbs are characterized with respect to the voice constructions that they are able to occur in; constructions are characterized in terms of the kinds of verbs which are eligible to feature in them. Since voice constructions in the sense in which their TAM interpretations differ from one another are likely to number in the tens of thousands, it is easy to see then that one must eschew a simple association between *-un* and irrealis and between *-an* and realis interpretation and undertake a careful analysis of the various construction types that the topic clearly deserves.

(12) Q wal=su kut-an ngta' qa la?

ASP=2S.GEN kill-LV chicken this FP

'Did you kill that chicken?'

A. ini' na, kut-an=mu kira'
 NEG still kill-LV=1S.GEN later
 'Not yet; I will kill it later.'

(13) the PV1 verb (-*un* form) co-existing with the perfective *wal* (Cf. Pattern 4)

wal=nya' ttu-n qu' qhuniq qa.
 ASP=3S.GEN chop-PV NOM tree this
 'He has chopped down the tree.'

(14) the CV verb co-existing with the perfective *wal* (Cf. Pattern 4)

wal=maku' s-tutu' sa qhuniq qu' rimuy.
 ASP=1S.GEN CV-chop OBL tree NOM PN
 'I have chopped down the tree for Rimuy.'

(15) Examples of stative verbs interacting with voice markers

Construction	PV2	PV1	LV1	LV2	CV
Voice form	<(i)n>	- <i>un</i>	- <i>an</i>	<(i)n>...- <i>an</i>	<i>s-</i>
<i>soya</i> ' 'like'	Stimu _{Re}	Stimu _{Pres}	Stimu _{Pres}	*	(AV)

a. s<n>oya'=mu qu' yumin.
 <PFV>like=1S.GEN NOM PN

'I liked Yumin before.'

b. sy-un=mu qu' yumin.
 like-PV=1S.GEN NOM PN

'I like Yumin.'

c. sy-an-mu qu' yumin.
 like-LV=1S.GEN NOM PN

'I liked Yumin.'

To return to the question posed above about how the information on realis mode, perfective aspect or past tense is parceled out among the voice affixes, recall that over 85% of the clauses in the two corpora examined are not marked with any

preverbal aspectual markers, suggesting that aspect is only a secondary distinction, and the bulk of TAM information needed for discourse interpretations rests with voice markers on the main verb. The orthodox view among researchers holds that a major morphological distinction on the verb in Squliq as well as in most Formosan languages is between realis and irrealis mood (Ross 2002, Zeitoun et al. 1996, among many others). Realis mood encodes realized events and states, and covers present, past and sometimes habitual; irrealis mood encodes future and otherwise unrealized events and states. With some verbs, the realis further distinguishes recent past and remote past, and the irrealis distinguishes recent future and remote future. This, coupled with the observation made in (8) above about a tense distinction between (a) and (c) forms, suggests that Squliq may be characterized as a weakly tensed language in one area of its grammar. Moreover, Squliq verbs differ in the availability of voice forms and thus the reality interpretations made available by the language. Some of the verbs in PV2 and a significant percentage of the verbs in LV 2 function as lexicalized nominals, and rarely function as verbal clauses. If they do, they always express realis events. By contrast, CV2 always expresses irrealis values, independent of discourse considerations.

Given this sort of complexity, one would expect native speakers to show first-order variation with respect to their choice of nominative argument nominals and their interpretation of reality values of various voice clauses. This is indeed the case, as illustrated in Table 10 based on the usage of the verb *pqwas* ‘sing’ by three native speakers Ciwas, Hama’ and Sehu’ (Maya Yeh, personal communication). In the table, Msg (message) refers to the cognate ‘object’ of the verb *pqwas*, a term derived from frame-semantics.

Table 10 First-order variation in choice of nominative nominals and TAM interpretations

pgwas	PV2	PV1	LV1	LV2	CV1	CV2
Ciwas/F, 72	Msg _{Re}	Msg _{Irr}	Msg _{Re}	Msg/LOC _{Re}	Msg _{Irr}	*
Hama'/F, 65	Msg _{Re}	Msg _{Irr}	Msg _{Re} /LOC _{Irr}	LOC _{Re}	BEN _{Re}	BEN _{Irr}
Sehu'/M, 71	Msg _{Re}	Msg _{Irr}	NMZ	LOC _{Re}	BEN _{Re}	BEN _{Irr}

Recapping briefly the preceding discussion, there is compelling evidence that in Squaliq Atayal the reality value of a given voice construction is ultimately lexically specific and sensitive to a number of discourse factors, including voice markers, the presence of the perfective *wal* and temporal expressions such as *kira'*, and cannot be simply read off of morphological markings on the verb. As one looks deeper into the interaction between TAM markings and voice constructions, one begins to suspect that no two verbs in Squaliq appear to have exactly the same syntax with respect to the participant roles of their nominative NPs and the TAM information encoded. Indeed, the label 'irrealis' in this context starts to look somewhat suspect. There is no single irrealis gram in Squaliq; what irrealis mood in Table 5 refers to, for example, actually encompasses a variety of different constructions, and it is each of these separate constructions as a whole that supplies that irrealis sense. In other words, Bybee's point also holds in the case of Squaliq verb morphology when she states that 'it appears that the term 'irrealis' is too general to be useful, except as a pointer to a broad domain' (Bybee 1998: 269).

4. Syntax of the LV2 construction

A total of 48 LV2 voice forms were found in the five Frog narratives and all of them were cliticized with the 3rd person singular genitive marker =*nya'* or plural genitive =*nha'*. These LV2 voice constructs functioned as either fully lexicalized nominals or as noun-modifying constructions embedded within an NP. However, there is at least one LV2 construct that arguably appears to function as an independent clause. Each of these observations is illustrated below in (16).

(16) Types of LV2 voice construction

Type 1: fully lexicalized

(a) in-lung-an ‘feeling, thinking’

p<in>lg-an ‘companion, friend, colleague’

(b) in-lung-an=nya’ ‘his /her thinking/feeling’

blaq yal p(<in>) lg-an=nha’ ‘They get along nicely’

Type 2: LV2 functions as a nonce clausal nominalization marked by a case marker.

(c) Frog 2

14. m’uy squ’ in-ngay-an=naha’ lga’,

tired.AV OBL PFV-watch-LV=3P.GEN FP

15. ...m-usa’ m-’abi’ qu’ yumin.

AV-go AV-sleep NOM PN

‘After they were tired of watching (it), Yumin went to sleep.’

(d) wal mgey qu’ q<n>yat-an=nya’ lga’

ASP leave.av NOM raise <PFV>-LV=3S.GEN FP

‘His pet (frog) got away/The frog he kept got away.’

Type 3: LV2 functions as a noun-modifying construction

(e) Frog 1

28. ... wal inu’ qu’ a

go where NOM FILLER

29. ... (1.0) q<n>yat-an=ta’ qpatuŋ qasa maha

raise<PFV>-LV.NMZ=1PI.GEN frog that QP

‘(He said,) “where is our pet frog/the frog we have raised?”’

(f) hpas-un qu’ qutux qpatung ka q<n>yat-an=nya’

play.with-PV NOM one frog LK raise<PFV>-LV=3S.GEN

‘(He) played with the one frog he kept.’

Type 4: LV2 functions as an independent clause, as in line 19 below.

(g) Frog 5

15. ... m-aki' qutux qu',
AV-exist one NOM

16. ... so-n maha a,
say-PV QP PM

17. ... qpatung a
frog PM

18. ... k<n>yap a.. k<n>yap=naha' ru
<PFV>catch PM <PFV>catch=3P.GEN CONJ

19. ... q<n>yat-an=naha' squ' ska' na' yuyut.
keep<PFV>-LV=3P.GEN OBL inside GEN bottle

'There was a frog that they caught. And they kept (it) inside a bottle.'

Given these results, a most natural inference is that the LV2 voice construction in Squliq is stored and processed at different levels of abstraction and schematicity and that lower-level constructions are associated with particular lexical items. Lexical items that belong in Type 1, for example, and those in Types 3 and 4 in fact form a disjoint set. The LV2 construction thus represents a family of constructions whose functions range from the more lexicalized nominals to the more schematic or productive format, defined by particular tense-aspect combinations and specialized functions determined by discourse factors. For those Type 1 LV2 forms that now function strictly as lexical nominals, they also add some substance to the idea that the lexicon is often the final repository for old grams.

Our ability to form varying degrees of abstraction for language use together with the question of how many levels there should be is an issue of continuing debate. Traugott (2007), for example, distinguishes between micro-, meso-, and macro-constructions, where the micro-construction is the locus of language change

and the macro-construction represents the most abstract schemas for a particular construction. The syntax of LV2 then provides compelling evidence that there are categories of grammar that are difficult to distinguish in a clear-cut fashion because change occurs over time in a gradual way, moving an element along a continuum from one category to another. This is also the commonly shared view among construction grammarians that, since there are lexically specific constructions and constructions that are schematic in structure, ‘lexicon, morphology and syntax form a continuum of symbolic units serving to structure conceptual content for expressive purposes’ (Langacker 1987: 35).

5. Variability, stability and attractor

We have examined a number of construction types in the Pear and Frog narratives to show that, for each of the construction types examined, there is usually one or at most two favored and stabilized constructions, with variations around the stabilized norms. These favored verbalizations are the preferred states of the system for expressing events and actions, TAM in event construal etc., and may be thought of as strong attractors in the behavior space in terms of complexity theory. These attractors exert a force on the grammatical system, and impose a frame on them and model the development of new forms. Some evidence for ‘attractors’ includes the following:

- a. Squliq is strongly head-initial in relative clause constructions and head-final RC is a minor variant pattern. By contrast, Tsou, Amis, Takivatan Bunun (Rik De Busser, pc), Pazih (based on texts in Li and Tsuchida 2002), Yami (Vicky Rau, pc) are strongly head-final, while Kavalan, based on my own analysis, shows no clear-cut preference.
- b. Case marking in Squliq is also fairly stabilized, though there is frequent crossover between oblique and locative case markers. The blurring of the distinction in case marking for common nouns and for personal nouns noted

in L. Huang and Hayung (2016) must surely underlie considerable first-order variation.

- c. First-order variation in the interpretation of reality values of various voice clauses in Squliq is pervasive; the only stability appears to be the morphological realis/irrealis distinction, though the interpretations of reality values have been shown to be both lexically specific and sensitive to discourse factors.
- d. The LV2 voice form in Squliq is used either as lexicalized nominals or is used nearly always in an embedding structure as a stabilized feature of the language in the background portion of a discourse, with little variation.

The point to stress is that it is important to have some deep understanding of the variability and stability in the syntax of Squliq, since interplay between stabilized forms and degrees of variability provides us important information on both the structure and likely ongoing change of the language.

6. [S/A] pivot? [S/P] pivot?

Some languages have an [S/A] pivot, as in English, some an [S/P] pivot, as in Dyirbal, some have no pivot of either type, as in Chinese, some combine the two types in different areas of grammar, as in Jarawara (Dixon 2000), and some have a mixed set of pivots (Van Valin 1981), where pivot is understood in the sense of Dixon (1994). In this section, I demonstrate that in Squliq, as in other Formosan languages I have examined, there is no pivot of either type. There are a number of different ways to determine whether a language has an [S/A] pivot, or an [S/P] pivot or no pivot of any type at all. One way is to look at patterns of interclausal coreference. Interclausal coreference in Squliq and also in many Formosan languages follows the accusative [S/A] pattern, though the more minor ergative pattern [S/P] is also attested. This is done by counting anaphoric links across adjacent clauses according to the valency roles in which the co-referential

referents occur in the two clauses. For example, an instance of the A-to-S link means that a nominal appearing in the A role reappears as S in the succeeding clause.

We examined the main clauses in the first 200 IUs of each of the five Frog narratives and arrived at the figures below in (17) showing all the various types of interclausal anaphoric linkage. Note that in the tabulations, clitics attached to A's, where relevant, are counted as anaphoric zeroes.

(17) S=S	43%
S=A	20%
A=S	12.4%
A=A	22.3%
S=P	1.8%

Since as many as 98.2% of the links ([A/A], [S/S] and [S/A] combined) are co-reference under identity of primary topic (A or S), there is a strong convergence of primary semantic (“role”) property of agent and primary pragmatic property of clausal topic. Moreover, the fact that [S/A] anaphoric links are the most common preferred way of forming anaphoric links suggest that an [S/A] pragmatic pivot in the sense of Van Valin (2005) has begun to emerge, a pivot which neutralizes the valency role distinction between S and A, and which is determined by the demands of topicality and cross-clause linkage under coreference.

Two instances of the pivot pattern [S/P] are exemplified by the following fragments (18) and (19).

(18) Frog 4

237 ..	wal	si'	pqaya'	squ'	tunux	a,	
	ASP	just	cling	OBL	head	PM	
238 ..	qara'	na'	a	qehuy	na'	para'	qani qu', [S]
	branch	GEN	PM	antler	GEN	deer	this NOM

239 .. **tali' qa lga'**,

PN this FP:CONJ

240 ... wal ras-un na'= para' la. [P]

ASP take-PV GEN deer FP

'Tali' keeps clinging to the head, the branch, the antler of the deer and was taken away by the deer.'

(19) Frog 1

217. ... si ke'ke' mge,

just ONOM run.away.AV

218. ... qu' so-n maha o a [S]

NOM say-PV QP PM PM

219. ... (0.8) a huzil qasa hya' la.

PM dog that EMP FP

220. ... ey iy a

PM PM PM

221. ... wal hyag-un nqu' a yaya' na' tryung. [P]

ASP chase-PV GEN PM mother GEN wasp

'Chased by the queen wasps, the dog ran away as it shouted, 'ke' ke''.'

Data on anaphoric links across successive clauses show that the number of [S/A] links far outnumber that of [S/P] links, and thus the topic continuity dimension defines for Squliq a strong preference for nominative/accusative [S/A] alignment. This is not surprising, however, since both accusative and ergative languages are known to exhibit an unmistakable preference for [S/A] alignment. The low frequency of [S/P] anaphoric linkage, on the other hand, is striking and suggests that changes in the pragmatic role of a nominal in Squliq do not have to depend on changes in "syntactic role", and that Squliq does not have the kind of pivot system found in either English or Dyirbal where the choice of pivot is strictly governed by the exigencies of topicality and interclausal linkage under coreference;

hence necessitating the use of passive (for English) or antipassive construction (for Dyirbal) to permit alternative choices of pivot when required by context. This is why the emergence of a ‘passive’ format discussed below is an important pragmatic strategy for a morphologically ergative language like Squliq.

7. Emergence of a ‘passive’ format

There were a total of four instances of [S/P] interclausal linkage pattern produced by three different speakers in the entire Frog narrative corpus. In each case, there is first a mention of an intransitive clause with a nominative-marked nominal, followed in the succeeding IU by a clause in which the verb is in PV form, and an agentive nominal introduced by the genitive *na’/nqu’*, though never an agentive genitive clitic (= *nya’*) affixed to the PV. Schematically, the sequence has the following format:

- (20) 1. [AV + NP]
 2. [PV (+ agentive NP)]

It is commonly known that agents with a genitive clitic have higher topic persistence than those marked with a non-clitic genitive marker. The fragment below exhibits a clear case of [S/P] linkage pattern, and the PV clause at line 240 below pragmatically has the flavor of a notional passive since the speaker is focusing on her topic *tali’*, the protagonist of the narrative and also at points beyond. In effect *na’ para’* at line 240 may be interpreted as an adjunct headed by an oblique marker *na’*.

(21) Frog 4

237. .. wal si’ pqaya’ squ’ tunux a qara’ na’,
 ASP just cling OBL head PM branch GEN
 238. .. qehuy na’ para’ qani qu’, [S]
 antler GEN deer this NOM

239. ... tali' qa lga',

PN this FP.TOP

240. ... wal ras-un na'= ... para' la. [P]

ASP take-PV GEN deer FP

'Tali clung to the head, the branch, the antler of the deer and was taken away by it (the deer).'

Over time this type of cross-IU format may be compressed into a micro-construction in a single IU with a notional 'passive' interpretation. The fragment below exemplifies this kind of compression.

(22) Frog 4

24. ... m-aki' qutux qu' qpatung q<n>yat-an nqu' tali' qa.

AV-exist one NOM frog raise<PFV>-LOC GEN PN this

'There is a frog kept by Tali''

The emergence of a 'passive format' suggests that there are at least two ways of going from ergative to accusative in the morphosyntax of a language: one way is through reinterpretation of an antipassive as a transitive. Saisiyat has apparently embarked on this pathway in one area of its grammar. Another way of going from ergative to accusative is through reinterpretation of a PV/LV construct in a given context as a notional passive, as seen in the emergence of a passive format above. Enabling conditions for the emergence of a passive format in a given context to become a stabilized norm involve the following stages:

- (23) a. The transitive PV/LV must normally omit its agentive NP or defocus its topicality by de-cliticizing it. (This would not be easy since the agentive NP, as a topical constituent, is nearly always cliticized, though as (22) shows, this can happen.)

- b. The mere possibility of (a) would entail that the original active/transitive construction would gradually lose its force and over time drop out of use.
- c. The original agentive marker on A is reinterpreted as an oblique marker, and P will now receive the same marking as S in a plain intransitive.

Language use is the locus of change and variation is the precursor to language change. The fact that there are instances of [S/P] interclausal linkage pattern produced by three different speakers in the narrative data when the language as a whole shows a strong preference for [S/A] linkage pattern calls for some explanation. My proposal is that a passive format may be emerging where a given PV/LV in some context is reinterpreted as a notional passive rather than the more expected active.

8. Multiverb constructions and the representational problem

Any researcher who looks closely at syntax knows that one can never represent everything about the structure of a sentence in a single diagram. It is impossible to display simultaneously (a) the grammatical relations holding among the words in the sentence, (b) the left-to-right linear sequence of words as the sentence is spoken, and (c) the grouping of words into prosodic phrases. The concurrent/simultaneous event construction in Squliq, illustrated in (24) and (25), has exactly this kind of representational problem.

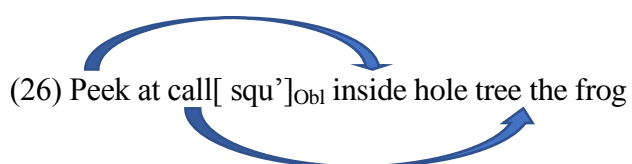
(24) Frog 1

179. ... 'sa-n=nya' memaw,
go-LV=3S.GEN even
180. ... t<m>ŋa' m-lawa' squ' ska' na',
<AV>peek AV-call OBL middle GEN
181. ... bliŋ na' qhuniq qu' qpatuŋ ma
hole GEN tree NOM frog FP
- 'He glanced at/in the direction of the tree hole as he/ and then called out to the frog.'

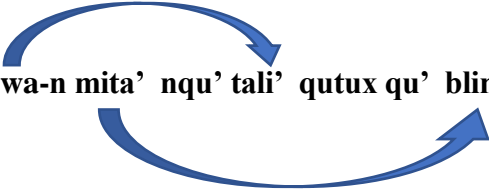
(25) Frog 4

120. nyux p-lwa-n mita' nqu' tali' qutux qu' bling cyux hyal wa
ASP CAUS-call-LV see.AV GEN PN one NOM hole ASP ground FP
- 'Tali was watching a hole in the ground while/as he was shouting.'

How should we represent the grammatical relations holding between the two verbs *t<m>ŋa'* 'peek at' and *m-lawa'* 'call' and their respective complements *bling na' qhuniq* and *qpatung* in (24), or the two verbs *pl-wa-n* and *mita'* and their respective argument nominals *nqu' tali'* and *bling* in (25)? As the diagram in (26) below shows, they each stand in a discontinuous dependency relation, making it impossible to represent their grammatical relations using the familiar phrase structure tree. Although *t<m>ŋa'* 'peek at' and *m-lawa'* 'call' are contiguous, they do not form a single unitary event, and thus do not fit into the SVC of the familiar kind. Exactly the same argument applies to the sentence in (25), as the diagram in (27) shows.



(27) **nyux p-lwa-n mita' nqu' tali' qutux qu' bling**



The multiverb construction in (24) and (25) differs from the types of double, or triple or quadruple verb serializations in Formosan languages discussed in Yeh and Huang (2009) where the authors found that four basic verb types, namely modal, emotion, manner and motion enter most readily into verb serialization and triple verb serializations result from choosing any two of the four basic verb types and positioning them before the final action/motion verbs. Moreover, these various types of verb serialization are typically arrayed in an iconic order, unlike the sentences in (24) or (25), which typically receive concurrent event interpretation, although native speakers agree that a sequential interpretation sometimes would be also likely.

Let us term the type of multiverb construction instantiated in (26) and (27) concurrent event construction. The concurrent event construction appears to be a productive construction type that can be readily pressed into service when the occasion calls for it, as shown by the fact that they were employed by all of the five Frog narrators. Here is another example from another Frog narrative, Frog 5.

(28) Frog 5

124. ... (1.0) ru,

CONJ

125. ... cyabang qani hya' lga',

PN this 3S.N.F FP.TOP

126. ... (1.0) kta-n=nya' iy z<m>uy qu' puqing nqu' a,

see-LF=3S.GEN PM <AV>shake NOM origin GEN PM

127. ... qhuniq qani lga',

tree this FP.TOP

128. ... a,

PM

129. ... (3.2) kta-n=nya' z<m>uy qu' qhuniq qani lga'.

see-LF=3S.GEN <AV>shake NOM tree this FP.TOP

'And, as for Cyabang, it was watching (the hive) hanging on the top of the tree as it/and then shook the tree.'

While multiverb constructions most often discussed in the literature and those examined in Yeh and Huang (2009) share the same subject, concurrent event constructions share the same subject, but they have distinct objects, each of which is governed by a different verb. There are also in addition other types of multiverb constructions that share the same subject and the same object, as in (29) and (30). Example (31) illustrates what is known as inclusory serialization, one with different subjects and different objects, where the experiencer of V1 is the patient of V2.

(29) p<in>hapuy=nha' lmgá', tnaq=nha' n~niq-un.

<PFV>cook=3P.GEN FP.QUOT.TOP same=3P.GEN RED~eat-PV

'What they had cooked was enough for them to eat.'

(Academia Sinica Formosan Language Archive:20-005-c)

(30) blaq=nha' p-zí'-un qu' qpatung qani.

good(.NAV)=3P.GEN CAUS-play-PV NOM frog this

'They liked to play together with the frog.' (Frog 5:70)

(31) kong-un=nya' cqiri'=nha' ga'.

scared-PV=3S.GEN tease=3P.GEN FP

'He was afraid of being teased by people.'

(Academia Sinica Formosan Language Archive:12-007-c)

My non-native intuition is that multiverb constructions sharing the same object are much rarer than those that are most commonly discussed that share the same subject, as well as the concurrent event constructions examined in this section.

Looking toward the future, one would like to be able to become clearer about what other possible variant patterns there are, what restrictions on the various types of verbs are that serialize in concurrent verb serializations, and whether they show a similar pattern of lexical skewing, etc. It seems quite clear that any attempt to formulate some kind of statement of the universal features of multiverb constructions must take into account those examined here and elsewhere in the literature.

9. Discussion and concluding observations

In this study, I have examined a large number of verbalizations in the Pear and Frog narratives in Squliq to look for variations and processes that lead to change as well as stabilized forms. In the process, I have provided a careful look into various components of Squliq grammar, their variability and stability situated within language use in natural discourse. The findings reported above are supported by researching these verbalizations produced by a large enough number of native speakers in an attempt to ensure a high quality of linguistic evidence.

Based on the narrative data, I have shown that there is, in each of the construction types of the narrative scenes examined, usually one or at most two favored and stabilized verbalizations, with variability around the stability. A number of stabilized forms as well as variants associated with them have been identified, including those for case marking, relative clause constructions, language of motion, voice constructions and TAM interpretations and control and pivot patterns. While these variations enrich our understanding of Squliq syntax, the stabilized forms are the preferred states of the system and they may be thought of as strong attractors in the behavior space in terms of complexity theory. Variation, on the other hand, is the precursor of language change. Since language change arises out of variation and also gives rise to it, it is easy to see that the study of variation is central to research into language change in cognitive-functional

linguistics. Variability is as important as stability for linguistic research, Mainstream researchers have a penchant for viewing regular stabilized patterns as primary and dismissing variation and gradience as secondary, but that approach would be counterproductive, since, as Bybee (2010) has observed, the same cognitive and interactional factors produce both regularities and variations.

Consider the minor variant [S/P] pivot pattern discussed in Section 7. I have shown that a passive format can be plausibly thought to have emerged from the [S/P] pivot, given the appropriate discourse context, and that over time the [S/P] format might gain in frequency as the PV voice form is more regularly reinterpreted as a passive, both in form and in meaning.

The syntax of LV2 discussed in section 4 is equally instructive. There it was shown that LV2 construction in the Frog narratives functioned as a lexicalized nominal or as a noun-modifying construction in the backgrounded portion of a discourse. However, as a minor variant pattern, some LV2 forms arguably appeared to function as an independent clause, which is presumably the dominant function of LV2 at earlier stages of Squliq grammar. The syntax of LV2 thus shows that some categories of grammar are gradient in character that are difficult to distinguish because change occurs over time in a gradual way, moving an element along a continuum from one category to another.

Elsewhere I have shown that the emergence of a ‘passive format’ suggests that there are at least two ways of going from ergative to accusative in the morphosyntax of a language: one way is through reinterpretation of the oblique case as an accusative case, and thus reinterpretation of an antipassive as a transitive. Saisiyat has apparently embarked on this pathway in one area of its grammar. Another way of going from ergative to accusative is through reinterpretation of a PV/LV as a passive, as seen in the emergence of a passive format above.

Kemmer (1993) defines the distinguishability of events in terms of two factors: (1) number of grammatical participants in a clause; (2) the number of subevents

expressed in the clause. Kemmer probably had only realized events in mind when she made her suggestion. The realis/irrealis distinction examined in this study, however, suggests that this distinction is sensitive to multiple discourse factors, and it emerges in different languages in different ways. If so, reality as a mood category should have a critical role to play in the study of event typology. When a verb/root has multiple argument realizations, it must have distinct event structure. When a verb/root has multiple reality interpretations, it must have distinct event structure.

A question arises as to whether first-order variation may decrease over time if people are given increased access to standard variants. Nettle (1999: 27) addresses this issue and gives an emphatic negative answer. He stresses that sociolinguistics (e.g. Labov 1972) has shown that considerable stable linguistic diversity can persist within a single society and that diversity does not lessen if increased access to standard variants is given to non-standard speakers. Nettle's contention is that ethnolinguistic boundaries persist despite a history of contact, exchange and mutual influence.

It may be appropriate in this context to at least briefly allude to the line of research Barbara Johnstone has pursued over the years concerning sociolinguistic authenticity. Some people may think of some variants and some speakers as more authentic than others, and these judgments can be consequential, as people choose or avoid particular variants, emulate or fail to emulate particular speakers. It would be interesting to explore, as Johnstone (2013) had done, the meanings of sociolinguistic authenticity in a community where this concept is in play, based on a close and systematic interpretation of texts and talk in the context of ethnography.

I hope to have shown the complexity perspective to be a fairly fruitful approach to grammatical research and it would not be out of place to urge the interested analyst to investigate the wide ranging, dynamic and systematic variability and stability within and across individuals in Squliq and other Formosan languages from the complexity perspective.

References

- Beckner, Clay, Richard Blythe, Joan Bybee, Morten H. Christiansen, William Croft, Nick C. Ellis, John Holland, Jinyun Ke, Diane Larsen-Freeman, Tom Schoenemann. 2009. Language as a complex adaptive system: Position paper. *Language Learning* 59(S1): 1-26.
- Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad, and Edward Finegan. 1999. *Longman Grammar of Spoken and Written English*. London: Longman.
- Blake, Barry. 2001. *Case*. Cambridge: Cambridge University Press.
- Bybee, Joan. 1998. 'Irrealis' as a grammatical category. *Anthropological linguistics* 40.2: 257-271.
- _____. 2010. *Language, Usage and Cognition*. Cambridge: Cambridge University Press.
- Chang, Anna H. 2006. *A Reference Grammar of Paiwan*. Doctoral dissertation, Australian National University.
- Croft, William. 2006. The relevance of an evolutionary model to historical linguistics. In Ole Nedergaard Thomsen (ed.), *Competing Models of Linguistic Change: Evolution and Beyond*, 91-132. Amsterdam/ Philadelphia: John Benjamins Publishing.
- Dixon, Robert M. W. 1994. *Ergativity*. Cambridge: Cambridge University Press.
- _____. 2000. A-constructions and O-constructions in Jarawara. *International Journal of American Linguistics* 66.1: 22-56.
- Hawkins, John. A. 2004. *Efficiency and Complexity in Grammars*. Oxford: Oxford University Press.
- Holmer, Arthur J. 1996. *A Parametric Grammar of Seediq*. Lund University Press.
- Hopper, Paul. 1987. Emergent grammar. *Proceedings of the Thirteen Annual Meetings of the Linguistic Society of Berkeley*, 139-157.

- Hsieh, Fuhui. 2015. The *sa* construction in Paiwan: A mismatch of syntax and semantics. In E. Zeitoun, S. Teng and J. Wu (eds.), *New advances in Formosan Linguistics*, 313-339. Asia-Pacific Linguistics 017/Studies on Austronesian Languages 003. Canberra: Australian National University.
- Huang, Lillian M. 1993. *A study of Atayal Syntax*. Taipei: Crane Publishing Company.
- _____. 1995. The voice system in Atayal. In Feng-fu Tsao and Mei-hui Tsai (eds.), *Proceedings of the First International Symposium on Languages in Taiwan*, 73-98. Taipei: Crane Publishing Company.
- Huang, Lillian M. and Tali' Hayung. 2016. 泰雅語語法概論 (Introduction to Atayal Grammar). 台北:行政院原住民事務委員會出版.
- Huang, Shuanfan and Huei-ju Huang. 2003. On the status of reality marking in Tsou. *Taiwan Journal of Linguistics* 1.2:1-34.
- Johnstone, Barbara. 2013. "100% Authentic Pittsburgh": Sociolinguistic authenticity and the linguistics of particularity. In Thiemo Breyer, Véronique Lacoste, and Jakob Leimgruber (eds.), *Indexing Authenticity: Perspectives from Linguistics and Anthropology*, 97-113. Berlin: Mouton De Gruyter.
- Kemmer, Suzanne. 1993. *The Middle Voice*. Amsterdam/Philadelphia: John Benjamins Publishing.
- Labov, William. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Langacker, Ronald. 1987. *Foundations of Cognitive Grammar, Volume 1: Theoretical Prerequisites*. Stanford: Stanford University Press.
- Larsen-Freeman, Diane and Lynne Cameron. 2008. *Complex Systems and Applied Linguistics*. Oxford: Oxford University Press.
- Li, Paul Jen-kuei and Shigeru Tsuchida. 2001. *Pazih Dictionary*. Taipei: Institute of Linguistics, Academia Sinica, Taiwan.

- _____. 2002. *Pazih Texts and Songs*. Taipei: Institute of Linguistics, Academia Sinica, Taiwan.
- Lindblom, Björn, Peter MacNeilage and Michael Studdert-Kennedy. 1984. Self-organizing processes and the explanation of phonological universals. In Brian Butterworth, Bernard Comrie, and Östen Dahl (eds.), *Explanation for Language Universals*, 181-203. New York: Walter de Gruyter.
- Malchukov, Andrej and Andrew Spencer. 2009. Typology of case systems: parameters of variation. In Andrej Malchukov and Andrew Spencer (eds.), *The Oxford Handbook of Case*, 651-667. Oxford: Oxford University Press.
- Nettle, Daniel. 1999. *Linguistic Diversity*. Oxford University Press
- Rau, Victoria, D. 1992. *A Grammar of Atayal*. Taipei: Crane Publishing Company.
- _____. 2004. Lexical similarity, sound change and intelligibility of Atayalic dialects. In John Bowen and Nicholas Himmelmann (eds.), *Papers on Austronesian Subgrouping and Dialectology*, 37-95. Pacific Linguistics 563. Canberra: The Australian National University.
- Ross, Malcolm. 2002. The history and transitivity of Western Austronesian voice and voice-marking. In Fay Wouk and Malcolm Ross (eds.), *The history and Typology of Western Austronesian Voice Systems*, 17-62. Pacific Linguistics, Research School of Pacific and Asian Studies, the Australian National University.
- Starosta, Stanley, Andrew Pawley, and Laurence Reid. 1981. The evolution of focus in Austronesian. In Amran Halim, Lois Carrington, and Stephen Wurm (eds.), *Papers from the Third International Conference on Austronesian Linguistics, Vol.2: Tracking the Travelers*, 145-170. Pacific Linguistics Series C, No. 75. Australian National University.
- Teng, Stacy Fang-Ching. 2008. *A Reference Grammar of Puyuma*. Pacific Linguistics, PL 595. Canberra: The Australian National University.

- Timberlake, Alan. 2007. Aspect, tense, mood. In Timothy Shopen (ed.), *Language Typology and Syntactic Description, Volume III: Grammatical Categories and the Lexicon*, 280-333. Cambridge: Cambridge University Press.
- Traugott, Elizabeth Closs. 2007. The concept of constructional mismatch and type-shifting from the perspective of grammaticalization. *Cognitive Linguistics* 18: 523-57.
- Van Valin, Robert. 1981. Grammatical relations in ergative languages. *Studies in Language* 5.3: 361-394.
- Yeh, Maya Yuting. 2013. *Event Conceptualization and Verb Classification in Squliq*. Ph.D. Dissertation, National Taiwan University.
- Yeh, Maya Yuting and Shuanfan Huang. 2009. On the interaction between TAM, voice forms and nominative NPs in Squliq Atayal. Paper presented at *the Eleventh International Conference on Austronesian Linguistics*. Aussois, France, June 22-26, 2009.
- Yeh, Meili. 2016. 賽夏語語法概論 (Introduction to Saisiyat Grammar). 台北: 行政院原住民事務委員會出版.
- Zeitoun, Elizabeth, Lillian M. Huang, Marie M. Yeh, Anna H. Chang, Joy J. Wu. 1996. The temporal, aspectual, and modal systems of some Formosan languages: A typological perspective. *Oceanic Linguistics* 35.1: 21-56.

Shuanfan Huang

Graduate Institute of Linguistics, National Taiwan University

sfhuang@ntu.edu.tw

泰雅語法的變異性與穩定性

黃宣範

國立台灣大學

本文從語言作為複雜的調適系統的角度，利用泰雅語口語語料，檢視泰雅語法中幾個句構所表現的變異性與穩定性。句構的概念雖然隱含結構的穩定性。但也必然具有變異性，因為變異是驅動語言變化的基本要素。變異性有助於我們更了解泰雅語法的複雜度，而穩定性才是語言系統通常比較偏愛的狀態。本文觀察泰雅語的格位系統、關係子句、時式動貌與模態系統、[S/A], [S/P] 的句與句之間的代詞連結、LV2 的結構、連動句構等等，顯示每一句構都具有複雜而有趣的變異而穩定的雙重性質。本研究也說明把語言視為複雜的調適系統是個深具創意的觀點。

關鍵詞：賽考利克泰雅語、格位標記、時式動貌與模態標記、
多動詞構式，複雜系統觀點