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A Voice System in Search of an Identity: The Multiple Functions of the Patient Voice Construction in Formosan Languages*

Shuanfan HUANG
National Taiwan University

Philippine-type languages, including Formosan languages spoken in Taiwan, are known to lack the grammatical category of subject representing convergence of topic, actor and pivot and do not have a pivot system governed by the exigencies of topicality and linkage patterns under coreference. In this study we presented the Formosan solution to 'voice' by undertaking a systematic examination of patient voice constructions in four Formosan languages. Three distinct discourse functions of patient voice constructions were distinguished based on evidence from discourse linkage patterns, namely active transitive, notional passive, and pragmatic inverse. The PV constructions in Formosan languages are not true voice constructions in the traditional sense, since PVs in these languages are neither active, nor inverse, nor passive, precisely because they can be all of them, given appropriate discourse context. These empirical findings pose a challenge to the mainstream views on voice marking and call for a rethinking of the typology of the voice systems in the world' languages.

Key words: passive format, patient voice constructions, linkage patterns

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1. Introduction

The ‘focus’ systems of Western Austronesian languages (now more generally known as ‘voice’ systems, a term adopted in this study), including Philippine languages and Formosan languages spoken in Taiwan, is widely known to be a typologically unusual kind of morphosyntactic alignment. In this system, one argument is marked as having a special semantic relationship to the verb and this special relationship manifests itself as a ‘voice’ affix on the main verb that corresponds to the syntactic role of the argument nominal within the clause. The argument nominal is marked by a particular case marker and enjoys a privileged syntactic status in the clause. The verb so marked then triggers a reading of the nominative-marked noun as the patient of the clause, as the agent of the clause, or as location, instrument, beneficiary of the event associated with the verb. One of the most intensely researched of Philippine-type languages in early Austronesian scholarship is Tagalog, where verb forms with affixes <um>, -in, -an-, and i- were respectively analyzed as “active voice,” “direct passive,” “local passive,” and “instrumental passive” in early Tagalog linguistics (Wolff 1973). Given the one-active and three-passive analysis, the selected NP was then called “subject.” Since the 70’s the nature of the voice systems in these languages has been a focus of intensive research and has remained largely controversial. Among the well-known topics that have long intrigued grammarians, typologists and historical linguists are the origin and evolution of Austronesian voice systems (Starosta, Pawley and Reid 1982; Starosta 2002; Wouk and Ross 2002; Blust 2009; Chen 2017; Smith 2017, among many others too numerous to cite), case marking, verb morphology and its reconstruction in PAN (Blust 1999; Sagart 2004; Ross 2009; Blust 2009; Chen et al. 2022); Austronesian voice systems from a typological perspective (Shibatani 1985, 1988; Reid and Liao 2004; Himmelmann 2005; Arka and Ross 2005; Ross and Teng 2005; Arka and Manning 2008), the semantic/pragmatic

properties and transitivity of Austronesian voice systems (Huang 2002; Tanangkingsing 2008; Huang and Tanangkingsing 2011; Teng 2020); the nature of valence-changing morphology (see articles anthologized in Austin, Blake and Florey 2001; Teng 2020), accusativity vs ergativity and grammatical relation in Philippine-type languages (Kroeger 1993; Foley 2008; Chen and McDonnell 2019).

1.1 A wide variety of passive constructions in the Austronesian world

The current study represents the most comprehensive attempt yet to investigate the discourse functions of the patient voice system in four Formosan languages (FLs), the Austronesian languages spoken in Taiwan. The discourse data used in this study comes from a corpus of Pear and Frog narratives and daily conversations in several FLs constructed as part of a larger project to study the interaction between grammar, discourse, and cognition (visit https://corpus.linguistics.ntu.edu.tw/# for an introduction to an updated and vastly expanded version of the corpus). These lines of research were in part inspired initially by research conducted by Slobin and his associates. Using the frog story method, Slobin (2004) found, for example, that speakers of S-languages and V-languages have distinctive narrative styles, especially in representations of time and space. S-languages allow for detailed description of paths within a clause and tend towards greater specification of manner. In V-languages, such elaboration is more of a luxury since path and manner are elaborated in separate clauses, in comparison with S-languages (see Huang and Tanangkingsing 2005 for findings on a similar semantic typology of the motion event clauses in six Western Austronesian languages, including five FLs). The nature of the voice systems in Western Austronesian languages have turned to be far more complex than that of motion event clauses. Two central questions were raised in the introduction to the

volume edited by Arka and Ross (2005) that have continued to engage the attention of many Austronesian researchers. The first question concerns how Austronesian voice system should be characterized in terms of syntactic typology and the second question is, per Arka and Ross (2005), if the undergoer voice in these languages is the default voice in most systems of both the Philippine and Indonesian types, how is the undergoer voice in these languages selected in discourse. The voice systems of languages examined either in volume or in the vast and growing literature on Austronesian languages differ from each other, often in quite subtle ways. The present study focuses on the nature of the patient voice (PV) constructions in Formosan languages in natural discourse, in particular whether the PV constructions, their labels notwithstanding, can be interpreted as passive familiar from European languages.[1] Indeed, toward of the end of their introduction, Arka and Ross (2005: 13), based on case studies of voice phenomena in Palu'e by Donohue (2005) and Manggarai (Arka and Kosmas 2005; see also Arka and Wouk 2014), raise the most basic question in the typology of the 'passive voice': If the putative undergoer voice construction in these languages is a voice, it is passive, but is it in fact a voice? It is clear from their discussion of the papers in the volume, that the answer was in the affirmative. Any construction that involves some kind of change in the grammatical status of the arguments counts as a change in voice.

[1] Following Givón (1990) I take passive, as a comparative concept, to be a multi-dimensional functional domain and characterized by the following five features. It is these features that frame the following discussion of patient voice constructions in FLs in relation to 'passive' voice. The five features are (1) The passive is in contrast with another construction, the active; (2) A of the passive is encoded like an Oblique, if it is expressed; (3) P is encoded like a Subject; (4) V of the passive is morphologically distinct from V in the active, and (5) The passive is pragmatically restricted relative to the active (cf. Shibatani 1985; Croft 2001; Siewierska 1985, 2005). For purposes of discussion of the voice systems in FLs, the sixth feature is critical: (6) maximal or minimal integration of A into the syntax of PV clauses. Few languages will have a descriptive category that corresponds exactly to these five features (e.g., there are 'passive without passive morphology' languages), but for our present purposes this characterization is sufficient.

As an illustration, Palu'e and Manggarai, both languages spoken on the island of Flores in Eastern Indonesia, have lost the voice morphology, but are argued to have a passive which is not marked morphologically on the verb. In Palu'e, the passive is marked by undergoer-actor-verb (PAV) word order, while in Manggarai, Arka and Wouk (2014) show that there is an active/passive opposition with a change in structural coding and the agent is marked by le. In addition to agent demotion, the voice change in Manggarai is also encoded by a change in subject co-referential cliticization. Rukai, a Formosan language that has lost the voice morphology has evolved an active-passive voice and the passive is marked by a passive marker on the verb (Zeitoun 2016; Ross 2013). In Austronesian languages that have retained the voice morphology, several different syntactic strategies to express passive in functional-pragmatic terms can be distinguished. Puyuma, an FL spoken in southeastern Taiwan, has the typical Philippine-type voice system, and also in addition a passive construction marked by prefix ki- on the verb and the agent is marked oblique.[2] There is also in Puyuma a quasi-passive construction, namely the anticausative construction marked by *m-u-* on the verb where the undergoer is marked nominative and the external force is marked oblique (Teng 2020). In Indonesian, representing the Indonesian-type voice system, transitive verbs show a tripartite system: an actor voice (AV) construction marked a nasal prefix (*meN-*), an affixed non-AV (undergoer voice) construction where the verb is prefixed with *di-* and the agent argument is expressed as a preposition, is understood to be oblique and may be optionally deleted. This is generally analyzed as passive. There is also the zero UV construction where the verb is unaffixed, the agent is expressed by preverbal pronominals and is understood as an active transitive (Miller 2014). In Cebuano, a Philippine language, the *na-* prefixed verb construction is argued to best satisfy the standard criteria for a passive construction

[2] *ki-* passive is also found in Paiwan and Rukai, apparently a result of language contact (cf. Teng 2020).

in a language: defocusing of agents, minimal integration of A into the syntax of its clauses, low text frequency and a distinct word order from the active clause. In clauses containing the *na*-affixed verb, the P is the inadvertent undergoer of an action while the A is always absent and inaccessible (Tanangkingsing and Huang 2007). In Kavalan, Paiwan and other East Formosan languages there is a *ma*-undergoer voice construction, which is in contrast with the typically active transitive patient voice constructions. The *ma*- affix typically appears on stative verbs, though verbs formed with *ma*- may also be valency-enhancing in that they permit agentive phrases marked by genitive marker or genitive clitic, resulting in a structure which is functionally equivalent to the passive familiar from language such as English (see Chen et al. 2022 for further discussion).

In this study we will be concerned specifically with the behaviors of patient voice constructions in natural discourse in FLs to better understand the discourse-pragmatics of the voice system in Formosan languages. How did other authorities view the discourse behavior of PV constructions? One might anticipate that there would be a need to make a strenuous effort to master a large literature that had been written on this important topic. The truth is that much of the research into voice constructions in FLs has largely been restricted to constructed data, and how voice constructions are deployed in natural discourse in these languages has not been adequately examined. To anticipate the findings of the present study, what the PVs and the voice system in FLs are committed to doing are to specify transitivity of clauses determined in part by definiteness, referentiality or affectedness of the patient, agency of the agent or completeness and perfectivity of the event associated with the verb. In contrast, the various voice forms in discourse are never thematically organized such that they respond to the exigencies of topicality and interclausal linkage patterns to achieve the effect of patient promotion to subject, agent demotion to an oblique argument and a pivot system which is sensitive to changes in the ‘syntactic roles’ of patients and agents.

What the voice systems in FLs can do is to organize the discourse structure to achieve agent demotion and patient promotion via what I will term 'passive format' in discourse when the speaker finds it appropriate to do so.

1.2 Passive as a multi-dimensional functional domain

In the present context I take passive as a multi-dimensional functional domain in the sense stated in footnote 1 and I pay careful attention to how PV constructions in FLs function in relation to actor voice constructions (AV) in discourse. In effect, I take passive to be a property not of verbs or clauses, but of a discourse. Note that the term PV is being used in this study as a cover term to encompass all non-actor voice constructions (namely PV, LV, and CV clauses). Several commonly known properties of PVs in FLs must be noted before we proceed. First, PVs exhibit the typical properties associated with active transitive clauses. Second, PVs have a very high text frequency (they together account for about 50% of all clause tokens in our corpora) and are not pragmatically restricted at all vis-à-vis their AV counterparts. The agent of a PV is typically overt and is often syntactically integrated into the main predicate or the AUX and manifests properties associated with syntactic core arguments as opposed to adjuncts. Finally, the verb in a PV exhibits special marking, just as the verb of the AV is also explicitly marked. PV and AV then do not really contrast since both are active clauses. This implies that FLs do not have a voice construction that is formally or functionally passive, a point also stressed in Shibatani (1985) and Siewierska (2005). Despite these observations, Keenan and Dryer (2007: 360) take Malagasy and Philippine-type languages as having multiple passives when they state that: "... Other languages on the other hand, such as many among the Bantu and Austronesian groups, essentially allow all verbs to passivize, and commonly a given verb will have several different passive forms according, for example, to the aspect of the derived structure or the semantic role of its derived subject." In effect, Keenan and Dryer

take all the non-actor voice markers as markers of passive. They illustrate their points with data from Kapampangan, a Philippine language (Keenan and Dryer 2007: 352) (glossing original):

(1) a. k<um>amang aku sa tubig na lata adti balkon
<AV>get I (subj) do water with can on porch
'I'll get the water on the porch with the can.'

b. kamang-in ku ya tubig na lata adti balkon
get-passive I (ag) subj water with can on porch (patient)
'The water will be got by me with the can on the porch.'

c. pag-kamang ku ya lata sa tubig adti balkon
pass-get I(ag) subj can do water on porch (instr)
'The can will be got water with by me on the porch.'

d. kamang-an ku ya balkon sa tubig na lata
get-passive I(ag) subj porch do water with can (loc)
'The porch will be got water on by me with a can.'

If we understand passives to refer to formally marked structures that function to demote agents and promote patients in discourse, then passives are not limited to what is termed the basic passive (e.g., *John was slapped*) in the sense of Keenan and Dryer (2007). Keenan and Dryer (2007) raise the question whether languages that lack the basic passive construction have a gap in their expressive power. Their answer is that if English had no passive, it might use a semantically equivalent active transitive with an indefinite subject (e.g., *someone slapped John*). In general, Keenan and Dryer (2007) hold that the most common means of expressing a functional equivalent of the basic passive is to use an active sentence with an

impersonal subject. We have shown above that a number of Austronesian languages recruit a wide variety of passive constructions, including the fascinating strategy pursued by Manggarai, where the voice change is encoded by a change in subject co-referential cliticization; the *ma-* undergoer construction attested in Kavalan and Paiwan, the *mu-* anticausative construction in Puyuma and the constructions with *na-* prefixed verbs in Cebuano where the P is the inadvertent undergoer of an action while the A is always absent and inaccessible. We show below that deploying an active clause with an impersonal subject is precisely the discourse strategy that is not available to FLs; instead, they employ discourse patterns exhibiting what is termed 'passive format' below in section 2 that can be shown to be functionally equivalent to the basic passive.

Current consensus for the Formosan languages is that, as the following data on linkage patterns in section 2 demonstrate, PVs typically function as active transitive clauses in discourse, though they have multiple discourse functions and may also receive notional passive interpretation in certain specifiable discourse contexts. If one goes to the e-dictionary for the 16 officially recognized FLs put up online under the auspices of the Council of Indigenous Peoples in Taiwan (https://e-dictionary.ilrdf.org.tw/index.htm), and type in the function word *bei*, the 'passive' marker in Mandarin, one finds that some of the PV sentences are rendered as *bei* sentences in Mandarin translations. This suggests that these PV sentences in the mind of native FL e-dictionary speaker-compilers are sometimes perceived as 'functionally' equivalent to the *bei* construction in Mandarin, although that should not be taken to imply that these PV sentences per se are structurally equivalent to passives in the standard sense of the term noted above. The very same verbs in PV form in a different context are in fact rendered in Mandarin as active transitive sentences in the same e-dictionary. Examples of these dual functions of PV clauses from the e-dictionary in Saisiyat and Paiwan are illustrated below in (2) and (3).

(2) Saisiyat[3]

a. Pazay noka korkoring si'ael-en
rice Gen child eat-PV
E: 'The rice got eaten by the child.'
C: 'fan bei haizi chi-le.' (Lit. rice bei child eat-Pfv)

b. k<in>a:at noka minayti' mingkoringan ma'an Si-bae:iw ila
<Pfv>write Gen younger.sibling female 1S.G CV-buy Pfv
E: 'I sold the book written by my younger sister.'
C: 'wo maidiaole wo meimei xie de shu.'

(3) Paiwan

a. c<in>abiljaq-an nua kina timadju ayatua m-aparang tua quliqali
<Pfv>slap-LV Obl mother 3S.Nom because AV-bully Obl people
E: 'He got slapped by his mother because he bullied people.'
C: 'yinwei ta qifu bieren bei mama da-le yibazhang.'
(Lit. because 3S bully other.people bei mother slap-Pfv)

b. ka kirivu-an timadju m-ikakimi a uri qaung
when curse-LV 3S.Nom AV-grimace Lnk about.to <AV>cry
E: 'He grimaced and about to cry after he got scolded.'

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[3] Glossing and transcription conventions used in this study are: 1S-first person singular; 1P-first person plural; 3S-third person singular; 3P-third person plural; Asp-aspect marker; Aux-Auxiliary verb; AV-Actor voice marker; CAU-causative marker; Conj-Conjunction; Det-Determiner; DM-Discourse marker; E-Extended argument; Emp- emphatic marker; Epis-Epistemic marker; Exist-Existential verb; FP-Filler particle; Fut-Future tense marker; Gen-Genitive case marker; Hab- habitual marker; Imp-imperative; Lnk-Linker; Loc-Locative case marker; Locnmz-Locative nominal; LV-Locative Voice marker; N-Neutral; NAV-Non actor voice marker; NMZ- Nominalizer; Nom-Nominative; Obl-Oblique case marker; Pfv-Perfective marker; PM-Pause marker; PN-Proper noun; PV-Patient Voice marker; QP-Question particle; CV-Circumstantial Voice marker. x= - x is lengthened; … (0.8)- duration of pause for 0.8 seconds; FS- false start; (H)- inbreath, audible inhalation; [ ]- overlapping speech

C: ‘ta *bei* ma shi, baizhelian yao ku (Lit. 3S bei curse when, grimace about to cry).’

I have now briefly identified several strategies that Austronesian languages recruit to express notional passive and hinted at the multiple functions of patient voice constructions in Formosan languages. We now move on to consider interclausal anaphoric linkage patterns in FLs immediately below and the roles of passive format in both notional passive interpretations and understanding how voice constructions are selected in natural discourse. Passive format is argued in section 3 below to be a distinct discourse strategy for conveying notional passives that has not been reported in the literature. This may give us some insight as to why we don’t always appreciate how discourse enriches our communicative repertoire.

1.3 Organization of the paper

The rest of the paper is organized as follows. Section 2 examines anaphoric linkage patterns in Squliq and shows how passive format emerges from discourse as a strategy to express notional passives. Section 3 defines and justifies the notion passive format. Section 4 looks at the linkage patterns in Saisiyat and identifies some of its unusual linkage patterns as well as how these relate to its characteristic word order patterns. Sections 5 investigates the linkage patterns in Kavalan, while section 6 looks at how PV clauses can receive a notional passive interpretation. This happens when they occur in subordinate clauses where the agent phrase is absent or inaccessible and the patient nominal occurs as head of a modifying clause. Section 7 examines the linkage patterns in Tsou. Section 8 summarizes the multiple functions of the patient voice constructions in each of the four Formosan languages and suggests that PV clauses as a family of constructions. Section 9 takes a closer look at the distribution of the undergoer construction in Kavalan, focusing special attention on the undergoer marker *ma-* in the language. Section

10 maps out the syntactic space for the *ma-* construction. Section 11 is the conclusion.

2. Pivot and interclausal anaphoric linkage patterns

In this section we develop the notion passive format and suggest how it relates to notional passive interpretation and to the nature of voice systems in FLs. Before we proceed, we need to investigate in some detail the discourse-pragmatic roles of pivot in FLs. Van Valin (2005) distinguishes different types of pivots found in various languages, some of which are argued to be definable purely in syntactic terms, others of which are shown to be influenced by discourse-pragmatic considerations such as the use of passive or antipassive. While controllers may trigger verb agreement (like subjects in English) or antecede a reflexive (e.g., the subject he in 'He did it himself') or supply the interpretation for a missing argument in an adjacent unit, pivots supply the missing argument in a linked unit when an argument can be argued to bridge two constructions, as in He saw John and ran away. In many languages subject is seen as both a controller and a pivot that has been generalized to many contexts. Note, however, the notion subject in the grammar of a language such as English involves multiple functional constraints. It is a grammatical strategy that privileges clustering the properties of actor, topic, and pivot onto one nominal argument, and thus subject is fundamentally a pragmatic notion. Formosan languages opt for an entirely different strategy. Actors and topics are funneled into different nominal arguments, and it is not possible to single out a subject category as a pivot in FLs, an insight due primarily to Schachter (1976). This follows from the fact that FLs do not have a consistent pivot pattern and thus no subject category can be established.

Passive, a voice construction that figures importantly in Van Valin (2005) classification of types of controllers and pivots, is also a grammatical strategy that

similarly involves multiple functional constraints. Passive, in the present study, is conceived of as a way of organizing grammars to exploit the correlation of four mechanisms: the notion subject, patient promotion to subject status, actor demotion to an oblique argument and, most importantly, a pivot system governed by the exigencies of topicality and interclausal linkage under coreference. Since FLs lack the grammatical device of subject representing convergence of topic, actor and pivot, this gives rise to the fact that they do not have a consistent pivot type. What this means is that FLs have pursued a completely different evolutionary pathways and are not built to the same design as the languages with a passive voice that we are all familiar with. Many languages of the world, for example, have an accusative system with an S/A pivot where the default choice for pivot is the actor and there is also a passive that operates to make the undergoer of a transitive the choice for pivot. By contrast, languages with a deep ergative system have an S/P pivot where the default choice for pivot is the undergoer. Often there is also an antipassive that makes the actor of an intransitive verb the choice for pivot. FLs opt neither for an accusative nor ergative pivot system, since in FL coordinate constructions nearly any type of linkage patterns is attested, suggesting that FLs do not have a (consistent) pivot system.

One way to determine whether a language has an S/A pivot, or an S/P pivot or no pivot of any type is to examine interclausal coreference involving zero anaphora. A language with an S/A pivot means that both S=A and A=S linkage patterns are attested and that no other linkage patterns are permitted. Similarly, a language with an S/P pivot means that only S=P and P=S linkage patterns are attested and that no other linkage patterns are sanctioned. Interclausal coreference linkage is done by counting anaphoric links across coordinate clauses according to the valency roles in which the coreferential referents occur in the two clauses. An instance of the A=S linkage pattern means that a nominal appearing in the A role in the first conjunct reappears as S in the succeeding clause. Although

interclausal coreference in Formosan languages exhibits a strong preference for an accusative (S/A) pattern of coreference (namely S=A or A=S), the ergative S/P pattern and even other minor linkage patterns such as A=P are also attested. If any linkage pattern in inter-clausal coreference in a language is possible, then of course the language cannot be said to have a pivot system at all.

2.1 Linkage patterns in Squliq

The table below shows all the types of linkage patterns instanced in Squliq based on five Frog narratives. The corpus data for the Frog narratives is based on adults' tellings of the booklet Frog, where are you? This is a wordless booklet that contains 24 pictures in which a boy and his dog try to find their pet frog, which had run away from home. Their search results in a happy ending depicted in the last picture where the boy and dog return home with the frog. Note that in the tabulations below, clitics attached to A's appearing in the second conjunct of a coordinate construction are counted as an anaphoric zero, since pronominal clitics appear regularly on argument nominals in transitive clauses in Squliq and other FLs.

Table 1. Distribution of Linkage Patterns in Squliq

	S=P	P=S	S=A	S=S	A=A	A=S	Total
Frog 1	1	0	8	15	2	4	30
Frog 2	1	0	8	14	5	4	32
Frog 3	1	1	5	19	1	5	32
Frog 4	2	1	11	17	7	7	45
Frog 5	0	0	6	10	5	0	21
Total	5	2	38	75	20	20	160
%	3.1	1.2	24	47	12.5	12.5	100

As we can see, 95.7% of the linkage patterns in Table 1 represents patterns of coreference under identity of the primary topics As or Ss, namely A=A, S=S, S=A, and A=S (henceforth abbreviated as S/A linkage patterns). There is thus a

strong convergence of the primary semantic ('role') property of agent and primary pragmatic property of clausal topic for the Squliq Frog data, even though Squliq, like other FLs, with the sole exception of Rukai, is morphosyntactically ergative, one would also have expected either S=P or P=S linkage pattern to have a stronger showing in interclausal anaphoric coreference. As Anderson (1976) has observed, there is a need to distinguish morphological coding properties from behavior-and-control properties and between deep and shallow ergative languages. In "deep" ergative languages both overt morphological and formal behavioral properties reveal the same ergative-absolutive split, while in shallow ergative languages only the morphology reveals this split, and behavior-and-control properties follow a nominative-accusative pattern. However, as we have seen, even the behavior-and-control properties of Formosan languages in interclausal coreferences cannot be reduced to a simple nominative-accusative pattern, since nearly every possible linkage pattern is found in Squliq and other FLs as well. The high percentage of the S/A linkage pattern is hardly surprising since both accusative and ergative languages are known to exhibit an unmistakable preference for S/A anaphoric links, a grammatical truism that follows from the discourse-pragmatic principle that S and A as human or animate actor subjects enjoy greater degrees of topicality than patients and they show up in syntactic coding as zeros or pronominal forms and persist to a greater degree through a discourse than other argument nominals, resulting in a higher percentage of S/A anaphoric linkage patterns.

As just noted above, in S/A linkage patterns, the genitive clitic attached to an A appearing in the second conjunct of a coordinate construction is counted as an anaphoric zero, since pronominal clitics are nearly always present for agent arguments in transitive clauses in Squliq and some other FLs. (4) and (5) illustrate the use of such pronominal clitics in an S=A and A=A linkage pattern respectively. Note the peculiar syntax of the utterance at line 97 in (5), the use of the genitive

nya’ vs the use of the AV *m-tulux*. One could also say that (5) exhibits an A=S linkage pattern, based on the use of the AV clause.

(4) Squliq Frog 2

175... Botu qani hya’ ga [S]
PN this Emp Top

176... memaw m-karaw squ’ a
even AV-climb Loc PM

177... kta-n=nya’ qutux bling na’ qhuniq [A]
see-LV=3S.Gen one hole Gen tree

‘Botu even climbed onto (a tree) and took a look at a hole in the tree.’

(5) Squliq Frog 2

95... (3.4) ru tpapak=nya’ hya’ ga,
Conj pet.name=3S.G Emp Top

96... (0.9) cyux=nya’ kt-an qu’ b’yaling qasa lga, [A]
Aux=3S.G see-LV Nom bee that FP.Top

97... moye=nya’ balay m-tulux [A]
hard=3S.G true AV-bark

‘His pet, Tpapak, was watching the bee(-hive) and it was barking hard (at the beehive).’

3. Passive format

Although S/A linkage patterns are the most common preferred way of forming anaphoric links in Squliq, that does not mean that the language has an S/A pivot system, since, based on Table 1, Squliq also allows for an S=P, P=S, or even P=A and A=P linkage patterns to occur in the narrative data. In the Squliq Frog narrative corpus there were a total of four tokens of S=P linkage pattern produced

by three different speakers. In each instance, 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 marked by the genitive *na'/nqu'*, though never a genitive clitic (=*nya*') attached to the PV, as illustrated in (6).

(6) Squliq Frog 4

237...	wal	si	pqaya'	squ'	tunux	a=		
	Aux	just	cling.	Obl	head	PM		
238...	(0.9) qara'	na'	a=	qehuy	na'	para'	qani	qu'
	branch	Gen	PM	antler	Gen	deer	this	Nom
239...	tali'	ga	lga	[S]				
	PN	TOP	FP.TOP					
240...	wal	ras-un	na'	para'	la			
	Aux	take-PV	Gen	deer	FP			

'Tali keeps clinging to the head, the branch, the antler of the [P] deer as he is taken away by the deer.'

In (6) the narrator was at lines 237-238 fumbling for the word *qehuy* 'antler' and succeeded in doing so only after two trial attempts marked by lengthening the pause marker *a*. We show below that the S=P linkage pattern represents an important discourse strategy for expressing the notional passive for the IU at line 240. First, an NP is introduced into discourse as an intransitive subject [S], optionally marked by the topic marker *ga*', and in the immediately following stretch of discourse the subject NP [S] reappears as a [P], the patient of a transitive PV clause, the agentive NP is not marked by a pronominal clitic and the whole sequence forming a cross-IU passive format of the form shown schematically in (7) below:

(7) Passive format in Squliq:

a. [AV + NP_S] *ga*

b. PV + agentive NP not marked by pronominal clitic

where the subscript s representing intransitive subject is the topic in both the fragment marked by topic marker *ga'* and the following stretch of discourse.

The passive format in Squliq and in other FLs can be seen as a locus of interaction that speakers orient to in projecting what actions are being done by their utterances. Note that the presence of an agentive nominal marked by genitive *na*' rather than by a pronominal clitic is crucial for securing notional passive interpretation as that would ensure that the S nominal continues to function as the topic of the immediately following discourse fragment, and that the *na'*-marked agentive nominal cannot be the topic of the PV clause, as would be the case were the agentive nominal a clitic attached to the Aux or the main verb as a pronominal clitic. It is commonly known that agents with a genitive clitic have higher topic persistence than those marked with a genitive marker *na'/nqu'*, which is why *para'* at line 240 in (6) would be unlikely to assume the topic status of the discourse sequence (see Givón (1976) for further discussion on topicality hierarchy).

Another instance of S=P linkage pattern illustrating the emergence of a passive format in Squliq narrative is given in (8) where *ke'ke'* is an onomatopoeic expression and the agentive phrase at line 219 is marked by genitive *nqu'*, but not a pronominal clitic.

(8) Squliq Frog 1

217...	si	ke'ke'	mge	qu'	so-n	mha	o=	a		[S]
	Just	ONOM	AV.flee	Nom	say-PV	say.AV	PM	PM		
218...	(0.8)	a=	huzil	qasa	hya'	la				
		PM	dog	that	Emp	FP				

219... wal hyag- un nqu' yaya' na' tryung [P]
Aux chase-PV Gen mother Gen wasp
'The dog ran away, shouting "ke'ke'" as it was chased by the queen wasps.'

Again, the fragment in (8) produces the same passive format structure as shown in (7) above, except that here the topic nominal was not marked by a topic marker. Over time this type of cross-IU passive format may be compressed into a micro-construction produced in a single IU, as illustrated in (9).

(9) Squliq Frog 4

24... m-aki' qutux qu' qpatung q<n>yat-an nqu' tali' ga
AV-exist one Nom frog raise<Pfv>-LV Gen PN this
'There is a frog kept by Tali.'

Line 24 is a compressed construction representing the existential clause of the language that has the form Exist + *qu'* + (NPpat + (Vpv + nqu' NP)$_{RC}$)$_{NP,}$ where the discourse topic *qpatung* 'frog' marked by nominative *qu'* is introduced by the existential construction embedded within a relative clause whose main predicate is a verb in patient voice form.

The emergence of a 'passive format' in discourse suggests that it is possible to reinterpret a typically active-transitive PV as a notional passive, given an appropriate discourse context, especially when the agentive nominal is not a clitic, or the PV clause occurs within an embedding structure, or both. Enabling conditions for the emergence of a passive format to become the more preferred discourse strategy arise if one takes greater interest in the P nominal than in the agentive A nominal. The emergence of a passive format as a stabilized attractor would involve the following stages:

(10) A. The transitive PV must routinely
(a) omit its agentive NP, or

(b) defocusing the topicality of agent by marking it with a non-pronominal genitive marker

B. The possibility of (a) and (b) entails that the original PV transitive clause in the passive format would eventually lose its transitivity.

C. The agentive marker on A would be likely reinterpretable as an oblique marker.[4]

Language use is the locus of change and variation is the precursor to language change. The fact that there are instances of the S=P interclausal linkage pattern produced by four different speakers in the Squliq narrative data when the language in general shows a strong preference for S/A linkage patterns calls for some explanation. My proposal is that a passive format arises in response to the situation at a point in discourse where there is a need for the intransitive S argument to continue to function as a discourse topic overriding the possible topic status of the agent of an immediately following active transitive PV clause. These steps of development, if allowed to persist over an extended period, would stabilize and ensure that formally active transitive PV clauses in FLs can receive notional passive interpretations in certain discourse contexts. We turn in the next section to consider linkage patterns in Saisiyat to see if a similar passive format can be justified based on discourse data.

4. Linkage patterns in Saisiyat

Saisiyat has several unusual grammatical features that merit mention. First, it does not have bound personal pronouns and thus lacks pronominal clitics. Second, the language appears to have evolved a division of labor strategy where the

[4] The oblique marker on A in *ki*-passive in Rukai is argued to have derived from Proto-Austronesian genitive (Ross 2013). The 'genitive' marker noka in Saisiyat is argued to be an incipient oblique marker in section 4.2.

genitive *noka* tends to occur in PV clauses with a potential notional passive interpretation, especially when they occur in embedded structures, as illustrated in (2), and the pronominal genitives (e.g., *ma'an* '1S.Gen', *niSo* '2S.Gen', *nisia* '3S.Gen') tend to occur in active transitive PV clauses, as shown in (14), line 32 and (16), line 70. Third, Saisiyat has a vibrant case system and a high frequency patient-initial word order pattern, where the PV clauses nearly always receive notional passive readings. Fourth, it has an accusative marker, the only FL with the Philippine-type voice constructions to do so.[5] Saisiyat is a strongly subject-initial language in which AV clauses, unlike a typical morphosyntactically ergative Formosan language like Squliq, enjoys a clear numerical superiority over NAV clauses (77% vs. 23%). Also, unlike most Formosan languages, transitive AV clauses outnumber transitive NAV clauses. Lastly, Saisiyat shows symptoms of split ergativity in that there are two sets of transitive clauses in the language: AV transitives and NAV transitives. NAV clauses tend to correlate with higher discourse transitivity, including their stronger tendency to occur in the perfective aspect, while AV clauses exhibit the more expectable feature of lower transitivity, including their tendency to occur in the imperfective aspect. These features

[5] Seediq is another FL with the PAn voice morphology that has been shown to have evolved an accusative case except that in this language the accusative case is marked by word order. When an AV verb is followed by a patient nominal, there is no case marker that mediate the relationship. It is still an unsettled question whether there is a covert accusative case, or an implicit oblique case that has recently dropped out of the language, since oblique case is frequently dropped in a closely related language, Truku (Lee and Nowbucyang 2016). Discourse data suggest that although some AV clause in Seediq take non-referential patients, over 65% of them refer to (Continued from P.13) either specific or definite referents. Moreover, many AV patients are coded with high continuity devices (zero anaphora, clitics, pronouns) in natural discourse. This is especially true of patients in conversational data (over 50%), a percentage on a par with patients of the NAV clauses. Discourse behavior, assessed in term of topic persistence and referential distance, suggests that there is no significant difference between AV patients and NAV patients (see Huang 2002 for further discussion).

together suggest that Saisiyat is splitting its transitive clauses by exploiting the grammatical strategies usually associated with discourse transitivity (see Yeh 2016 for other details).

Interclausal linkage patterns in Saisiyat, based on Frog narratives, are shown below in Table 2.

Table 2. Distribution of Linkage Patterns in Saisiyat

	S=S	S=A	A=S	A=S	S=P	P=S	P=A	A=P
Frog 1	11	11	9	2	3	1	1	0
Frog 2	0	3	6	9	0	0	0	1
Frog 3	5	10	6	9	2	1	1	0
Frog 4	8	2	2	2	1	2	0	1
Frog 5	22	17	13	10	0	2	1	0

A comparison of the linkage patterns found in Squliq with those shown in Table 2 for Saisiyat reveals striking differences. There are not only more instances of the S=P linkage pattern, but also patterns not found in Squliq, namely P=A and A=P. The significance of these differences will be addressed immediately below. For now, we will focus attention on the rarer S=P, P=S, P=A and A=P linkage patterns, as illustrated below.

(11) Saisiyat Frog 3

42... (0.8) tas-sahae' ray- ray ra:i' [S]
speedy-fall FS Loc ground

43... hini ka taboway min-lakay ila
this Nom jar AV.become-break Pfv

44... hini 'aehoe' ma nisia 'aehoe' [P]
this dog also 3S.Gen dog

45... ma 'awpo'-en ila.
also hug- PV Pfv

‘(The dog) fell sharply to the ground, the jar broke, and his dog was also hugged (by the child).’

(12) Saisiyat Frog 1

88... (0.8) hiza ‘aras-en ila hiza ‘ae’aeaew [P]
there take-PV Pfv there AV.run

89... (2.5) ma-ray ‘at’atasan [S]
AV-pass cliff

90... (1.1) hiza ka=
that PM

91... (1.0) korkoring kayni’ ‘aras-en [P]
child NEG take-PV

92... (0.9) pa-tae’aes ka= b<in>ilis kah’ong [A]
CAU-let.go Acc <Pfv>hold antler

‘(The child) was taken there (while the deer was) running, passed the cliff. He didn’t want to be taken away and he let go of the deer antler being held (by the child).’

In a P=A linkage pattern, the patient argument P occurs invariably in IU- or clause-initial position and that clause is often preceded by a clause where the same nominal occurs in it as a topical element. In (12) the P nominal *korkoring* ‘child’ at line 91 occurs as subject of an intransitive clause at line 89, which means that the nominal *korkoring* has the status of a topic at that point in discourse. Consequently, its continued presence to herald the clause at line 91 is most naturally interpreted as signaling topic continuity, forming a P=A linking pattern with the following clause at line 92. Here the [P] is the NP *korkoring* ‘child’ followed by a bare PV without an accompanying agentive phrase, and the [A], the child, is the agent of the complex clause at line 92 containing a modifying relative

clause whose main verb *b<in>ilis* is a PV in perfective aspect marked by *<in>* without an accompanying agentive phrase.

In an A=P linkage pattern, an agent argument in either a transitive AV clause or a PV clause appears in clause-initial position and the patient argument acts as the topic of the succeeding clause. In (13) the nominal *ahoe'* 'dog' is the agent of the clause at line 75, while the patient argument *boya'* 'bee' is the 'subject' of the clause at line 76. Lines 77-78 parallel the structure of lines 74 and 76, and line 78 also gets a notional passive interpretation.

(13) Saisiyat Frog 4

74... (1.5) hini' ahoe' ma=
here dog also

75... (1.6) h<om>ahli: ka pak-sahae' ka boya' [A]
<AV>shake Acc Cau-fall Acc bee

76... Sowaw-en ila noka boya [P]
chase-PV Pfv Gen bee

77... (2.2) isahini korkoring ma
Now child also

78... (2.3) Sowaw-en noka= kal'oe
chase-PV Gen owl

'The dog causes the beehives to fall and is being chased by the bees. Now the child is also being chased by the owl.'

4.1 A=A linkage pattern vs P=A pattern

At this point one may question whether the second half of the fragment in (12) might be more appropriately interpreted as instantiating instead an A=A linking pattern. To show how a true A=A linking pattern differs from a P=A pattern in as far as how linkage patterns are identified, consider the following two

fragments from the Frog narrative which clearly instantiate an A=A linkage pattern:

(14) Saisiyat Frog 2

28... lakay-en ka hiza ka= binbinisitan [A]
break-PV Nom that Nom container

29... ma=
and

30... mari'-in ila 'al-'aloehaz-en ila ka= ta'oeloeh [A]
take-PV Pfv Red-take.out-PV Pfv Nom head

31... noka i= noka 'ahoe'
Gen PM Gen dog

32... 'awpo'-en ila nisia noka korkoring [A]
hold-PV PFv 3S.G Gen child

'(The dog tried to) break the container, the child pulled the dog's head out (of the container) and he (the child) carried the dog away.'

(15) Saisiyat Frog 5

249... (1.9) mo-hae'oe: 'isa:a' k<om>i:im ka takem [A]
AV-go.down then <AV>search Acc frog

250... (5.0) m-wa:i' sa'oewaz kita-en ila ray= [A]
AV-come AV.true see-PV Pfv Loc

251... (0.8) 'atabai hikor ka= takem roSa'
wood behind Nom frog two

'(The boy) then came down to look for the frog and (he) saw two frogs behind a piece of wood.'

(16) Saisiyat Frog 2

70... (0.8) nisia ta:'itol-on [A]

3S.Gen lift-PV

71... (1.9) noka wa'ae' pa-hangal [P]
Gen deer Cau-carry.on.shoulder

72... si-panra:an ila 'aras-en ila
CV-walk Pfv take-PV Pfv

73... hiza 'ahoe' taniSowaw taniSowaw ka korkoring [A]>[P]
that dog follow follow Acc child

74... noka wa'ae' 'araS-en
Gen deer take-PV

'It (the deer) lifted (the child); (the child) was carried on the shoulder, taken for a walk by the deer. The dog was following the child taken by the deer.'

In (14), all the As are agents of transitive PV clauses. There is little question that the narrator is maintaining his topic continuity regarding the boy. In (14), the dog, as inferred from the discourse context, is the agent of the first PV clause at line 28, and the second A is the child *(korkoring*), which is also the agent of the transitive PV clause at line 32, the last two PV clauses forming an A=A linkage pattern. Note that in (14) the genitive phrase *noka korkoring* function to disambiguate the reference of the genitive pronoun *nisia* '3S.Gen'. In (15), the first A is the agent of a transitive AV clause, while the second A is the agent of a transitive PV clause. Again, given that agents are topics par excellence, it is only natural to assume that the narrator continues to talk about the child, subject of the serial verb construction at line 249, and again at line 250, where the third verb *kita'-en* is a PV. In (16), the genitive personal pronoun *nisia* is agent of the transitive clause at line 70. The PV clause at line 74 functions as a modifying clause whose head is *korkoring* at line 73. (13) and (14) are thus perfect examples of a discourse fragment where the agent of a PV clause maintains topic continuity over a stretch of discourse, forming an A=A linkage pattern.

4.2 Multiple functions of PV clauses

We have seen then that there are multiple functions of PV clauses. They often get notional passive interpretations, especially when the agentive nominals are marked by *noka* and there is a patient argument appearing in sequence-initial position, as seen in (13) above. This is a recurring phenomenon in the narrative text and there is thus some discourse evidence that *noka* may be best viewed as an incipient oblique marker. However, PV clauses typically function as active transitive clauses when they occur as independent clauses taking a genitive nominal as agent of the main verb. To be sure, there are discourse fragments where there is some indeterminacy as to the discourse status of a PV clause, hence indeterminacy in determining their linkage pattern. Consider the following narrative fragment.

(17) Saisiyat Frog 1

98... (1.6) hiza ‘aehoe’ m-wa:i’ tatilhaeael
that dog AV-come AV.help

99... (1.3) min-‘ae’aew hiza korkoring [A]
AV-save that child

100... (5.5) korkoring kaSna’itol ila [S]
child AV.mpve.up Pfv

101... (0.9) noka ‘aehoe’ si-in-‘ae’aew [P]? [A]?
Gen dog CV-Pfv-save

‘The dog came to help and saved the child. The child climbed up on (the rock) and was saved by the dog/the dog saved him.’

102... (0.8) potngor ila ray eh= ray babaw
AV.arrive Pfv Loc FIL Loc top

‘(And) the child got on top (of the rock).’

In this fragment the narrator switched his topic in short order from the dog at line 98 to the child at lines 100 and 102. It would seem more natural to assume that at line 101 the narrator would continue to maintain his topic initiated at line 100 through to the end of the fragment to mean that 'the child was saved by the dog,' as the narrator at line 102 continues to talk about what happens to the child, buttressing the argument for topic continuity. On the other hand, the narrator may have intended to repeat at line 101 the topic he launched earlier at lines 98-99 to mean that the dog saved the child, since at that point in discourse both the child and the dog would be uppermost in the mind of the narrator. Under this alternative interpretation, the clause would function as a typical active transitive. Use of clitic personal pronouns would have helped resolve the issue one way or the other, although that is one recourse that Saisiyat can't really fall back on, since the language lacks personal pronominal clitics. Essentially the same linkage pattern is seen in the fragment (18) below where lines 136-137 also form an S=P linkage pattern. At lines 136-139 the narrator appears to be taking the dog as the topic throughout this part of the discourse sequence. There is thus no question that the complement clause *noka boya' sowawon* is best interpreted as a notional passive. Maintaining topic continuity underpins all the linkage patterns shown in (6) and (8) for Squliq, or (12), (13), (14), (17) and part of (18) for Saisiyat**.**

(18) Saisiyat Frog 5

134...	ks hiza korkoring homses	
	Nom that child frightened.AV	
135...	(0.8) sahoe' ila hani ray ra:i'	
	fall.AV Pfv there Loc ground	
136...	(1.6) 'aehoe' ima rae:iw noka boya'	[S]
	dog Asp run.AV Gen bee	
137...	(1.4) Sowaw-en	[P]

chase-PV

138... (0.8) ‘isa:a’

and

139... (0.8) may ‘isaso: ray kahoey pingi [S]

pass.AV there Loc tree root

‘The child is frightened and falls to the ground, and the dog is running away chased by the bees and is passing under the trees.’

4.3 P=S linkage pattern

Another distinct Saisiyat linkage pattern missing from the Squliq data is P=S, two instances of which are illustrated in (18) above and in (19) below. In (19) there is first at line 103 an intransitive subject acting as the patient of a PV clause, and in the immediately succeeding intransitive clause, the same nominal functions as subject of the intransitive clause, forming a P=S linkage pattern.

(19) Saisiyat Frog 3

102... (1.1) kita’-en lasia hini

see-PV 3P.Gen here

103... hini= korkoring noka= [P]

here child Gen

104... kal’oe Sowaw-en hini sia [P]

owl chase-PV here 3S.N

105... (0.8) hosail ila ray= bato’ babaw [S]

hide.AV Pfv Loc rock top

‘They see that the child is being chased by the owl and is hiding on top of a rock.’

4.4 Word order patterns and special linkage patterns in Saisiyat

In this section we attempt to give an account of the special linkage patterns found in Saisiyat data. As noted above, Saisiyat is strongly subject-initial. Transitive AV clauses are 100% agent-initial, based on our corpus data. In terms of complexity theory, one might say that AV clauses in the language are a stabilized form that attracts or coerce new grammatical constructions, i.e., it imposes a frame on them and models the development of new forms (see Beckner et al. 2009; Traugott 2008 for further discussion on grammaticalization and complexity theory). Since AV clauses, both intransitive and transitive, enjoy clear numerical superiority over NAV clauses, they appear to have acted as a driving force behind the PV clauses having developed a word order pattern in which the innovative non-V-initial word order (i.e., both agent-initial and patient-initial word orders) have gained ground on the more conservative verb-initial word order such that these two innovative types of word orders are now roughly evenly distributed. Below we take a closer look at the patient-initial word order in PV clauses for their role in forming new linkage patterns.

4.5 An account of the linkage patterns P=S and P=A

There are in the Saisiyat Frog narratives a total of six P=S linkage patterns and three P=A linkage patterns, some of which have been illustrated above. The Ps in these linkage patterns are invariably patients of the verbs in PV clauses and these occur in clause-initial position in context where they have been introduced earlier in discourse and are now acting as topic in the current stretch of discourse. Although the fact that they occur in clause-initial position may seem nothing out of the ordinary, given that they are participants that are talked about by the narrator, they are still unusual in that these types of linkage patterns are entirely absent from the Squliq discourse data. As seen in Table 1, the A/S linkage patterns account for 95.7% of all attested patterns. I suggest that an explanation for this crosslinguistic difference in linkage patterns may be sought in the difference in the higher

discourse transitivity of PV clauses relative to the lower discourse transitivity of AV clauses. What this means is that patients in PV clauses in Saisiyat are more likely than patients in AV clauses to become secondary topics and that transitive AV clauses are in all probability a recent innovation, since AV clauses in other FLs are known to be grammatically intransitive (Blust 2009; Huang and Tanangkingsing 2011). Given that these types of Ps are frequently topical, and that topics tend to be expressed early in the sentence, these two features have combined to privilege clause-initial position in the sentence, leading to the occurrence of P=S or P=A linkage patterns. Since AV clauses in Saisiyat are strongly subject-initial, these topical subjects would serve as an attractor for other clause types, pushing either the patient-initial or agent-initial order in PV clauses into an increasingly more dominant word order pattern, with predictable consequences for the occurrence of interclausal anaphoric linkage patterns such as P=S or even P=A.

5. Linkage patterns in Kavalan

We turn next to considering interclausal linkage patterns in Kavalan, a language characterized by at least two special grammatical features. First, while PV and LV clauses are grammatically distinct clause types in other FLs, these clauses have undergone a merger and are realized as LV in form, though LV clauses in Kavalan behave grammatically like patient voice constructions seen in other FLs, with the consequence that locative expressions are now largely coded not by LV, but rather by locative case markers *(ta)…-an*. Secondly, there is a semi-productive valency-decreasing undergoer voice construction, the *ma-* construction, that functions to provide for patient prominence in discourse. Only four intercausal linkage patterns were attested in Kavalan, based on six Frog narratives, are shown below in Table 3, although it is entirely conceivable that other rarer linkage pattern

such as P=A and A=P could turn up in a large sample of corpus data. S=P and P=S linkage patterns are illustrated in (20) and (21).

Table 3. Distribution of anaphoric linkage patterns in Kavalan

	S=P	P=S	S=A	A=S	Total
Frog 1	1	0	7	5	13
Frog 2	1	2	7	6	16
Frog 3	2	0	6	6	14
Frog 4	2	1	5	2	10
Frog 5	1	0	5	1	7
Frog 6	2	2	5	2	11
Total	9	5	35	22	71
%	12.6	7.0	49.3	31.0	100

(20) Kavalan Frog 2

124... (1.3) yau ta-babaw quRu=na uzung-an na [S]
Exist Loc-top head=3S.G shoulder-LV 3S.G

125... (1.0) na siRemuq a yau [P]
3S.G deer Lnk that

126... ya= sunis a yau tangi
Nom child Lnk that now

127... nani
and

128... suRaw=ti [S]
fall=Pfv

'The child is on the back of the deer, is carried by the deer on its shoulder and he falls (off the cliff).'

(21) Kavalan Frog 4

67... tu wiya=ti me-RaRiw a siRemuq a yau nani [S]
then leave=Pfv AV-run Nom deer Lnk that DM

68... yau=ti ta-quRu-an na siRemuq a sunis [S]

Exist=Pfv Loc-head-Loc Gen deer Nom child

69... azkaw uzung-an na siRemuq [P]

Uh-oh shoulder-LV Gen deer

'The deer is running off and the child is sitting on the back of the deer. Too bad he is being carried by the deer on its shoulder.'

In (20), the child is the topic throughout the fragment. The narrator is saying the child is riding on the head of the deer, and is carried by the deer on its shoulder, and then he falls off. Thus, the child, as the patient of the verb *uzung-an* 'to shoulder, to carry', functions as [P] at line 125. The expression *yau ta babaw na quRu=na* together with the verb *uzung-an* constitutes a single IU, with *uzung-an na* functioning as a modifying clause. In (21), the narrator shifts her topic from the deer at line 67 to the child at line 68 through line 69, justified in part by her use of the alarm interjection *azkaw* 'damn, uh-oh'. The narrator is alarmed by the fact that the child is being carried away by the deer.

Recall that we have shown earlier that the passive format may be compressed into a micro-construction in a single IU with a notional 'passive' interpretation, as illustrated in (10), and repeated as (22) below. Line 24 has the form Exist + *qu'* + (NPpat + (Vpv + agent NP) $_{RC}$) NP, where a discourse topic is introduced by the existential construction embedded within a relative clause whose main verb is in patient voice form, although, as noted earlier, the equivalent voice construction is in LV voice form in Kavalan.

(22) Squliq Frog 4

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

AV-exist one Nom frog raise<Pfv>-LV Gen PN this

'There is a frog kept by Tali.'

Analogously, an S=P linkage pattern need not be manifested across two clauses but may be compressed and realized in a single IU, as illustrated in (23) and (24). At line 85 in (23) the boy is both subject [S] of the verb *maytis* and [P] of the verb *qa-qaRat-an* of the verb complex *maytis qa-qaRat-an*. Similarly, at line 107 in (24) the boy is also both subject of the verb *mangay* and patient of the expression *dudut-an=na*.

(23) Kavalan Frog 6

84... Ray-tung-tungz-an=na wasu=na m-uRing=ti
bark-Red-bark-LV=3S.G dog=3S.Gen AV-cry=Pfv
ya lazat=na
Nom person=3S.G

85... m-aytis qa-qaRat-an na pennay sayza [S]/[P]
AV-fear Red-sting-LV Gen bee maybe

'The dog keeps barking (at the bees) and the boy is crying. (The boy) fears that he may get stung by the bees.'

(24) Kavalan Frog 6

106... azkaw quni-an=ti yau a adam
Uh-oh how-LV=Pfv Exist Nom bird

107... (0.9) mangay=iku dudut-an=na adam
or.else=1S.Nom sting-LV=3S.Gen bird

108... zin=na sayza m-aytis sunis a zau
say=3S.Nom maybe AV-afraid child Lnk that

'Uh-oh, there is a bird, what should (I)do? (I must run) else I'd get pecked at by the bird.' Maybe the child is thinking to himself. The child is scared.'

6. Passive format: an extension

We have shown in the preceding sections that in a passive format a normally active transitive PV clause gets a notional passive interpretation in discourse context where an NP is introduced into discourse as an intransitive subject [S], and in the immediately following stretch of discourse, the subject NP becomes a [P], the patient of a transitive PV clause and the agentive nominal of a PV clause is not a pronominal clitic. A second way for PV clauses to receive a notional passive interpretation is for them to occur in subordinate clauses where the agent phrase is absent or inaccessible and the patient nominal occurs as head of a modifying clause, yielding a structure of the form $[V_{PV} + P]_{SC}$, as illustrated in (25), (26), (27) and (28) below. A canonical active transitive PV clause, by comparison, is much more likely to occur as an independent clause, has the structure of the form $[V_{PV}(A)(P)]_{mc}$ where either A or P may be anaphorically omitted, although this is more likely to happen to As, given the greater potency of As to function as successive topics. A comparison between $[V_{PV} (A) (P)]_{mc}$ and $[V_{PV} +P]_{sc}$ suggests that word order as well as clausal status (namely mc vs. sc) plays an important role in signaling clausal functions of PVs. In (25), P of the main clause occurs embedded inside a relative clause modifying the head noun (*binbinniSitan 'izo'*) with an unspecified agent, namely,'-*in-aSkan-an ka takem*, and the clause receives a notional passive interpretation (the frog that had been kept). In (26), *kayni' kohngaep-en* 'NEG bother-PV (refuse to be bothered)' functions as the cause for the main CV verb *Sik-rae:iw,* and the P of the verb *kohngaep-en* is covert, but is identical to the main clause subject. In (27), the identity of the P and the A of the verb complex *peelUi mU'a* in the subordinate clause marked by nominative '*o* is irrelevant and hence left unspecified. In (28), where Eatiou is the name of a short narrative, the agent of the PV *opcoz-a* is inaccessible, and the clause gets a notional passive interpretation, as expected.

(25) Saisiyat Frog 2

14... (1.3) ‘aehoe’ rima k<om>i:im ka takem
dog AV.go <AV>search Acc frog
15... ray binbiniSitan ‘izo’ ‘<in>-aSkan ka= takem
Loc container inside <Pfv>-put Nom frog
‘The dog went to look for the frog inside the container where it (the frog) had been kept.’

(26) Saisiyat (e-dictionary)
hiza ma’iyaeh mo-wa:i’ k<om>ohngaep,
this person AV-come <AV>pester
ma’an Sik-rae:iw kayni’ kohngaep-en
1S.G CV-run NEG pester-PV
‘The man came to pester; I got away (since) I didn’t want to be bothered.’

(27) Tsou conversation 4
98 A: mo engha man’i ‘o nte la peelU-i mU’-a
Aux very.AV many Nom Fut Hab can- LV plant-PV
ta holiuci
Obl reserve.land
99 honci la maezo facan to soakuo.
if Hab AV.also develop Obl fruit
‘Many things can be planted on the reserved land if (they) can also develop fruit business.’

(28) Tsou Eatiou
20 oh=he cu aiti ho cohiv-i ho
Aux-3P.G Pfv see.LV Conj know-LV Conj
21 opzocsa ‘e mo yuso
kill-PV Nom Aux two.people

'They saw and knew that two people were killed.'

A language may need to evolve a consistent strategy to introduce a new discourse entity as the subject of an intransitive clause, and then to comment that something may happen to it as it undergoes a transitive event as the patient of a transitive clause. This discourse effect is achieved by availing the grammar of a passive format as discussed above. Sometimes the language also needs to be able to downgrade the agent of a transitive clause embedded within a subordinate clause while focusing on its patient and relating it to a larger discourse structure. A passive format of the form $[V_{PV}$ +P$]_{SC}$, where SC denotes subordinate clauses, is a grammatical response to the exigencies of this second type of discourse requirement, as illustrated in (25) through (28). Both strategies are distinct yet effective ways of expressing notional passives. As we have shown, PV clauses have multiple discourse uses and can be adapted in discourse to fulfill exactly these two types of functions.

We have thus far investigated the linkage patterns in Squliq, Saisiyat and Kavalan. We turn next to examine the linkage patterns in Tsou for one unusual linkage pattern not attested in other FLs. The unusual linkage pattern is E=A. While Es, the oblique-marked arguments of extended intransitive clauses, have been known to play little role in participant tracking, one narrator of the Frog story was found to produce an instance of E=A linkage pattern, profiling an E and making it the agent as well as the topic of the following PV clause. I term this type of linkage pattern a pragmatic inverse construction in that the E is more topical than the agent, akin to the inverse construction from the Algonquian family. In the next section we turn our attention to the linkage patterns in Tsou.

7. Linkage patterns in Tsou

Tsou is characterized by several unique grammatical features. First, Tsou requires that every clause be obligatorily marked with a realis or irrealis auxiliary verb, with the consequence that the main verb make fewer morphological alternations. Secondly, Tsou allows only one clitic per clause (genitive clitics occur with transitive clauses and nominative clitics with intransitive clauses), and the clitics are accusatively organized. Thirdly, Tsou permits internally headed relative clauses, as in *mo UmnU si mo smovey ci ino ta o'ko* '(Aux pretty.AV Nom Aux carry.AV Lnk mother Obl child) 'The mother who carried the child on her back was pretty.' Finally, oblique-marked Es in extended intransitive clauses in Tsou encode referents that are nearly always never tracked in subsequent discourse. By contrast, Ps, nominative-marked nominals in PVs, are significantly much more frequently tracked than Es, a finding that provides evidence that the language has grammaticized the core/oblique distinction in EICs (see Huang and Tanangkingsing (2011) for detailed discussion on EICs). Table 4 below provides distribution of anaphoric linkage patterns found in Tsou, also based on the Frog narratives.

Table 4. Distribution of Anaphoric Linkage Patterns in Tsou

	Frog 1	Frog 2	Frog 3	Frog 4	Total	%
S=A	5	10	15	10	40	28.6
S=S	11	5	13	15	44	31.4
A=A	5	13	10	10	38	27.1
A=S	0	1	4	6	11	7.8
S=P	1	0	1	1	3	2.1
E=A	1	0	0	0	1	0.7
P=S	0	0	1	2	3	2.1
Total	23	33	44	46	140	100

Table 4 shows, much as in other FLs, the largely expected dominance of S/A linkage patterns in Tsou, the only surprise here being the E=A linkage pattern. The

E=A linkage pattern has never been attested in the three other languages examined in the present study and its existence in Table 4 calls for some scrutiny. The single instance of the linkage pattern is illustrated below in (29).

(29) Tsou Frog 1

54... mi-cu cocapo ho ta mo yuhcuvu ci
Aux-Pfv climb.AV Conj Obl Aux bulge.AV Lnk

55... (0.9) yuhcuvu ho
bulge.AV Conj

56... (1.4) mo mici to totoefUngU ta puku [E]
Aux AV.intend Obl AV.hide Obl owl

57... ho i-si ‘aok-a peobang-a [A]
Conj Aux-3S.G always-PV chase-PV

‘(The boy) climbs to an elevated ground, intending to hide from the owl, which has been chasing after (him).’

At line 56 in (29) the oblique-marked *puku* ‘owl’ is an E, but it was tracked and got elevated by the narrator to an A of a transitive PV clause at line 57, and the two clauses are conjoined by the connector *ho*, forming an E=A linkage pattern. Note that it is only the Es occurring in coordinate clauses that are rarely tracked in Tsou and other FLs examined here. The restriction is significantly relaxed in loosely connected clauses, in control constructions, and in purposive clauses.[6]

[6] In all of the FLs we have investigated, A, S, and P may function as either controller or pivot in control constructions, and E, the oblique-marked argument, may function as controller, but not as pivot, depending on the semantics of the lexical verb involved in the construction. E as a controller is illustrated below in Kavalan and Squliq.

(i) Kavlan

pawRat a tina-na tu sunis pa-qaynəp [E, S]
force Nom mother-3S.G Obl child Cau-sleep

‘His mother managed to make her child sleep.’

(ii) Squliq

q<n>ihul=mu sa yumin nbuw qu’ qwox qa [E, S]? [E, A]?
force<pfv>=1s.g Obl PN drink.AV.NF nom wine this
‘I forced Yumin to drink wine.’

In (ii) the semantic role of the missing pivot is ambiguous. It may be an S since the verb is AV, or an A since the object argument is marked nominative. In purposive clauses, both A=S and S=P linkage patterns are also attested.

a. Saisiyat (Yeh 2016: 207)

‘altikal ila ka h<in>emek kasnaw, ‘aewhay rikrika: [P,S]
lift.AV CRS ACC <PFV>cover soup bad hot
‘ Lift the cover of the soup so it will not get too hot.’

b. Squliq Atayal (constructed)

h<m>ow qu’ laqi’ qa ga’, nanu yasa qu’, pong-an na’ kwara’ la
<AV>shout Nom child that Top so.that hear-LV Gen all FP
‘The child shouted, so everyone heard (him). [S, P]

c. Saisiyat (Yeh 2016: 208)

Pak’-akoey ka s<in>i’ael ‘aewhay ‘a’otoehan kita’-en
CAU- a.lot ACC <Pfv>eat bad skinny see-PV [A, S]
‘Eat more so you won’t look so skinny.’

In short, control patterns in coordination, in control constructions and in purposive clauses suggest that these FLs, which are morphologically ergative, hardly behave like a deep ergative language. We thus arrive at a conclusion that vitiates the validity of the Subject Construction Hierarchy proposed in Croft (2001). SCH is an implicational scale such that for any construction on the scale, if the construction patterns ergatively, then all the construction to the right of it also pattern ergatively. If the construction patterns accusatively, then all the constructions to the left of it on the scale also pattern accusatively. The Formosan data examined here hardly fit into the Croft (2001: 156) table for SCH, summarized below only in part in Table A due to space limitation (E: ergative; A: accusative; n: neither; Formosan: FLs examined in the current study).

8. Interim summary

We have examined the linkage patterns in four Formosan languages and found that nearly every type of linkage pattern is attested in these FLs, suggesting that these languages do not have a consistent pivot type, where pivot is understood to refer to the argument shared by more than one clause. It is important for us to get clarity about the behavior of cross-clausal anaphoric linkages in a language since this reveal more of the nature of the properties of pivot or subject. Properties of A, S or P are properties of local arguments at clause level, while properties of pivot are properties at discourse level. In natural discourse, English has a discourse structure determined primarily not by transitivity, but by thematicity, meaning that the English speaker is more likely to follow the accusative anaphoric linkage patterns, hence to the thematic continuity of As and Ss (e.g. A>A>A>S>S>A>S>A). On the other hand, speakers of FLs are more committed to getting clausal transitivity right, since they need to reckon with two intransitive clause types (AV and EIC), in addition to three transitive clause types (PV, LV and CV, or LV and the undergoer *ma-* in Kavalan). They are thus prone to producing a much wider range of linkage patterns, which might be A>S…P>S…S>P, …P>A…E>A, where commas indicate topic discontinuity. This is precisely why there is some preliminary evidence, based on comparative Frog and Pear narrative data, that topics in Formosan discourse do not appear to persist over a long stretch of discourse, while a thematic structure like that found

Table A. Data supporting the subject construction hierarchy.

	Coord	Purpose	Rel	Case
Dyirbal	E	E	E	(E)
English	A	A	A	A
Formosan	n	n	n	E

in English helps to orient a narrative text around a central theme or a series of related themes running through a story. A listener processing a narrative text in a Formosan language, given its wider range of possible linkage patterns, may have to appeal to what is known as the Davidsonian principle of charity to interpret the narrator's story in the most coherent and rational way in order to maximize coherence in the narrator's story (Davidson 1973: 19).

Results from the present inquiry into linkage patterns demonstrate then that FLs do 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. This necessitates the use of passive or antipassive constructions to permit alternative choices of pivot when required by the discourse context. Changes in the pragmatic role of a nominal in FLs do not depend on changes in "syntactic role", since that is a grammatical strategy that is simply not available to any of the FLs examined here. This is why the emergence of a 'passive' format' discussed in the present study represents an important discourse-pragmatic strategy for a morphologically ergative language like Squliq, Kavalan and Tsou for expressing notional passive. Saisiyat is not a 100% morphologically ergative language as these other FLs, because it has developed a system of case marking where both accusative-marked transitive clauses and ergative marked transitive clauses coexist in the language. In most FLs, a canonical active transitive PV clause is more likely to occur as an independent clause and has the structure of the form $[V_{PV}(A)(P)]_{mc}$ where either A or P may be anaphorically omitted. PV clauses, however, receive a notional passive interpretation in a discourse context where the agentive nominal is not a pronominal clitic and/or the PV clause occurs within an embedding structure where the agent phrase is absent or inaccessible and the patient nominal occurs as head of a modifying clause.

8.1 Variations in linkage patterns

Language is known to be highly variable. Three types of variation are distinguished in Croft (2010). First-order variation refers to individual differences, second-order variation pertains to socially driven differences and third-order variation to typological diversity. Interclausal linkage patterns found in these FLs show not only first-order individual differences, such as the unusual lone E=A linkage pattern produced by the Frog 1 narrator in Tsou, but also third order crosslinguistic differences as well. We have shown in section 5.1 that there are in the Saisiyat Frog narratives a total of six P=S linkage patterns and three much rarer P=A linkage patterns, noting that the Ps in these linkage patterns are invariably patients of the verbs in PV clauses. These occur in clause-initial position in context where they have been introduced earlier in discourse. I have suggested that an explanation for this crosslinguistic variation in linkage patterns may be sought in the difference between the higher discourse transitivity of PV clauses relative to the lower discourse transitivity of AV clauses. What this means is that patients in PV clauses in Saisiyat are more likely than patients in AV clauses to become secondary topics. It also means that transitive AV clauses are in all probability a recent innovation. What is significant about these patterns is that PV clauses as a construction type exhibit multiple discourse functions. Three functions of PV constructions have been distinguished based on either the evidence from the linkage patterns, or what is essentially the same type of evidence, the relative topicality of the A and P arguments, namely active transitive, inverse, and notional passive. The S/A linkage patterns account for over 90% of the attested linkage types, which means that the PV clauses are default active transitive clauses when the A nominal is more topical than the P nominal and the A argument is realized as a pronominal clitic attached to the verb, as illustrated in (30) below from the Pear narrative.

(30) Squliq Pear 4

51...	tuliq	qu’	squliq	qani’	lga		[S]
	get.up.AV	Nom	person	this	FP.TOP		
52...	gal-un=nya’	qu’	qbubu’	lru’			[A]
	take-PV=3S.Gen	Nom	hat	FP.Conj			
53...	gal-un=nya’	qu’	qbubu’	lga			[A]
	take-PV=3S.Gen	Nom	hat	FP.Top			
54...	biq-an	squ’	bwe	qhuniq	qu’	cyugal	l-laqi [A]
	give-LV	Obl	fruit	tree	Nom	three	Red-child

‘The boy got up and took the hat. He took the hat and gave three pears to the three kids.’

In (30) the subject of the intransitive clause at line 51 reappears as the agent of the following three PV clauses, functioning as the topic of the entire sequence. When the A nominal is downplayed, unexpressed, or inaccessible from discourse context, the PV clause would most likely receive a notional passive interpretation, as illustrated in (25)-(28) above. Of greater interest is the fact that PV clauses may function like a pragmatical inverse construction if instead of the A in the form of a pronominal clitic functioning as the expected topic of the clause, it is the P nominal that has come to assume the unexpected status of a controller, become more topical than the A nominal, is tracked and function as the subject of a following intransitive clause, yielding a P=S linkage pattern, as illustrated in (31). The agentive nominal in (31) is *-si,* a third person singular genitive clitic, but the topic of the fragment switches to the patient nominal *av’u* ‘dog’ at line 36. In instances like this the PV clause may be said to act like a pragmatically inverse construction where P overrides A, enjoying higher topicality.

(31) Tsou Frog 2

50... i-si na'na sU'no-va ta 'oko 'e av'u [P]
Aux-3S.G very.PV angry-PV Obl child Nom dog

51... ho mo-'so 'oha bumemealU [S]
Conj Aux-because Neg careful.AV

'The child got mad at the dog because it (the dog) was not being careful.'

8.2 PV clauses as a family of constructions

The multiple functions of PV clauses identified above mean that the PV clause is a construction type that cannot be understood in the standard sense of a construction as a pairing of form and function. Now what unites the discourse behavior of the various functions of PVs is topicality, the property that appears to correlate with choice of voice form in a specific discourse sequence. In the first function of PVs identified, a PV clause functions as an active transitive since agents of PV clauses are treated by the narrators as the default perspective for the clause. Thus, they are the overwhelming choice to form A/S linkage patterns. In the second function identified, PV clauses receive a notional passive interpretation when A is downgraded or absent or inaccessible, and P is more topical. In the third function, PV clauses function pragmatically like an inverse when P overrides A in enjoying higher topicality. In short, what the PVs and the grammatical systems as a whole in FLs are committed to doing are to specify the transitivity of clauses determined in part by definiteness, specificity or referentiality or the process of change that occurs in the patient, but their forms hardly ever respond to the exigencies of topicality and interclausal linkage patterns to exploit the correlation of four mechanisms: the notion subject, patient promotion to subject status, agent demotion to an oblique argument and a pivot system sensitive to changes in the 'syntactic roles' of patients and agents. Lacking a consistent pivot type is part and parcel of the grammatical system in FLs that also lack the grammatical category

of subject representing convergence of topic, actor, and pivot. FLs are thus not built to the same design as languages like English or Dyirbal where the choice of pivot is strictly governed by topicality and linkage patterns, hence necessitating the use of passive or antipassive to permit an alternative of pivot when required by discourse. The voice systems in FLs are thus not true voice constructions in the traditional sense of the term, since PVs in FLs are neither active, inverse, nor passive, precisely because they can be all of them, given appropriate discourse context.

PV clauses then are best viewed as a family of constructions, where construction is understood in the standard sense in which learned pairings of syntactic patterns are relate to meanings in a conventionalized way. The family of constructions that emerge from discourse are clearly closely related, each with its own syntactic and semantic properties specifiable in relation to the larger discourse structure.

9. The undergoer construction: *ma-* in Kavalan

Given that PV clauses in FLs are used predominantly to convey higher topicality of As and lower topicality of Ps, one would naturally expect that the languages may at some point evolve distinct grammatical structures that would profile higher topical Ps. In this section we examine the functions of the undergoer voice marker *ma-* in Kavalan that can be shown to fulfill exactly this function. Reid and Liao (2004) refer to a class of stative verbs in Philippine languages with nominative patient nominals as true passives since they are intransitives and their As are often absent. Reid (2006) further indicates that in such constructions when the nominative argument functions as an undergoer, the verbal morphology is a reflex of the PEF (Proto-Extra- Formosan) **ma-* affix which typically appears on stative verbs. Blust (2009: 363) notes that Proto-Austronesian stative prefix **ma-*

is one of the most attested affixes in AN languages; what he had in mind was probably the more widespread AV voice marker **ma-*, not the valency-changing undergoer voice marker found in Kavalan and other East Formosan languages.[7]

A total of just 18 tokens of *ma-* prefixed verbal expressions were found in the Kavalan corpus. Three types of these verbal expressions can be distinguished: (a) valency-decreasing *ma-*; (b) lexical expressions of *ma-* on stative verbs or experiential verbs; (c) *ma-* activity verbs occur with full complement of argument nominals (see also Huang and Sung 2008). An examination of the Kavalan corpus data suggests that verbs of type (a) continue to be highly productive, those of type (b) much less so. The functional range of type (c) in Kavalan is difficult to assess, though it is a productive process in Amis (Wu 2016), a numerically powerful neighboring language. Since a vast majority of Kavalan speakers are fluent in Amis (Hsieh and Huang 2008), whatever Amis does will impact the grammar of Kavalan.

Type (a) valency-decreasing *ma-* refers to *ma-* prefixed verbs where the verb stem is semantically transitive, yet there is absence of agent expression since the focus is on the topical patient argument, as seen in (32) and (33), where the two verb stems *bedung* 'break' and *tayta* 'see' are semantically transitive. Other verbs of type (a) found in the corpus are *ma-ziyut* 'hang', *ma-sebit* 'get torn', *ma-benaR* 'get split', *ma-baliwnes* 'get twisted', and *ma-tepuq* 'get cut'.

[7] The transitive use of *ma-* is attested in Paiwan and in four East Formosan languages (Amis, Siraya, Basay-Trobiawan and Kavalan) and in many Malayo-Polynesian languages. This, along with other shared innovations, has been argued by Chen at al. (2022) to provide evidence that East Formosan and Malayo-Polynesian may share a common origin, which they have termed Coastal Formosan. An alternative explanation is that language contact may have played some role in these shared developments, simply because these Formosan languages are known to have been in contact. Also, drift, i.e., independent but parallel development, for the claimed 'shared innovation' cannot be ruled out. Several Philippine languages are also known to also have dynamic *ma-* clauses that take an oblique agent (Reid and Liao 2004; Reid 2006).

(32) Kavalan Frog 1

17... (1.8) nani wasu ‘nay pa-susuR-an na ta-peRasku-an quRu
DM dog that Cau-enter-LV 3S.Gen Loc-bottle-Loc head
na nani.
3S.Gen DM

24... (1.1) ma-bedung peRasku ‘nay
MA-break bottle that

‘And the dog’s head got into the bottle…. and the bottle broke.’

(33) Kavalan Earthquake

52R: ... wi=iku pasazui ta-ngayaw-an na qani-iza
leave=1S.N toward Loc-front-Loc Gen QANI-that

53... na ta-qena-lappaw-an na qani-isaku tayan kwa
Gen Loc-PAST-house-Loc Gen QANI-PN there FP

54... ta-qauri-an nani
Loc-place.near.sea-Loc DM

55... ma-qayta ya bettu a yau Raya-ay
MA-see Nom stone Lnk that big-NMZ

‘I turned toward the front of the house where Isaku used to live, toward the place near the sea. The big rock was visible.’

Four tokens of the *ma-tepuq* construction in the Kavalan corpus were instantiated, two of which occurred in Weaving, a conversation between two females A (Abas) and I (Ipay), as illustrated in (34).

(34) Kavalan Weaving

12A: ... wanni s<m>anis=iku nani
this.way <AV>bark=1S.Nom DM
13... ma-tepuq a lima=ku
MA-cut Nom hand=1S.Gen
14... me-lizaq=ti=iku qaya ya.
AV-happy=Pfv=1S.Nom again FP
'(When I barked banana trees), my hand got cut, (but) I'd be happy to (bark) again.'
15I: ... pa-qan-qanas-ka
CAU-Red-slow-IMP
16... me-la-lazuk [saizi nayau-an]
AV-Red-hurry sure that.way-LV
'Go slow; if you are in a hurry, your hands surely (will get cut again).'
17A: [ma-tepuq a lima]
MA-cut Nom hand
'My hand will get cut.'
18... me-la-lazuk=ita saiza m-dungut=ti=ita nani
AV-Red-hurry=IPI maybe AV-slow=Pfv=IPI DM
'We have to hurry up; maybe we were going too slow.'
19... qa-la-lazuk= pa=ita zin=ku nani
FUT-RED-hurry=FUT=IPI say=1S.Gen DM
'We're going to hurry up, I think.'

Type (b) *ma-* verbs refer to lexical expressions of *ma-* on intransitive stative verbs, posture verbs or sensory verbs. Examples of type (b) verbs from the online e-dictionary are given in (35).

(35) ma-naquni ‘how’; ma-tayta ‘visible’; ma-temaq ‘burnt’; ma-bangRut ‘stink’ ma-salin ‘float’; ma-kasianem ‘remember’, ma-singut ‘smell’; ma-ipil ‘hear’ ma-ziyut ‘hang’

Type (c) verbs are syntactically transitive verbs that take a full complement of argument nominals, including agent phrases. No token of this type of verb was instantiated in the corpus, though one can generate a considerable number of verbal clauses of this type in Kavalan if one visits its online dictionary, types in the passive marker *bei* in Chinese and you get Kavalan passive-like translations accompanied by an agent phrase. (36) are taken from the online Kavalan e-dictionary (see Hsieh 2016 for similar observations). Note that *ma-* as an intransitive voice marker is preserved in these sentences even when it has extended its grammatical function and behaves exactly like a transitive LV verb in being able to take a genitive clitic *na* or an agentive phrase marked by *na*.

(36) Kavalan

a. ma-qeRut na babuy na naung qawpiR zau
MA=bite Gen boar Gen mountain yam this
‘This yam was bitten into by the boar.’

b. ma-qila na tina=na sunis ‘nay
MA-scold Gen mother=3S.G child that
‘The child was scolded by his mother.’

c. ma-sinit na qaddan punuz=ku taRRawy
MA-pinch Gen chair butt=1S.G hurt.AV
‘My butt got pinched by the chair and it hurt.’

d. ni-nubi na tina=ku qabus ma-qan=ku=ti
Pfv-hide Gen mother=1S.Gen lobster MA-eat=1S.G=Pfv
‘The lobster that mother stashed away got eaten by me.’

An instructive example of the potential meaning contrast between a stative *ma*-verb and a transitive *ma*-verb based on the same verb base can be seen in the following discourse fragment from the Frog narrative (37). The word *ma-ziyut* at line 54 is a resultative stative verb, while at line 55 the word *ni-ziyut-an* is an LV verb, implying that there is an agent involved, though that is left unexpressed. The narrator, Imui, was herself wondering who the agent might have been and her long pause at line 55 suggests that someone or other acting as an agent must have done it.

(37) Kavalan Frog 2 (Imui)

53... yau tazian ‘nay usiq ‘nay bunguR=na paRin
Exist here that one that trunk=3S.G tree

54... (0.8) yau ma-ziyut ta-babaw-an na paRin a yau
Exist MA-hang Loc-top-Loc Gen tree Lnk that

55... (1.7) niana ‘nay semani ta-babaw-an paRin
what that do.not.know Loc-top-Loc tree
ni-ziyut-an
Pfv-hang-LV

‘There is a tree trunk here. There is something hanging on top of the tree. I have no idea what got hung up there in the tree.’

10. Syntactic space for the various functions of the voice constructions in Kavalan

Figure 1 below shows the relative syntactic space occupied by each function of the LV construction in Kavalan. In the diagram the vertical axis represents the role of the Nominative NP (S or P), while the horizontal axis represents the form of the A nominal (absent, zero or overt). Since there is no intransitive LV construction, there is a lacuna in the syntactic space. This lacuna is filled by the

undergoer *ma-* structure where the nominative is S, and the A argument is typically absent. On the other hand, when the Nominative NP is P, that is, when the clause is a transitive construction, the clause may be active or inverse depending on the relative topicality between the A and the P nominals. The clause is active when the A nominal is slightly more topical than the P nominal and the A nominal is also attached closer to the verb. The clause is inverse when the P nominal overrides the A in being slightly more topical than the A nominal. Note that inverse LV clauses in Figure 1 represent an extrapolation from the data like those seen in (31) in Tsou as these were not attested, though potentially realizable, in the Kavalan corpus. After all, it can be quite difficult for Ps to override As, especially when the A is marked by a pronominal clitic such as *i-si* in (31). The LV -an passive refers to the situation where the A is downplayed, or inaccessible from the discourse context, as is often the case when it occurs in embedded structures. It is this type of LV construction in Kavalan that is functionally equivalent to a passive. Croft (2001: 315) suggests that if there is a contrast between a basic (i.e., active transitive), and non-basic voice (i.e. passive) in a language, then the semantic map of the basic voice will include the upper right corner of the conceptual space, while the semantic map of the non-basic voice will include the lower left corner of the conceptual space. The distribution for LV clauses and the undergoer *ma-* construction in the conceptual space is exactly as stated.

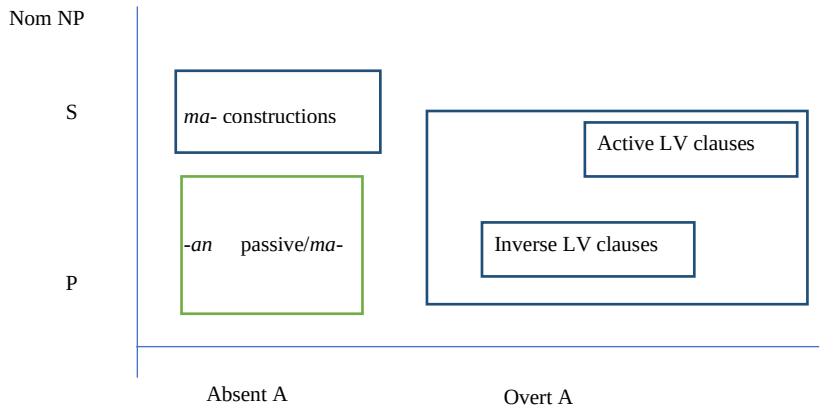

Figure 1. Syntactic space for the *ma-* and LV clauses in Kavalan

11. Discussion and conclusion

This paper began by taking note of the wide range of typological variety in Austronesian languages to express passive. A useful point of departure is a distinction between languages that have kept the Austronesian voice morphology and those that have lost it. Palu'e and Manggarai, both languages spoken in Eastern Indonesia, have lost their voice morphology, but have developed a passive which is not marked morphologically on the verb. In Palu'e, the passive is marked by undergoer-actor-verb (PAV) word order, while in Manggarai it is marked by the *le* agent construction. Rukai, the only Formosan language that has lost its voice morphology, has evolved an accusative-passive voice system and the passive is marked by a passive marker on the verb. In Austronesian languages that have retained the voice morphology, several different syntactic strategies to express passive can be distinguished. In Indonesian, transitive verbs show a tripartite system: an actor voice (AV) construction marked a nasal prefix (*meN-)*, an affixed non-AV construction that is generally analyzed as a passive. There is also a zero UV construction where the verb is unaffixed, the agent is expressed by preverbal

pronominals, which is understood as an active transitive. In Cebuano, the *na*-prefixed verb construction has been shown to best satisfy the typical criteria for a passive construction in a language: defocusing of agents, minimal integration of A into the syntax of its clauses, low text frequency and a distinct word order from the active clause. In clauses containing the *na*-affixed verb, the P is frequently the inadvertent undergoer of an action while the A is nearly always absent and inaccessible. In Paiwan, Kavalan and other East Formosan languages there is a *ma*- undergoer voice construction on stative or experiential verbs to profile the undergoer argument of the clause. The *ma*- construction may also in addition occur with activity verbs that take a full complement of argument nominals.

A central focus of the present study has been to attempt to map out the multiple functions of the PV constructions in FLs. I hope to have at least provided 'another dot' on the emerging picture of the voice system in FLs by showing with discourse data that, in either coordinate clauses, or elsewhere, any argument, core or non- core, may be a controller or a pivot. S=A, A=S, E=S, S=P, P=S, P=A and even E=A are all attested linkage patterns, making these FLs stand out from the languages examined in Croft (2001) for his subject construction hierarchy. In Section 4.2 I discussed cases where there is some real indeterminacy in determining linkage patterns in the Saisiyat data, and, presumably, the discourse data in other FLs. Two further points made there bear repeating. One was that there is some evidence that topics in Formosan discourse often do not appear to persist over a long stretch of discourse, while a thematic discourse structure like that found in English helps to orient a narrative text around a central theme or a series of related themes running through a story. Consequently, a hearer processing a narrative text in a Formosan language may need to make frequent appeal to Davidsonian principle of charity to interpret the narrator's story in the most coherent and rational way as to maximize coherence in the narrator's story.

The logic of the present argument can be summarized as follows: PVs in FLs are the default active transitive clauses, since they form the bulk of S/A linkage patterns investigated in the present study (see also Arka & Wouk 2014; Katagiri 2005; Foley 2008; Shibatani 2009, among many others, for similar observations, each via slightly different set of evidence). Three functions of PVs have been distinguished based on evidence from the linkage patterns, namely active transitive, inverse and notional passive. The PV construction functions primarily as an active transitive in discourse where A is more topical than P and A is attached to the verb as a clitic. The PV construction occasionally functions pragmatically like an inverse when P overrides A in enjoying higher topicality in some discourse. Finally, PV clauses get a notional passive interpretation when A is downgraded, absent or inaccessible, as illustrated in the S=P linkage pattern where the passive format emerges. In short, these PV clauses never involve any kind of change in grammatical statuses of arguments and thus a change in voice or voice alternation. Even fronting of a P in these languages is just that, a topicalized object that does not involve voice alternation. Discourse evidence shows that the passive format is the primary discourse strategy to express notional passive, since they profile the topical patient and demote the agent in transitive PV clauses. In a passive format, there is an S=P linkage pattern at point in discourse where an NP is first introduced into discourse as an intransitive subject [S], and in the immediately succeeding stretch of discourse there is a PV clause, the subject NP becomes a [P] of the PV clause and the agent nominal of the transitive clause is usually absent or is not realized as a pronominal genitive clitic.

I have assumed throughout this study a discourse-functional approach to the study of grammar. I take passive to be a multidimensional functional domain in the spirit of Givón (1990). The five features that characterize the passive construction represent to my mind the current consensus among leading researchers who have addressed the issue. There are several constructions across

languages of the world that manifest some, but not all, of the five properties given there, and which have not been classified as passives, such as the anticausative construction (e.g. the *m-u* construction in Puyuma), the undergoer *ma-* construction in Kavalan and the *kur-* construction in Puyuma (termed middle in Teng 2020). The inverse construction from the Algonquian language family is another construction that is like the passive in functional-pragmatic terms. Do these five features apply to FLs? An answer to that question depends critically on the nature of the voice phenomena in FLs. The question whether the voice systems in the Philippine-type languages should be considered a voice opposition and if so of what type - active/passive, or ergative/antipassive remain controversial (see Blust 2009 for a recent synthesis and the references cited there). Several well-known arguments against a passive analysis of PV clauses in particular need to be repeated here, however. They include the following: (1) they exhibit a very high text frequency (about 50% of a discourse sample, far more than the typical 5%~10% for the passive usually reported in the literature; (2) the agent is typically overt and integrated into the syntax of the PV clauses, manifesting core argument properties as opposed to adjuncts; (3) they are semantically highly transitive in the sense of Hopper and Thompson (1980); (4) PV clauses are used as imperatives in Philippine-type languages, as is commonly known; (5) the verb does not exhibit special marking, as it is also explicitly marked in the AV construction (known in the literature as the symmetric voice languages), and (6) PV clauses are not pragmatically restricted vis-à-vis their AV clause counterparts. I thus share the majority view that favors ergative analysis for the voice system in Philippine-type languages and thus do not take PV clauses to be passives, as argued in Starosta et al. (1982), Liao (2004), Gibson and Starosta (1990) and Blust (2009), among many others (see Liu 2017 for a dissenting view).

Many researchers have now singled out Philippine-type voice system as a distinct voice type on a par with active/passive, absolutive/ergative and

direct/inverse systems, each for a different set of considerations. Klaiman (1991), for example, recognizes four types of voice systems: (1) derived voice systems, e. g. English, German; (2) basic voice systems, e. g. Latin, classical Greek, Sanskrit; (3) pragmatic voice systems: (3) information salience systems (or focus systems), e. g. Philippine languages; (4) inverse systems, e. g. Algonquian languages. Klaiman (1991: 246) takes the following characteristic as indicative of a Philippine-type voice system, based primarily on Shibatani 's (1988) data from Cebuano: 'In a Philippine clause, the verbal complex usually includes one from among a limited set of indices. These are bound elements which alternate in indexing nominal positions or statuses. Some recent writers use the term focus to refer to these indices, but Philippine linguistics has an older tradition ... in which they are termed voices, and this terminology will be followed below. Shibatani (2006) seeks to provide a conceptual framework for voice phenomena, within which he identifies three types of voice systems: active/passive, ergative/antipassive and Philippine-type voice systems. According to Shibatani (2006: 43), 'What distinguishes the three primary arguments in the three types of languages—the nominative argument in accusative languages, the absolutive argument in ergative languages, and the topic/subject/pivot of the Philippine-type languages—is their indispensability. That is, all sentences in the respective language types must contain these arguments. We take this fact to be connected to the requirement of a proposition to contain an item to be predicated over. In other words, the primary arguments under consideration all have the referential function of pointing out what is to be talked about, or predicated over, in a propositional verbal act. They are what the traditional term ''subject'' represents in both logic and grammar, and there is no harm in applying this term to nominative, absolutive, and Philippine-style ''topic'' nominals, so long as they are understood in terms of their role in a propositional act'.

We have demonstrated above, however, that although one can look at an isolated sentence and point to the nominative-mark nominal as a topic/subject/pivot, as soon as discourse data is examined, then the notion of topic/subject/pivot evaporates, since any interclausal linkage pattern is attested and thus no consistent pivot type can be established for the four languages examined here. The reason for that is not hard to find. As Schachter (1976, 1996) has insightfully shown, the notion subject familiar from European languages is split between actor and topic in Philippine-type languages, and FLs simply lack the grammatical device of subject representing convergence of topic, actor, and pivot, suggesting that FLs are simply not built to the same design as languages like English or Dyirbal where the choice of pivot is strictly governed by discourse topicality and linkage patterns, hence necessitating the use of passive or antipassive to permit an alternative choice of pivot when required by discourse. As Fillmore (1968) elegantly put it half a century ago, ergative languages lack the process of subjectification, since these languages tend to favor categorization of participants in terms of semantic roles (ergative or absolutive/nominative), while accusative languages are more interested in categorizing participants in terms of their roles in the topicality hierarchy (A/S vs O). In section 9 I alluded to a tentative observation that since speakers of FLs are prone to produce a much wider range of linkage patterns, one of which might be A>S, P>S,… S>P, … P>A, … E>A, where commas indicate topic discontinuity, it would seem quite plausible to suggest that, based on comparative Frog and Pear narrative data, that topics in Formosan discourse do not appear to persist over a long stretch of discourse, while a thematic structure like that found in English helps to orient a narrative text around a central theme or a series of related themes running through a story. The voice systems in FLs are thus unlike other voice systems where there is an active/passive contrast since there is no syntactic passive voice in FLs. PVs in FLs are neither simply active, inverse, nor simply passive, precisely because they can

be all of them, given an appropriate discourse context. The rationale for recognizing Philippine-type voice system as a distinct voice type then rests on the fact that what the PVs and the voice systems taken as a whole in FLs are committed to doing are to specify semantic roles of participants in the depicted events. Thus, transitivity of clauses is determined by definiteness, specificity or referentiality. Consequently, the forms of PV clauses hardly ever respond to the exigencies of discourse topicality and linkage patterns to exploit the correlation of the notion subject, patient promotion to subject status, agent demotion to an oblique argument and a pivot system sensitive to changes in the 'syntactic roles' of patients and agents.

There is thus a strong sense in which discourse preferences and the morphosyntax of a language co-evolve together and mutually shape one another. In this study I have presented evidence from discourse data to demonstrate the complex interplay between language use and the voice system in FLs. If we take the frequency of occurrence of a structure to be indicative of its degree of entrenchment, then PV clauses in FLs are arguably highly entrenched voice types in these languages. They have also turned out to be a multifaceted construction type, since, as indicated above, they are capable of functioning either as active transitive clauses, as pragmatic inverse clauses, or as notional passives. Given these results, the voice systems in FLs are not true voice systems as traditionally understood and pose a challenge to the mainstream views on voice marking, calling for a rethinking of the typology of the voice systems. What the Formosan solution to 'voice' means then is that it reveals to us just how ingenious and flexible the human mind is and enriches our universe of what a voice system can be.

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Shuanfan Huang
Graduate Institute of Linguistics, National Taiwan University
國立臺灣大學語言學研究所
sfhuang@ntu.edu.tw

臺灣南島語的語態系統在型態學上的地位：論受事焦點句構的多重功能

黃宣範
國立臺灣大學

菲律賓型態的語言有別於一般人熟悉的印歐語：印歐語中的主語揉合了語用的主題跟語義的行為主動者兩個概念，但臺灣南島語的語法系統把主題／行為主動者兩個概念作明顯的區分，因此一般所謂的主語的概念（魯凱語除外）在臺灣南島語也就無法成立。印歐語常見的語樞是建立在「主語」的概念上，因此可以推知語樞也不見於臺灣南島語。主語，語樞，以及被動語態三者關係密切，彼此相互確立。沒有主語也沒有語樞的語言如何表達被動語態？臺灣南島語沒有語法上的被動式，這些語言如何表現被動語意？本文針對主事焦點句之外佔最大百分比的受事焦點句構作深度的言談分析，論證兩點：一為臺灣南島語沒有「語樞」；二為臺灣南島語是利用言談結構中的被動版式表達概念上的被動語意。主要的結論是受事焦點句式有三大言談功能：作為主動及物句，作為被動句以及作為語用上的反逆句。這些結果顯示受事焦點句有別於一般的句構，既非及物句，也非被動句，也非返逆句，而是這三種功用兼具。如果在適當的言談情境下，受事焦點句構嚴格講其實是幾個不同句構的組合。因此臺灣南島語的語態系統相當特殊，形態學上的意義與地位值得重新審視。

關鍵詞：受事焦點句、臺灣南島語、被動版式、言談功能、連結型式