VOLUME I
ARGUMENT STRUCTURE OF TSOU:
SIMPLEX and COMPLEX PREDICATES

by
GUJING LIN
ABSTRACT

Argument Structure of Tsou: Simplex and Complex Predicates

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This thesis investigates the argument structure of Tsou, a Formosan language within the Austronesian family. The investigation studies both simplex and complex predicates as well as describes the valency groupings and alignment patterns emerging from various clausal configurations. Assuming the stance that language description should respect language-specific categories and that cross-category comparison should be justified with sufficient similarities, this thesis depicts Tsou argument structure as the interaction of a lexical predicate with the syntactic construction in which the predicate occurs. A predicate introduces event-specific participants that are to be aligned with the argument roles licensed by particular constructions. Within a construction, an argument is associated with the ACTOR/PATIENT/REFERENCE/LOCATION distinction (the four grammatical roles) and the TOPIC/NON-TOPIC contrast (the two grammatical relations). Both layers of distinctions figure prominently in determining clausal structure and the operation of syntactic processes. Disregarding any layer would inadvertently conflate the functional divisions in Tsou, leading to incomplete analyses.

Adopting the constructional approach, this thesis argues that there are four major valency constructions in Tsou: Valency=0 Construction, Valency=1 Construction, Valency=2 Construction, and Valency=3 Construction. Depending on the alignment of the ACTOR/PATIENT/REFERENCE/LOCATION distinction and the TOPIC/NON-TOPIC contrast, a valency construction may instantiate various types of focus constructions. A verb may interact with different constructions and therefore illustrate alternating valency. By adopting the constructional approach, this thesis depicts alternating valency without necessarily assuming that one of the constructions involved is more basic than the other(s). On the one hand, a construction may display partial overlap of syntactic, semantic, or pragmatic properties with other constructions, but on the other hand, may carry features specific to its own. A constructional analysis is therefore capable of capturing both cross-construction similarities and construction-specific features, allowing a more comprehensive understanding of the Tsou language.
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Abbreviations

ACC: accusative
ADV: adverb
AV/AF: Actor Voice/Focus
AUX: auxiliary
BV/BF: Benefactive Voice/Focus
CAUS: causative
COMP: complementizer
DAT: dative
DF: Dative Focus
EVI: evidential markers
GEN: genitive
GF: Goal Focus
IBF: Instrumental/Benfactive Focus
Invis: invisible
IRR: irrealis mood
LF: Location Focus
LNK: linker
LOC: locative
NAF: Non-Actor-Focus
NEG: negation
NOM: nominative
NTOP: NON-TOPIC
OBL: oblique
PERF: perfective
PF: PATIENT-FOCUS
PROG: progressive
PL: plural
R: realis mood
REDU: reduplication
REL: relativizer
RF: REFERENCE-FOCUS
SVC: serial verb construction
SG: singular
TOP: TOPIC
Vis: visible
Chapter 1 Overview

This dissertation investigates the argument structure of Tsou, one of the endangered Formosan languages within the Austronesian family. Languages in this family have long been acknowledged for their distinct voice systems, also known in Austronesian studies as ‘focus systems’. These focus systems pose a serious challenge to the universality of grammatical relations such as ‘subject’ and ‘object’ in both language typology and syntactic theory. Linguists disagree as to which nominal within the Austronesian system, if any, is the closest equivalent to the ‘subject’. The questionable application of the concept ‘subject’ in these Austronesian focus systems in turn affects the identification of the ‘object’, the second prominent grammatical relation in a clause, as well as other non-core grammatical relations.

The focus systems of Formosan and Western Malayo-Polynesian languages, together with the difficulty in identifying grammatical relations, pose several challenges to the study of argument structure, including (i) how grammatical roles and relations should be distinguished at various lexical and syntactic levels, (ii) how these roles and relations are related to focus marking, and (iii) how similar these grammatical roles and relations are to conventional thematic roles (such as agent and patient) and grammatical relations (such as subject and object). This dissertation sets out to describe the argument structure of Tsou on the basis of empirical and language-internal evidence. This description will provide an understanding of Tsou argument structure and, furthermore, will have implications for the entire Austronesian language family as well as linguistic theory in general.

Specifically, this dissertation explores the following theoretical issues:
1. THE DISTINCTION BETWEEN ARGUMENTS AND ADJUNCTS: In the structure of Tsou, how are arguments and adjuncts distinguished (if they are indeed distinguished)?

2. ARGUMENT STRUCTURE OF TSOU: What are the grammatical roles and grammatical relations that need to be identified in Tsou argument structure? If Tsou argument structure contains two or more layers of representation, how are they aligned?

3. ORGANIZATION OF EVENT PARTICIPANTS: How are event participants in Tsou organized into categories that are grammatically relevant? How should these categories be characterized?

4. UNIVERSALITY OF GRAMMATICAL RELATIONS: Are the notions of ‘subject’ and ‘object’ universally valid and therefore applicable in Tsou? If not, what kinds of grammatical relations can be established using internal evidence in Tsou?

1.1 Organization of Contents

Chapter 2 reviews various issues and controversies in the studies of Formosan and Western Malayo-Polynesian languages, focusing on the four approaches that have been advanced for describing grammatical relations in these languages. I also review notions that are critical to the configuration of argument structure, including the formulation of both grammatical relations and thematic roles, as well as the alignment between them. In the review, attention is directed toward the common assumption that thematic roles can be clearly identified across languages. At the end of this chapter I discuss the importance of respecting language-specificity in organizing categories.
Chapter 3 is a sketch of Tsou, focusing on the morphosyntactic aspects critical to the investigation of argument structure. I first present a general description of Tsou discussing its current situation, genealogical status, phonology, and clausal structure. In this chapter I will also review and appraise previous works on Tsou, focusing on the six topics which reflect the configuration of Tsou argument structure: nominal marking, verbal marking, grammatical relations, thematic roles, morphological causatives, and serial verbs. This discussion identifies a need for a new perspective on these issues.

A description of Tsou argument structure in simplex clauses is given in Chapters 4 and 5. Chapter 4 begins with an investigation of valency groupings in Tsou and their interaction with focus categories. I first discuss in Section 4.2 how arguments and adjuncts may be distinguished in Tsou. In Section 4.3 I introduce Construction Grammar (Goldberg 1995; Croft 2001), the working framework adopted for describing argument structure in the present study. Sections 4.4 and 4.5 specify the reason for adopting such a theoretical stance, emphasizing that the Construction Grammar framework allows us to describe generalizations at the level of constructions instead of assuming a particular default pattern across constructions. Adopting the Construction Grammar framework, I argue that Tsou argument structure is not directly registered in the lexicon but is jointly determined by lexical items and the particular grammatical construction in which a given lexical item occurs. A Tsou argument structure construction is represented as the interaction of event participants, the TOPIC/NON-TOPIC contrast, and the ACTOR/PATIENT/REFERENCE/LOCATION distinction. Sections 4.6-4.9 introduce four valency groupings in Tsou using this three-layered structure.

In Chapter 5 I characterize the alignment patterns between event participants, the ACTOR/PATIENT/REFERENCE/LOCATION distinction, and the TOPIC/NON-TOPIC contrast. I first
specify in Section 5.2 the empirical basis of the ACTOR/PATIENT/REFERENCE/LOCATION distinction. I then investigate the alignment of event participants and the ACTOR/PATIENT/REFERENCE/LOCATION distinction in Section 5.3. In Section 5.4 I investigate the interaction of the ACTOR/PATIENT/REFERENCE/LOCATION distinction and the TOPIC/NON-TOPIC contrast, focusing on the distribution of grammatical prominence and discussing how subjecthood should be defined in this language. In Section 5.5 I examine the TOPIC selection process and explore the factors that motivate one alignment pattern over the others, including but not limited to referential prominence.

In the next two chapters I investigate the argument structures of two types of complex predicates in Tsou: the poa-morphological causative (in Chapter 6) and (non-harmonizing) serial verbs (in Chapter 7). These two types of complex predicates provide important theoretical implications to the overall understanding of argument structure. In the case of morphological causatives, previous literature generally agrees that a causativized predicate is associated with one more actor argument than the corresponding simplex predicate. Despite this change in valency—and therefore the difference in the array of arguments involved—there is a very strong tendency for the clausal structure of a morphological causative construction to mirror that of a simplex predicate with the same number of arguments (as explicitly pointed out by Aissen (1979) and Kemmer and Verhagen (1994)). By comparing the formal properties of poa-causatives and simplex predicates in Chapter 6, I examine how the Tsou language accommodates valency change into its clausal syntax and how the poa-construction imposes specific constraints not seen in simplex predicates. This provides a clearer understanding of Tsou argument structure and confirms the claim made in Chapters 4 and 5 that many generalizations are better specified at the level of constructions.
Chapter 7 describes serial verb constructions in Tsou and examines whether and how Tsou argument structure is affected by event integration, arguably one of the defining characteristics of serial verbs. I show that non-harmonizing serial verbs present a case where the actions represented by individual verbs are integrated into a single event. However, this event integration does not go hand-in-hand with argument unification, at least in the syntax. Non-harmonizing SVCs therefore constitute a counterexample to Durie's claim (1997) that verb serialization involves a unified argument structure.

Chapter 8 provides concluding remarks.

1.2 Relevant Background Issues: Language Consultants and Data Collection

The present study is a project that I conducted from 2004-2009. The main target of this research is the TapangU dialect of Tsou, spoken in the villages of TapangU, Niaeucna, Saviki, and Sinvi. I conducted fieldwork in TapangU (Dapang Village, Alishan Township, Chiayi County, Taiwan) during the past five years, mainly in the summer. I have three main consultants: Yangu'e Luheacana (Chinese: Luo, Yufong), female, born in 1959; Sayung'e Tiakiana (Chinese: Zheng, Jinfong), female, born in 1939; and Yapsuyong'e Niamoeoana (Chinese: Mao, Qizhong), male, born in 1938. They are all native speakers of Tsou who are also fluent in Mandarin Chinese. These three consultants are individuals with the available time, interest, and willingness to devote long hours to minute fact-checking. During each field visit, I also benefited from

1 'Dapang' is the transliteration of Tsou to Chinese to English.

2 I was introduced to Ms. Luheacana in summer 2004. By means of her referral, I became acquainted with Ms. Tiakiana and Mr. Niamoeoana in summer 2005.
overheard speech and numerous short conversations with the villagers in the street, in front of grocery stores, or during the Tsou harvest festival (*homeyaya*). I jotted down overheard speech and conversation and later asked the three main consultants to help me understand it. However, following IRB (Institutional Review Board) guidelines, the present study includes only data from the three consultants who granted me the permission to use the data.³

Most of the data in this dissertation come from my fieldnotes from 2004 to 2008, which is comprised mainly of elicited sentences but also contains seven narratives. Elicited sentences are referenced by their occurrence in the sections in the notebooks in the order of FNA–FNF, as tabulated in Table 1-1 below.⁴ Sentence elicitation was carried out using Mandarin Chinese as the contact language. Some of the data were spontaneously offered by the consultants, mostly by Ms. Sayung’e Tiakiana, when they constructed a mini-monologue based on previously elicited sentences. In verbal elicitation, prompts were given mostly in Mandarin Chinese but sometimes in Tsou (or what I considered my best shot at Tsou), especially in the later stage of the fieldwork when I gained more vocabulary for simple communication. The prompts typically consisted of a proposition in Chinese, accompanied by a description of the scenarios around the proposition I wanted to elicit. Another procedure that was also fruitful for elicitation was prompting with just a particular focus form. Most of the time, consultants would respond with a clause containing the prompted form and even with

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³ I acquired the approval of the three speakers for participating in this project between 2004 and 2005.
⁴ For instance, the reference code FNE.XGAI624 labels the 4th entry at page/sub-section 62 in section XGAIU in the notebook coded FND.
the specification of the pragmatics of the elicited clause, i.e., an example of when it would be used.

<table>
<thead>
<tr>
<th>Notebook Codes</th>
<th>date collected</th>
<th>sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNA</td>
<td>2004</td>
<td>XFRG, XSSE</td>
</tr>
<tr>
<td>FNB</td>
<td>2005</td>
<td>XTRC, XNRC</td>
</tr>
<tr>
<td>FNC</td>
<td>2006</td>
<td>DJUD, DTXB, XCRE, XFPT</td>
</tr>
<tr>
<td>FND</td>
<td>2007</td>
<td>XPRO, XDFN, DDCV</td>
</tr>
<tr>
<td>FNE</td>
<td>2008</td>
<td>XNGO, XGAU, DDEC</td>
</tr>
<tr>
<td>FNF</td>
<td>2005-2008</td>
<td>XTOB</td>
</tr>
</tbody>
</table>

Table 1-1 Reference codes for elicited sentences

Of the unprompted mini-monologues and the sentences the consultants constructed for me in response to the 'focus prompt', translations in Chinese were often offered spontaneously by the consultants. I usually double checked the translations by discussing the specific scenarios involved in the monologues and the self-constructed sentences, in an attempt to ensure that the consultants and I had the same understanding of the meanings.

The data contained in this dissertation also include sentences I constructed for examining particular syntactic constructions such as reflexivization. Elicitations of this kind usually started by first showing the consultants the relevant instances pulled from Tung’s (1964) narratives and asking for their interpretation of the scenarios involved. Based on the instances discussed I constructed a related example in Tsou and asked for acceptability judgments. A frequent reaction, if the consultant disagreed with the sentence I constructed, was an utterance in Tsou they considered more ‘authentic’ or
'adult-like'. If more than one consultant showed this reaction,\(^5\) and effects from semantic/contextual inappropriateness could be excluded, I considered this a 'negative acceptability judgment'. If the consultant agreed with the constructed sentence, I would proceed and ask him/her to construct another example similar to the prompt.

This dissertation also contains data extracted from the narratives recorded by Tung (1964)\(^6\) as well as from the printed materials published by the TapangU community (e.g., elementary textbooks and a rudimentary dictionary for a local language revival program). Data from Tung's narratives are referenced first by the section number in his book and then by the order in the text. For instance, the reference 'Tung 1-29: 005' indicates the fifth sentence (according to his segmentation) in the 29th story of Section 1 in Tung's book. Tung's narratives and the data pulled from the elementary textbooks are utilized to provide more examples of the patterns extracted from elicited data.

\(^5\) The judgments thus derived typically coincided among the three consultants, although it is not clear to what extent geographical affinity contributed to the relatively low variability in this case (the three consultants live in the same alley). When variation of judgments did occur, both female consultants recommended that I adopt Mr. Niamoeoana's judgment.

\(^6\) Tung's narratives were collected between 1957-1959 by Tung and his assistants during their field study. These narratives were published posthumously in 1964. Among the 133 narratives that Tung collected, 57 were based on the TapangU dialect, 48 on the Tfuya dialect, and 28 on the Luhtu dialect. Only the 57 narratives from the TapangU dialect were utilized in the present study.
Chapter 2  Formosan and Western Malayo-Polynesian Languages:
Issues and Controversies

This chapter reviews previous literature on grammatical relations and argument roles in Formosan and Western Malayo-Polynesian languages, focusing on various issues and controversies surrounding them. At the end of this chapter, I will present the theoretical stance adopted in the present study in response to these issues and controversies. Before proceeding, however, a few words are needed regarding the label Formosan and Western Malayo-Polynesian languages. Due to the immense internal diversity of the group, it is difficult to suitably label the Austronesian languages spoken in Taiwan, the Philippines, mainland Southeast Asia, western Indonesia (Sulawesi and all islands to the west of it), Borneo, and Madagascar, as well as the languages Palauan and Chamorro (spoken on the Palau and Mariana islands, respectively). The rather loose geographical expression Western Austronesian has been used by Ross (2002) and Himmelmann (2002) as a cover term for languages in this area. However, that label unnecessarily implies an internal subgrouping:¹ listing Formosan languages under the cover term Western Austronesian languages implicitly suggests that Western Austronesian languages form a primary subgroup of Proto-Austronesian, and that within this subgroup the Formosan languages form one or more branches. Blust (1977; 1999) and others challenge this implication, arguing that Formosan languages are all first-order subgroups of Proto-Austronesian whereas all Austronesian languages outside Taiwan belong to a single group called Malayo-Polynesian (see Section 3.2 for a summary of

¹ Even authors who use the term 'Western Austronesian languages', such as Ross (2002) and Himmelmann (2002), make it clear that these languages do not constitute a genetically-defined group.
relevant literature). To avoid the unintended implication, I have chosen the somewhat clumsy but neutral label *Formosan and Western Malayo-Polynesian* as the cover term for languages in this area.

This chapter is structured as follows: in Section 2.1 and 2.2 I present a brief discussion of the verbal and nominal marking systems in Formosan and Western Malayo-Polynesian languages. Section 2.3 reviews competing proposals about the grammatical relation systems in these languages. Section 2.4 surveys theories critical to the configuration of argument structure and the syntax-semantic alignment. In Section 2.5 I discuss the linguist’s dilemma in faithfully presenting language-specific features while at the same time searching for generalizations across languages. I will illustrate how the present study sets out to strike a balance between what seems to be two irreconcilable extremes.

2.1 The Austronesian Voice Systems

2.1.1 Types of Distinctions

Formosan and Western Malayo-Polynesian languages possess distinct types of verbal marking systems typically known in the Austronesian literature as ‘focus systems’.

Although traditionally, Austronesianists often distinguished focus systems from the English-type voice system, in recent years more and more proposals have been advanced associating focus systems with voice phenomena (Kroeger 1993; Foley 1998; [Blust 2002](#) notes that ‘voice’ and ‘focus’ are the two most common terms for the Austronesian verbal marking systems in the literature. Among the 67 sources he investigates, ‘voice’ is used in 28 sources and ‘focus’ is used in 25 sources. However, it should be noted that some linguists such as Himmelmann (2005) deliberately avoid the term ‘focus’ for fear of confusion with pragmatic focus.)
Himmelmann 2002; Bell 1988; Gerdts 1988; De Guzman 1988, 1992, to name a few). For instance, Himmelmann (2002) argues that the Austronesian 'focus' alternation is essentially a voice phenomenon and shares similarities with the active/passive alternation in English. Both types of alternation involve a different argument acting as syntactic pivot, if not as syntactic subject; both alternations trigger the occurrence of different morphological markings. Under this view, the Austronesian 'focus' alternation is a voice phenomenon but with features distinct from the typologically more common active/passive voice alternation.\(^3\) The Tagalog examples in (1a)-(1d) illustrate the four-way focus system recognized by Schachter (1993).\(^4\)

(1)

a. *sulat ang bata ng liham sa abogado para sa babae*

\(<\text{AF.prf}>\text{write NOM child GEN letter DAT lawyer for DAT woman}\)

'The child wrote a letter to a/the lawyer for a/the woman'.\(^5\)  

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\(^{\text{3}}\) Though not directly relevant here, the active/passive alternation is not the only voice phenomenon. Shibatani (2006) points out that phenomena such as middle, reflexive, causative, and applicative could all be included in the domain of voice if voice opposition is viewed as the alignment between the evolutionary properties of action and various degrees of discourse relevance. Under this definition, the Austronesian focus alternation shares functional similarities with the English active/passive contrast because they both involve adjusting the degree of discourse relevance among arguments.

\(^{\text{4}}\) The number of exact voice types may vary from language to language. For instance, the major Indonesian languages have reduced the voice system to a two-way AF/PF contrast (cf. Gil 2002). Additionally, the number of voice types is somewhat idiosyncratically determined in different approaches. For example, while Kroeger (1993) distinguishes four different voices in Tagalog, Schachter and Otanes (1972) list ten. According to De Guzman (1978), Maclachlan (1992) and Rackowski (2002), however, Schachter and Otanes' (1972) ten-way system can be reduced to four through a reanalysis of the multi-morphemic voice markers such as pag-...-an. Readers are referred to De Guzman (1978), Maclachlan (1992), and Rackowski (2002) for more details.

\(^{\text{5}}\) Schachter's (1993) original glosses have AN, PN, DN, and BN for my AF, PF, DF, and BF.
b. s&lt;in&gt;ulat ng bata ang liham sa abogado para sa babae
   &lt;PF,prf&gt;write GEN child NOM letter DAT lawyer for DAT woman
   'A/the child wrote the letter to a/the lawyer for a/the woman'. Patient Focus

c. s&lt;in&gt;ulat-an ng bata ng liham ang abogado para sa babae
   write&lt;prf&gt;-DF GEN child GEN letter NOM lawyer for DAT woman
   'A/the child wrote a letter to the lawyer for a/the woman'. Direction Focus

d. i-s&lt;in&gt;ulat ng bata ng liham sa abogado ang babae
   BF-&lt;prf&gt;write GEN child GEN letter DAT lawyer NOM woman
   'A/the child wrote a letter to a/the lawyer for the woman'. Beneficiary Focus

In studies of Tagalog, the different verb forms shown in (1a)-(1d) are assumed to mark the thematic role of the ang phrase, commonly known as the 'topic' (Schachter 1993:2). AF is 'actor focus', PF 'patient focus', DF 'direction focus', and BF 'benefactive focus'. Note that the label 'actor' is intended as a grouping of 'A' and 'S' a la Dixon (1979), not just the agentive participant denoted by the semantically transitive predicate. Within such a system, the occurrence of -um- in (1a) indicates that the NP ang bata 'the child' is the actor of the clause. The occurrence of -i in (1d), on the other hand, marks the thematic role of the ang phrase as the beneficiary. Patient focus, direction focus, and beneficiary focus are sometimes subsumed under the cover term

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6 Different linguists may refer to the same focus form using different thematic labels. For instance, Schachter and Otanes (1972) utilize the label OBJECT for referring to the argument most affected by the described action. Ross (2002) instead chooses the term PATIENT. Similar variation occurs between CIRCUMSTANTIAL (cf. Ross 2002) and BENEFActive (cf. Foley & Van Valin 1984).

7 Dixon (1979) introduces the labels 'S', 'A', and 'O' for, respectively, the single argument of intransitive predicates, the agentive argument of transitive predicates, and the patientive argument of transitive predicates. Dixon sees these labels as 'syntactic-semantic primitives' that provide a semantic basis for the definition of grammatical relations such as subject and object. Comrie (1978; 1981) provides a similar framework using the labels 'S', 'A', and 'P'.
Himmelmann (2002; 2005) defines the various types of Austronesian focus systems as special instances of a more general set of voice phenomena. However, these focus systems display features that are not comparable to other instances of voice phenomena, such as the English active/passive voice opposition. In English, the active-passive alternation is overwhelmingly asymmetrical in terms of morphological markedness, syntactic distribution, frequency of use, and valency. The active form is the basic and unmarked form whereas the passive form is morphologically marked, syntactically restricted in distribution, low in frequency, and involves valency reduction. Active forms are transitive while passives are intransitive with the agent nominal expressed as an adjunct, if at all. In Formosan and Western Malayo-Polynesian languages, however, the actor focus is not necessarily the basic form syntactically and morphologically. Cena (1977) points out that in Tagalog, patient-focus forms are not morphologically more complex than actor-focus forms. De Guzman (1988; 1992) and Payne (1982) argue that clauses containing patient-focus forms are not syntactically more restricted than those containing actor-focus forms (see Section 2.3.2 for the relevant discussion and literature). Shibatani (1988) notes that while it is the norm for the agentive constituent to be missing in English and Japanese passives, the agent is normally found in PF constructions in the Philippine-type languages. This raises a question: if the agentive phrase in PF constructions is truly an adjunct, why does it appear in general? These characteristics have turned the Austronesian focus systems into a source of contention. Central to this contention is the debate over which focus

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* The cover term **UNDERGOER VOICE** is used by Ross (2002). Linguists who work on Formosan languages generally prefer the term **non-actor-voice (NAV)** or **non-actor-focus (NAF)**.
form should be the basic one and whether focus alternation in these languages is symmetrical or asymmetrical. I summarize these issues in Section 2.1.2 below.

2.1.2 Symmetry between AF and PF Clauses?

2.1.2.1 Asymmetrical System

In studies of Formosan and Western Malayo-Polynesian languages published before the 1990s, there is a common assumption that the alternation between different focus constructions is asymmetrical (cf. Bell 1976, 1988; De Guzman 1988, 1992; Gerdts 1988; Payne 1982; Cena 1977). Under this assumption, underlying the four-way focus alternation is a basic focus construction which is morphologically unmarked and syntactically underived. The other focus constructions are marked, involving syntactic derivation and valency reduction. Depending on the theoretical leanings of the investigator and the criteria that the investigator adopts (e.g., morphological markedness, textual frequency, or syntactic distribution; see Section 2.3 for more details), different focus constructions have at various times been claimed to be the basic form in these languages. Bloomfield (1917), for instance, treated the Tagalog actor-focus as the active voice and the basic form; all the other focus forms were referred to as passive, specifically 'direct passive', 'instrumental passive', and 'local passive'. Disagreeing with Bloomfield's proposal, Cena (1977) and Payne (1982) argue that patient-focus sentences are the basic clause type of the Tagalog transitive predicate, as evinced from morphological and syntactic properties. Cooreman, Fox, and Givón (1984) also claim that patient-focus sentences are the basic sentence type based on their study of textual frequency. Analyses that treat patient-focus sentences as the basic construction have been collectively referred to as the ergative analysis. Since the
investigation of the basic construction is closely related to the analysis of grammatical relation systems (e.g., the active-passive analysis vs. the ergative-absolutive analysis), I leave the relevant discussion until Section 2.3.

2.1.2.2 Symmetrical System

In contrast with the above asymmetrical analyses, Foley (1998; 2008) and Himmelmann (2005) propose that the alternation between different focus forms is symmetrical. The claim for symmetry is made mostly on morphological and syntactic grounds but has not yet been vindicated by studies of textual frequency. The ergative analysis, on the other hand, has a comparatively more solid basis in textual frequency (see Section 2.3.2). Foley (1998:24) claims that all focus forms in Tagalog are “signaled by some overt verbal voice morpheme (e.g. -um-, -in, -an, -i- etc).” Neither actor-focus nor any of the non-actor-focus forms is morphologically more unmarked than the other (see Section 2.3.2 for the dissenting view that patient-focus is morphologically unmarked); and no one NP type is preferably selected for the ang phrase (note that Foley does not discuss the preference for definite patient nominals to be selected for the ang phrase). Before Foley and Himmelmann coined the term ‘voice symmetry’, the idea of a symmetrical system for Tagalog was suggested by Kroeger (1993:40-48). Using behavioral properties, he argues that both the AF (actor-focus) and the PF (patient-focus) constructions contain two terms; neither construction involves valency reduction. The AF construction contains an ang-marked actor and a ng-marked patient (ng is pronounced as nang in Tagalog). The PF construction contains an ang-marked patient and a

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9 Himmelmann (2005:167) states that more than half of the languages in the area are characterized by the occurrence of symmetrical voice alternation.
ng-marked actor. Assuming that the ang phrase is a core argument in the Tagalog clausal structure, Kroeger argues that the ng-patient in the AF construction and the ng-actor in the PF construction are also terms/core arguments given their ability to control the operation of certain syntactic processes. Let us start with the ng-actor in the Tagalog PF construction, whose termhood is said to manifest in its ability to launch syntactic processes such as EQUI, reflexive binding, and control of imperative addressee. In example (2) below, for instance, the ng-actor (of the lower predicate) is always a possible target of EQUI NP deletion (i.e., the controlee).

10 Schachter originally claimed that the actor is always the target of EQUI NP deletion in Tagalog (1976:505). However, he later toned down his claim since under certain circumstances, non-actor topics may also be the EQUI targets. Kroeger (1993) notes that verbs such as humimok ‘persuade’ and nagpilit ‘insist on’ allow the controlee to be either the actor (regardless of case marking) or a non-actor topic. This complexity, nonetheless, does not influence the assessment of termhood and transitivity under the symmetrical voice hypothesis: both the actor and the topic are recognized as the EQUI target and therefore a core argument.

Let us now turn to the ng-patient in the Tagalog AF construction, whose termhood, according to Kroeger, is manifest in its inability to undergo adjunct fronting while at the same time having the ability to control the gap in the subsequent adverbial clause. These are the two behavioral properties that the ang-actor also shares. Example (3) below illustrates that the ang-actor and the ng-patient ‘thief’ are equally capable of controlling the gap in the adverbial nang clause.

11 Compared to ng-marked nominals, less contention resides in the oblique status of the sa-marked nominals. Katagiri (2005:164) states that sa-marked nominals share similar behavior with locative and

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(2) um-iwas ako =ng tingn-an Ø si Lorna
   PERF.AV-avoid 1SG.NOM COMP look.at-DV GAP NOM Lorna
Kroeger’s study challenges the various asymmetrical analyses which assume that the AF/PF alternation in Tagalog involves valency reduction, including ergative analyses like those of De Guzman (1988) and Gerdts (1988). According to De Guzman and Gerdts, the PF construction contains two terms whereas the AF construction contains only one term. However, Kroeger’s study and the two ergative analyses may not be fully comparable, given the different defining criteria they use: De Guzman (1988) and Gerdts (1988) assess termhood using the diagnostics of relativization, clefting, reflexivization, topic fronting (De Guzman’s ‘focus construction’), raising, and EQUI; Kroeger’s claim is based on adjunct fronting and control of adverbial clauses. In order for a symmetrical analysis to work, it must be able to unify analyses resulting from various sets of diagnostics (or at least to justify why certain diagnostic results should be excluded).

A more serious challenge to the symmetry hypothesis lies in its lack of precise characterization of voice symmetry; in particular, at which level of linguistic representation is the symmetry intended to apply: symmetry in terms of morphological markedness, symmetry in terms of valency, or both? We need to bear in mind that temporal adjuncts in terms of the ability to undergo adjunct fronting and to control the gap in the subsequent adverbial clause. Cena (1995) and De Guzman (1999) hold a similar view.
morphological symmetry does not necessarily entail syntactic symmetry, and vice versa. Katagiri (2005:153-165) notes that both PF forms and AF forms in Tagalog could be morphologically unmarked in certain contexts, but she remains doubtful whether morphological symmetry can be readily generalized to the entire grammar (see Section 2.3.2 for Katagiri's study). She cites the diverging analyses by Kroeger (1993) and De Guzman (1999), arguing that to date there is no unambiguous evidence that AF clauses are grammatically intransitive/transitive. Any claim that morphological symmetry necessarily implicates syntactic symmetry is therefore risky.

To summarize, the symmetry hypothesis requires more detailed characterization to enhance its validity. While the claim of voice symmetry may hold in morphological markedness, its validity in terms of transitivity and syntactic valency remains in doubt.

2.2 Nominal Marking Systems

Formosan and Western Malayo-Polynesian languages have prenominal clitics whose function is to indicate the relationship that a nominal bears to its predicate (note that the relationship is not necessarily semantically/thematically oriented). There is a long tradition in the Austronesian literature to call these clitics 'case markers' and to compare them with the case inventories of other languages (Bell 1976; 1988; De Guzman 1988; 1992; Foley and Van Valin 1984; Gerdts 1988; Kroeger 1993; Holmer 2002; Tsukida 2005). Table 2-1 and Table 2-2 illustrate the 'case' systems of Tagalog and Cebuano, respectively. (Unless otherwise indicated, the 'case' labels are quoted original from the


\[\text{Reid (2002:286) shows that more than two dozen labels have been used in reference to the so-called 'case markers' in the literature of Austronesian languages, including but not limited to articles, determiners, prepositions, and relation markers.}\]
Nominal marking systems in these languages usually distinguish between person names and common nouns, as shown in Table 2-1 and Table 2-2. However, exceptions do exist. Thao, a Formosan language spoken in central Taiwan, has a system that does not distinguish between person names and common nouns, as shown in Table 2-3. This is also the pattern observed in Tsou, which I will present in Chapter 3.

<table>
<thead>
<tr>
<th>NOM</th>
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<th>DAT</th>
</tr>
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<tbody>
<tr>
<td>common noun markers</td>
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<td>ng</td>
</tr>
<tr>
<td>personal name markers</td>
<td>si</td>
<td>ni</td>
</tr>
</tbody>
</table>

Table 2-1 Tagalog case system (Kroeger 1993:13)

<table>
<thead>
<tr>
<th>NOM</th>
<th>GEN</th>
<th>DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>common noun markers</td>
<td>ang</td>
<td>sa</td>
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<tr>
<td>personal name markers</td>
<td>si</td>
<td>ni</td>
</tr>
</tbody>
</table>

Table 2-2 Cebuano case system (Himmelmann 2005:145)

<table>
<thead>
<tr>
<th>NOM</th>
<th>ACC</th>
<th>LOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>case forms</td>
<td>ti</td>
<td>tu</td>
</tr>
</tbody>
</table>

Table 2-3 Thao case system (Huang 2000:77)

In recent years a number of researchers have proposed to dissociate these nominal marking systems from the case inventories in European languages, observing that the two types of systems display distinct properties (cf. Himmelmann 2005:133). In the European context, case morphology is traditionally defined alongside semantic and/or syntactic relations and has been considered indicative of the term/non-term distinction of a language. According to Anderson (1985), for instance, cases that encode
the organization of S, A, and P typically bear strong correlation with core grammatical relations and are often referred to as ‘direct cases’. Cases that deal with everything else are often linked to non-core grammatical relations, referred to as ‘oblique cases’. However, such correlation with semantic and syntactic relations is not clearly manifest in the use of prenominal clitics in Austronesian languages. According to Himmelmann (2005:144-149) and Ross (2002:24-32), the prenominal clitics in Austronesian languages encode differences in specificity/definiteness and rarely provide clear-cut evidence for a term/non-term distinction (note that such a claim assumes that the term/non-term distinction can always be specified; see below). In Tagalog, a ‘case’ marker is often used for what are treated in English as terms and non-terms, or arguments and adjuncts. In example (4) below, the genitive ng marks the agent ‘child’, the patient ‘fish’, and the instrument ‘money’. Of the three participants, the first two are typically assumed to be obligatory arguments to the verb ‘buy’ whereas the last one is often interpreted as an optional adjunct. Himmelmann (2005:147) states that a similar lack of an argument-adjunct distinction is seen in the use of the dative sa, conventionally taken as marker of adjunct phrases such as location (cf. Foley and Van Valin 1984:63). In example (5) below, however, sa is used with a definite patient, which is often taken to be a core argument of ‘eat’ due to its semantic obligatoriness.

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13 Aside from encoding the syntactic-semantic relations, case also has discourse functions, but these discourse functions still correlate with semantic and syntactic relations to a certain extent. In Turkish, for instance, the accusative case suffix -i marks definite direct objects; indefinite direct objects typically occur without any case suffix (Comrie 1981:125-126).

14 The assessment of ng as a marker for oblique elements here raises the important question of whether or not the distinction between arguments and adjuncts can be drawn simply on the basis of obligatoriness.
Considering examples such as (4) and (5), Himmelmann (2005:147) concludes that “the distribution of the phrase-marking clitics in Philippine-type languages does not reflect in any direct way the distinction between core and peripheral arguments.” However, this claim assumes that the core-peripheral contrast can be distinguished without specifying which defining criteria should be used. As mentioned in earlier sections, different criteria may return diverging diagnostic results (cf. the dissenting views on voice symmetry), rendering the assessment of termhood a difficult job. Additionally, an even more fundamental challenge is that the argument/adjunct distinction may be construction-specific. For instance, it was mentioned earlier that the Tagalog instrument phrase ng pera ‘money’ in (4) is an adjunct given its non-obligatoriness for completing the meaning of the verb ‘buy’ in the DF construction (Naonori Nagaya, p.c.). However, when the verb ‘buy’ appears in the IF (instrumental focus) form ip-in-am-bili, the instrument phrase ‘money’ becomes an obligatory argument of ip-in-am-bili and is marked as ang pera, as in (6).

(6) ip-in-am-bili ng lalake ng isda ang pera
    IF-PERF-buy GEN man GEN fish NOM money
    ‘The man bought fish with the money’. (Foley and Van Valin 1984:135)
The fact that 'money' is optional for the DF form b-in-ilh-an 'buy' but obligatory for the IF form ip-in-am-bili indicates that semantic obligatoriness may be altered for different voice/focus constructions. The alteration raises the question of whether the argument/adjunct distinction is determined by verb semantics alone, such that every verb has a unique array of arguments across all constructions. I will return to this discussion in Chapter 4.

2.3 Grammatical Relations Systems in Formosan and Western Malayo-Polynesian Languages: Problems and Puzzles

In this section I summarize the four approaches that have been advanced for analyzing the grammatical relation systems of Formosan and Western Malayo-Polynesian languages, using Tagalog as the representative data source. The four approaches differ mainly in terms of which nominal—the actor or the ang phrase (in Tagalog)—is identified as the most prominent grammatical relation, viz. subject (but note that Dixon (1979; 1994) does not define subject using grammatical prominence; see Section 5.4.2). In an attempt to remain neutral, in the following sections I refer to the ang phrase as the Topic instead of the nominative argument, following Schachter (1976).

I summarize these four approaches in Sections 2.3.1-2.3.4, respectively. In Section

\[15\] However, we should not assume that Formosan and other Western Malayo-Polynesian languages parallel Tagalog in every detail. Due to language-specific variation, a particular analysis may be valid for a particular language, but not hold true in others. For instance, the topic analysis (see Section 2.3.4) may be valid for the eastern Indonesian languages Sasak and Sumbawa, which have a well-defined subject category apart from the topic. However, the validity of the topic hypothesis should not be extended to other Western Malayo-Polynesian languages before any robust investigation, especially those languages lacking a well-defined subject category.
2.5 The four approaches are contrasted with studies by Dryer (1997) and Haspelmath (2007), who propose that grammatical relations should be recognized on a language-specific basis.

2.3.1 S/A Topic=Nominative Argument=Subject

Most of the early discussion on Tagalog treats the Topic as the nominative argument and the subject of a clause (cf. Aspillera 1969; Bloomfield 1917; McKaughan 1973). The actor, which represents the grouping of S and A a la Dixon, is the default choice of subject and the actor-focus (AF) construction is the basic clause type comparable to the active clauses in English. All the non-actor-focus constructions are compared to the passive in English. Bell (1976) presents an active-passive analysis of Cebuano using the framework of Relational Grammar. She argues that the actor corresponds to the '1' of the initial stratum and the Topic corresponds to the '1' of the final stratum. AF sentences have the same status as active sentences in English whereas non-AF sentences involve advancement to the final '1'.

Since the early 1970s, the active-passive analysis has fallen into general disfavor. There are two main reasons for this disfavor. First, as will be specified in Section 2.3.2, evidence from both morphological marking and textual frequency falsifies the claimed similarities between Tagalog AF sentences and the active sentences in English. As the basic clause type, the English active sentence has a morphologically unmarked verb

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16 McKaughan (1973:208) argues that 'I am ready to emphasize that phrases introduced by so in Maranao or ang in Tagalog ... are subjects of their sentences. These phrases (or their pronoun substitutes) are in the most favored or primary relation to the verb. They have been nominated as subjects, and the predicate is that which says or asserts something about the subject.'
form and commands an overwhelming predominance in terms of textual frequency. However, AF forms in Tagalog are not always morphologically unmarked, nor are AF sentences the commonest clause type in terms of textual frequency. Cena (1977) demonstrates that AF forms of certain Tagalog verbs are morphologically more marked than the PF forms, as illustrated in the pair of h<um>a-hawak ‘hold, AF’ and hawak ‘hold, PF’ in (7) below. In terms of textual frequency, Cooreman, Fox, and Givón (1984) state that the Tagalog AF construction constitutes only 24% of transitive clauses in their corpus; the PF construction is instead the more common clause type (see Section 2.3.2 for more details).

(7) Tagalog AF and PF constructions (Katagiri 2005:161, quoting Cena 1977:14-15)

a. hawak ni John ang libro
   hold.PV.IMP GEN John ANG book
   ‘John holds the book’. (PF construction)

b. *hawak si John ng libro
   intended ‘John holds a book’. (AF construction)

c. h<um>a-hawak si John ng libro
   <AV>IMP-hold ANG John GEN book
   ‘John holds a book’. (AF construction)

The second reason for the general disfavor of the active-passive analysis, and probably the more fundamental one, is that the active-passive analysis fails to explain why the syntactic properties often found clustering on the subject relation are split

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17 Cena (1977) states that the verb hawak ‘hold’ does not carry any overt focus affix when functioning as the PF form. The corresponding AF form h<um>a-hawak, however, carries the AF affix -um- and inflects for aspect.
between the actor and the **TOPIC** in Tagalog, as pointed out by Schachter (1976) and summarized in Table 2-4 below. On the basis of the split, Schachter argues that no argument of a basic transitive clause in Tagalog can be uniquely identified as the grammatical subject (see Section 2.3.3 for more details on Schachter’s analysis).

<table>
<thead>
<tr>
<th>Role-related</th>
<th>Reference-related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor nominal</td>
<td><strong>TOPIC</strong> nominal</td>
</tr>
<tr>
<td>reflexive binding</td>
<td>obligatory element</td>
</tr>
<tr>
<td>EQUI deletion</td>
<td>quantifier float</td>
</tr>
<tr>
<td>imperative addressee</td>
<td>relativization</td>
</tr>
<tr>
<td>word order (Kapampangan, Cebuano)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2-4 Split of subject properties in Tagalog (Schachter 1976; 1977)

Schachter’s claim about the even split of subject properties in Tagalog was later challenged by Kroeger (1993), who claims that when more data are considered, the **TOPIC** in fact displays more subject properties than the actor. Of the ten diagnostics that Kroeger considered, eight of them point to the **TOPIC** as subject whereas the remaining two are considered irrelevant to the assessment of subjecthood (see Table 2-5 for the ten diagnostics employed in Kroeger’s analysis). Kroeger argues that Tagalog has a well-defined grammatical subject, which is the **TOPIC**.

Kroeger’s analysis is not simply a reprise of the earlier active-passive analyses. In fact it assumes an unusual mapping of thematic roles and grammatical functions in claiming that the patient is the grammatical subject of basic transitive clauses in Tagalog and is the default choice of the **TOPIC** (1993:56).¹⁸ This patient-subject mapping

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¹⁸ It is important to note that Kroeger does not distinguish between definite patients and indefinite patients but lumps them together as the default choice of the **TOPIC**. According to Naonori Nagaya (p.c.),
distinguishes Kroeger's analysis from the earlier active-passive analyses even though both refer to the TOPIC as the nominative argument and the grammatical subject. The unusual patient-subject mapping also, as pointed out by Kroeger (1993:229), challenges the common assumption that patient nominals can only become the subject when no actor nominals are present (see Section 2.4.2 for details).\textsuperscript{19}

<table>
<thead>
<tr>
<th>ACTOR</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>reflexivization</td>
<td>quantifier float</td>
</tr>
<tr>
<td>EQUI deletion</td>
<td>control of 2\textsuperscript{nd} predicate</td>
</tr>
<tr>
<td></td>
<td>relativization</td>
</tr>
<tr>
<td></td>
<td>possessor ascension</td>
</tr>
<tr>
<td></td>
<td>number agreement</td>
</tr>
<tr>
<td></td>
<td>raising</td>
</tr>
<tr>
<td></td>
<td>subject obviation</td>
</tr>
<tr>
<td></td>
<td>conjunction reduction</td>
</tr>
</tbody>
</table>

Table 2-5 Distribution of subject properties in Tagalog (Kroeger 1993)

2.3.2 S/P Topic=Absolutive Argument

The ergative analysis grew as a response to the purported unmarkedness of AF forms and AF sentences in Tagalog (Cena 1977; De Guzman 1988; 1992; Gerdts 1988 on Ilocano; Holmer 2002 on Seediq; Mithun 1994 on Kapampangan; Payne 1982). Under the ergative analysis, PF sentences are the basic clause type of a transitive predicate. The patientive

however, such lumping is not borne out by Tagalog discourse data, which typically associate indefinite patients with the NON-TOPIC status.

\textsuperscript{19} The challenge to Burzio's generalization was first pointed out by Guilfoyle, Hung, and Travis (1992) on the basis of data from Tagalog, Malagasy, Cebuano, and Malaysian/Indonesian. They propose that the phrase structure of the four languages contains two distinct subject positions, one at the specifier position of IP and the other at the specifier position of VP. It is the mapping of patient elements with the subject position at [SPEC, IP] that is in conflict with Burzio's generalization.
argument of transitive predicates (P) and the sole argument of intransitive predicates (S) are the default choice of TOPIC. That S and P are treated in the same way motivates labeling the TOPIC as the absolutive argument. The AF construction of the same transitive predicate is considered syntactically derived and reduced in valency, comparable to the antipassive construction in ergative languages.

The ergative analysis is preferred to the active-passive analysis on various grounds, including morphological markedness, textual frequency, and language acquisition process. In terms of morphological markedness, Cena (1977), Payne (1982), and Blake (1988) all claim that PF forms may be morphologically less marked than AF forms in certain environments. Table 2-6 is the paradigm of the verb root sulat ‘write’ and its various forms after inflecting for focus and aspect/mood. According to Blake (1988:79), the AF form in realis perfective, i.e., s-um-ulat ‘write’, carries an overt AF marker -um-, but its PF counterpart s-in-ulat ‘write’ does not carry any overt focus affix and is thus morphologically less marked (the infix -in- is typically analyzed as a marker of realis aspect, not a focus marker, because it is found in all non-AF realis forms). Cena (1977) makes a similar statement, which I mentioned in example (7) (Section 2.3.1).

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20 The distribution of morphological unmarkedness is largely subject to language-specific criteria. In Tagalog, it is the PF form that may appear morphologically unmarked. In the case of Tsou, however, it is the AF form that may appear morphologically unmarked (see Section 3.4 for details).
Empirical evidence, based on textual frequency and language development, is also claimed for the ergative analysis. Cooreman, Fox, and Givón (1984) report that Tagalog displays discourse ergativity in which PF sentences are a more common clause type than AF sentences (in terms of transitive predicates). Approximately three-fourths of the transitive clauses in their corpus are PF sentences (231 out of 281 transitive clauses);²¹ AF sentences constitute only one-fourth of clauses. Under the ergative analysis, the statistical minority of AF sentences in textual frequency is compared to the antipassive construction in ergative languages (however, see page 31 for a different interpretation of this distributional fact by Shibatani (1988)). In terms of language development, studies by Segalowitz and Galang (1978) and Galang (1982) claim that the PF construction is acquired earlier than the corresponding AF construction. Evidence from these three perspectives all point to the PF construction as the basic clause type of a transitive predicate.

Even though the ergative analysis arguably has an empirical basis in terms of morphological marking, syntactic properties, and textual frequency, a recent study by Katagiri (2005) indicates that the analysis may involve an inappropriate

²¹ Among the 231 PF clauses, 166 of them occur in the non-inverted verb-initial order whereas the rest 47 clauses occur in the ay-inversion construction (PAT-ay-Verb-AGT) (Cooreman, Fox, and Givón 1984:17).
characterization of the Tagalog focus morphology and even an inaccurate interpretation of the nature of antipassive constructions. She first points out that both PF forms and AF forms could be morphologically unmarked in certain contexts. It is true that in the realis perfective, the PF form of ‘write’ (s-in-ulat) is less marked than its AF counterpart (s-um-ulat). In the irrealis future, however, it is the AF form su-sulat that occurs without any overt focus affix, as shown in the irrealis future paradigm in Table 2-6. Similar examples can also be observed in the paradigm of ‘buy’ in Table 2-7, where the AF form in the irrealis future (bibili) appears unmarked, lacking any overt focus affix.

<table>
<thead>
<tr>
<th>Irrealis</th>
<th>Realis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>infinitive</td>
</tr>
<tr>
<td>AF</td>
<td>bumili</td>
</tr>
<tr>
<td>PF</td>
<td>bilhin</td>
</tr>
<tr>
<td>BF</td>
<td>ibili</td>
</tr>
<tr>
<td>DF</td>
<td>bilhan</td>
</tr>
</tbody>
</table>

Table 2-7 Paradigm of bili 'buy' in Tagalog (Katagiri 2005:159)

According to Katagiri (2005), the ergative analysis of Tagalog also involves an inaccurate interpretation of antipassivization. Quoting Dixon’s (cf. Dixon 1994:146) study, Katagiri emphasizes that a verb form is only to be identified as antipassive when there is convincing formal evidence that the verb form is derived from an underlying transitive predicate. In Tagalog, however, there is no convincing evidence indicating

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22 A reader questioned the derivational account of an antipassive form, arguing that an overt derivational relationship between an antipassive form and its basic counterpart is theory-internal to the GB framework. However, the notion of derivation has been widely adopted by linguists working outside of the GB framework for the combination of a stem with a meaning-changing morpheme, as in
that the AF form of a Tagalog transitive predicate is derived from the corresponding PF form (2005:155-159). If the AF form of ‘cook’ in (8) were derived from the corresponding PF form lutu-in ‘cook’, we should expect the form *maglutuin. Instead, the attested form is nagluluto, whose morphological structure displays no direct evidence of being derived from the PF form lutu-in.

(8) (Katagiri 2005:159)

a. lutu-in ang manok ng babaē
   cook.PF-PERF NOM chicken GEN woman
   ‘The woman cooked the chicken’.

b. nagluluto ang manok ng babaē
   AF.Imp+cook NOM chicken GEN woman
   ‘The woman cooked a chicken’.

Both syntactic properties and textual frequency also fail to support an analysis of AF sentences as antipassive constructions. In terms of syntactic properties, Shibatani (1988) illustrates that AF sentences in Cebuano display a clear active/accusative pattern in conjunction reduction, which is not expected for an antipassive construction. The Cebuano examples in (9) exhibit a clear accusative pattern in which the controller of the gap in an intransitive second clause is always the actor Juan, whether it is a TOPIC or not (the TOPIC nominal is set in boldface in the free translation for reading convenience).\(^{23}\) If the focus alternation in Cebuano follows the ergative-antipassive

derivational morphology. To summarize Dixon’s (1994) derivational account of antipassive therefore does not commit the present study to the GB framework.

\(^{23}\) The control of the gap in a transitive second clause, such as Juan greeted Pedro and __ kissed Maria, is a little more complex, but again, the pattern is not ergative. I will come back to this issue in Section 5.3 when investigating conjunction reduction in Tsou.
contrast as in Dyirbal (Dixon 1972), the gap in the second conjoined clause should always be interpreted as identical with the topic in the first clause given the analogy between the topic and the absolutive nominal.

(9) Conjunction reduction in Cebuano (Shibatani 1988:107)

a. Ni-bunal si Juan ni Pedro ug ni-lakaw Ø
   AF-hit TOP Juan DIR Pedro and AF-leave
   'Juan hit Pedro and Ø left'. (Ø=Juan)

b. Gi-bunal-an ni Juan si Pedro ug ni-lakaw Ø
   DF-hit-DF DIR Juan TOP Pedro and AF-leave
   'Juan hit Pedro and Ø left'. (Ø=Juan)

Textual frequency also does not seem to support the ergative analysis. Readers may recall that in Section 2.3.1, the ergative analysis was claimed to have an empirical basis in textual frequency, because of the small number of AF sentences relative to PF sentences. However, simply because AF sentences and prototypical antipassive constructions are both statistical minorities in natural texts does not mean that they are instances of the same type of construction. The statistical minority they display may be of different natures. Shibatani (1988) points out that antipassive forms in prototypical ergative languages are extremely rare. He cites Kalmár's (1979) study showing that antipassives constitute only 4.9% of transitive clauses in natural Eskimo texts (6 out of 123 transitive clauses). However, in Cooreman, Fox, and Givón's (1984) report, AF sentences in Tagalog have a higher percentage of occurrences in their

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24 Kalmár (1979) does not specify the name of his researched language but refers to it simply as 'Eskimo', even though this is a name for a branch of languages in the Eskimo-Aleut family. Linda Lanz (p.c.) pointed out that the data in Kalmár's study are mostly from Inuktitut.
corpus, constituting 24% of transitive sentences. In Cebuano, the percentage of AF sentences in natural texts is even higher. Shibatani reports that 52% of Cebuano sentences in his study are AF sentences. Considering the distinct distributions of textual frequency, the statistical difference highlights the differences between AF sentences and antipassive constructions instead of confirming their claimed similarities.

2.3.3 Two Subjects/Non-English-Type Subject

Unlike the previous two analyses, which assume that the subject relation constitutes a single category, a third approach to the Tagalog grammatical system claims that properties often associated with subject in languages such as English are split between two nominal classes in Tagalog, i.e., the actor and the TOPIC (when they diverge). Due to this split, no argument of a basic transitive clause in Tagalog can be unambiguously identified as the grammatical subject, because neither the actor nor the TOPIC is the perfect equivalent to subject in English. This two-subject approach is mostly attributed to the two seminal papers by Schachter (1976; 1977), as briefly mentioned in Section 2.3.1. According to Schachter, the split of subjecthood is related to the division of ‘role-prominence’ and ‘reference-prominence’, two functions that are tightly integrated in most languages but are separated in Tagalog and in many other Austronesian languages into two nominal classes, i.e., the actor and the TOPIC. The actor is the central participant in an event that ‘holds the most interest or importance for the speaker’ (Schachter 1977:283). It is defined by Schachter as the most prominent role within the clause and controls syntactic operations such as EQUI deletion,
reflexivization, imperative addressee, and word order (in Kapampangan and Cebuano)—properties that are related to role-prominence. In contrast to the actor, the TOPIC is the nominal class that carries presupposed referentiality/definiteness and controls syntactic processes related to reference-prominence—such as relativization, quantifier float, and being the indispensable/obligatory element of a clause (Schachter 1976; 1977). Table 2-4, presented earlier in Section 2.3.1, summarizes Schachter's (1976; 1977) studies on the distribution of subject properties in Tagalog. In 1993, Schachter re-examined the distribution of subject properties in response to Kroeger's (1993) challenge, as mentioned in Section 2.3.1, and claimed that his new analysis of Tagalog still points to an approximately even split of subject properties between the actor and the TOPIC (see Table 2-8). While the actor and the TOPIC each have certain syntactic properties often associated with subjects in languages such as English, they each lack some such properties as well. Still no single nominal class can yet be identified as the unique subject in Tagalog.
Shibatani's (1988) study of Cebuano illustrates a similar split of subject properties, which, according to Shibatani, is best represented using the notion of prototype category. He first points out that the Cebuano actor and TOPIC each have certain syntactic properties often associated with the prototypical subject, but they each also lack some such properties (see Table 2-9). When the two categories converge, the converging actor-TOPIC controls the maximal clustering of grammatical properties typically associated with the prototype of subject. The actor-TOPIC therefore bears the most resemblance to the prototypical subject. However, when the actor and the TOPIC diverge, neither of them displays the same degree of clustering of subject properties. The actor and the TOPIC therefore both deviate from the prototype of subject and are categorized by Shibatani as non-prototypical subjects.
In recent years, the understanding that the notion of subject may not constitute a uniform category in Formosan and Western Malayo-Polynesian languages has also come to the attention of proponents of generative grammar such as Guilfoyle, Hung and Travis (1992) (abbreviated as GHT hereafter), who propose that the split of subject properties be given a structural account. Using the Government-Binding framework, GHT argue that the split of subject properties is due to a unique characteristic: namely, that the phrase structure of these languages contains two distinct subject positions, each of which is associated with a subset of subject properties. These two positions are located respectively in [SPEC, VP] and [SPEC, IP], as shown in Figure 2-1.

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25 GHT (1992) base their analysis on data from Tagalog, Malagasy, Cebuano, and Malaysian/Indonesian.

Table 2-9 Distribution of subject properties in Cebuano (Shibatani 1988:125)
In GHT's (1992) proposal, a verb in Tagalog assigns Case to all but one of its arguments. The argument that does not receive Case co-varies with the voice form of the verb. That is, if the verb is marked in actor-voice, it fails to assign Case to the actor. If the verb is marked in patient-voice, it fails to assign Case to the patient. The argument that does not receive Case moves to [SPEC, IP] in order to receive the nominative case from INFL. According to GHT, the movement is obligatory for non-actor arguments but not required for the actor. An actor that does not receive Case from the corresponding actor-voice verb remains in [SPEC, VP] and receives the nominative case in situ from INFL, because INFL can govern down into [SPEC, VP]. Since this structural difference is not directly relevant to the discussion of subjecthood here, readers are referred to GHT for more details.

2.3.4 Actor as Subject, Topic as A'-element

In describing the split of subject properties, some linguists working under the
Principles and Parameters framework take the stance that the actor is always the grammatical subject whereas the TOPIC is an A'-element manifesting prominence in discourse-related phenomena. Under this interpretation, alternation in focus morphology has nothing to do with the re-alignment of syntactic positions and thematic roles. This approach was first suggested, although implicitly, by Carrier-Duncan (1985) and later elaborated by Richards (2000) for Tagalog and Pearson (2001; 2005) for Malagasy. For convenience of reference, I will refer to this approach as the 'topic hypothesis', following Hyams, Ntelitheos, and Manorohanta (2006).

Under the 'topic hypothesis', the TOPIC (Pearson's 'trigger') is not an argument but a discourse-related A'-element located in the complementizer domain (C-domain) (Richards (2000), Pearson (2001; 2005), and see also Hyams, Ntelitheos, and Manorohanta (2006)), as shown in Figure 2-2. The TOPIC receives theta properties through co-indexation with a null operator (Op) that raises to the specifier of WhP from an argument position inside VP (which is nested inside TP). The null operator could be an actor, a theme, or obliques of various kinds. However, since the TOPIC is an element in an A' position, under the P&P framework it is not (directly) associated with any grammatical relation, among them the subject, in a clause. The genuine subject, according to the topic hypothesis, is invariably the actor.

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27 This is a simplification of Pearson's (2005:402) proposal which involves a more articulate structure with the imposition of EP, vP, and AspP. The structure in Figure 2-2 should suffice for the purposes of the present study.
The topic hypothesis is not only appreciated by formalists working within the P&P framework but has also been acknowledged by some functionalists. Shibatani's (2008) recent work on the relativization of Sasak and Sumbawa—two eastern Indonesian languages—acknowledges the topic hypothesis and claims that the dissociation of the \textsc{topic} and the grammatical subject is adequate to describe the two languages. His study indicates that Sasak and Sumbawa have a clearly delineated subject category composed of \textit{S}, \textit{A}, and the \textit{P} of the passive, which corresponds nicely with the subject category in English. Aside from the subject category, the two languages also have a \textsc{topic} category that contrasts with the subject category in cliticization, gap control, and relativization.

\textbf{Figure 2-2} \textsc{topic/trigger as an A'-element (Pearson 2005)}

\[\text{TopP} \quad \text{Top}' \quad \text{Trigger}_i \quad \text{WhP} \quad \text{Top} \quad \text{Wh}' \quad \text{Op}_i \quad \text{Wh} \quad \text{TP} \quad \text{T} \quad \text{VP} \quad \text{V}_j \quad \text{(actor)} \quad \text{V}' \quad \text{t}_j \quad \text{theme}\]
Shibatani's (2008) work appears to support the topic hypothesis; however, his work involves a different interpretation of grammatical relations and as a consequence is not directly comparable to Richards' (2000) and Pearson's (2001; 2005) theories. In addition, demonstrating that the topic hypothesis is adequate for the two eastern Indonesian languages does not establish that the hypothesis works for all Austronesian languages. First, Shibatani's work assumes a two-layered framework in which the subject (S, A, and the P of the passive) and the TOPIC are both grammatical relations critical to syntactic patterning. Richards' (2000) and Pearson's (2001; 2005) theories instead treat the topic as an A' position unrelated to the assignment of grammatical relations, given the P&P framework they assume. The grammatical relation of the TOPIC must be understood from the argument position inside the VP from which it is raised. Second, Shibatani's (2008) work is based on Sasak and Sumbawa, in which the object relation and passive constructions can be clearly identified. However, Richards' (2000) and Pearson's (2001; 2005) works are based on Tagalog and Malagasy, neither of which arguably has a well-defined passive construction or an object relation. Therefore I do not assume that the pattern derived in one language can be readily generalized to another, an issue that I will return to in Section 2.5 when discussing the tension between depicting language-specific categorizations and searching for cross-linguistic similarities.

Before closing this section, there is one more point to note with regard to the investigation of grammatical relations/subjecthood in Austronesian languages. The four approaches reviewed above all contain the assumption that subjecthood be characterized using maximal grammatical prominence, i.e., the methodology advanced by Keenan (1976) for defining subjecthood in a cross-linguistic sense. However, we must bear in mind that this is not the only possible understanding of what 'subject' is.
As will be discussed in Section 5.4.2, Dixon (1979) dissociates the notion of subjecthood from the clustering of grammatical prominence, arguing that a universally valid definition of subjecthood be stated in terms of the convergence of S and A; this S/A grouping may not necessarily display the maximal grammatical prominence in the surveyed language. Dixon's approach will figure prominently for the investigation of Tsou grammatical relations in this dissertation.

2.4 Argument Structure: Organization of Thematic Roles and its Alignment with Grammatical Relations

This section provides a survey of notions critical to the study of argument structure, focusing on how argument structure is taken to be a grammatical construct that deals with the correlation of semantic attributes and syntactic configuration. This survey will build up the theoretical context for the investigation and analysis of Tsou argument structure in Chapters 4 and 5.

For many years, one of the long-standing issues in the study of syntax has been how the regularities in clausal expression in a language can be best captured and represented. Despite the different theoretical leanings that individual linguists adopt, across theories there is a widespread consensus/assumption that clausal expression is to a certain extent predictable from the information registered in verbs (cf. Perlmutter and Postal 1984). Such an assumption gives rise to the view that verb semantics

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28 For instance, the Projection Principle of the Principles and Parameters framework stipulates that verbs have structured lexical entries that register the number and types of arguments they take and these lexical properties are represented at all levels of syntactic representation (Chomsky 1981:29, 38).

29 The correlation of verb meanings and clausal expressions is supported by the observation that verbs of similar meanings exhibit similar clausal patterns. For instance, in his well-known study on verbs of
constitutes a structured representation specifying all facets of information critical for making a grammatical clause: the number of participants obligatory for composing a (minimally) semantically complete proposition (i.e., arguments), the types of these participants, the grammatical functions these participants bear in a clause, and the morphosyntactic expressions with which these participants are associated. Such a representation, often referred to under the label 'argument structure', is taken by many syntactic theories to be a grammatical construct at which general predictability exists to map semantic attributes of a verb to the syntactic configuration of a clause. The presence of argument structure in grammar therefore presupposes the existence of three different sub-constructs: a semantic representation of verbs, a syntactic representation of clauses, and some linking patterns that map the semantic representation to the syntactic representation.

Various syntactic theories have proposed their own representations of argument structure. Among the various proposals, one of the most widely adopted formats is to isolate the meaning of a verb into a list of participants necessary for the successful attainment of the event named by the verb. These participants, often referred to as 'thematic roles' or 'θ roles', are then given different degrees of prominence along a hierarchy that determines how these thematic roles are linked to different grammatical relations and thus associated with particular morphosyntactic patterns. Fillmore (1970) argues that the two classes of verbs manifest distinct behavioral patterns attributable to the semantic properties of each class. Verbs of breaking, which involve a change of state in an entity, manifest a pattern alternation between transitive and intransitive uses (i.e., the causative-inchoative alternation). Verbs of hitting, which involve a forceful contact but do not entail any change of state, do not display such a pattern alternation.
expressions.\textsuperscript{30} Example (10) below illustrates a predicate-argument representation taken from Levin and Rappaport Hovav (1986), which presents the meaning of put as a composite of thematic roles annotated with the grammatical function the corresponding NP will bear in syntax.

\par \textbf{(10)} PUT: Agent <Theme, Location> (Levin and Rappaport Hovav 1986)

The representation in (10) indicates that put takes three arguments bearing the \( \theta \)-roles Agent, Theme, and Location, respectively. Among the three thematic roles, the agent is the external argument (as indicated by being placed outside of the angle brackets) that will be mapped onto the subject relation in syntax.\textsuperscript{31} Inside the angle brackets are the two internal arguments, i.e., the Theme and the Location. The underlined Theme is the direct argument of put whereas the Location is the indirect argument.\textsuperscript{32}

Despite its wide acceptability, the thematic-role format as illustrated in (10) is not without problems. In what follows, I review two of the most often criticized issues of the thematic-role approach to the representation of argument structure: the

\textsuperscript{30} In earlier days, argument structure was presented simply as a list of arguments related by the verb head without any reference to grammatical functions (cf. Fillmore's (1968) case roles, Gruber's (1965) thematic relations, and Stowell's (1981) \( \theta \)-grid). The use of annotation to indicate grammatical functions was first introduced by Williams (1981), who proposes that the external/internal argument distinction be included in argument structure.

\textsuperscript{31} Williams (1981) introduces the external/internal argument distinction into argument structure. The external argument is the argument realized outside the maximal projection of the verb; the internal arguments are those realized inside the maximal projection.

\textsuperscript{32} Marantz (1984) argues that the internal arguments of a verb can be further distinguished by the direct/indirect contrast. The direct argument is the one that receives its theta role directly from the verb whereas the indirect argument is the one that receives its theta role from prepositions.
organization of thematic roles and the ranking hierarchy that is given to these thematic roles.

2.4.1 Organization of Thematic roles: Their Usefulness and the Limit of Usefulness

The thematic-role approach to argument structure assumes that the semantics of verbs can be consistently reduced to a small set of 'roles', often taken to be universally valid and useful for cross-linguistic studies. Holding thematic roles constant, linguists are able to compare the encoding and behavioral properties of a particular thematic role, such as experiencer, in one language versus another. However, the assumption of a finite set of thematic roles often fails in the lack of precise defining criteria. As pointed out by Rappaport and Levin (1988), Dowty (1991), Palmer (1994), and Blake (2001), to date there are no uncontroversial criteria that can be consistently applied to determine the enumeration of roles and the assignment of a particular theta role. As a consequence, a finite set of thematic roles is essentially 'non-definable' due to the lack of precise criteria, as commented by Dowty (1991). Depending on their own judgment, different linguists have proposed various lists of thematic roles, which differ considerably in both number and type (see Table 2-10). Some studies, such as Andrews (1985), propose an elaborate and fine-grained system, with up to fourteen different roles. Others, such as Anderson (1971; 1977), choose a coarse-grained categorization with only four roles.33

33 In Anderson's (1977:45) proposal, an argument can bear more than one case relation. For instance, in sentences like she knew it, the argument she bears the ergative relation and the locative relation at the same time. The multiple assignment of case relation makes Anderson's system more like a feature list rather than a system of role types.
Linguists are forced to choose one of the many lists for language description (or to create the roles that need to be introduced). In the process of choosing a list or formulating new roles, two critical features of the nature of thematic roles are often ignored: (i) the enumeration of thematic roles needs to be justified by grammatical correlates, and (ii) thematic roles should be evaluated for utility and adequacy within the surveyed language, by assuring that they capture the regularities in clausal structure of the surveyed language. The purpose of postulating thematic roles is not simply to depict semantic attributes but for highlighting semantic attributes that are

<table>
<thead>
<tr>
<th>Linguist</th>
<th>Thematic Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fillmore (1968; 1971)</td>
<td>Agent, Counter-agent, Experiencer, Object, Result, Instrument, Source, Goal</td>
</tr>
<tr>
<td>Andrews (1985)</td>
<td>Agent, Experiencer, Patient, Theme, Recipient, Directional (Source/Goal), Causer, Instrumental, Inner locative, Outer locative, Reason, Circumstantial, Comitative, and Temporal</td>
</tr>
<tr>
<td>Radford (1988)</td>
<td>Agent, Theme, Experiencer, Benefactive, Instrument, Locative, Goal, Source</td>
</tr>
<tr>
<td>Bresnan and Kanerva (1989)</td>
<td>Agent, Beneficiary, Recipient, Experiencer, Instrument, Theme, Patient, Location</td>
</tr>
<tr>
<td>Palmer (1994)</td>
<td>Agent, Patient, Beneficiary, Locative, Instrumental</td>
</tr>
<tr>
<td>Van Valin (2001)</td>
<td>Agent, Experiencer, Recipient, Stimulus, Theme, Patient</td>
</tr>
<tr>
<td>Givón (1984)</td>
<td>Agent, Patient, Dative, Instrument, Benefactive, Locative, Associative, Manner</td>
</tr>
</tbody>
</table>

Table 2-10 Thematic roles advanced in various approaches: A sample
SIGNIFICANT for argument realization. A thematic role therefore needs to be justified by grammatical correlates, be it morphological or behavioral. If the formulation of a particular thematic role is not honored by grammatical correlates in the surveyed language, the particular role is of limited utility for stating the semantic-syntactic correlation.

That the formulation of thematic roles needs to be justified by grammatical correlates in turn raises the question of whether the formulation of thematic roles is constant across languages, or, to phrase differently, if a particular list of thematic roles appropriate for one language is necessarily appropriate for another. There is no denying that conventional thematic roles, whichever list one chooses, provide a common vocabulary for comparing encoding patterns and behavior-and-control properties across studies and languages. For instance, assuming that thematic roles are constant across languages, linguists can compare the encoding of the experiencer in English with that in Spanish. However, given that grammatical correlates are essentially language-specific, the list of thematic roles appropriate for language A may be not be equally appropriate for language B. For example, Marantz (1984) proposes to split Instrument into two distinct roles, i.e., Intermediary Instrument and Facilitating Instrument considering the differences in syntactic properties in English. While this

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34 For instance, liquid and solid objects are conceptually distinct, but the distinction is rarely of grammatical contrast in terms of argument realization. To postulate liquid and solid objects as two distinct thematic roles is therefore of limited utility for the investigation of argument structure. Let us not forget that thematic roles are postulated for organizing specific event participants and describing how semantically coherent elements are mapped onto a particular syntactic relation in a predictable manner.

35 According to Marantz (1984), Intermediary Instrument, like the new gadget in (a) and (b), may be encoded either as a prepositional phrase or as a subject in the appropriate syntactic environment.
fine-grained categorization has an empirical basis in English, other languages do not necessarily make the same grammatical distinction. In those cases, such a fine-grained categorization does not help describe how various syntactic configurations reflect semantic contrasts. Similarly, although the experiencer role could conceptually be divided into perceiver, cognizer, and emoter, as shown in the second column to the left in Figure 2-3, this split is of little utility if the three-way distinction does not have grammatical correlates in the surveyed language. On the other hand, if a language grammatically distinguishes agent and experiencer, as in the use of dative subject in Spanish, postulating two distinct roles is more effective than imposing the macrorole Actor for stating how the semantic contrast between KILLER and LIKER, for example, correlates with syntactic differences.

Enabling Instruments such as the fork in (c) and (d), however, are never expressed as subject.

(a) The cook opened the jar with the new gadget.
(b) The new gadget opened the jar.
(c) Shelly ate the sliced banana with a fork.
(d) *The fork ate the sliced banana.
To summarize, thematic roles are postulated to highlight those semantic attributes significant enough to cause regularities in syntax. The formulation of thematic roles and the assignment of a particular role therefore need to be evaluated relative to their adequacy in describing the pattern generalization and the encoding contrast of the surveyed language. If the postulated thematic roles are not directly supported by the encoding contrast of the surveyed language, it may be necessary to opt for a different list that is more effective. The issue of choosing the appropriate list of roles will surface in Section 3.7 when I summarize and appraise the previous studies on Tsou thematic roles.
2.4.2 Alignment between Thematic Roles and Grammatical Relations: Thematic Hierarchy

Another issue that is problematic for the thematic-role approach lies in the ranking hierarchy it imposes on arguments. Syntactic theories attempt to represent argument structure in a particular internal organization such that the syntactic realization of arguments can be predicted from the interaction of the semantics of arguments and some particular ‘linking algorithm’. In this way they hope to capture the regular correlations of semantic attributes and clausal configurations. The most common format is to rank arguments along a hierarchy according to a scale of prominence; this hierarchy of thematic prominence then determines the syntactic realization of arguments in grammatical functions and constituent structure. For instance, Grimshaw (1990) states that arguments are ranked according to the prominence scale listed in (11).

The argument ranked highest on the thematic hierarchy—typically the agent—is linked to the most prominent position in syntax, i.e., the subject. The lower arguments are linked to the positions inside the maximal projection of the verb head.

(11) Agent> Experiencer> Goal/Source/Location> Theme (Grimshaw 1990:8)

Although the idea that arguments are ranked according to degree of thematic prominence is well accepted in most syntactic theories, there is no consensus on how the degree of thematic prominence should be defined. For instance, while Grimshaw (1990) argues that Experiencer ranks higher than Location, Bresnan and Kanerva (1989) argue for a reverse ordering, as shown in (12). In addition to the difference in ranking order, the thematic roles considered for prominence relation in the two studies also differ in both type and number. (13) is yet another version of the thematic hierarchy
with differences in ranking order, role number, and role type, proposed by Givón (1984).

(12) Agent> Beneficiary> Recipient/Experiencer> Instrument> Theme/Patient> Location
(Bresnan and Kanerva 1989:23)

(13) Agent> Dative/Benefactive> Patient> Location> Instrumental/Associative> Manner
(Givón 1984:139)

The differences among the various proposals on the thematic hierarchy illustrate that argument prominence is still a controversial issue. There is little consensus on the number, type, and ranking order of thematic roles within the hierarchy, except that agent is always preferably located at the top. The prominence of the agent argument captures the predominant tendency for agent arguments to be associated with subject, arguably the most prominent grammatical function in a clause. The agent prominence is so well accepted that various linguists have stipulated that non-agent arguments are associated with the subject position only when no agent argument is available (Burzio 2000; Legendre, Raymond, and Smolensky 1993; Woolford 2001; Woolford 2003). For instance, a patient argument only becomes a grammatical subject when the agent role is ‘absorbed’ (by the passive affix, according to the GB framework) or ‘demoted’ to oblique status (in the framework of Relational Grammar). Agent is the default choice

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36 The generalization of agent prominence is a modified view of Burzio’s generalization, which states that only verbs that can assign a θ-role to the subject can assign accusative Case to an object (Burzio 1986:178). Subsequent literature tends to recast Burzio’s generalization in terms of how internal arguments are associated with the subject function when no external arguments (i.e., agents) are present.
for subject selection.

Even though the claim of agent prominence is widely accepted, it is important to note that the validity of such claim is dependent upon how subject is defined. For languages that are claimed to contain more than one subject-like relation, agent prominence may not apply in one of the subject-like relations. For instance, Guilfoyle, Hung, and Travis (1992) claim that the Austronesian languages contain two subject positions, one at [SPEC, IP] (i.e., the TOPIC) and the other at [SPEC, VP] (i.e., the actor). Of the two subject positions, the former constitutes a counterexample to the presumed agent prominence in that both agent and non-agent arguments are equally eligible for the position. Acknowledging GHT's (1992) idea, Kroeger (1993:229) claims that Tagalog presents a counterexample to agent prominence in having patient as the grammatical subject of a basic transitive clause, which is the TOPIC in Kroeger's analysis. However, his claim only follows when the actor is not considered to be the subject. If the actor is the subject and the TOPIC exists apart from the actor-subject, agent prominence still applies in the selection of Tagalog subject and there must be other mechanisms for TOPIC selection (see Chapter 5).

2.5 Language-Specificity in Grammatical Relations and Grammatical Categories

As readers may notice, most of the studies on Formosan and Western Malayo-Polynesian languages (except the two-subject approach summarized in Section 2.3.3) assume, explicitly or implicitly, that these languages follow the patterns of well-studied languages. That is, the syntactic patterns of Formosan and Western Malayo-Polynesian languages must be either accusative or ergative; and whatever the
pattern, all languages should have a subject (however it is defined), like English. For many years, the questions that most linguists asked were: Are these languages accusative or ergative? Which nominal can be given the category label 'subject' in these languages? Whether or not these Austronesian languages even have a well-defined category corresponding to that label is often not carefully evaluated.

Before asking the same questions and trying to choose particular labels for describing Tsou categories, let us ponder the necessity of imposing familiar category labels on less-studied languages and the pros and cons of such label assignment. On first look, language description appears to be made easier if there is a list of pre-established categories from which linguists can choose a particular subset to use as descriptive tools. That is, by assigning popular category labels such as 'subject' to the surveyed language, we can describe the regularities in grammar in a more efficient way without going into the labor of repetitively saying 'the sole argument of intransitive predicates and the agent-like argument of transitive predicates' every time when the category becomes relevant for description. Additionally, extracting typological generalizations also appears to be made easier when languages can be compared by analogous categories. For instance, by assigning the label 'subject' to a particular clausal argument in Spanish, we can illustrate the properties shared between this Spanish argument and the English subject (e.g., that they both control agreement

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37 The term 'category' is used in the present study in a broader sense to encompass any particular class of linguistic expressions that display similar if not identical properties, be it structural or functional. The categories so defined need not be of primitive or 'real' status. By this assumption, the present study is able to refer to the subject relation as a grammatical category even though in Government and Binding theory, subject is not considered to be of real status but is structurally defined by the position on the phrase structure.
marking and are able to undergo passivization). Such a choice of labels facilitates comprehension and highlights the functional similarities between the two categories. Comparison of languages is made possible.

Despite the convenience outlined above, label assignment could be misleading if not conducted in an appropriate manner, especially when label assignment causes linguists to impose category boundaries and assume they are identical to categories in other languages. If the choice of labels is mistaken as an imposition of universal categories, assigning popular categories to less-studied languages may create more puzzles than the problems it promises to solve. Let us use Mandarin locational coverbs as an example. In Mandarin, locational coverbs such as zài ‘exist, at’ illustrate functions of both prepositions and verbs. On the one hand, zài can introduce a locational nominal, forming a modifying adjunct to a verb head, as in (14a). On the other hand, zài can stand alone and contribute a locational predication, as in (14b).

(14)

a. tā zài fāngjiān lǐ shuìjiào
   he exist room inside sleep
   'He slept in the room.'

b. tā zài fāngjiān lǐ
   he exist room inside
   'He was in the room.'

Given the mixture of properties, are the locational coverbs in Mandarin Chinese prepositions or verbs? Whichever category the investigator chooses, the choice involves fitting the Chinese locational coverbs into existing categories by ignoring the 'non-fitting' features. In doing so, the assignment of familiar labels is of limited utility
for describing the function of Chinese locational coverbs. Instead, the investigator imposes a presumed category boundary on the language that is not justified by the data.

In response to the drawbacks, in recent years linguists such as Dryer (1997), Croft (2001), and Haspelmath (2007) all propose to define grammatical categories on a language-specific basis. Such proposals are justified in terms of descriptive adequacy: categories are devices that linguists create for describing the way languages function (Hagège 2004). A descriptive category should reflect how a language treats certain types of elements alike in grammatical marking and how it treats these groups of elements differently from one another. Given that grammatical marking/morphosyntactic property is essentially language-specific, the patterns of categorization thus derived are also specific to the particular language and should be justified by empirical and language-internal evidence of the particular language. Before proceeding to discuss the recent proposals for language-specific categories in Section 2.5.2, I introduce in Section 2.5.1 how American Structuralists have long implored to describe categories on their own. Section 2.5.3 discusses the consequences of treating grammatical categories as language-specific, in particular how conventional diagnostics can still be utilized for examining the possible boundary of language-specific categories.

2.5.1 Language-Specificity in a Historical View

Skepticism about the existence of universal categories is not a new idea. Starting from the early twentieth century, American structuralists such as Bloomfield and Boas were
cautious in describing structural categories of individual languages. They and their supporters warned not to make assumptions in the description of any category. Above all, they specifically warned us not to describe unfamiliar languages in terms of categories derived from familiar Indo-European languages. Boas (1911:24-43) stated that different languages have different fundamental categories that form the unit of speech. The categories derived from the languages of Europe and western Asia, be it phonological, morphological, or syntactic, are valid only for those groups of language but do not extend to others. In order to give each language its proper description, every category should be described on its own and, to avoid unwanted connotations with the Greek/Latin and English tradition, be given special language-particular labels. The description of American Indian languages in the 1940s and 1950s is largely influenced by the Boasian approach. For instance, Newman (1944:113) coined two language-specific terms 'celerative' and 'retardative' for two Yokuts affixes which express the manner in which an act is carried out: 'celerative' is used for an action occurring in an accelerated manner, whereas 'retardative' is for an action occurring in a manner slower than expected.

2.5.2 Language-Specificity and Grammatical Relations: Dryer (1997)

More recently, Dryer (1997), Croft (2001; 2003), and Haspelmath (2007) explicitly argue that grammatical categories cannot be defined independently of particular languages. Among the three, Dryer's argument focuses specifically on the language-specificity of grammatical relations. According to Dryer, grammatical relations should not be given to any language a priori. Every language imposes its own criteria for organizing
arguments into classes (although similarities may exist among language-particular categories). We should not assume that grammatical relations established in one language can be readily generalized into another. Assigning unjustified categories may lead to an inappropriate characterization of the surveyed language.

In his proposal, Dryer (1997:131-132) specifically illustrates the long-standing 'problem' in Philippine languages with regard to subject identification. To Dryer (1997:132), "there is no problem internal to Philippine languages in identifying the grammatical relations". The morphosyntax in Cebuano, Dryer's main reference, clearly points to two dimensions of contrast: the dimension of topic vs. non-topic and the dimension of actor vs. others. In Cebuano, for instance, relativization makes reference to the topic whereas reflexivization makes reference to the actor (Shibatani 1988). It is the topic vs. non-topic distinction and the actor vs. non-actor contrast that figure prominently in the grammar of Cebuano for organizing nominals and determining the pattern of argument realization, not a single universal subject category which controls the clustering of grammatical prominence. Language description would be impossible without making reference to the two distinctions/categories, making the two categories legitimate grammatical relations for describing Cebuano.38 In other words, Cebuano has discrete language-internal grammatical relations; the so-called 'problem' in identifying the grammatical subject only arises when we try to identify in Cebuano an English-like subject, i.e., a single uniform category which controls the maximal grammatical category.

Dryer's point pertains to all linguistic categories and constructions. At a broad

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38 Also note that the difficulty in identifying a uniform subject never leads to problems in describing syntactic patterns in these languages, as argued by Schachter (1993:51-52).
level, linguistic structures such as case, grammatical relations, thematic roles, causative constructions, and serial verb constructions are all categories that linguists create for describing the way languages function (Hagège 2004). A descriptive category should reflect how a language treats certain types of elements alike in grammatical marking but others different. Given that morphosyntactic properties are essentially language-specific, the patterns of categorization thus derived should also be justified by and evaluated for the best utility of reflecting language-specific properties.

2.5.3 Language-Specificity, the Use of Diagnostics, Label Assignment, and Crosslinguistic Similarity

Some readers may challenge the 'languages-on-their-own' claim, arguing that this claim disables a linguist from using conventional diagnostics, typically developed on the basis of better-studied languages, for identifying a particular category in lesser-studied languages. The logic is: if grammatical categories, such as 'word', are essentially language-specific, the diagnostics for identifying a particular category should be entirely language-specific as well. By such reasoning, a linguist adhering to the 'languages-on-their-own' claim is prohibited from adopting conventional diagnostics of wordhood (cf. Harris 2000 on Udi) for investigating the category of word in Tsou, Atayal, or Amis. This reasoning, however, involves a not-so-appropriate conception of the nature of a grammatical category and of the function of diagnostics. Let us illustrate why such a conception is not so appropriate in what follows.

To begin with, a grammatical category, like most other categories, is best understood as a recurring cluster of features, which typically form a correlation among themselves (Taylor 1995). These features constitute the basis on which linguists
develop diagnostics for identifying a particular category. However, the fact that a particular set of features cluster in language A and define a particular category does not entail that these features necessarily cluster and define an identical category in language B. It is highly likely that the features that form a bundle in A may diverge and form two or more different bundles in B. Individual diagnostic features provide the sampling points for detecting where a categorical difference may be made, but the use of these features for diagnoses does not pre-exclude any non-canonical clustering (or does not presume any particular clustering). Thus, conventional diagnostics do not disable a linguist from observing language-specificity, because they provide the opportunity to detect non-canonical clustering. The use of conventional diagnostics therefore does not lead to theoretical incoherence even when a linguist describes languages on their own, contrary to the assumption mentioned at the beginning of this section.

Let us take as an example the diagnostics utilized by Harris (2000) for assessing Udi wordhood. Harris (2000) states that an Udi word displays a clustering of the following three properties: the internal parts cannot be negated (henceforth the negation test), the internal parts cannot be conjoined (henceforth the coordination test), and the entire unit should be able to undergo further derivational processes (henceforth the derivation test). However, the fact that the three features cluster and define the same category named 'word' in Udi does not guarantee that these features necessarily form the same clustering in another language T. It is highly likely that the three features

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39 Harris (2000) actually provides a list of seven diagnostics for wordhood: noncompositionality, input to derivational processes, negation, anaphoric islands, questioning, conjoining, and gapping. For ease of illustration, I list only three properties.
may not cluster in language T. One of the possible scenarios that may arise is for the coordination test and the derivation test to cluster and define the same category X but for the negation test to diverge and to define a different category Y instead (see Chapters 6 and 7 for the assessment of wordhood in Tsou). Questions then arise as to how the diverging diagnostic results should be interpreted. Due to the shared similarities in the conjunction test and the derivation test, we are likely to treat the Tsou category X as comparable to the Udi word (and to dismiss category Y over the two criteria). Nevertheless, considering the mismatching result of the negation test, we would be hesitant to view category X as fully identical to the Udi word. In cases like this, adopting conventional diagnostics does not rule out the opportunity of detecting deviation and language-specific features clustering in Tsou.40

Another issue that may arise concerns label assignment: considering the diverging diagnostic results, should we assign distinct labels such as ‘X’ or ‘Y’ to the Tsou categories under question, in an attempt to make clear that these categories are not identical to the category ‘Word’ in Udi? While such labeling has the advantage of highlighting the differences between compared categories, it interferes with the comprehension of shared similarities, which is not what the language-specific approach intends to accomplish. The reason for emphasizing language-specificity is to avoid fitting observed data into existing categories by simply ignoring the deviant

40 A reader questioned the theoretical coherence of the present study in adopting the languages-on-their-own mantra but at the same time utilizing notions such as morphemes and phonemes without investigating their language-specific values in Tsou. While the language-specific values of these conventional categories are certainly topics of academic significance, accommodating these issues in a study of this size would detract from the research questions about argument structure. I therefore make use of terms, such as morphemes and phonemes, in the present study, without making claims about their specific characteristics in Tsou.
features. However, this approach does not suggest that categories across languages are so different that they cannot be compared. For instance, the label ‘adjective’ is used for categories in Japanese and English to indicate that a Japanese expression bearing this name shares similarities with an English adjective (Backhouse 2004). The compared categories may be different;\(^4\) but as long as they share sufficient similarities, calling them by the same name facilitates comprehension and helps capture the underlying functional or cognitive principles that motivate pattern regularities. We must bear in mind the possibility that each category may also carry features not shared by other categories.

Even though conventional category labels facilitate comprehension and help capture pattern regularities, I emphasize in the present study that every label brings with it a set of implications that need to be dealt with carefully. Labels with unintended implications need to be avoided with extra caution. For instance, a study that is not working within the framework of Optimality Theory should avoid the term ‘optimal candidate’ when describing the grammatical prominence of subject as the relation that is the most accessible to various syntactic operations, as the term carries with it the OT implication that constraints can be violated and their resistance to violation can be ranked—an implication that may not be welcomed for studies done in other frameworks. Another relevant example is seen in the dissenting opinions between Givón (1994) and Aissen (1996) regarding whether or not the label ‘inverse’ can be extended to cover PF constructions in Cebuano and Chamorro. Givón (1994) proposed

\(^4\) For instance, unlike English adjectives which are assumed to form a coherent class, Japanese adjectives can be separated into two groups by the feature of inflection: inflected and uninflected adjectives (Backhouse 2004:50). Both groups shared similarities with the English adjectives but they also lack some (Backhouse 2004:51-63).
to unify various constructions under the macro-category 'inverse' according to the criterion that patient outranks agent in topicality, but Aissen (1996) questioned the validity of such comparison due to the lack of sufficient morphosyntactic commonalities between the compared constructions. This example indicates that the validity of grouping constructions/entities under the same label depends crucially on which attributes are assessed, and in particular, whether the similarities are sufficient to outweigh the differences. The present study intends to emphasize that the best a linguist can do is to describe a surveyed category in as much detail as possible and not to discard any ‘non-fitting’ features relative to conventional categories; only by doing this can a linguist decide on the most appropriate label for the category under question and utilize the label to locate the particular category relative to other categories when both similarities and difference are considered.

To summarize, three theoretical issues stand out prominently in the study of Formosan and Western Malayo-Polynesian languages:

- **voice systems**: Do Formosan and Western Malayo-Polynesian languages pattern more with the active-passive system or the ergative-antipassive system? Or do they exhibit a distinct pattern of their own? If they do, how should this distinct pattern be characterized?

- **argumenthood and organization of grammatical relations**: Is the distinction between core, oblique, and adjunct elements always clearly delineated? If the presumed core-oblique-adjunct distinction is not empirically supported in the surveyed language, how are grammatical relations such as subject and object empirically justified?

- **empirical validity of category assignment**: For descriptive purposes, we
constantly apply familiar labels to the categories identified in Tsou (e.g.,
previous research refers to the prenominal clitics in Tsou as case markers
and thus draws an implicit analogy with case systems in other languages).
To what extent are the inter-category similarities sufficient enough to
vindicate the analogy?

In the rest of this dissertation, I will address these issues using data from Tsou.
Chapter 3  Introduction to Tsou

In this chapter I provide a sketch of the Tsou language. I first present a general description of Tsou describing its current situation, genealogical status, phonology, and clausal structure. In this chapter I will also review and appraise previous works on Tsou, focusing on the six topics which reflect the configuration of Tsou argument structure: nominal marking, verbal marking, grammatical relations, thematic roles, morphological causatives, and serial verbs. The first four topics reflect the configuration of Tsou argument structure at the level of simplex predicates. The last two topics reveal how argument structure of a simplex predicate may be altered in response to the formation of complex predicates. The review and appraisal of these six topics will identify the need for a new perspective on Tsou argument structure, to be presented later in Chapters 4-7.

3.1  Sociolinguistic Overview of Tsou

Tsou is spoken by the people of the Tsou tribe in southwestern Taiwan. The Tsou territory lies to the southwest of Mt. Jade, spreading over Nantou County and Chiayi County to Kaohsiung County. The main settlement of the Tsou people is located in Mt. Ali, Chiayi County. Figure 3-1 shows the geographical location of this settlement. The census statistics by the Council of Indigenous Peoples of Taiwan (2006) indicates that the current Tsou population totals around 6,335. Melody Y.Y. Chang (2004)\(^1\) reports

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\(^1\) In the earlier drafts of this dissertation, citations of Melody Y.Y. Chang's works were noted as 'Y.Y. Chang', following the abbreviation of her Chinese name. This abbreviation, however, is easily confusing.
that Tsou people under 40 years old no longer maintain fluency of their native language and prefer to use Mandarin Chinese, the national language of Taiwan, for daily communication. My observation shows that children under 12 years old rarely grow up speaking Tsou as their first language, despite the installation of a small-scale language revitalization program funded by the Ministry of Education of Taiwan. The lack of proficiency of Tsou in the young generation creates communication problems between children and their grandparents, leading to intergenerational disruption of language transmission. Such disruption is most evident in the lexicon and sporadically seen in word order, the minimum use of complex clauses, and grammaticality judgments regarding the use of focus marking. The present study targets speakers aged over 40 and does not assume that the analysis necessarily applies to speakers below 40.

with the Chinese name of another Formosan scholar Henry Y.L. Chang, who also publishes on Tsou. For the sake of clarity, citations of Melody Y.Y. Chang's works will be referred to as M. Chang (Year) hereafter. Citations of Henry Y.L. Chang's works will be referred to as H. Chang (Year).

For instance, some younger speakers have a tendency to prepose the TOPIC nominal to the clause-initial position. The older generation considers the preposing inappropriate and attributes the change to the influence of Mandarin Chinese.
Tsou currently consists of three different dialects: TapangU, Tfuya, and Luhtu. These three dialects are mutually intelligible despite phonological and lexical

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3 This map is based on the image file extracted from http://www.ecai.org/austroasiaweb/maps/formosan_yami/Formsan_Map.jpg. I mark the Tsou settlement in red boundary.
differences (Li 1979). Li (1979) described two phonological differences among the three dialects: (1) Luhtu /r/ corresponds to /e/, /y/, or zero in both TapangU and Tfuya. For example, the word ‘fish’ is rosku in Luhtu but yosku in TapangU and Tfuya. (2) Tfuya and Luhtu /z/ (and sometimes the sequence /iz/) corresponds to /i/ or zero in TapangU. The word ‘lance’ is mengzu in Tfuya and Luhtu but mengiu in TapangU.

3.2 Genealogical Linkage of Tsou

The genealogical linkage of Tsou is subject to both the positioning of the Formosan languages within the Austronesian language family and the internal subgrouping of Formosan languages. In what follows, I summarize the stances that are commonly assumed regarding the two topics.

3.2.1 The Position of Formosan Languages within the Austronesian Language Family and the Internal Subgrouping of Formosan Languages

The Formosan languages have long been recognized as significant within the Austronesian family because of their additional phonological distinctions in comparison to languages outside Taiwan. In general, the phonemic inventories observed in Formosan languages are considered archaic and to preserve Proto-Austronesian features (cf. Dahl 1981; Ross 1992; Blust 1999). In addition to the conservative phonology, Formosan languages also display an enormous amount of internal variability and low internal lexicostatistical correspondences. These three features have led researchers such as Blust (Tryon and Tsuchida 1995; Blust 1999; Ferrell 1969; Starosta, Pawley, and Reid 1982; Tsuchida 1976, to name a few) to hypothesize that Taiwan, the locus of
Formosan languages, was the starting point of migration for the Proto-Austronesian people. Currently, Taiwan is home to fifteen extant Austronesian languages: Atayal, Seediq, Tsou, Kanakanabu, Saaroa,4 Thao, Paiwan, Rukai, Bunun, Puyuma, Saisiyat, Amis, Pazeh, Kavalan, and Yami (Blust 1999). Yami, however, belongs to the Western Malayo-Polynesian subgroup and is not a member of the Formosan language group.

Before the 1990s, the position of Formosan languages within the Austronesian family was in serious dispute. The main question was whether or not Formosan languages come from a common first-order subgroup called 'Proto-Formosan'. While the idea that Formosan languages form a monophyletic group attracted quite a few proponents at the time (Dyen 1963; Dahl 1976; Tsuchida 1976; Dyen and Tsuchida 1991; Starosta 1995), the idea of 'Proto-Formosan' gradually subsides in the scholastic discussion in the 1990s and onwards. Instead, a consensus has been reached that Formosan languages should be sorted into subgroups that are themselves the first-order daughter languages of Proto-Austronesian (Ferrell 1969; Blust 1977; Dahl 1981; Harvey 1982; Blust 1999). Under the emerging consensus, Formosan languages form more than one primary branch of Proto-Austronesian, whereas all the non-Formosan languages form a single group (Malayo-Polynesian) at the same level as any one of the Formosan groups (see Figure 3-2).

Unlike the near-consensus on the first-order status of the Formosan languages within the Austronesian family, the internal subgrouping of Formosan languages is still under debate. The subgrouping hypotheses by Ferrell (1969) and Blust (1999), for instance, differ considerably in both number and sorting criteria. Ferrell (1969)  

4 Kanakanabu and Saaroa are sometimes transcribed as Kanakanavu and Sa'alua, as in Li (1985; 1990).
proposed a three-way grouping based on lexicostatistics and scores of relative closeness of cognate sets, sorting the Formosan languages into three primary branches of Proto-Austronesian: Atayalic (Atayal, Seediq), Tsouic (Tsou, Kanakanabu, Saaroa), and Paiwanic (the remaining languages). Disagreeing with the three-way categorization, Blust (1999) utilizes phonological evidence and argues that the Formosan languages should be divided into nine primary branches from Proto-Austronesian: East Formosan, Northwest Formosan, Puyuma, Paiwan, Rukai, Tsouic, Bunun, Western Plain, and Atayal. In this theory, all Austronesian languages outside Taiwan belong to a single subgroup called ‘Malayo-Polynesian’. Among the ten primary branches of Proto-Austronesian, Blust (1999:44-55) provides evidence for the existence of the first four subgroups, leaving everything else to the previous literature (see the references listed in Blust (1999) for the evidence of the other six groups). According to Blust (1999:46-47), the East Formosan subgroup can be defined by the distinctive merger of PAn *j and *n and the distinctive merger of PAn *t and *C. The Northwest Formosan subgroup can be distinguished from others by the shift of *C to *s and the lenition of *q (to /ʔ/ in Saisiyat and to zero in Kulon and Pazeh) (Blust 1999:52-53). As for Paiwan and Puyuma, Blust’s (1999:47-51) main argument is that there is no convincing evidence for the putative ‘Proto-Paiwan-Puyuma’; as a consequence “it is best to consider each of these languages a primary branch of the An [Austronesian] family” (Blust 1999:51). Figure 3-2 below presents Blust’s classification.

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5 Reid (1982), however, suggests that Proto Malayo-Polynesian may subgroup with one or more Formosan languages.
3.2.2 Tsou within Formosan Languages

The Tsou language, together with two of the other Formosan languages Saaroa and Kanakanabu, forms the Tsouic subgroup of Formosan languages (Ferrell 1969; Tsuchida 1976; Li 1985; 1990; Blust 1999). Within the Tsouic group, Saaroa and Kanakanabu are argued to be more closely related with each other, as opposed to Tsou (Tsuchida 1976). On the basis of geographical distribution, the two languages are sometimes collectively referred to as 'Southern Tsou'. The Tsou language, the target of the present study, is referred to as 'Northern Tsou'.

Within the various subgrouping theories regarding Formosan languages, the Tsouic group is often located at the uppermost node of the Proto Austronesian daughter
languages within Taiwan. Ferrel (1969) and Blust (1999), for instance, argue that the Tsouic languages constitute one of the primary branches of Proto-Austronesian. However, Tsuchida (1976) disagrees with this subgrouping, arguing that the Tsouic languages maintain a close relationship with Rukai on phonological grounds and a higher order subgroup 'Rukai-Tsouic' should therefore be established. Nevertheless, the Rukai-Tsouic subgroup has not been widely accepted and over time has come to be ignored within scholastic discussion. Figure 3-3 presents Ferrell's (1969:69) groupings of Formosan languages, in which Tsou, Kanakanabu, and Saaroa are separated from other languages and form a distinct subgroup. Figure 3-4 presents Tsuchida's groupings, in which Kanakanabu subgroups first with Saaroa and then with Tsou. The three Tsouic languages then subgroup with Rukai, forming Rukai-Tsouic.

![Figure 3-3 Groupings of Formosan languages (based on Ferrell 1969:69)](image)

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4 Dahl (1981) also claimed that a higher order subgroup 'Rukai-Tsouic' could be established on top of the Tsouic group.
7 Ferrell (1969) bases his conclusions on (1) lexicostatistical percentages, (2) scores of relative closeness of cognate sets, (3) the existence of echo vowels, and (4) cultural anthropological observations.
4 This is a simplification of Ferrell's figure, in which he subdivided the Paiwanic group into Paiwanic I and Paiwanic II. Paiwanic I and Paiwanic II include ten extant and two extinct Formosan languages. But the details do not directly concern the present study and the structure in Figure 3-3 should suffice for the purposes of the present discussion.
Among the Formosan languages, Tsou is often regarded as the language with unusual grammatical characteristics. One of its most conspicuous properties is a set of grammaticalized auxiliaries that mark modality and may simultaneously co-index focus marking. This feature, together with other grammatical characteristics, will be detailed in Sections 3.3-3.10 as I present a brief discussion of Tsou grammar.
3.3 The Phonemic Inventory and Phonology

3.3.1 The Phonemic Inventory and Stress

The Tsou phonemic inventory includes fifteen consonants, one glide, and six vowels (see Table 3-1 and Table 3-2 for the consonant and vowel inventories in IPA). Where standard IPA symbols differ from the practical orthography used by the Tsou community, as in the case of the implosive bilabial /ɓ/ vs. b, the symbol used in the orthography appears in brackets following the IPA symbol. To better correlate with materials published by the Tsou community, the present study adopts the practical orthography when the standard IPA symbol of a phoneme is divergent from the practical orthography: ‘ɓ’ for the bilabial implosive /ɓ/, ‘ʈ’ for the dental implosive /ɖ/, ‘ŋ’ for the velar nasal /ŋ/, ‘ʔ’ for the glottal stop /ʔ/, ‘U’ for the high central unrounded vowel /i/, and ‘y’ for the glide /j/.

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Lab. Dent.</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>p</td>
<td>t</td>
<td></td>
<td>k</td>
<td></td>
<td>?[ʔ]</td>
</tr>
<tr>
<td>Implosive</td>
<td>ɓ[b]</td>
<td>d[l]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricate</td>
<td></td>
<td>ts[c]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td></td>
<td>ŋ[ŋ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f</td>
<td>v</td>
<td>s</td>
<td>z</td>
<td></td>
<td>h</td>
</tr>
<tr>
<td>Approximant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>j[y]</td>
<td></td>
</tr>
</tbody>
</table>

Table 3-1 Tsou consonants (Zeitoun 2005:260)

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td>i [U]</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

Table 3-2 Tsou vowels (Zeitoun 2005:260)

Ferrell (1969:67) stated that “Tsou itself is very aberrant lexically, phonologically and structurally from all the other Formosan languages.”
The identification of the phoneme inventory of Tsou is not completely devoid of controversy; among the most-discussed controversy is the debate regarding the phonemic nature of the palatal glide /y/.\textsuperscript{11} Tung (1964) and Chen (2002) argued that the palatal glide /y/ is an allophone of the mid vowel /e/ when the vowel does not constitute a sonority peak. Refuting Tung’s no-glide assumption, Ho (1976) argues that the palatal glide /y/ is better analyzed as a distinct phoneme for a systematic account of stress assignment and reduplication in Tsou. Ho’s argument is adopted by both M. Chang (1998) and Zeitoun (2000; 2005).\textsuperscript{12} The present study also sides with Ho’s analysis and recognizes /y/ as a distinct phoneme in Tsou.

The syllabic structure of a Tsou word is often represented by the formula (C)(C)V (Tung 1964; Tsuchida 1976; Zeitoun 2005). Tung (1964) specifically argued that there are no word-final codas in this language. Tsuchida (1976:88) states that a Tsou root which has a CVC structure is compensated for by a supporting vowel (what Zeitoun (2005) terms an ‘echo vowel’) whose phonetic value is determined by the preceding vowel. Table 3-3 below lists the proposed root forms and their surface forms after the insertion of an echo vowel. A preceding vowel of /i/ or /e/ takes the echo vowel of /i/, as can be observed between the proposed root form his and its surface form his.i ‘tooth’. A preceding vowel of /u/ takes the echo vowel of /u/, as can be observed between the proposed root form puz and the surface form puzu ‘fire’. Finally, a preceding vowel of

\textsuperscript{10} I understand that Tung (1964) used the symbol ‘u’ for the high central unrounded vowel. I choose to label the vowel using a capital u because the bar u is easily confused with the IPA symbol for the high central rounded vowel.

\textsuperscript{11} For a more detailed summary of the Tsou phoneme system, see Zeitoun (2005:260-264).

\textsuperscript{12} M. Chang (1998) supports Ho’s analysis with minimal pairs of /e/ and /y/, as between /yono/ ‘banyan (Ficus benghalensis)’ and /eono/ ‘lift up’. Strictly speaking, the two words only form a near-minimal pair given the difference in syllable number.
/U/, /o/, or /a/ takes the echo vowel /U/, as between the proposed root form ngUc and the surface form ngUcU 'nose'.

<table>
<thead>
<tr>
<th>preceding V</th>
<th>proposed root form</th>
<th>surface form</th>
</tr>
</thead>
<tbody>
<tr>
<td>i/e</td>
<td>his</td>
<td>his.i</td>
</tr>
<tr>
<td>u</td>
<td>puz</td>
<td>puz.u</td>
</tr>
<tr>
<td>U, o, a</td>
<td>ngUc</td>
<td>ngUc.U</td>
</tr>
<tr>
<td></td>
<td>pas</td>
<td>pas.U</td>
</tr>
<tr>
<td></td>
<td>zom</td>
<td>zom.U</td>
</tr>
</tbody>
</table>

Table 3-3 Insertion of echo vowels (based on Tsuchida 1976:88)

stress

Stress in Tsou is not contrastive (Tsuchida 1976:85). A multisyllabic word has its primary stress on the penultimate syllable, as in yatatiskóva 'human'. Suffixation and encliticization cause stress to shift to the right of the stem, falling on the derived penultimate syllable. A comparison between stem forms and affixed forms illustrating the change of stress assignment is presented in (1)-(3).

(1) kúzo 'bad' vs. kuzó-he 'worse'
(2) cóngo 'painful, AF' vs. congó-a 'painful, PF'
(3) ámo 'father' vs. amó-='u 'my father' (FND.XDCV002-004)

The penultimate stress has been adopted by Tsuchida for explaining the pattern of unstressed vowel deletion (e.g., c-m-úhu 'roast, AF' vs. chú-a 'roast, PF') and the h->k dissimilation (e.g., s-m-úhnu 'dispose, AF' vs. skún-a 'dispose, PF'), which I will address later. However, Tsuchida does not specify the ordering of the penultimate stress assignment relative to these two morphophonological rules. Such non-specification
renders the mechanism of the Tsou morphophonological processes subject to question and in certain cases even generates incorrect output forms (see below, Figure 3-6 and Figure 3-7).

As an alternative analysis, the present study represents the assignment of penultimate stress as the result of syllable metrification and orders the process of metrification/stress assignment after the insertion of an echo vowel but before unstressed vowel deletion and $h\rightarrow k$ dissimilation (see page 81 below). All the non-final syllables of a word are divided into metrical feet that are right-headed and assigned/parsed from left to right. Each metrical foot is composed of an unstressed left-headed syllable plus a stressed right-headed syllable. The final syllable of a word is assumed to be extrametrical and invisible to the parsing procedure. The assignment of primary stress on the penultimate syllable of yatatiskova can be modeled using the metrical grid of Halle and Vergnaud (1987). In the following illustration, Line 0 of the metrical grid indicates a potential position where stress can be assigned. Line 1 is the foot level where Line 0 asterisks are grouped into a binary unit. An asterisk at Line 1 marks the occurrence of a secondary stress. All of the Line 1 asterisks will be grouped into an unbounded constituent at Line 2 where the primary stress of the word level will be determined. In the case of Tsou, the Line 2 constituent is a right-headed constituent which assigns a primary stress to the right-most position. The procedure is carried out as follows:

---

13 Wright and Ladefoged (1997) were the first to analyze the Tsou stress assignment in a metrical framework. Unfortunately, their work does not discuss how stress assignment interacts with other morphophonological rules and derives different focus forms.
a. Mark Line 0 asterisks. The right-most syllable is extrametrical and is indicated by brackets.

b. Asterisks at Line 0 are grouped into binary right-headed constituents from left to right.

c. Asterisks at Line 1 are grouped into an unbounded right-headed constituent.

![Metrical grid of yatatiskova](image)

In Section 3.3.2 below, I specify how syllable metrification interacts with other morphophonemic rules and alters the morphophonological shape of a lexical item in different environments.

### 3.3.2 Morphophonological Processes

Tsou has a number of morphophonological processes that alter the morphological shape of certain verbs in different environments, such as *s-m-ohpici* ‘pinch, AF’ vs. *skopic-a* ‘pinch, PF’. The relevant processes include the insertion of echo vowels (see the above section), dissimilation, vowel weakening, and unstressed vowel deletion (Ho 1976; Tsuchida 1976; Li 1979; Zeitoun 2005). Readers are reminded that the following summary is only intended to illustrate that these morphophonological processes may obscure the formal resemblance of a verb to its different focus forms. I do not intend to provide a full account of these morphophonological rules because the details of the
application of these rules are still a topic of controversy in the study of Tsou phonology (Tsuchida 1976; Ho 1976; Li 1979; Wright and Ladefoged 1997; Zeitoun 2005).

vowel weakening

Ho (1976) reports that the stem-final vowel of certain verbs in Tsou is reduced to a consonant when being associated with suffixes that begin with a vowel. Zeitoun (2005:263) reports that such sound change is present when a verb stem alternates between the ACTOR-FOCUS form and the corresponding NON-ACTOR-FOCUS form(s). For instance, the stem-final i of opcoi ‘kill’ is changed to the voiced alveolar fricative z when followed by the PATIENT FOCUS suffix -a, as shown below. Ho (1976:261-265) argues that the sound change is governed by vowel backness. Front vowels such as i and e are changed to the alveolar fricative z when followed by NON-ACTOR-FOCUS suffixes. Non-front vowels such as U, u, and o are changed to the voiced labiodental fricative v when followed by the NON-ACTOR-FOCUS suffixes. Such vowel weakening does not alter the stress assignment, which remains on the penultimate syllable of the output form.

- e/i → z
- opcoi ‘kill,AF’ vs. opcóz-a ‘kill,PF’
- húmi ‘mark,AF’ vs. húmz-i ‘mark,LF’

- U/u/o → v
- bohsifóu ‘climb,AF’ vs. bohsifóv-a ‘climb,PF’
- pasunaén ‘sing,AF’ vs. pasunaénv-a ‘sing,PF’

unstressed vowel deletion

14 Ho (1976:273) refers to this morpho-phonological process as ‘vowel consonantizing’.
Tsuchida (1976) notes that unstressed vowels in specific types of verbs are deleted, thus obscuring the relationship of a verb stem to its various focus forms, as can be seen in the contrast between \textit{c-m-úhu} ‘roast, AF’ and \textit{chú-a} ‘roast, PF’ (see Figure 3-6 below). According to Tsuchida (1976:88), such a phenomenon deletes every non-word-final vowel “in an even-numbered syllable in either direction from the stressed syllable\footnote{It is not entirely clear why Tsuchida referred to the deleted syllable as “an even-numbered syllable in either direction from the stressed syllable.” It is even more confusing when Tsuchida (1976:266) claimed that in proto-Tsou “every non-word-final vowel in an odd-numbered syllable counted from the stressed syllable will be deleted.”} and is noticeable in verb stems that select -\textit{Vm}\footnote{\textit{V} stands for an abstract underlying vowel which never surfaces.} or \textit{mo-} as the \textsc{actor focus} affix (see Section 3.4.2 for focus affixes in Tsou). Two of the lexical pairs that Tsuchida uses for illustration are \textit{c-m-úhu} ‘roast, AF’ vs. \textit{chú-a} ‘roast, PF’ and \textit{t-m-ópsU} ‘write, AF’ vs. \textit{tpósU} ‘book’. The following is Tsuchida’s illustration quoted verbatim (note that Tsuchida does not mark stress on the surface form):

\begin{verbatim}
mp /c-Vm-úhu/ c-m-úhu ‘roast (AF)’; cf. mp /cuhú-a/ chu-a (GF)
\end{verbatim}

Tsuchida states that the first pair is derived from the same root \textit{cuhu} and the second pair from the root \textit{topos}. Other than that, he does not specify how the rule of unstressed vowel deletion yields the expected output forms, nor does he detail in which order vowel deletion interacts with the insertion of echo vowels and penultimate stress assignment. In fact, as readers may notice, Tsuchida’s analysis is inconsistent in regard to stress labeling. In order to derive the correct AF form \textit{c-m-úhu}, he claims that the root \textit{cuhu} is stressed on the first syllable (Tsuchida 1976:104). On the same page, however, he...
claims that the root is stressed on the second syllable (i.e., cuhū) for the purpose of deriving the PF form chú-a. A similar inconsistency is observed in the treatment of topos, which is stressed on the first syllable for deriving the AF form t-m-ðpsU ‘write’ but on the second syllable for deriving the noun tpósU ‘book’. The inconsistency creates a serious drawback in Tsuchida’s analysis and renders the mechanism of unstressed vowel deletion subject to question.

The inconsistent treatment of stress also underlies the possible inconsistency in the way Tsuchida orders the morphophonemic rules. If we order the penultimate stress assignment after the affixation of focus marking but before the insertion of echo vowels and vowel deletion, such order predicts the correct forms of c-m-úhu, chú-a, and t-m-ðpsU, but yields the incorrect form *tópsU (see Figure 3-6). However, if we order stress assignment after the affixation of focus marking and the insertion of echo vowels but before vowel deletion, the ordering predicts the correct forms of c-m-úhu, chú-a, and tpósU, but generates the incorrect form *t-Vm-pópsU (see Figure 3-7).

<table>
<thead>
<tr>
<th>root</th>
<th>AF formation</th>
<th>PF formation</th>
<th>AF formation</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>cuhū</td>
<td>cuhū</td>
<td>cuhū-a</td>
<td>t-Vm-ðpos</td>
<td>N/A</td>
</tr>
<tr>
<td>c-Vm-úhu</td>
<td>↓</td>
<td>↓</td>
<td>t-Vm-ðpos</td>
<td>tópsU</td>
</tr>
<tr>
<td>c-Vm-úhu</td>
<td>↑</td>
<td>↑</td>
<td>t-Vm-ðposU</td>
<td>tópsU</td>
</tr>
<tr>
<td>N/A</td>
<td>↓</td>
<td>↓</td>
<td>t-Vm-ðposU</td>
<td>tópsU</td>
</tr>
<tr>
<td>t-m-ðpsU</td>
<td>↓</td>
<td>↓</td>
<td>tópsU</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3-6 Inferred formation of c-m-úhu, chú-a, t-m-ðpsU, and tpósU (I)**
As an alternative analysis, the present study proposes that the operation of unstressed vowel deletion be interpreted as contingent upon syllable metrification which assigns penultimate stress. By ordering syllable metrification after the insertion of an echo vowel but before vowel deletion, the metrical analysis avoids the issue of inconsistent stress assignment apparent in Tsuchida's study and correctly predicts the four expected forms. As previously mentioned, the process of metrification groups all of the non-final syllables of a Tsou word into binary units from left to right. The final, right-most syllable is extrametrical and invisible to the grouping/parsing process. Each metrical foot is composed of a stressed syllable on the right and an unstressed syllable on the left. Within each metrical foot, the non-front vowel in the unstressed syllable is then deleted, as is the remaining syllable in a degenerate foot. The metrical analysis predicts the occurrence of c-m-úhu and chú-a, as shown in Figure 3-8, and t-m-ópsU and tposU, as in Figure 3-9.
dissimilation /h->k/

The process of /h->k/ dissimilation is contingent on that of unstressed vowel deletion. After unstressed vowels are deleted, the glottal fricative /h/ that immediately follows the palatal fricative /s/ is changed to the velar stop /k/. Two of the most-cited examples of dissimilation are skun-a ‘dispose, PF’, derived from the root suhun, and skopic-a ‘pinch, PF’, derived from the root sohopic (Tsuchida 1976:93). Figure 3-10 presents the formation of skun-a ‘dispose’, with a comparison with its AF form s-m-uhnu.

17 The AF form is s-m-uhnu ‘dispose’.
The PF form skun-a is formed by attaching the PF suffix -a to the stem suhun (Tsuchida 1976:93), generating the intermediate form suhun-a. All of the non-final syllables of suhun-a are then metrically parsed from left to right. The first /u/, due to its non-head position in the metrical foot, is deleted, deriving the intermediate form shun-a. The glottal fricative /h/ now stands immediately after the palatal fricative /s/ and is changed to /k/, deriving the final form skun-a. The corresponding AF formation, due to its different metrical constituency, does not undergo the process of dissimilation and retains the original glottal fricative /h/.¹⁹

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¹⁸ The AF form is s-m-ohpici 'pinch'.
¹⁹ The AF form s-m-uhnu is formed by attaching the AF infix -Vm- to the stem suhun. The intermediate form *s-Vm-uhun is supplied with an echo vowel u to avoid word-final codas, deriving another intermediate form with three non-word-final syllables, s-Vm-uhunu. The metrical constituency is formed by parsing from left to right and thus leaves a degenerate foot hu. The degenerate foot does not assume metrical headedness and is deleted in the process of vowel syncope.
3.4 Morphosyntax of Tsou: Review and Appraisal

Starting from this section I review and appraise previous works on Tsou nominal marking (commonly known as ‘case morphology’), focus marking, grammatical relations, thematic roles, morphological causatives, and verb serialization. The review and appraisal identifies the need for a new perspective on these issues, which will be presented later in Chapters 4-7. As background for further discussion, I introduce the basic facts of Tsou clausal structure in Section 3.4.1. Controversy and alternative views of the clausal structure are dealt with in the appraisal sections from Sections 3.5-3.10.

3.4.1 Clausal Structure: Nominal Marking

3.4.1.1 Nominal Marking

A simple Tsou clause typically begins with an auxiliary and a predicate with nominals following. Every nominal is preceded by a particle indicating the dependency relation of the nominal to its licensing predicate. The pre-nominal particle illustrates a two-way contrast, referred to in the present study as TOPIC vs. NON-TOPIC, although previous works typically use the terms ‘nominative’ vs. ‘oblique’ (H. Chang and Tsai 2001; H. Huang and S. Huang 2007; S. Huang, Su, and Sung 2001; Starosta 1974; Szakos 1994; Tsuchida 1976; Yang 2001; Zeitoun 1993; 2000; 2005). A clause may contain multiple NON-TOPIC nominals but only one TOPIC nominal, as shown in examples (4a) and (4b) below. Example (4b) indicates that the use of TOPIC/NON-TOPIC markers also applies to proper nouns such as

---

20 The dependency relation referred to here is not limited to the often-cited subject, object, agent, or patient. At a broad level, dependency relations can be of various kinds as between modifier-modified, possessor-possessed, a nominal and its appositive counterpart, as per Van Valin (2001).

21 The NON-TOPIC markers ta and to differ in the features of specificity, identifiability, and evidentiality. See Table 3-4.
'Pasuya', a person's name.

(4)

a. \( \text{mo}=\theta, \) \( \text{mo-si} \) to \( \text{pooyoyo} \) ta \( \text{ca'hU} \) 'o \( \text{amo}, \)
\( \text{AUX.AF.R=3SG AF-put NTOP pants NTOP chair TOP father} \)
'Father put pants on a/the chair.' (FNE.XNGO932a)

b. \( \text{mo}=\theta, \) \( \text{mo-si} \) to \( \text{pooyoyo} \) ta \( \text{ca'hU} \) 'o \( \text{pasuya}, \)
\( \text{AUX.AF.R=3SG AF-put NTOP pants NTOP chair TOP pasuya} \)
'Pasuya put pants on a/the chair.' (FNE.XNGO932d)

The **TOPIC/NON-TOPIC** contrast indicates the different types of dependency a nominal has relative to its licensing predicate. This contrast has grammatical consequences. First, the **TOPIC** nominal is an obligatory constituent of the major clause types of Tsou;\(^{22}\) this is less true for **NON-TOPIC** nominals. Second, the **TOPIC** nominal triggers the appearance of a special affix on the corresponding predicate, which is said to index the thematic role of the **TOPIC** nominal relative to the predicate, as seen in the occurrence of the suffix \(-a\) in the predicate \( \text{si-a} \) in (5) and the occurrence of the prefix \( \text{mo-} \) in the predicate \( \text{mo-si} \) in (4). In contrast, **NON-TOPIC** nominals do not trigger a similar indexation on the predicate.

(5) \( i=\theta, \) \( \text{si-a} \) ta \( \text{ca'hU} \) to \( \text{amo}, \) 'o \( \text{pooyoyo} \)
\( \text{AUX.NAF.R=3SG put-PF NTOP chair NTOP father TOP pants} \)
'Father put the \text{pants} on a/the chair.' (FNEXMAY932b)

The **TOPIC/NON-TOPIC** contrast in prenominal particles also interacts with pragmatic features and can be accordingly specified into various subtypes. Table 3-4

\(^{22}\) This statement excludes existential and meteorological expressions. Additionally, the obligatory occurrence of a nominal is not to be confused with pro-drop. As an obligatory nominal, the **TOPIC** may be pro-dropped, but its specific identity is still recoverable from the context. However, when a **NON-TOPIC** is omitted, its specific identity is not readily recoverable. See Section 5.4 under the discussion of indispensability.
below presents a modified version of Tsuchida's (1976) classification (I change his 'nominative' to TOPIC and his 'oblique' to NON-TOPIC for reasons to be specified in Section 3.5). Tsuchida's organization in terms of proximity and visibility has been widely adopted in subsequent works despite updated terminology and finer distinctions (S. Huang, Su, and Sung 2001; Szakos 1994; Yang 2001; Zeitoun 1993; 2000; 2005). Based on Tsuchida's organization, the use of the three particles 'o, ta, and to in (5) creates a context where the referent 'chair' is present in the immediate speech scene but the two other referents 'father' and 'pants' are not.

<table>
<thead>
<tr>
<th>Visible to speaker and hearer</th>
<th>TOPIC (Tsuchida's 'NOM')</th>
<th>NON-TOPIC (Tsuchida's 'OBL')</th>
</tr>
</thead>
<tbody>
<tr>
<td>near</td>
<td>I</td>
<td>ta</td>
</tr>
<tr>
<td>middle</td>
<td>le</td>
<td></td>
</tr>
<tr>
<td>distant</td>
<td>si</td>
<td>ta</td>
</tr>
</tbody>
</table>

Invisible to speaker and hearer

| known/seen by speaker       | o                        | to                          |
| unknown/unseen by speaker   | na                       | no                          |
| unknown by speaker, but     | co                       | nca                         |
| somewhere nearby            |                          |                             |

Table 3-4 Nominal encoding in Tsou (Tsuchida 1976:96)

3.4.2 Clausal Structure: Focus Marking

A Four-way Contrast

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23 Tsuchida (1976) suggests to split the particle na into two functions, one for marking full NPs that represent invisible entities unknown/unseen to speakers, the other for marking pronouns in all three persons, which are apparently not unknown at least in terms of first and second person (see 3.4.4 for details). This distinction is rarely made in other works.
As illustrated in the previous section, a characteristic property of the Tsou topic nominal is that it triggers the appearance of a special affix on the predicate (Tsuchida 1976; Szakos 1994; Zeitoun 1992; 2000; 2005; M. Chang 2004; S. Huang 2004; H. Huang and S. Huang 2007). This special affix is a member of a set of verbal affixes often referred to as 'focus affixes'; traditionally, they are analyzed as markers indexing the thematic relation of the topic nominal to the corresponding verb. In example (6a), for instance, the topic nominal encodes the agent participant of the described event, hangU ‘enemy’. This agent phrase triggers the appearance of a special prefix m- on the predicate. If the topic nominal is associated with a thematic relation other than the agentive nominal, the verbal affix changes, as shown in (6b).

(6)

a. moso=ð, m-aeo to yuozomU 'o hangU
   AUX.AF.R=3SG AF-take NTOP warrior TOP enemy
   ‘The enemy caught a warrior.’ (FNE.XNG0818a)

b. o=si, ea-a to hangU 'o yuozomU
   AUX.NAF.R=3SG take-PF NTOP enemy TOP warrior
   ‘The enemy caught the warrior.’ (FNE.XNG0818b)

Depending on the nominal that bears the topic marking, a verb may appear in at most four different focus forms: actor focus (abbreviated henceforth as AF), patient focus (PF), reference focus (RF), and location focus (LF). The PF, RF, and LF forms are often referred to collectively as non-actor focus forms (henceforth NAF forms). As

24 A reader questioned the theoretical basis for saying that the topic triggers verb marking and not the other way around. As will be specified later in Chapter 5, the selection of the topic is not determined by a particular semantic role of the licensing predicate but is determined mostly by the referential status of a nominal within the span of discourse. Saying that verb marking triggers the topic marking would lead to the unintended conclusion that the topic selection is thematically determined.
shown in Table 3-5, all of the NAF markings are suffixes, but AF marking is coded by prefixes, infixes, or zero, depending on the types of verb stems (see the following paragraphs for details). Examples (7a)-(7d) below illustrate the four focus forms of the lexical root *si* 'put': *mo-si* (AF), *si-a* (PF), *si-eni* (RF), and *si-i* (LF).

<table>
<thead>
<tr>
<th>Focus Categories</th>
<th>Affixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor Focus</td>
<td><em>mo-</em>, <em>mu-</em>, <em>m-</em>, *-m-, *b-, <em>0</em></td>
</tr>
<tr>
<td>Patient Focus</td>
<td><em>a</em></td>
</tr>
<tr>
<td>Reference Focus</td>
<td><em>neni</em></td>
</tr>
<tr>
<td>Location Focus</td>
<td><em>i</em></td>
</tr>
</tbody>
</table>

Table 3-5 Tsou focus categories (based on Zeitoun 2005)

(7)

a. *mo=oa*<sub>i</sub> *mo-si* to *pooyoyo* ta *ca'hU* 'o *amo*<sub>i</sub>  
   AUX.AF.R=3SG AF-put NTOP pants NTOP chair TOP father  
   'Father put pants on the chair.'  (AF verb, AF aux, FNE.XNGO932a)

b. *i=si*<sub>i</sub> *si-a* ta *ca'hU* to *amo*<sub>i</sub> 'o *pooyoyo*  
   AUX.NAF.R=3SG put-PF NTOP table NTOP father TOP pants  
   'Father put the pants on the chair.'  (PF verb, NAF aux, FNE.XNGO932b)

c. *i=si*<sub>i</sub> *si-eni* to *pooyoyo* to *amo*<sub>i</sub> 'o *oko*  
   AUX.NAF.R=3SG put-RF NTOP pants NTOP father TOP child  
   'Father put aside pants for the child.'  (RF verb, NAF aux, FNE.XNGO932c)

d. *i=si*<sub>i</sub> *si-i* to *pooyoyo* to *amo*<sub>i</sub> 'o *ca'hU*  
   AUX.NAF.R=3SG put-LF NTOP pants NTOP father TOP chair  
   'Father put pants on the chair.'  (LF verb, NAF aux, FNE.XNGO932d)

25 Of the four types of focus affixes, the labeling of the *neni* suffix has undergone the most change. It has been referred to at various times as 'Instrument/Benefactive Focus' (Tsuchida 1976; Zeitoun 2005), 'Benefactive Voice' (H. Huang and S. Huang 2007), and 'Reference Focus' (S. Huang 2004). The present study chooses the label 'Reference Focus'.

26 None of the sentences in (7) above means 'Father dressed himself on the chair'. To express the intended proposition, a different verb *sUyUsU* 'dress, AF' is required, as in (a) below.

(a) *mi=oa*<sub>cu</sub> *sUyUsU* ne *hopo=u*  
   AUX.AF.R=1SG=PERF dress.AF NTOP room=1SG  
   'I dressed myself in my room.'  (FNB.XTRC0311)
Complexity of AF Marking

Of the four focus categories of Tsou, ACTOR FOCUS displays the most morphological complexity. Unlike the three NAF categories which are invariably marked by specific suffixes (PF -a, RF -(n)eni, and LF -i), the AF category may be marked by a prefix, an infix, or a zero. For instance, the predicate b-onU 'eat, AF' takes a b- prefix for the AF marking while the predicate t-m-oycU 'cut, AF' requires the infix -m-. On the surface level, seven affixes are observed being used for indicating the AF category in Tsou, as shown in Table 3-6 based on Tsuchida’s (1976) study.

<table>
<thead>
<tr>
<th>AF affixes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>b-</td>
<td>b-onU 'eat'</td>
</tr>
<tr>
<td>-m-</td>
<td>t-m-oycU 'cut'</td>
</tr>
<tr>
<td>m-</td>
<td>m-futu 'tie'</td>
</tr>
<tr>
<td>mu-</td>
<td>mu-funu 'spurt water from mouth'</td>
</tr>
<tr>
<td>mo-</td>
<td>mo-si 'put'</td>
</tr>
<tr>
<td>mu-</td>
<td>mU-'ho 'hit'</td>
</tr>
<tr>
<td>φ</td>
<td>toa 'pick'</td>
</tr>
</tbody>
</table>

Table 3-6 AF affixes in Tsou (based on Tsuchida 1976)

According to Tsuchida (1976), the seven AF affixes correspond to five underlying representations: -Vm-, mo-, m-, φ, and m-; provisionally labeled here as AFUR (Actor Focus Underlying Representation). The complex correspondence between surface forms and underlying representations is due in large part to the application of morphophonological rules in Tsou (Tsuchida 1976:104-107; see Section 3.3 for details).

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77 The two m- prefixes correspond to different classes of verb stems. See below.
For instance, the AFUR infix -Vm- is realized as three different surface affixes dependent on different morphophonological environments involved: b- as in b-onU 'eat' and b-ochio 'know'; -m- as in t-m-oycU 'cut' and t-m-alU 'hear'; m- as in m-imo 'drink'. The correspondence between the seven surface AF affixes and the five AFURs are illustrated in Table 3-7.

<table>
<thead>
<tr>
<th>AF</th>
<th>Stem</th>
<th>NAF</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR</td>
<td>allomorph</td>
<td>PF</td>
<td>RF</td>
</tr>
<tr>
<td>I</td>
<td>-Vm-</td>
<td>b-</td>
<td>-a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-m-</td>
<td>t-m-oycU</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>tyoc-a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>m-</td>
<td>m-imo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mU- ho</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mu-</td>
<td>mu-funu</td>
</tr>
<tr>
<td>III-1</td>
<td>m-</td>
<td>p</td>
<td>m-eobango</td>
</tr>
<tr>
<td>III-2</td>
<td>m...m</td>
<td>p...p</td>
<td>m-ampcino</td>
</tr>
<tr>
<td>IV</td>
<td>ø</td>
<td>supeohU</td>
<td>eobako</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-1</td>
<td>m-</td>
<td>t</td>
<td>m-oté</td>
</tr>
<tr>
<td>V-2</td>
<td>m-</td>
<td>e</td>
<td>m-aezo</td>
</tr>
</tbody>
</table>

Table 3-7 Tsou focus affixes (based on Tsuchida 1976:101)

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28 According to Tsuchida (1976:88), the AF affix -Vm- is composed of an underspecified vowel and a subsequent bilabial nasal. The exact phonological detail of this vowel is unknown because it is deleted in the process of unstressed vowel deletion and thus never appears on the surface level.

29 For more details on the morphophonological processes involved in the Tsou AF marking, readers are referred to Tsuchida (1976).

30 Tsuchida (1976) claims that Type III and Type V AFURs are both realized as the prefix m-. They differ in that Type III AFUR only occurs with stems that begin with p while Type V AFUR occurs with stems that begin either with t or e. Zeitoun (2005) argues that the stem-initial phonemes are deleted in the respective AF forms after the m- prefixation but are retained in all the NON-ACTOR FOCUS forms. For instance, the stem-initial p of peobang-a 'catch, PF' is retained in the PF form but deleted in the AF form m-eobango 'catch, AF'.
While Tsuchida’s classification may be viable on morphological and phonological grounds, it should not be taken as directly indicative of semantic distinctions, particularly in reference to the semantics of the Tsou actor (note that Tsuchida (1976) has never claimed that his classification be interpreted semantically). A close look at the Tsou data reveals that distinctions in AF marking do not consistently reflect different types of semantic attributes in the nature of the actor (e.g., patientive actor vs. agentive actor). For instance, the surface AF infix b- may appear on verbs with a voluntary agent, as in b-onU ‘eat, AF’, but it is also observed in b-uhyayo ‘look ahead’, b-ochio ‘know’, and b-aito ‘see’, verbs denoting an entity that perceives a stimulus non-agentively. A similar lack of clear semantic orientation is observed in the use of φ, the Type IV AF affix. For example, although the use of φ in supeohU ‘fall, AF’ may be taken as suggestive of an non-agentive actor undergoing a change of location, this hypothesis does not accurately describe other φ-marked AF predicates such as eobako ‘beat, AF’, yu’pici ‘cut in half, AF’, and nUs’UhU ‘burn (something/someone) to death, AF’.

Considering the lack of a clear semantic basis, the present study will not divide the actor role into further subtypes based on the contrast in AF marking; only a holistic actor category is recognized.

3.4.3 Clausal Structure: Auxiliaries

Tsou Auxiliaries and Modality
The Tsou auxiliary is an obligatory constituent of the major clause types of Tsou (Zeitoun 2000). As an obligatory constituent, a Tsou auxiliary normally appears in the clause-initial position, followed by a verb. However, in pragmatically-marked constructions the auxiliary may be preceded by negation markers or evidential particles that indicate the source of the information expressed in the clause. This is shown in the use of 'ua in (8) (Yang 2001). Additionally, a Tsou auxiliary may attract pronominal and aspectual clitics. In (8) and (9) both auxiliaries are encliticized with aspectual markers, =cu 'perfective' and =n'a 'progressive', respectively. Examples (9) and (10) demonstrate that the Tsou auxiliaries attract pronominal clitics cross-referencing the ACTOR (see Section 3.4.4 for details).

(8) 'ua moh=cu b-onU 'o pasuya
   EVI AUX.AF.R=PERF AF-eat TOP Pasuya
   'Pasuya must have eaten.' (Yang 2001:52)

(9) mi=hin'i=n'a t<occU to evi 'e mamameoi maitan'e
    AUX.AF.R=3PL=PROG <AF>cut NTOP tree TOP elders now
    'The elders are cutting a tree now.' (FNB.XTRC0103a)

(10) i=hin'i=n'a tyoc-a ta mamameoi, 'o evi maitan'e
     AUX.NAF.R=3PL=PROG cut-PF NTOP elders TOP tree now
     'The elders are cutting the tree now.' (FNB.XTRC0103b)

In Tsou, auxiliaries express the speaker's attitude regarding the reality or the likelihood of the proposition described in a clause (Zeitoun 1996; 1999; Zeitoun et al. 1997; Zeitoun 2000; 2005). Zeitoun and her colleagues state that Tsou is the only Formosan language that developed an auxiliary system for modality marking. In (9), the

---

31 The Tsou auxiliaries do not occur in existential and equational expressions.
auxiliary *mi* indicates realis mood, asserting that the cutting event is actually happening. In (11) below, the auxiliary *te* marks irrealis mood, making no assertion regarding the actuality/reality of the event described. Within the realis category, auxiliaries can be further distinguished according to an immediate vs. remote contrast: the immediate realis auxiliaries *mo, mio, mi, i,* and *os* encode a situation close to the speaker. The remote realis auxiliaries *moso, moh,* and *oh* instead mark a situation away from the speaker.\(^{33}\)

Table 3-8 presents a complete set of the Tsou auxiliaries by Zeitoun (2000; 2005).\(^{34}\)

\[(11)\] te=ta, t=<m>-oycU to evi 'e pasuya, hohucma
AUX.IRR=3SG <AF>cut NTOP tree TOP Pasuya tomorrow
Pasuya will cut a tree tomorrow.' (FNB.XTRC0103c)

<table>
<thead>
<tr>
<th>Focus</th>
<th>Realis</th>
<th>Irrealis</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>mio, mo, mi</td>
<td>te, nte, nte, nte, nto, nto(h)</td>
</tr>
<tr>
<td>NAF or NAF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habitual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothetical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counterfactual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Immediate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>mi</td>
<td></td>
</tr>
<tr>
<td>mo</td>
<td></td>
</tr>
<tr>
<td>moso, moh</td>
<td></td>
</tr>
<tr>
<td>Remote</td>
<td></td>
</tr>
<tr>
<td>mso, mo</td>
<td></td>
</tr>
<tr>
<td>o, os</td>
<td></td>
</tr>
<tr>
<td>Table 3-8 Auxiliaries in Tsou (Zeitoun 2000)</td>
<td></td>
</tr>
</tbody>
</table>

\(^{32}\) The evidential marker 'ua indicates that the proposition 'Pasuya must have eaten' is established on the basis of speaker's inference (Yang 2001:52).

\(^{33}\) H. Huang (2002) proposes that the immediate-remote distinction is mostly a speaker-based judgment in terms of psychological distance. A point to be noted is that the binary contrast of *mio, mo, mi* vs. *moso, moh* was already proposed in Tung (1964:96), even though the terms 'immediate' and 'remote' were coined by Zeitoun et al. (1997) and are later widely adopted by other Tsou specialists (Weng 2000; H. Huang 2002, to name two).

\(^{34}\) Zeitoun (2000) argues that the distinction between *mo, mi, and mio* lies in the compatibility with types of pronominal clitics. While *mi* attracts all types of pronominal clitics, *mo* and *mio* occur only with the third person invisible clitics (see Section 3.4.4).
The use of Tsou auxiliaries may give rise to interpretations of temporal reference, but the literature in general is not explicit regarding whether these auxiliaries really encode tense distinctions or whether the temporal interpretation is an implicature arising from the interaction of the realis/irrealis contrast and context. Since an investigation of this kind is beyond the scope of the present study, I will simply take the Tsou auxiliaries as a modal system but will not assume that they can be directly associated with tense distinctions.

As a convention in this dissertation, unless alerted to tense by temporal adverbs such as maitan'e ‘now’ and other clear contextual cues at the moment of speaking, I translate all the elicited clauses of realis mood as past tense in the free translation.

**Auxiliaries and Focus**

In addition to indexing modal information, the Tsou auxiliaries may simultaneously indicate focus marking, agreeing with the focus indexed on the verb. For instance, the AF verb c<m>uhu ‘butcher’ in the realis proposition (12a) requires the Actor Focus (AF) auxiliary mi, whereas its PF counterpart tyoc-a ‘cut’ in (12b) takes the Non-Actor-Focus (NAF) auxiliary i instead.

(12)
a. mi='o c<m>uhu to moatU'nU
   AUX.AF.R=1SG <AF>butcher NTOP goat
   ‘I butchered a goat.’ (AF verb, AF aux, FNE.XNGO817a)

b. i='o chu-a 'o moatU'nU
   AUX.NAF.R=1SG butcher-PF TOP goat
   ‘I butchered the goat.’ (PF verb, NAF aux, FNE.XNGO817b)

Agreement between auxiliaries and verbs displays a different pattern in non-harmonizing serial verb constructions. See Chapter 7 for more details.
Although Tsou auxiliaries are marked for focus, their encoding pattern is different from the pattern embodied on the verb. First, the distinction of focus categories is greatly reduced in the auxiliary. On the verb, there are at most four focus categories (AF, PF, RF, and LF), but on the auxiliary, there are only two (in realis mood): **ACTOR FOCUS** (abbrev. AF) vs. **NON-ACTOR FOCUS** (abbrev. NAF). While AF verbs are accompanied by an AF auxiliary, PF, RF, and LF verbs are all associated with an NAF auxiliary, as shown in (12b), (13a), and (13b).

(13)

a. *i=ta haf-neni to f'ue 'o ba'i*
   AUX.NAF.R=3SG take-RF NTOP yam TOP granny
   ‘He brought yams for Granny.’ (RF verb, NAF aux, FNB.XNRC305c)

b. *i=ta yon-i 'e hopo='u*
   AUX.NAF.R=3SG stay-LF TOP room=1SG
   ‘He stayed in my room.’ (LF verb, NAF aux, FNE.XNGO331)

Second, the AF-NAF distinction on the auxiliary may be further neutralized. Examples (14a) and (14b) indicate that the irrealis auxiliary *te* is used with both AF and NAF verbs. Zeitoun's (2000; 2005, to name two articles) studies show that the AF-NAF distinction is completely neutralized in all irrealis auxiliaries (see Table 3-8).

(14)

a. *te=ta, b-onU to tacUmU 'e ak'i*
   AUX.IRR=3SG AF-eat NTOP banana TOP grandfather
   ‘Will Grandpa eat bananas?’ (AF verb, irrealis auxiliary te; FNE.XNGO332a)

b. *te=ta, an-a ta ak'i, 'o tacUmU?*
   AUX.IRR=3SG eat-PF NTOP grandfather TOP banana
   ‘Will Grandpa eat the bananas?’ (PF verb, irrealis auxiliary te; FNE.XNGO332b)
The Tsou auxiliaries also attract pronominal clitics (Tsuchida 1976). These clitics always reference the **ACTOR** of the clause regardless of its nominal marking (Starosta 1974; 1988). For instance, the third person plural =hin'i refers to an **ACTOR-TOPI** in (15a) but a **NON-TOPI ACTOR** in (15b). See more details in the next section.

(15)  
a. mi=hin'i, m-eobango ta av'u 'e 'o'oko,  
   AUX.AF.R=3PL AF-chase NTOP dog TOP children  
   ‘(The) children chased the dog.’ (FNE.XNGO333a)

b. i=hin'i, peobang-a ta 'o'oko, 'e av'u  
   AUX.NAF.R=3PL chase-PF NTOP children TOP dog  
   ‘(The) children chased the dog.’ (FNE.XNGO333b)

3.4.4 Clausal Structure: Pronominal Marking

Tsou has free and bound pronouns; both types distinguish between singular and plural (Li 1997; Zeitoun 2000; 2005), but there is no dual or paucal distinction. First person plural distinguishes between inclusive and exclusive reference. Third person singular and plural are both further distinguished between visible and invisible reference. Table 3-9 provides a summary of the Tsou pronominal system based on Zeitoun (2005).37

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36 In Tsou, the yes-no question is expressed by a clause-final rising intonation.

37 Table 3-9 is a modified version of Zeitoun's (2005) formulation. Zeitoun (2005) labels the two-way contrast in the bound pronouns as 'nominative' vs. 'oblique'; the present study renames the contrast
Free pronouns in Tsou fill in the position of a lexical noun phrase in a clause. The same form may occur either in the syntactic position that expects a \textit{Topic} nominal, as in (16a), or in the position that expects a \textit{Non-Topic} nominal, as in (16b). Zeitoun (2005) states that free pronouns and lexical NPs are behaviorally distinct in the use of prenominal particles. A free pronoun in the position of a \textit{Topic} nominal may be preceded by the \textit{Topic} marker \textit{na}, but this marking is not obligatory, as in (16a). A free pronoun in the position of a \textit{Non-Topic} nominal, such as in (16c), is not allowed to be preceded by any particle, even \textit{Non-Topic} markers such as \textit{no}.

(16)
\begin{verbatim}
a. te eUngUcU (na) suu?
   AUX.IRR insane.AF (TOP) 2SG
   'Are you insane?' (FNE.XNG0341)

b. tena ti'usnu suu 'o lema'cohio
   AUX.IRR punish.AF 2SG TOP teacher
   'Will the teacher punish you?' (FNE.XNG0342a)
\end{verbatim}

\textit{Topic} vs. \textit{Non-Topic} for reasons to be specified in Section 3.5. Zeitoun treats bound pronouns as suffixes, whereas Tsuchida (1976) and the present study both analyze them as clitics.
Bound pronouns occur in two sets corresponding to the **TOPIC/NON-TOPIC** contrast (Zeitoun's 'nominative/oblique') made in noun phrases. The contrast, however, is generally not clearly indicated due to the widespread syncretism in first, second, and third person visible; only in third person invisible is the contrast clearly distinguished. When bound pronouns cliticize to an auxiliary, they invariably reference the **ACTOR** of a clause (Starosta 1974; 1988), as shown in (17a) and (17b). None of the **NON-ACTOR** nominals is capable of triggering the same pronominal cliticization, even when they are selected as the **TOPIC**, as shown in (17c). For ease of glossing, I spare the **TOPIC/NON-TOPIC** contrast in the pronominal clitics henceforth.

(17)

a. mo=qa, oengUtU 'o okO
AUX.AF.R=3SG.invis.TOP sleep.AF TOP child
'The child fell asleep.' (**ACTOR-TOPIC**; FNB.XNRC135)

b. i=si, koic-a to mameoi 'e 'o'oko
AUX.NAF.R=3SG.invis.NTOP scold-PF NTOP senior TOP children
'The old man scolded the children.' (**NON-TOPIC ACTOR**; FNB.XNRC126a)

c. *i=hin'i, koic-a to mameoi 'e 'o'oko
AUX.NAF.R=3SG.vis.TOP scold-PF NTOP senior TOP children
intended 'The old man scolded the children.' (**NON-TOPIC ACTOR**; FNB.XNRC126b)

**NON-TOPIC** bound pronouns can also be used in the genitive function when attached to the end of a noun phrase. For example, the third person singular **NON-TOPIC** =si in (18) attaches to the end of the noun phrase f'UsU 'hair', indicating a possessive relationship 'his/her hair'. This function, however, is not directly related to the pattern of argument realization and is therefore not the center of discussion in the present study.
3.5 Previous Works on Nominal Marking: Review and Appraisal

Prenominal particles in Tsou have traditionally been labeled 'case markers' (Tsuchida 1976; Szakos 1994; Zeitoun 2000; S. Huang, Su, and Sung 2001; H. Chang and Tsai 2001; S. Huang 2002; Zeitoun 2005; H. Huang and S. Huang 2007, to name a few). However, this practice is called into question by M. Chang (2004:70) on the grounds that typical case systems do not convey pragmatic information, including referentiality, identifiability, deixis, and evidentiality (see Section 3.5.3 for more details of M. Chang’s argument). I review and appraise the two approaches in Sections 3.5.1-3.5.4.

3.5.1 Prenominal Particles as Case Markers: The 'Case' Approach

There is a long tradition in the Tsou literature to refer to prenominal particles as 'case markers' or labels of similar flavor. In Starosta’s (1974:349) study of causative constructions in Formosan languages, he called the Tsou prenominal particles 'case markers'. Tsuchida (1976:93-96), whose work is based mainly on the Luhtu dialect, refers to these prenominal particles as 'relation markers' and divides them into two groups: nominative and oblique (see also Table 3-4). ‘Nominative’ markers indicate the subject of a clause, whereas ‘oblique’ markers mark all the non-subject nominals and

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Himmelmann (2005) argues that the so-called 'case markers' in the Philippine-type languages would be better interpreted as phrase marker clitics given their structural resemblance to adpositions.
the possessor-possessed relation. Examples in (19) illustrate the actor-subject, the goal-subject, and the location-subject identified by Tsuchida, respectively. It is important to note that Tsuchida does not provide any characterization of subjecthood, nor does he specify the mechanism of subject selection (unless otherwise specified, the examples below follow Tsuchida’s original gloss).

(19) AF, GF, and LF sentences of the Luhtu dialect (Tsuchida 1976:102)

a. mi =cu ruvaho ta porave ta avari 'e pasura
   already borrow:AF OBL bolo OBL Avari NOM Pasura
   'Pasura borrowed a bolo from Avari.'

b. i =si ruvah-a ta pasura 'e porave no avari,
   by him borrow-GF OBL Pasura NOM bolo OBL Avari
   'The bolo of Avari was borrowed by Pasura. Pasura borrowed the bolo from Avari.'

c. i =si ruvah-i ta porave ta pasura 'e avari
   by him borrow-LF OBL bolo OBL Pasura NOM Avari
   'Avari was borrowed a bolo from by Pasura. Pasura borrowed the bolo from Avari.'

Tsuchida’s nominative-oblique dichotomy is adopted by many subsequent works, but rarely do these works discuss the motivation for such category assignment and the ensuing implications for characterizing grammatical relations in general. Most of these works instead elaborate on the interaction between the two-way dichotomy and pragmatic status. Among them, Zeitoun characterizes Tsou prenominal particles as a system where the nominative-oblique distinction interacts with proximity, visibility, identifiability and referentiality (see Table 3-10). S. Huang (2002) investigates the

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39 Following Payne (1997), Chafe (1976), Lyons (1976), and Givón (1979), identifiability is interpreted as synonymous to definiteness in the present study. A nominal is considered identifiable when the speaker presupposes that the hearer can uniquely identify its referent within a particular context. If the hearer is assumed incapable of distinguishing the referent from all the other individuals in the universe of discourse, the nominal is deemed indefinite.
correlation of the nominative-oblique distinction and referential prominence/topicality. He argues that the 'nominative' case markers in Tsou encode nominals whose referents are highly topical. The 'oblique' case markers are used with nominals whose topicality could be high, moderate, or low. Table 3-10 below illustrates Zeitoun's classification together with S. Huang's finding.

<table>
<thead>
<tr>
<th>Case</th>
<th>Nominative</th>
<th>Oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>+identifiable</td>
<td>+referential</td>
</tr>
<tr>
<td></td>
<td>visible, proximal</td>
<td>'e</td>
</tr>
<tr>
<td></td>
<td>visible, medial</td>
<td>si</td>
</tr>
<tr>
<td></td>
<td>visible, distal</td>
<td>ta</td>
</tr>
<tr>
<td>II</td>
<td>+/-identifiable</td>
<td>+referential</td>
</tr>
<tr>
<td></td>
<td>-visible, high certainty</td>
<td>'o</td>
</tr>
<tr>
<td>III</td>
<td>-identifiable</td>
<td>-referential</td>
</tr>
<tr>
<td></td>
<td>-visible, low certainty</td>
<td>na</td>
</tr>
</tbody>
</table>

Table 3-10 Tsou 'case' markers (based on S. Huang 2002 and Zeitoun 2005)

3.5.2 Appraisal of the 'Case' Approach

The 'case' approach associates the differences in Tsou prenominal particles with the oppositions seen in prototypical case systems. Although proponents of the 'case' approach rarely detail the motivation for doing so, the association is not entirely

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40 A nominal is deemed specific if the nominal can be understood to refer to a bounded, individuated entity (or a particular class of individuals). An expression with a specific reference is often understood to imply the existence of some individual that satisfies the description (Givón 1979; Payne 1997). On the other hand, a nominal is non-specific/generic if the nominal does not refer to any individuated entity. When a non-specific expression is used, the speaker does not commit himself to the existence of any specific individual.
unreasonable considering the commonalities shared by the Tsou prenominal particles and prototypical case systems, such as the one found in Latin. First, the Tsou particles and their Latin counterparts are both instances of dependent marking, marking a nominal to indicate its relation to the governing predicate. Second, both the two-way contrast in Tsou and the case opposition in Latin have consequences in word order, morphology, or other aspects of structural patterning. In the case of Latin, the nominal bearing the nominative case is capable of determining the person and number marking on the corresponding verb, as in *Di Caesarem admonent* ‘the gods are warning Caesar’ vs. *Caesar déos admonet* ‘Caesar is warning the gods’; none of other cases exerts similar control (Gildersleeve and Lodge 1963; Hammond 1976). In Tsou, only the nominal that bears the ‘nominative case’ triggers on the corresponding verb the appearance of a special affix, which is conventionally described as indexing the thematic role of a ‘nominative’ nominal relative to its governing verb. For instance, the ‘nominative’ nominal ‘Avari’ in (19c) triggers the occurrence of the suffix -i on the verb stem *ruvaho* ‘borrow’, which is taken to be indicative of a location role. None of the nominals bearing the ‘oblique case’ is capable of triggering similar indexation. Like the case opposition in Latin, the two-way contrast among the Tsou prenominal particles is discriminatory in distinguishing types of dependency relations possible between a nominal and the corresponding predicate in a clause.

However, most proponents of the case approach are not explicit, if not indifferent, as to whether the dependency relation coded by the topic/non-topic contrast in Tsou is

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41 Gildersleeve and Lodge (1963:148) stated that a Latin verbal predicate agrees in number and person with its subject, which is always indicated by the nominative case in finite clauses (1963:144). Hammond
of the same type as coded by the case systems in other languages. Even less attention is
given to the possible discrepancy between the labels, the implications introduced by the
labels (see Section 2.5), and the patterns reflected by the data. In its European origin,
case opposition denotes contrastive categories into which the relation of a noun to its
head is organized. Generally, these categories are assumed to have a partial semantic
basis and maintain some degree of correspondence with a particular grammatical
relation. Anderson (1985) states that case morphology is an indispensable part in
configuring semantic roles, grammatical relations, and a term/non-term distinction.
For instance, cases can be separated into ‘direct cases’, i.e., those for encoding S, A, and
P and bearing strong correlation with core grammatical relations, and ‘oblique cases’,
i.e., those linked to non-core grammatical relations. The contrast between ‘direct’ and
‘oblique’ cases is often taken to be discriminatory in separating terms from
non-terms—separating syntactically prominent elements from elements that are
syntactically inactive.

Now let us turn to Tsou. The use of Tsou prenominal particles does not separate
clausal elements into similar categories as differentiated in European languages by case
opposition. First, in Tsou, identifying the nominal marking in a clause does not answer
the question as to ‘who does what to whom’, as a wide range of event participants may
be subsumed under the same ‘case’. For example, the ‘nominative’ marker 'e, as glossed
by Tsuchida (1976), admits an agent in (19a), a patient in (19b), and a source in (19c).
Equally non-predictive is the use of ‘oblique case markers’ in Tsou: the ‘oblique’ marker
ta in (20a), as glossed by Zeitoun (2005), is used for both the patient ‘wine’ and the

(1976:146) states that the Latin nominative case names the center of interest of the sentence, called the
location ‘table’. Second, the two-way contrast among the Tsou particles does not describe the term/non-term distinction as differentiated in European languages. Elements that are differentiated as terms (such as patient) and non-terms (such as location) in European languages can equally be selected for the ‘nominative case’ in Tsou, as seen in (20). There is no convincing formal evidence that the location element ‘table’ undergoes any further derivational processes to be selected as the ‘nominative’ argument, presumably a core position. The verbal marking in (20b) is not morphologically more marked than that in (20a).

(20)

a. te-ta mo-si ta pangka ta emi
   AV.IRR-3SG AV-put OBL table OBL wine
   ‘He is going to/will put the wine on the table.’ (Zeitoun 2005:281)

b. i-si si-i to emi to amo ‘e pangka
   NAV.RLS-3SG put-LV OBL wine OBL father NOM table
   ‘Father put the wine on the table.’ (Zeitoun 2005:266)

From what we have learnt about the nominal marking pattern above, the Tsou particles do not code the same types of dependency relations as are coded in European languages by ‘nominative’ and ‘oblique’. From another perspective, the terms ‘nominative case’ and ‘oblique case’ do not depict the types of contrasts differentiated by TOPIC and NON-TOPIC in Tsou. We need to ask: what is the purpose in continuing the ‘case’ approach if it does not help clarify the pattern observed in Tsou?

‘subject’. Finite verbs show by their endings the number and person of their subjects (1976:115).
3.5.3 Prenominal Particles are not Case Markers: the 'Non-Case' Approach

Not every linguist agrees with calling the Tsou prenominal particles 'case markers'. The 'non-case' approach is seen in both Tung (1964) and M. Chang (2004). Tung (1964:100, 145) first recognized that the preceding works by Ogawa (n.d.: 674-677, 693) and Wei (n.d.: 212-218) both referred to the two-way contrast among the Tsou particles as 'nominative' vs. 'non-nominative'. He gave explicit warning not to associate the Tsou prenominal particles with the labels 'nominative case' and 'non-nominative case' because the relations marked by these terms do not correspond to subject and object in Western languages. Tung proposed to label the two-way contrast among the Tsou particles by their sequential position relative to the predicate in a clause. Given that the 'oblique/non-nominative' nominal typically stands close to the predicate whereas the 'nominative' nominal typically occurs at the end of a clause, as shown in (21a) and (21b) below, the former becomes Tung's 'first conjunctive' and the latter becomes his 'second conjunctive'. A sentence with more than two nominals therefore has multiple first conjunctive phrases but at most a single second conjunctive phrase, which occurs at the end of a sentence and maintains a contrastive correspondence with the marking on the predicate, as shown in (22).\footnote{Tung’s original examples did not provide glosses for functional elements such as i, si, and cu. The glosses here are mine.}

(21) First and Second Conjunctives in Tsou (Tung 1964:98)

a. \textit{mi cu bUengU to fue} \\
\textit{AUX.AF PERF bake\textsubscript{basic} FIRST sweet.potato} \\
'He baked a sweet potato.'

b. \textit{i si cu eUng-a na skuzu} \\
\textit{AUX.NAF 3SG PERF bake\textsubscript{inflected} SECOND stone} \\
'He baked a stone.'
(22) \( i = si = cu \) to's-eni no chumu no cou na ufi
\[ \text{AUX.NAF=3SG=PERF throw-RF FIRST water FIRST Tsou SECOND cake} \]
\[ \text{‘The Tsou (person) threw the cake into the water.’ (Tung 1964:144)} \]

For many years Tung’s work has been acclaimed as one of the most comprehensive studies on Formosan languages, but his warning on category association is not well heeded. Most of the subsequent works still accord the Tsou prenominal particles labels like ‘nominative’ and ‘oblique’. It was not until the work by M. Chang (2004) that the ‘non-case’ approach appears to have been revived. M. Chang (2004:61-75) argues that the traditionally recognized ‘nominative case’ in Tsou is not a case marker but a determiner sensitive to pragmatic considerations. Her main argument centers on one point: the assignment of a nominative case in languages with prototypical case systems is unrelated to pragmatic/discourse considerations such as definiteness, topicality, and deixis. Linguistic devices that mark pragmatic prominence and participate in discourse-oriented constructions are unrelated to, and should be dismissed completely from, the discussion of case marking (2004:69). By dissociating prenominal particles from case systems, she further claims that the dichotomy among these particles is irrelevant to how the dependency relations between nominals and verbs are differentiated in the Tsou language.

3.5.4 Appraisal of the ‘Non-Case’ Approach

Both Tung and M. Chang dissociate the Tsou prenominal particles from case systems in other languages, but their decision is underlined by different beliefs about language and its structure. M. Chang refuses to make this association on the belief that case marking
is independent of pragmatic/discourse considerations. Linguistic units indicative of pragmatic/discourse status must be something other than cases and are irrelevant to the differentiation of dependency relations. She is correct in pointing out the functional differences between Tsou prenominal particles and prototypical case systems. However, her argumentation contains a hidden assumption that just because something is not case, it must be irrelevant to the encoding of dependency relation. This assumption is problematic because case marking is not the only way to differentiate dependency relations (however they are defined). Other grammatical features such as word order and agreement marking are equally capable of marking dependency relations. The fact that Tsou prenominal particles are functionally distinct from prototypical case systems does not mean that these particles are completely unrelated to dependency marking, among which two of the most mentioned are grammatical relations such as ‘subject’ and ‘object’.

Tung took a different stance. He recognized that the Tsou prenominal particles encode the types of dependency relations contracted between nominals and their governing predicates, but the relations are not of the same types as differentiated in European languages by ‘nominative’ and ‘non-nominative’ or ‘subject’ and ‘object’. By not dismissing the Tsou prenominal particles as totally irrelevant to dependency marking, Tung’s approach enables a more faithful account of the structure of Tsou, and this is the stance adopted in the present study. In criticizing the case approach, the present study does not deny the fact that the two-way contrast in nominal marking encodes the dependency relation of a nominal to its licensing predicate, nor does the present study deny that the two-way contrast has grammatical correlates in other
syntactic operations (see the beginning of Section 3.5.2). What the present study argues against is the inadequate implications introduced by the labels ‘nominative’ and ‘oblique’— that the ‘nominative case’ is linked to the actor by default, that the AF clause is the basic clause type, and that the two-way contrast in nominal marking represents the identical argument/adjunct distinction as in other languages. In Sections 4.2 and 5.5, I will specify that the topic vs. non-topic contrast is not indicative of the conventional term/non-term distinction that separates agent and patient/theme from everything else (Andrews 1985:89). Instead, the two-way contrast is more relevant to differences in referential prominence.

3.6 Focus Marking and Focus Categories

3.6.1 The ‘Thematic’ Approach to Focus Categories

Previous research on Tsou typically considers the four-way focus marking to index the thematic relation of a topic nominal to its governing predicate. The intended association of focus marking and thematic relations is clearly seen in the labels traditionally given to the four types of focus affixes: the suffix -a is termed the patient focus affix (PF), the suffix -neni is the reference focus affix (RF), the suffix -i is the location focus affix (LF), and everything else, including mo-, mu-, mu-, m-, -m-, b-, and ø (see Table 3-5) is called the actor focus affix (AF). Behind these labels is the assumption that the four focus categories maintain one-to-one correspondences with the named thematic roles (however they are defined/formulated). The AF form indexes a topic nominal in an actor role under the governing predicate, as shown in (23a). Examples
(23b)-(23d) below illustrate the association of the PF form with a semantic patient, the RF form with a beneficiary, and the LF form with a location, respectively.

(23)

a. \( mo=\sigma_i \) mo-si to pooyoyo ta ca'hU 'o amo_i
   AUX.AF.R=3SG AF-put NTOP pant NTOP chair TOP father
   'Father put pants on the chair.' (AF with actor; FNE.XNG0932a)

b. i'=si_i si-a ta ca'hU to amo_i 'o pooyoyo
   AUX.NAF.R=3SG put-PF NTOP chair NTOP father TOP pants
   'Father put the pants on the chair.' (PF with patient; FNE.XNG0923b)

c. i'=si_i si-eni to pooyoyo to amo_i 'e oko
   AUX.NAF.R=3S put-RF NTOP pants NTOP father TOP child
   'Father put aside the pants for the child.' (RF with beneficiary; FNE.XNG0932c)

d. i'=si_i si-i to pooyoyo to amo_i 'e ca'hU
   AUX.NAF.R=3.SG put-LF NTOP pants NTOP father TOP chair
   'Father put pants on the chair.' (LF with location; FNE.XNG0932d)

The 'thematic' approach encounters problems when the occurrence of a particular focus affix appears unpredictable by the conventional thematic roles. One of the most conspicuous problems lies in the nature of the reference focus (\(-neni\)), which subsumes a wide variety of thematic roles conventionally separated in English, including the beneficiary, as in (23c), the instrument, as in (24a), and the theme, as in (24b).\(^43\) The difficulty in specifying the semantic nature of the RF category is reflected in the various labels that have been given to this category. In the literature, the category indicated by the \(-neni\) suffix has been referred to at various times as

\[^43\] In Chapter 4 I will argue that the use of conventional thematic categories such as instrument may not be adequate for portraying the semantic attributes that are significant for argument realization. The use of beneficiary and instrument in this chapter is meant for mnemonic purposes only.
'Instrument/Benefactive Focus' (Tsuchida 1976; Zeitoun 2000; 2005), 'Benefactive Voice' (H. Huang and S. Huang 2007), and 'Reference Focus' (S. Huang 2004).

(24)

a. $i=si$, cfu-eni to tposU to oko, 'o yUsU
   AUX.NAF.R=3SG wrap-RF NTOP book NTOP child TOP clothes
   'The child wrapped up the book with the clothes.' (RF with instrument; FNA.XSSE133c)

b. $i=si$, fa-eni to hahocngU to yoifo, 'o poyave
   AUX.NAF.R=3SG give-RF NTOP man NTOP wizard TOP knife
   'The wizard gave the knife to a man.' (RF with theme; FNA.XSSE131b)

3.6.2 Appraisal of the 'Thematic' Approach: Lexical Differences and Focus Paradigms

The 'thematic' approach to the four focus categories of Tsou is often read inappropriately, i.e., suggesting (i) that the alignment between focus categories and thematic relations is always discrete and semantically transparent, and (ii) that every verb necessarily has a complete four-way focus contrast. I will discuss the first issue when reviewing the 'non-thematic' approach in Sections 3.6.3-3.6.4, which argues that focus categories do not maintain one-to-one correspondences with thematic roles. In this section I concentrate on whether every Tsou verb necessarily has a complete four-way contrast.

Even though the verb root $si$ 'put' in (23) appears in four focus forms, a close inspection indicates that only a few verbs display a four-way focus paradigm. In most cases the paradigm is deficient. Predicates such as $miebocU$ 'break wind', for instance, only appear in the AF form, as in (25):"
Predicates such as opcoi ‘kill’ manifest another type of focus paradigm. Opcoi ‘kill’ may occur in the AF form, as in (26a), and in the PF form, as in (26b). It does not occur in the RF form or the LF form, as shown in the ungrammatical sentences (26c) and (26d), respectively.

(26)

a. mi=ta to cmoi 'e yuozomU
   AUX.AF.R=3SG kill.AF NTOP bear TOP warrior
   ‘The warrior killed a bear.’ (FNE.XNGO341a)

b. i=ta to cmoi 'o yuozomU
   AUX.NAF.R=3SG kill-PF NTOP bear TOP warrior
   ‘The warrior killed the bear.’ (FNE.XNGO341a)

c. *i=ta to cmoi 'o yoifo
   AUX.NAF.R=3SG kill-RF NTOP bear NTOP warrior TOP wizard
   intended ‘The warrior killed a bear for the wizard.’ (FNE.XNGO341c)

d. *i=ta to cmoi 'o iskiana
   AUX.NAF.R=3SG kill-LF NTOP bear NTOP warrior TOP Iskiana
   intended ‘The warrior killed a bear at Iskiana (place name).’ (FNE.XNGO341d)

Verb roots such as fi ‘give’ illustrate yet another type of focus paradigm. While fi may occur in the AF, RF, and LF forms, as shown in (27a)-(27c), it never occurs in the PF form. The putative PF form *fi-a is not attested.⁴⁴
Examples (23a)-(27c) illustrate that not every Tsou predicate has a full paradigm for the four-way contrast, a characteristic also observed by H. Huang and S. Huang (2007). They argue that the choice of focus forms is lexically determined but not necessarily semantically transparent; the contrast between focus categories should be dissociated from thematic roles. I review their approach in the next section.

3.6.3 The ‘Non-Thematic’ Approach: H. Huang and S. Huang (2007)

H. Huang and S. Huang (2007, hereafter H&H) propose to dissociate focus categories from thematic roles because they do not maintain one-to-one correspondences. The same type of thematic role, such as the destination of ‘tiptoe’ and ‘go toward’ in (28a) and (28b), may be encoded by more than one focus category. Likewise, the same focus category may admit more than one type of thematic role. The LF category, for instance, is shown to encode both the destination of ‘tiptoe’ in (28a) and the speech content of ‘ask’ in (29). These examples illustrate that focus categories cannot be identified with

(i)  
\[ \text{\textit{*i}={\textit{si}, \textit{fi-a to hahocngU to yoifo, ' ooko}} \]  
AUX.NAF.R=3SG give-PF NTOP man NTOP wizard TOP child
Ill (conventionally recognized) thematic relations. In dissociating focus categories from thematic relations, however, H&H do not specify whether focus categories should be identified as a semantic or syntactic construct. (Unless otherwise specified, the examples below follow H&H's original glosses.\(^46\))

\[(28)\]
\begin{enumerate}
\item \begin{tabular}{cl}
\text{a.} & \begin{tabular}{l}
oʊ-ɔ sehavi \text{t} o teoua \text{ho} tUtpUta \\
AUX.NAV-1SG.GEN tiptoe.LV NOM chicken CONJ catch.PV
\end{tabular} \\
& \text{‘I tiptoed to the chicken to catch it.’ (H&H, no. (XVib), p. 453)}
\end{tabular}
\item \begin{tabular}{cl}
\text{b.} & \begin{tabular}{l}
i-si us-ɔ 'o mo momo\text{h} \text{ho} haf-neni \\
AUX.NAV-1SG.GEN go.toward.PV NOM AUX.AV thick.AV CONJ carry-BV to cUyU OBL lunch
\end{tabular} \\
& \text{‘He went to those who were weeding and brought them lunch.’ (H&H, (XVIIb), p. 453)}
\end{tabular}
\end{enumerate}

\[(29)\] \begin{tabular}{cl}
oʊ-ɔ tuocos-i to pasuya \text{b} \text{kuyai} \\
AUX.NAV-1SG.GEN ask-LV OBL PN NOM car
& \text{‘I asked Pasuya about the car.’ (H&H, (XIIIb), p. 452)}
\end{tabular}

Among the four focus constructions, H&H claim that the RF category (their ‘BENEFICIARY VOICE’, BV) is semantically the most heterogeneous as it admits a wide range of thematic roles including benefactive, instrument, theme, and comitative, as shown in (30) below. The LF and PF categories are comparatively less heterogeneous. The LF category only admits the thematic roles of goal and utterance content (as seen in (28a)

\[\text{intended ‘The wizard gave the child to a man.’ (FNA.XSSE131c)}\]

\(^46\) H&H do not consistently label the morpheme boundary between predicate stems and focus affixes, as shown in the notation of tuocos-i ‘ask, LF’ in (29) and sehavi ‘tiptoe, LF’ in (28a). It is unclear if the notational difference is intended to mark any theoretical implications. A more bewildering point lies in their fairly inconsistent notation of AF morphology. The same AF predicate \text{e}\text{UsvUsvUt}\text{Ut} ‘tell’ is notated both as \text{eUsvUsvUtUt}, without any specification of morpheme boundaries, and \text{eUsvUsvUt-U}, formed by the stem \text{eUsvUsvUt} plus an AF suffix \text{-U}. It is important to note that AF morphology in the Austronesian languages, according to the current documentation, is rarely realized as suffixes. H&H do not provide any morphological analysis justifying the suffix analysis.
and (29)), whereas the PF category may include patient, goal, utterance content, emotion stimuli, percepts/concepts, and action causes (H. Huang and S. Huang 2007:437-438).

(30) RF constructions (H. Huang and S. Huang 2007)

a. os-'o pom-neni ta ceoa 'o tu'u-'u
   AUX.NAV-1SG GEN weed-BV OBL ground NOM hoe-1SG GEN
   'I leveled the ground with a hoe.' (instrument, H&H, no. (3c))

b. i-si engha-neni to mo'o 'o tegami to ino-si
   AUX.NAV-3SG GEN read.out-BV OBL PN NOM letter OBL mother-3SG GEN
   'Mo'o read his mother's letter for her.' (beneficiary, H&H, (Xc))

c. os-'o eupteUtU-neni 'o mo'o ne veiyo
   AUX.NAV-1SG GEN meet-BV NOM PN LOC PN
   'I met Mo'o in Veiyo' (comitative, p.437)

d. os-'o to's-eni ta pangka si tposU
   AUX.NAV-1SG GEN toss-BV OBL table NOM book
   'I tossed the book to the table.' (theme, H&H, no. (5b))


In this section I appraise H&H's study, focusing on their claim that the content of RF is semantically more heterogeneous than that of the other focus categories. Before proceeding, however, it is important to note that throughout their analysis H&H never

\[\text{\textsuperscript{47}}\] The gloss for momo should be 'weed, AF', not 'thick'. This is a typo in H&H (2007).

\[\text{\textsuperscript{48}}\] The original text of H&H states:

"The functions of LV clauses are on the whole quite stable, because their nominative arguments may be used to focus on just Goal (i.e., recipients or percepts/concepts) or Utterance Content (with verbs of saying). By comparison, the functions of the nominative arguments of PV clauses seem to be a bit more unpredictable, ranging as they do from Patient, Goal, Utterance Content, Emotion Stimuli, to percepts/concepts and action causes. Most complex of all are the functions of nominative NPs of the BV clauses. They are used to encode a wide variety of functions, Transported Theme, Content, Cause, Instrument, Benefactive, Source, and Comitative."

(H. Huang and S. Huang 2007:437-438)
address the empirical basis of the thematic roles they propose. Without any justification of the encoding or behavioral evidence employed, the proposed roles are then open to the question of whether or not they are formulated from the English translation and therefore are subject to the influence from the English categorization. In Section 3.7 I will question the validity of establishing thematic roles in this manner. In this section, I concentrate on appraising H&H's claim regarding the different degrees of heterogeneity among the three NAF focus categories. For argument's sake, I shall temporally accept H&H's assumption that thematic roles can be read off from translations. This is only for illustrating that semantic heterogeneity thus defined is not limited to the RF category.

H&H make a point of how the RF construction is semantically the most heterogeneous. When more data are considered, however, semantic heterogeneity is common to all four focus categories; the four focus categories all maintain one-to-many correspondences with the thematic roles conventionally identified in the linguistic literature. It is unclear in what sense the RF category is semantically the most 'unpredictable' and 'deviant' among the four. The AF category, for instance, admits various types of event participants typically differentiated in English as an agent, as in (31a), an experiencer, as in (31b), a theme that undergoes a change of location, as in (31c), and even a patient, as in (31d).

I do not think 'stable', 'unpredictable', and 'complex' are the best terms to compare these focus categories in terms of the variety of thematic roles admitted. I use 'heterogeneous' and 'homogeneous' instead.
Like the AF category, the PF category also admits various types of event participants, including but not limited to a patient, as in (32a), a location, as in (32b), and a theme, as in (32c).

(32) PF category

a. \( i=ta, \) eobak-a ta mameoi, 'e voyu
AUX.NAF.R=3SG beat-PF NTOP senior TOP Voyu
'The old man beat Voyu.' (patient; FNC.DTXB021b)

b. \( i=ta, \) yUmeUm-a ta mameoi, 'e hopo
AUX.NAF.R=3SG enter-PF NTOP senior TOP room
'The old man entered the room.' (location; FNA.XSSE123)

c. \( i=ta, \) si-a to ceoa ta mameoi, 'e emi
AUX.NAF.R=3SG put-PF NTOP ground NTOP senior TOP wine
'The old man put the wine on the ground.' (theme; FNA.XSSE132b)

The same heterogeneity is observed in the LF category, even though H&H claim that this focus category admits only goal and speech content and is semantically the most
homogeneous and predictable. However, examples (28a) and (33a)-(33e) demonstrate that the LF category includes a wide range of participants conventionally differentiated in English as direction, location, source, recipient, stimulus, and interlocutor. When all these data are considered, it is unclear why the LF category should be more homogeneous than the RF.

(33) LF category

a. i=si yon-i 'o oyomatospU
   AUX.NAF.R=3SG stay-LF TOP school
   'He stayed in the school'. (location; FNA.XSSE127b)

b. i=si i'im-i 'o amelika
   AUX.NAF.R=3SG come.from-LF TOP America
   'He came from America'. (source; FNC.XFPT855)

c. i=si fi-i to kamcia 'o oko
   AUX.NAF.R=3SG give-LF NTOP candy TOP child
   'He gave the child candy'. (recipient; FNB.XTRC0702b)

d. i=si ait-i 'o oko
   AUX.NAF.R=3SG see-LF TOP child
   'He saw the child'. (visual stimulus; FNA.XFRO241b)

e. i=si tuocos-i 'ooko
   AUX.NAF.R=3SG ask-LF TOP child
   'He asked the child'. (interlocutor; FNA.XFRO261b)

H&H's claim about the semantic heterogeneity of the RF category and the semantic homogeneity of the PF and LF categories is contingent upon an explicit set of empirical criteria for defining the enumeration and assignment of thematic roles. These criteria need to be explicit about when two nominals are considered to have the same
role and when they are not considered to have the same role. However, throughout their analysis H&H do not specify the criteria they adopt, raising the question of how semantic heterogeneity/homogeneity can be evaluated. For instance, it is unclear why ‘Mo’o’ in (30c) is a comitative instead of a patient/theme. It is equally unclear why the PF category is less heterogeneous than the RF category when the former includes six types of conventional thematic roles (see page 111 and Figure 3-11 below) but the latter includes seven. In what sense is seven more ‘unpredictable’ than six? I will return to this issue in Section 3.7 below.

3.7 Thematic Roles

3.7.1 Alignment between Focus Categories and Thematic Roles: H&H (2007)

H&H use ten thematic roles for describing the three NAF categories in Tsou. Their analysis argues that a Tsou focus category is typically associated with more than one thematic role. In a like fashion, a thematic role is often found encoded by more than one focus category. The alignment of focus categories with thematic roles is shown in Figure 3-11.

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49 H&H do not discuss the semantic nature of the AF category.
H&H argue that the LF category aligns with the thematic roles of goal and utterance content. The PF category corresponds to six thematic role types: patient, goal, utterance content, emotion stimuli, percepts/concepts, and action causes (note that they do not indicate action causes in their semantic map). The RF category aligns with seven thematic role types: theme, content, cause, instrument, benefactive, source, and comitative. Of the three NAF categories, H&H claim that the RF category admits the widest range of thematic roles and is the most complex and unpredictable category.

3.7.2 Appraisal of H&H: An Empirical Basis of Thematic Roles?

H&H's claim that the RF category is semantically the most heterogeneous raises the question of whether the three NAF categories are evaluated by the same degree of
generality. H&H argue that the LF category is only used for goal and utterance content whereas the RF category is for seven different roles. It is important to note that H&H's 'goal' is in fact a category lumping together what are typically split into recipient, percept/concept, destination, location, and source in English and in many syntactic theories. If the 'splitting' view is chosen for the LF category, the LF would appear to align with six thematic roles ([recipient, percept/concept, destination, location, source], goal and utterance content) and is no longer semantically less heterogeneous. On the other hand, the 'heterogeneity' of the RF category emerges when H&H split comitative, instrument, and beneficiary into three distinct types, even though the three roles can be lumped into a category labeled 'circumstantial' based on the commonality of indirect participation (cf. Fillmore 1994 on the thematic role of circumstantial). Without any justification, H&H's analysis is open to the challenge why a 'lumping' view is used for the LF category but a 'splitting' view is used for the RF category.

The difference between the 'lumping' view and the 'splitting' view boils down to two important questions: What is the empirical basis for formulating and assigning particular thematic roles in Tsou? More fundamentally, what do we need thematic roles for? In the previous section I questioned the empirical basis of the thematic roles formulated by H&H. By 'the empirical basis' I mean the contrast in either encoding or behavioral properties for justifying how certain verb-specific participants form a coherent category in contrast to other participants. For instance, without empirical evidence, it is unclear why the encountered friend in (30c) and the tossed book in (30d) make two distinct types when they are both coded with the -neni suffix in Tsou. Questions like this do not necessarily invalidate H&H's analysis, as long as there is a
morphosyntactic contrast separating the encountered friend and the tossed book into two categories. Unfortunately, H&H do not provide any justification along this line.

The unwarranted (or not-yet-warranted) formulation of thematic roles brings us to the next question: what is the purpose of establishing thematic roles? In Section 2.4 I mentioned that thematic roles are established for identifying semantic attributes relevant to argument realization in the surveyed language. I do not deny that conventional thematic roles such as experiencer and instrument are useful for surveying the similarities and differences in encoding patterns across languages at the preliminary stage, probably based on free translations. However, to effectively portray the uniformity and variation in Tsou argument realization, we need categories that are useful for depicting how this language treats certain nominals alike but others different. In this aspect, the conventionally assumed thematic roles do not fare well. For instance, instrument is one of the conventionally recognized thematic roles among various syntactic theories. However, imposing the instrument role on the Tsou data is not useful for describing (i) why certain instrument-like elements (e.g., the cut-with knife in (34a)) can be associated with the RF category while others (e.g., the kill-with drugs in (34b)) cannot, and (ii) why instrument-like elements share the same encoding with beneficiary-like elements but not with other semantic elements, such as agentive participants?^{50}

(34)

a. os='o tyoc-neni to evi 'o poyave
   AUX.NAF.R=1SG cut-RF NTOP tree TOP knife
   ‘I cut a tree with the knife.’ (instrument-like REFERENCE; FNC.XFPT313b)

^{50} Blake (1977:44) states that in many ergative languages of Australia, agents and instruments have the same morphological case.
b. ??os='o opcoz-neni to fkoi 'o s'os'o
   AUX.NAF.R=1SG kill-RF NTOP snake TOP drug
   intended 'I killed a snake with the drugs.' (instrument as TOPIC; FNA.XSSE122c)

c. os='o tuľu-neni to yUsU 'o ba'i=U
   AUX.NAF.R=1SG wash-RF NTOP clothes TOP grandma=1SG
   'I washed clothes for my grandma.' (beneficiary-like REFERENCE; FNB.XTRC0405c)

In Chapters 4 and 5 I will describe the Tsou patterns of argument realization using
the four grammatical roles of AGENT, PATIENT, REFERENCE, and LOCATION. These four roles
are empirically established on the four focus categories and are useful for investigating
the uniformity and variation in Tsou argument realization.

3.8 Grammatical Relations

As mentioned in Chapter 2, the application of the concept 'subject' in Philippine-type
languages has long been a hotly debated issue. Linguists disagree as to which nominal
within the Philippine-type focus systems should be the closer equivalent to the subject
in languages such as English. The questionable application of the concept 'subject' in
these focus systems in turn affects the identification of other grammatical relations.
However, somewhat surprisingly, the characterization of grammatical relations appears
to be one of the least-discussed issues in the study of Tsou. In the following sections I
summarize and appraise the two stances that are most widely adopted in the study of
Tsou grammatical relations. The first is to consider the nominal that bears the TOPIC
marker as the subject of a clause; the second is to treat the ACTOR nominal as the subject
regardless of its nominal marking. Of the two stances, the former represents the
majority view, which I will summarize in Section 3.8.1. The second approach is
proposed by M. Chang (2004) on the basis of actor prominence. I will discuss her approach in Section 3.8.3.

3.8.1 Topic as the Subject

In the Tsou literature, there is an implicit consensus that the 'nominative' nominal (our 'TOPIC') is the syntactic subject in Tsou. Tung (1964:145) reported that earlier descriptions of Tsou by Ogawa (n.d.:693) and Wei (n.d.:212) both treated the 'nominative' nominal as the subject of the sentence. The practice has been widely adopted in subsequent works (M. Chang 1998; Li 1972; 1977; Li 1997; Szakos 1994; Starosta 1974; Starosta 1985; Zeitoun 2000; 2005; Tsuchida 1976; H. Huang and S. Huang 2007). Even though these works rarely address the notion of subject directly, by adopting the term 'nominative' for a particular class of nominals without any specification, the implication of treating the 'nominative' argument as the grammatical subject is evoked. Also evoked is the implication of a nominative-accusative system of grammatical relations, which identifies the ACTOR as the default choice for the 'nominative' argument (see Section 2.3.1 for details). However, within the proponents of the TOPIC-subject analysis, there is a tendency to ignore the implied ACTOR-TOPIC alignment introduced by the labels 'nominative' and 'subject'. For instance, S. Huang's (2002) discourse study on Tsou indicates that the Tsou ACTOR is not always preferably linked to the TOPIC relation, a result that challenges the validity of the TOPIC-subject analysis (see Section 5.5 for details). Recognizing the challenge, however, he still refers to the TOPIC as the subject and the nominative argument without any justification.
Aside from the limited empirical support for the *TOPic*-subject, even far less attention is given to the characterization of the object relation, the second core argument in a clause in subject-object languages. According to Tung’s (1964) report, both Ogawa (n.d.) and Wei (n.d.) argued that ‘non-nominative’ phrases (Tsuchida’s ‘oblique’ nominals, our ‘NON- *TOPic*) could be read as direct object or indirect object in Tsou. Other than this brief description, no proper characterization of the object relation has been provided, including how it can be distinguished from subject, on the one hand, and from oblique relations, on the other.

### 3.8.2 Appraisal of the ‘Topic-Subject’ Analysis

The ‘*TOPic*-subject’ analysis is not without challenges. S. Huang’s (2002) discourse study indicates that the *TOPic*-subject analysis is not supported by textual frequency, an issue I will return to in Section 5.5. Another source of controversy is the questionable distribution of subject properties. H. Chang and Tsai (2001) point out that the *TOPic* nominal (their ‘nominative’ argument) does not display the same clustering of subject properties found in languages where the identification of subject is less problematic. For instance, the control construction in Tsou is sensitive to the *ACTOR* nominal, rather than to the *TOPic*, the presumed subject. Other syntactic phenomena that manifest the *ACTOR*’s syntactic prominence over the *TOPic* include reflexivization and pronominal marking on the auxiliary.\(^{51}\) However, H. Chang and Tsai (2001) do not address whether or not the notion of subject needs to be redefined in Tsou, considering the split of

\(^{51}\) See Section 5.4.3 for details on Tsou reflexivization. See Section 3.4.4 for the use of pronominal clitics for *ACTOR* marking.
subject properties between the ACTOR and the TOPIC. They only state that the ACTOR must be recognized for its syntactic prominence.

H. Chang and Tsai’s statement contains the assumption that the subject is the grammatically most prominent relation in a clause, controlling the operation of most syntactic processes. This assumption follows from Keenan’s (1976) definition of subject as the single uniform category that displays the maximal syntactic prominence. However, given that the TOPIC apparently does not display the maximal clustering of subject properties found in languages with a clearly-defined subject category, we cannot help asking: does the TOPIC nominal still qualify as ‘subject’?

3.8.3 ACTOR as the Subject: M. Chang (2004)

Disagreeing with the TOPIC-SUBJECT analysis, M. Chang (2004) argues that the Tsou ACTOR, not the TOPIC, displays more of the properties included in Keenan’s (1976) definition of subjecthood (see Table 3-11 below). The TOPIC is an A’ position that is structurally prominent, occurring at the specifier position of VOICEP (a type of CP). The TOPIC/NON-TOPIC distinction among prenominal particles is considered irrelevant to case opposition. Prenominal particles (TOPIC/NON-TOPIC markers) as a whole are taken to be determiners with deictic functions (2004:70). The AF-NAF alternation does not involve any change of grammatical functions. In the NAF constructions where the ACTOR is dissociated from the TOPIC status, the ACTOR is not syntactically demoted.
Aside from the \textit{actor} and the \textit{topic}, M. Chang also characterizes the object relation and 'applied' arguments. The object relation is analyzed as a structural position occupied by a base-generated DP under VP, as shown in Figure 3-12. This DP is associated with nominals whose semantic nature denotes a theme or a patient. The 'applied' arguments include beneficiary, instrument, recipient, goal, and location. They occur as the DP of APPLP, as shown in Figure 3-13. When these semantic elements are associated with the \textit{topic} status in RF and LF constructions, they become additional arguments incorporated into the clause, resembling applicative constructions in the Bantu languages. Following Pylkkänen (2002) and Rackowski (2002), M. Chang sorts these 'applied' arguments into two groups with different structural positions:

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
\textbf{TOPIC} & \textbf{ACTOR} \\
\hline
relativization & auxiliary agreement \\
 & reflexive binding \\
 & control \\
 & imperative addressee \\
\hline
\end{tabular}
\caption{Distribution of subject properties in Tsou \cite{M. Chang 2004}}
\end{table}

\footnote{On the functional similarities between Tsou RF and LF constructions and applicative constructions, M. Chang states that:}

\begin{quote}
The terminology of the applicative construction originally comes from the addition of additional arguments, so called the applied arguments, to the argument structure of verb in Bantu languages. The applicative constructions involve verbal affixes that have the property of increasing the number of internal arguments that the verb selects \cite{M. Chang 2004:111}.

Like Bantu languages, the applied benefactive, cause or instrumental arguments [in Tsou] can be represented as equally grammatical as the core arguments. Precisely, the inventories of the NAV verb allow the addition of the causer, benefactor or instrument in the structure. For example, the additional argument of benefactor or the instrument can be productively introduced into the NAV [our NAF] construction if only the verb stem is suffixed with \texttt{neni}. Accordingly, the domain of the argument structure will be expanded. \cite{M. Chang 2004:116}
\end{quote}
beneficiary and instrument are high applicatives, whereas recipient, goal, and location are low applicatives.\textsuperscript{53}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3-12.png}
\caption{Basic (non-applicative) structure in Tsou (M. Chang 2004:84)}
\end{figure}

\textsuperscript{53}Pylkkänen (2002) argues that high applicatives relate an individual to the entire event (e.g., \textit{He is eating food for his wife}), whereas low applicatives relate an individual to the direct object of the event but not to the entire event (e.g., \textit{I baked my friend a cake}). Her main argument is that 'his wife' in the eating event bears no relation to the eaten food but 'my friend' in the baking event stands in the possession relation to the baked cake.
3.8.4 Appraisal of the ACTOR-Subject Analysis

Even though M. Chang contributes an extensive discussion to the configuration of syntax in Tsou, some of her description is not transparent. First, she argues that the ACTOR displays more subject properties than the TOPIC. However, she then argues at length that Tsou is a CP-prominent language and that in such languages the TOPIC is structurally the most prominent element, referred to sometimes as 'subject' (with quotation marks) and sometimes as 'pivot'. A few puzzles then arise: How should 'structural prominence' be associated with (or delineated from) the Keenanian definition of subjecthood as maximal grammatical prominence? Do we need to redefine subjecthood for the CP-prominent languages instead of continuing the Keenanian
definition? It appears that M. Chang intends to model two layers of prominence, as far as I can tell. However, if she intends a two-layered model, one for the actor and the other for the topic, she should have specified how the two layers can be delineated/aligned and how subjecthood and grammatical relations in general should be characterized in the two-layered framework. Most important of all, more distinctive labels should be used to separate relations in the two layers because the terms 'actor-subject' and 'topic-subject' are simply confusing.

A second set of puzzles that arises in her analysis is the way she characterizes the object relation and 'applied' arguments using thematic roles. The object relation, i.e., the second core argument, is characterized as the theme/patient element and 'applied' arguments are characterized as anything other than the actor and the patient/theme. Underlying this semantic approach is a hidden assumption that agent and patient are always core arguments, whereas everything else is syntactically oblique and only aligned with core syntactic positions after applicativization (being 'applied'). The semantic approach is understandable given that patient elements form the object prototype across languages. However, M. Chang's analysis suffers from two weak points. First, she does not explain why the presumed object relation is sometimes coded by the PF suffix -a (e.g., an-a 'eat' (2004:78)) but in other cases by the LF suffix -i (e.g., ait-i 'see' (2004:89)). The differential object marking does not necessarily invalidate her claim, as long as evidence from behavioral characteristics or other encoding features still

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54 In the following paragraphs, I shall, for argument's sake, temporally accept the assumption that thematic roles such as beneficiary and instrument can be defined cross-linguistically.
indicates a (more or less) coherent object relation. Unfortunately, such a syntactic explanation is missing from her analysis. The lack of a syntactic explanation brings in a second question/weak point: in what way is the patient/theme element more 'core-like' than other semantic elements? If there is no reliable evidence that the patient/theme element is more accessible to various syntactic operations vis-à-vis other (non-actor) elements, the claim that the patient/theme constitutes the object relation/the second core argument in a clause becomes empirically unwarranted. Without a well-justified object relation, any claim that associates RF and LF constructions with applicative constructions becomes substantially unmotivated because applicativization is a syntactic phenomenon defined relative to the object relation (Peterson 2007).

In Chapters 4 and 5, I will explore the argument-adjunct distinction and the core-oblique contrast in Tsou, but I will not assume that Tsou necessarily has a second core argument in monoclausal structure.

3.9 The Poa-Causative Construction
Aside from the four topics discussed in Sections 3.5-3.8, the present study also reviews the analyses of two types of complex predicates, i.e., the poa-morphological causative and serial verb constructions (see Chapter 6 for details on the notion of complex

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55 For instance, Zaenen, Maling, and Thráinsson's (1985) study indicates that some Icelandic verbs assign quirky case to their objects (e.g., the verb 'miss' assigns a genitive case to its patient). Despite the difference in case marking, both 'quirky' nominals and accusative-marked objects can undergo passivization. According to Zaenen, Maling, and Thráinsson, this behavioral property establishes the object status of the 'quirky' nominals.

56 Core arguments are typically assumed to be capable of controlling the operation of (many) syntactic processes, whereas oblique elements are mostly syntactically inactive.

57 If LF constructions, for instance, are indeed a type of applicative construction that aligns locational elements with the object relation, defined by M. Chang as the semantic patient in Tsou, we should expect
predicates). The inclusion of these two types of constructions enables the present study to explore how the argument structure of a simplex predicate is altered (or remains unaltered) in response to the formation of complex predicates. In this section I review and appraise previous works on the poa-causative construction.

The poa-causative predicate has long been depicted as a type of morphological causative (cf. Tung 1964:190-193 and Starosta 1974), formed by attaching the causative morpheme poa- to a stem predicate. Depending on the focus marking of the stem predicate, the poa-causative falls into two subtypes: poa-$$X_{AF}$$-($$a$$), where a stem predicate in its AF form is affixed with a compulsory poa- prefix and an optional -$$a$$ suffix, and poa-$$X_{NAF}$$-neni, where a stem predicate in one of the NAF forms is affixed with both poa- and -neni. Previous studies on Tsou (cf. Tung 1964; Starosta 1974; Zeitoun 2005; Huang and Huang 2005) typically identify poa- as the causative morpheme but differ in the interpretations of the concurrent suffixes -$$a$$ and -neni. In what follows, I summarize and appraise Starosta’s (1974) analysis on the poa-causative construction, whose work is the first investigation on how causativization may alter the distribution of grammatical relations in Tsou. A more detailed literature review on causative constructions in general is postponed until Chapter 6.

3.9.1 Poa-Causatives and Re-Distribution of Grammatical Relations: Starosta (1974)

Starosta (1974) claimed that poa-causativization in Tsou redistributes grammatical relations to allow for the additional agent, i.e., the causer. He first identified three

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the LF form such as si-i ‘put at’ to have the overt marking of the patient/object, which is the PF suffix -$$a$$. However, the putative form si-$$a$$ or si-$$a$$-i is never attested.
grammatical relations in a basic Tsou clause: agent (AGT), object (OBJ), and dative (DAT); each of them is indexed on the verb via a specific focus marker. Table 3-12 below summarizes the linking between the three grammatical relations and focus forms in Starosta’s analysis, together with the more specific participant roles they are linked to. It is important to note that the PF marker -a is missing from Starosta’s analysis. As will be shown below, this negligence of the PF form leads to an inadequate description of basic and causative clauses.

<table>
<thead>
<tr>
<th>Participant Roles</th>
<th>agent</th>
<th>patient/theme</th>
<th>recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical Relations</td>
<td>↓ AGENT</td>
<td>↓ OBJECT</td>
<td>↓ DATIVE</td>
</tr>
<tr>
<td>Focus Forms</td>
<td>Agent Focus (AF)</td>
<td>Object Focus (OF)</td>
<td>Relational Focus (RF)</td>
</tr>
<tr>
<td></td>
<td>mo-</td>
<td>-(n)eni</td>
<td>-i</td>
</tr>
</tbody>
</table>

Table 3-12 Grammatical relations and focus forms in basic clauses (Starosta 1974)

In a causative clause, the above linking pattern is altered to incorporate the causer, i.e., the additional agent. Starosta argued that the causer assumes the agent relation in the causative clause, whereas the basic agent (the causee) is changed to the oblique beneficiary (BEN) relation. Causativization does not trigger any change on the basic OBJ and the basic DAT, both of which retain their syntactic positions as in the basic clause. The linking pattern involved in a Tsou causative clause is illustrated in Table 3-13 below. The slanted arrow illustrates that the causee (the basic agent) is redistributed to a new grammatical relation in the causative frame.
According to Starosta, the re-distribution of grammatical relations is made evident in the pattern of verbal morphology. The occurrence of the OF form fa.eni 'give' in (35a) and (35b) indicates that the nominal 'money' holds the OBJ relation both in the basic clause and in the causative clause. Similarly, the occurrence of the RF form fi.i 'give' in (36a) and (36b) also makes evident that the recipient nominal 'granny' holds the DAT relation both in the basic clause and in the causative clause. In claiming that the causative predicate poa-fa.eni.-neni in (35b) is marked for the OBJ relation and the predicate poa-fi.i-neni in (36b) is marked for the DAT relation, Starosta treated the second focus affix -neni as irrelevant to the consideration of grammatical relations.

(35) OBJECT FOCUS: BASIC AND CAUSATIVE

a. i=si fa.eni ta ʔoko to mameoi ʔo peisu
   AUX.NAF=3G give-OF OBL child OBL old.man NOM money
   +AGT +DAT +OBJ
   ‘The child gave (the) old man some money.’ (basic, FNB.XCRE312)

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58 In examples (35b), (36b), (37b), the first line is the Tsou text. The second line is mostly Starosta's glosses, but I have changed some of his notations of case form (see below). The third line marks grammatical relations. Note that Starosta treated all of the non-nominative cases (e.g., to and ta) as accusative markers, but Szakos (1994) and Zeitoun (2000; 2005) consider them oblique (see Section 3.5.1). Additionally, Starosta did not indicate morpheme boundaries between verb stems and focus markers in his examples, but he did indicate the morpheme boundaries between the causative affix poa- and verb stems. The morpheme breaks here are mine, for the purpose of reading convenience.
b. i=si poa-\textit{faeni}-neni ta \textit{oko} to \textit{amoo-si} to mameoi
\textit{AUX.NAF=3SG CAU-give.OF-neni OBL child OBL father-3SG OBL old.man}
\textit{+AGT +BEN +AGT +DAT}

\textit{?o peisu}
\textit{NOM money +OBJ}

‘The father made his child give \textbf{the money} to the old man.’ (causative; Starosta 1974: 352)

\textbf{(36) RELATIONAL FOCUS}

\textit{a. inehucma i=si \textit{fi-i} to \	extit{mo gooen} to \textit{mo mameoi}}
\textit{yesterday AUX.NAF=3SG give-RF OBL AUX five.dollar OBL AUX old.man}
\textit{+AGT +OBJ +AGT}

\textit{?e ba?i}
\textit{NOM granny +DAT}

‘Yesterday the old man gave five dollars to the \textbf{Granny}.’ (FNB.XCRE313)

\textit{b. i=ta poa-\textit{fl-i}-neni ta mameoi ta \textit{oko} to \textit{gooen}}
\textit{AUX.NAF=3SG CAU-give.RF-neni OBL senior OBL child OBL five.dollar}
\textit{+AGT +BEN +AGT +OBJ}

\textit{?e ba?i}
\textit{NOM granny +DAT}

‘The child had the old man give five dollars to \textbf{Granny}.’ (Starosta 1974:352)

Unlike the basic OBJ and the basic DAT, the ACT relation of the basic clause (i.e.,
the causee) is assigned a new grammatical relation in the causative frame. In the basic
clause (37a) below, the agent nominal ‘your father’ assumes the AGT relation in the
clause and triggers the AF marking on the verb when occurring in the ‘nominative’ case.
In the causative clause (37b), Starosta stated that the nominal ‘your father’ is no longer
the AGT but the BEN\textsuperscript{59} relation of the clause. The AGT relation now is the causer 'you', indicated by the second person singular clitic =ko on the auxiliary. Readers are reminded that Starosta did not specify why the BENEFICIARY relation shares the same focus morphology with the AGENT relation (poa-mofi) if the two are considered distinct. As will be made clear in the following section, this is one of the weak points of Starosta's analysis.

(37) \textbf{AGENT FOCUS, basic and causative}

\begin{verbatim}
(a) moh=ta mo-fi to peisu to mameoi ?e amoo-su
    AUX.AF=3SG AF-give OBL money OBL old.man NOM father-2SG +OBJ +DAT +AGT
    'Your father gave money to the old man.' (FNB.XCRE311)
\end{verbatim}

\begin{verbatim}
(b) te=ko n?=a poa-mo.fi to mameoi to peisu ?e amoo-su
    AUX.FUT=2SG ASP CAU-AF.give OBL old.man OBL money NOM father-2SG +AGT +DAT +OBJ +BEN
    'You tell your father to give the money to the old man.' (Starosta 1974:353)
\end{verbatim}

3.9.2 \textbf{Appraisal of Starosta (1974)}

Starosta insightfully directed our attention to the re-distribution of grammatical relations involved in a causative clause, but his analysis contains a few problems. The most conspicuous problem is the unsystematic interpretation of verbal morphology. In basic clauses such as (35a), (36a), and (37a), Starosta relied on focus marking for determining grammatical relations. Analogically, the second focus marking -neni in the causative template poa-X-neni should also be interpreted as a marker of the OBJECT.

\textsuperscript{59} Starosta did not specify the nature of the BENEFICIARY relation, in particular, how it is marked grammatically. According to Starosta's definition, the three grammatical relations (ACT, OBJ, DAT) in Tsou are manifested in the focus marking on the verb. Nevertheless, Starosta did not mention how the fourth grammatical relation, the BENEFICIARY, could be indicated on the verb form. More confusingly, the
relation, according to Starosta's claim in Table 3-12. However, he chose to interpret this second focus marking as irrelevant to the consideration of grammatical relations in a causative clause without any justification. A causative verb such as poa-fi₁,₁-neni in (36b) is interpreted as RF-marked instead of OF-marked. This inconsistency renders -nerd as an OF marker in a basic clause but as a dummy morpheme in a causative clause.

The interpretation of the BEN relation in the causative clause (37b) involves a similar inconsistency. Starosta claimed that the causee 'your father' assumes the BEN relation in the causative clause (37b), even though the corresponding verb poa-mo-fi clearly carries an AF prefix mo-, the marker indicative of the AGT relation in a basic clause. Starosta did not provide any justification why the BEN relation should share the same focus marking with the AGT relation, nor did he specify any other morphosyntactic evidence to vindicate the BEN analysis.

Last but not least, there is a huge difference between the focus morphology recognized by Starosta and the one identified by the rest of the Tsou literature and also by the present study. As shown in Table 3-14, Starosta identified AGENT FOCUS, OBJECT FOCUS, and RELATIONAL FOCUS but the present study (and many others) identifies ACTOR FOCUS, PATIENT FOCUS, REFERENCE FOCUS, and LOCATION FOCUS (see 3.4.2 for details). The suffix -a is ignored in Starosta's analysis, an unfortunate result considering that he relied on the single verb 'give' for establishing the focus paradigm of the entire language ('give' only has three focus possibilities, see Section 3.6.2). The failure to recognize -a as a focus marker invalidates Starosta's analysis for both basic and causative clauses. First, Starosta's analysis is unable to interpret the grammatical

BENEFICIARY never appears in the basic clause. As will be made clear in the following paragraph, this is one
relation indicated by verbs such as an-a ‘eat, PF’ in (38a). Second, as a consequence of the first point, his analysis fails to account for the grammatical relation encoded by the causative predicate poa-an.a-neni in (38b), especially when Starosta claimed that the occurrence of -neni in the causative frame is irrelevant to the consideration of grammatical relations. Third and probably most fundamental, without recognizing -a as a focus marker, Starosta’s analysis is unable to describe the change of grammatical relations on the part of the causee, which is indicated by the AF affix in a basic clause (as mo-fi ‘give’) but by an optional PF suffix -a in a causative clause (as poa-mo.fi-(a) ‘make-give’). Failures to identify -a as a focus marker result in the incorrect analysis that AF affixes mark the AGENT relation in a basic clause but the BENEFICIARY relation in a causative clause, a point mentioned in earlier paragraphs.

<table>
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<th>-neni</th>
<th>-i</th>
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<td>RF</td>
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<td>PF</td>
<td>RF</td>
<td>LF</td>
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<td>fa-eni</td>
<td>fi-i</td>
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<td>‘eat’</td>
<td>‘give’</td>
<td>‘give’</td>
<td></td>
</tr>
</tbody>
</table>

Table 3-14 Tsou focus categories: Starosta (1974) and the present study

(38) AGENT FOCUS, basic and causative

a. i=ta, an-a ta fkoi, o teoua
   AUX.NAF.R=3SG eat-PF NTOP snake TOP chicken
   ‘The snake ate the chicken.’ (FNB.XCRE212a)

b. i=si, poa-an.a-neni ta fkoi to yoifo, o teoua
   AUX.NAF.R=3SG CAU-eatPF-RF NTOP snake NTOP wizard TOP chicken
   ‘The wizard made the snake eat the chicken.’ (FNB.XCRE212b)

of the weak points of Starosta’s analysis.
In Chapter 6, I will explore the poa-causative construction, observing how the re-distribution of grammatical relations interacts with the four-way focus system. I will compare the pattern of argument realization between causative and simplex predicates, focusing on the adjustment made in argument structure to incorporate the additional agent.

3.10 Serial Verb Constructions

In this section I review previous works on serial verb constructions in Tsou, exploring how predicates composed of what appear to be two morphologically separate words pattern with regard to argument structure (see Chapter 7 for details on the definitions of serial verbs).

Serial verb constructions are not a well-attended topic in the Tsou literature. H. Chang (2005) is one of the forerunners who call our attention to the juxtaposition of two predicates in Tsou. In Section 3.10.1 below I first summarize his description of Tsou serial verb constructions. In Section 3.10.2 I appraise his analysis and list the issues that await further description and analyses. A more detailed characterization of verb serialization will be provided in Chapter 7.

3.10.1 Serial Verbs and Restructuring: H. Chang (2005)

H. Chang (2005) characterizes verb serialization in Tsou as a structure that contains two or more verbs juxtaposed without any intervening conjunction markers. Two examples are given in (39) below.
In both (39a) and (39b), two verbs are juxtaposed next to each other while only one auxiliary appears in the clause. Superficially both verbs share the same set of arguments (i.e., agent and patient). When the agent 'I' is selected as the **TOPIC** (H. Chang's 'nominative'), as in (39a), both verbs are marked with AF affixes, creating focus agreement not only between the two serialized verbs but also with the auxiliary, which occurs in the realis AF form mi. The same proposition is expressed in the PF form when the patient nominal 'bananas' is selected as the **TOPIC**, as in (39b). Despite the change in verb morphology and nominal marking, the two serialized verbs still maintain agreement in focus.

Based on the two examples listed above, H. Chang (2005) argues that (all) serial verbs in Tsou are tightly bound to each other and have undergone a serious restructuring process that unifies the two juxtaposed verbs. This restructuring explains why the two verbs in a serial structure always respect focus agreement, as

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60 H. Chang does not specify what he means by 'restructuring process'. It is unclear whether he intends the term in reference to restructuring predicates in the Romance languages (see Rizzi 1982 on Italian).
these two verbs now form a single, well-integrated syntactic unit. According to H. Chang, the strict focus agreement is a property unique to Tsou. Serial verbs in Atayal and Kavalan, the two other Formosan languages in his investigation, do not observe strict focus agreement but may display independent focus marking, as shown in (40) and (41) below.

(40) Atayal (H. Chang 2005)

a. ma-‘usa’ ‘i’ k<um>-aluap ‘i’ yumin
   AF.Fut-go LK hunt<AF> Nom yumin
   ‘Yumin will go hunting.’ (AF-AF)

b. ‘a-‘usal-an ‘i’ ma-bainay ni’ yaya’ ku’ bunga’
   Red-go-LF LK AF-buy Gen father Nom potato
   ‘Father will go to buy the potato.’ (LF-AF)

(41) Kavalan (H. Chang 2005)

a. m-atiw-iku m-ara tu sunis
   AF-go-1S AF-take OBL child
   ‘I went to bring a child back.’ (AF-AF)

b. qatiw-an-ku m-ara ya sunis
   go-PF-1S AF-take Nom child
   ‘I went to bring my child back’ (PF-AF)

3.10.2 Appraisal of H. Chang (2005)

The claim that juxtaposed verbs in Tsou invariably agree with each other in focus is under challenge when more data are considered. Examples in (42) illustrate that certain types of juxtaposed verbs have seemingly independent focus marking.

(42)

a. os=’o yon-i m-apaso ta fou ’e coca
   AUX.NAF.R=1SG stay-LF AF-cut NTOP pork TOP yard
   ‘I stayed in the yard slicing pork.’ (FNC.XFPT422a)
b. *os='o yon-i papas-a ta fou 'e coca
   AUX.NAF.R=1SG stay-LF cut-PF NTOP pork TOP yard
   intended 'I stayed in the yard slicing pork.' (FNC.XFPT422b)

c. *os='o yon-i papas-a ta coca 'e fou
   AUX.NAF.R=1SG stay-LF cut-PF NTOP yard TOP pork
   intended 'I stayed in the yard slicking the pork.' (FNC.XFPT422c)

Questions then arise regarding how serial verbs such as in (42) could be compared
with the type discussed by H. Chang (2005), and whether they could both be called a
type of serial verb construction. It is highly likely that we may need to recognize
multiple types of serial verb constructions in Tsou, each with their own specific features.
I will return to this in Chapter 7.
Chapter 4 Argument Structure of Tsou: Valency Patterns

4.1 Overview

A theory of argument structure specifies the number of arguments required in a particular sentence pattern (i.e., valency) and the relationship between these arguments and syntactic roles. In this chapter I investigate the valency patterns in Tsou and their interaction with different focus categories. The details regarding the relationship between required arguments and syntactic roles are postponed until Chapter 5. Before specifying each valency pattern, I introduce how arguments and adjuncts can be characterized empirically in Tsou in Section 4.2. Section 4.3 introduces the Construction Grammar approach to argument structure (Goldberg 1995; Croft 2001; Michaelis and Ruppenhofer 2001, to name three), the working framework adopted in the present study. Section 4.4 explicates why Tsou valency patterns are best represented using the Construction Grammar approach. Section 4.5 introduces the representation format for Tsou argument structure, which is established using a three-layered correspondence set of the ACTOR/PATIENT/REFERENCE/LOCATION contrast, the TOPIC/NON-TOPIC distinction, and event-specific participants. Sections 4.6-4.9 present the four valency groupings observed in Tsou argument structure. Section 4.10 summarizes this chapter and characterizes the constructional approach relative to the symmetry/asymmetry claims made in the Austronesian literature (see Section 2.1).
4.2 Arguments and Adjuncts in Tsou

4.2.1 A Consistent Terminology

As mentioned earlier, a theory of argument structure spells out the argument(s) required by a particular predicate and sets them off from non-required elements, i.e., the adjuncts. The spelling-out and setting-off is contingent on a set of explicitly specified criteria for characterizing arguments, adjuncts, and the distinction between them. Before I describe the nature of arguments and adjuncts in Tsou, however, it is necessary to specify what is intended by the labels 'arguments' and 'adjuncts'. The Tsou literature in general uses the two terms in a somewhat loose manner. For instance, H. Huang and S. Huang (2007, hereafter H&H) use the term 'non-core/peripheral arguments' interchangeably with 'adjuncts' for locational and time phrases (H&H 2007:425, 440, 447-449). It is unclear why an element can be 'argument' and 'adjunct' at the same time. I understand that different theories may use these terms in a slightly different manner; however, if terms are used interchangeably without any specification, it is difficult to understand what is intended.

For consistency's sake, the following terminology is used henceforth in the present study: arguments are participants required to complete a predication, whereas adjuncts are optional elements added to modify a completed predication (Haegeman 1994:36). The occurrence of arguments is restricted by the semantics of the licensing predicate,

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1 The term 'argument' is used by H&H sometimes as the label for obligatory constituents (as opposed to 'adjunct') but sometimes as the label for all kinds of participants pertinent to an event, obligatory or non-obligatory. For instance, H&H (2007:447) claim that agent, patient, and goal in European languages are treated as 'core arguments' whereas beneficiary, cause, companion, and instrument are 'non-core arguments'. Lots of specification is needed for clarifying what is intended for 'argument', 'adjunct', 'core', and 'non-core/oblique'.

2 Haegeman (1994:36) defines arguments as 'participants minimally involved in the activity or state
whereas adjuncts are freely omissible, freely attachable, and not subject to the idiosyncratic restrictions imposed by the governing predicate (Andrews 1985:89-97). Arguments are further divided between core and oblique based on the grammatical prominence they display. Core arguments are typically assumed to be capable of controlling the operation of (many) syntactic processes, whereas oblique elements are mostly syntactically inactive. In this chapter I investigate the Tsou argument/adjunct distinction and characterize valency patterns relative to this distinction. The discussion of core/oblique contrast is postponed until Section 5.4 after the investigation of the grammatical prominence of each argument type.

4.2.2 The Omissibility Test and Its Validity in Tsou

It is conventionally assumed that arguments and adjuncts can be successfully distinguished by the feature of obligatoriness/omissibility and semantic constraints. The occurrence of arguments is governed by the semantics of the licensing predicate, whereas the distribution of adjuncts is ungoverned; they are freely omissible and freely attachable to most predication. The common understanding holds that the

expressed by the predicate'.

Andrews (1985) argues that in English, only prepositional phrases whose form and distribution are not governed by the idiosyncratic properties of verbs are truly adjuncts. Prepositional phrases whose distribution and form are subject to lexical control are complements to the verb, even though they resemble their adjunct counterparts in form. For instance, the with-phrase in (a) is obligatory relative to the verb provide and, according to Andrews, is a prepositional complement.

(a) We provide Iran *(with weapons). (Andrews 1985:90)

In later sections I will specify that constructions also impose restrictions on the types of elements that may appear in a Tsou clause.

In Lexical-Functional Grammar, for example, core arguments are linked to subject and object (thematically unrestricted or restricted), whereas oblique arguments are those aligned with oblique relations, sentential complements, and open complements (Dalrymple 2001:7-28). By this classification, the English ditransitive verb put takes two core arguments (agent and patient/theme) and one oblique argument (location).
argument/adjunct distinction so defined is constant across constructions within a language or even across languages. A dividing line is typically placed separating agent and patient/theme from everything else. However, the omissibility test does not yield the expected division in Tsou. First, the number of obligatory arguments appears to vary across constructions. For instance, the verb stem eobako ‘beat’ is typically assumed to take two arguments, one for the beater and the other for the beaten. However, when ‘beat’ occurs in the RF form eobak-neni, it requires three arguments: the beater, the beaten, and the instrument used for the beating. The instrument, usually an optional adjunct, becomes an obligatory element when associated with the topic status (due to the constraint that every clause requires a topic nominal).

(1)

\begin{verbatim}
a mo=0 eobako to av'u 'o naau
AUX.AF.R=3SG beat.AF NTOP dog TOP Naau
'Naau beat a dog.' (FNC.DTXB002a)
\end{verbatim}

---

6 For instance, Kroeger (2004:10) states that the elements which express time, manner, and purpose are ‘almost always adjuncts’ rather than arguments. Andrews (1985:66-130) states that agent and patient are ‘quintessential participatory roles’ (Andrews 1985:69). By ‘participatory roles’, Andrews means the actual participants in the situation implied by the verb and are closely related to complements/arguments. However, this ‘fixed’, construction-independent view on the argument/adjunct distinction becomes inadequate to explain why agent of a transitive event is required in the English active voice construction but is an adjunct in the passive construction.

7 Even in English there are cases where the omissibility test does not yield the expected division. For instance, while adverbs in English are generally assumed to be non-obligatory adjuncts, there are instances where they are obligatorily required, as in (i). On the other hand, even though arguments are typically taken to be obligatory, example (ii) shows that the rule is not as hard and fast as expected.

(i) John behaved badly. (Dowty 2003:39)
(ii) I ate.

We need to bear in mind that the obligatoriness test is constantly defied by examples found in real data. Stronger conclusions are not warranted.

8 In this dissertation, omissibility refers to the omission of nominals independent of referential status, with the result still being a grammatical clause. It is not to be confused with pro-dropping, which refers to the omission of a definite nominal whose specific identity is retrievable from the context (that is where the name ‘pro(noun)-drop’ comes from). Tsou allows pro-drop, which typically applies to the topic nominal, whose referent in most cases is retrievable from either the immediate speech environment or previous utterances. Non-topic nominals are rarely pro-dropped. See Section 5.4.3 under the discussion of indispensability for more details.
Second, the distribution of what are typically taken to be adjunct-like elements is not unrestricted. Many semantically ‘peripheral’ elements (i.e., elements that are neither agent nor patient/theme) have restricted occurrences in Tsou, therefore sharing resemblance with prototypical arguments such as patient. Examples in (2) and (3) demonstrate that the occurrence of patient-like elements is restricted, probably by the semantics of the verb (although in later sections I will specify that construction semantics also plays a role). While it is felicitous to associate a patient with the verb ‘divide’, it is considered ungrammatical to associate a patient with the verb ‘sleep’. Now let us turn to ‘peripheral’ elements. Examples in (5)-(6) below illustrate that the occurrence of instrument-like and beneficiary-like elements is also restricted. An instrument-like participant can be attached/added to the clause headed by the verb ‘fell’ but not to the one headed by ‘kill’, as shown in (4) and (5). Examples in (6) and (7) indicate that beneficiary-like participants have a similar restricted occurrence. In all these examples, the restriction applies to both TOPIC and NON-TOPIC nominals.

(2) patient

a tena=c?u aajae to fiteu ho houp-neni to la
AUX.IRR=PERF divide.AF NTOP Fiteu.grass and put.together-RF NTOP HAB

peo-a fkuoa
dig-PF Fkuoa.grass

‘(They) will divide Fiteu grass and put (the Fiteu grass) together with the fetched Fkuoa grass.’ (Tung1-31:003)
If (one) finished dividing the meat and gave to others.' (Tungl-20:002)

(3) patient
a *mi=i oengUtU to hahocngU
AUX.AF.R=1SG sleep.AF NTOP man
intended 'I slept a guy.' (FNB.XTRC0223a)

b *i=o oengUtU-a 'o hahocngU
AUX.NAF.R=1SG sleep-PF TOP man
intended 'I slept the guy.' (FNB.XTRC0223b)

(4) instrument
a os=i s'eftUng-eni to evi 'o noko
AUX.NAF.R=1SG fell-RF NTOP tree TOP saw
'I felled a tree with the saw.' (instrument=TOPIC; FNB.XTRC0209c)

b os=i s'eftUng-a to noko 'o evi
AUX.NAF.R=1SG fell-PF NTOP saw TOP tree
'I felled the tree with a saw.' (instrument=NON-TOPIC; FNB.XTRC0209b)

(5) instrument
a ??os=i opcoz-neni to fkoi 'o s'os'o
AUX.NAF.R=1SG kill-RF NTOP snake TOP drug
intended 'I killed a snake with the drugs.' (instrument=TOPIC; FNA.XSSE122c)

b ??os=i opcoz-a to s'os'o 'o fkoi
AUX.NAF.R=1SG kill-PF NTOP drug TOP snake
intended 'I killed the snake with drugs.' (instrument=NON-TOPIC; FNA.XSSE122b)

(6) beneficiary
a os=i tUtpUt-neni to toebosU 'o naau
AUX.NAF.R=1SG catch-RF NTOP pheasant TOP Naau
'I caught a pheasant for Naau.' (beneficiary=TOPIC; FNE.XNG0811c)

b os=i tUtpUt-a 'o toebosU to naau
AUX.NAF.R=1SG catch-PF TOP pheasant NTOP Naau
'I caught the pheasant for Naau.' (beneficiary=NON-TOPIC; FNE.XNG0811b)

(7) beneficiary
a *os=i yuhungUz-neni 'o naau
AUX.NAF.R=1SG swim-RF TOP Naau
intended 'I swam for Naau.' (beneficiary=TOPIC; FNA.XSSE117a)
Third, different types of 'semantically peripheral' elements display different patterns of distribution, and at least three subtypes need to be distinguished. Of the 'peripheral' elements considered in the present study, instrument and beneficiary-like elements form the first subtype. Examples (4)-(7) reveal that these elements can be added to certain predications but not others, and the restriction applies to topic and non-topic nominals equally alike. However, this is not the case for locational elements, which display a second subtype of distribution. Non-topic location can be freely added to most predication, as shown in (8a), (8c), and (8d), but topic location is allowed only for certain verbs, as shown in (8b) and (8e). In other words, locational elements can be attached to most predication as non-topic elements, but not all of them can be selected as the topic of the clause.

(8) location

a  *mi='o  yuhsungu to  fatu  
   AUX.AF.R=1SG  sit.AF  NTOP  rock
   'I sat on a rock.' (location=non-topic; FNA.XSSE114a)

b  i='o  yuhsung-i  'o  fatu  
   AUX.NAF.R=1SG  sit-LF  TOP  rock
   'I sat on the rock.' (location=topic; FNA.XSSE114b)

c  mi='o  <m>oycU  to  evi  to  coca  
   AUX.AF.R=1SG  <AF>cut  NTOP  tree  NTOP  yard
   'I cut a tree in the yard.' (location=non-topic; FNB.XTRC0303a)

d  i='o  tyoc-a  to  coca  'o  evi  
   AUX.NAF.R=1SG  cut-PF  NTOP  yard  TOP  tree
   'I cut the tree in the yard.' (location=non-topic; FNB.XTRC0303b)
Elements that indicate the purpose for which an event is conducted display the third type of distribution. In Tsou, purpose elements are not expressed together with the corresponding main event in the same clause, as shown in (9a) and (9b). Instead, they are represented in a separate clause, in contrast to English, where the conflation of purpose elements and the events they modify is perfectly felicitous. Elements that indicate the companion with which an event is conducted display a similar pattern of distribution in a bi-clausal structure, as shown in (10).

(9) purpose (FNB.XNRC010a~e)
a  *mi='o c<m>uhu to teoua ta homeyaya
AUX.AF.R=1SG <AF>butcher NTOP chicken NTOP harvest.festival
intended 'I butchered chickens for the harvest festival.' (purpose=NON-TOPIC)
b  *i='o chu-*a/*-eni/*-i to teoua 'e homeyaya
AUX.NAF.R=1SG butcher-PF/RF/LF NTOP chicken NTOP harvest.festival
intended 'I butchered chickens for the harvest festival.' (purpose=TOPIC)
c  mi='o c<m>uhu to teoua ho te homeyaya
AUX.AF.R=1SG <AF>butcher NTOP chicken when AUX.IRR harvest.festival
'I butchered chickens for the harvest festival.'

(10) companion (FNE.XGAU051a~e)
a  *mi='o c<m>uhu to teoua to naau
AUX.AF.R=1SG <AF>butcher NTOP chicken NTOP Naau
intended 'I butchered chickens with Naau.' (companion=NON-TOPIC)
b  *i='o chu-*a/*-eni/*-i to teoua 'o naau
AUX.NAF.R=1SG butcher-PF/RF/LF NTOP chicken NTOP Naau
intended 'I butchered chickens with Naau.' (companion=TOPIC)
The occurrence and non-occurrence of semantically ‘peripheral’ elements listed above is summarized in Table 4-1 below.

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<td>TOP</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>companion</td>
<td>NTOP</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOP</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Table 4-1 Occurrence of some ‘peripheral’ elements in Tsou monoclausal structure

Table 4-1 highlights two critical points in Tsou clausal syntax. First, elements that are typically considered semantically peripheral and adjunct-like in other languages are not freely attachable and freely omissible in Tsou. The restricted occurrence reveals the similarities between these ‘peripheral’ elements and what are typically considered ‘arguments’, e.g., patient, in terms of distribution. Second, different types of ‘peripheral’ elements display different patterns of distribution. Of the elements considered in Table 4-1, NON- TOPIC location has the highest degree of freedom to appear in a monoclausal structure; it can be added to most predication, as expected for an adjunct. The occurrence of TOPIC location, however, is restricted by the semantics of the verb and the construction (see Section 4.4 for details). A similar restriction is seen in the distribution of beneficiary and instrument-like elements, and the restriction applies to both TOPIC
and **NON-TOPIC** nominals. In this regard, **TOPIC** location and both beneficiary and instrument-like elements do not differ greatly from patient; they all have restricted distribution. In the restricted distribution they are capable of being selected for **TOPIC** marking. Of the elements considered in Table 4-1, purpose and companion elements display the most restricted distribution. Neither, regardless of their nominal marking, is allowed to be included in a monoclausal structure for modifying a main event; they are expressed in a separate clause.

Based on the omissibility test and semantic constraints, the present study characterizes the Tsou argument/adjunct distinction as follows:

(i) Of the elements considered in the present study, **NON-TOPIC** location is the only adjunct that can be empirically established for Tsou; it is the clausal element that can be freely attached to most predication.

(ii) I define Tsou arguments as nominals that can be selected as the **TOPIC** relation in a monoclausal structure. This characterization is both semantically and syntactically justified. On semantic grounds, the ability for an element to be selected as a **TOPIC** is limited by the semantics of the verb and the construction. Syntactically, the **TOPIC** nominal is an obligatory element of most Tsou clauses and maintains a tight morphosyntactic relation with the verb via focus marking. By this characterization, argumenthood in Tsou is not restricted to agent and patient but extends to beneficiary, instrument, and a certain type of location (if they can be selected as the **TOPIC** relation).
The ‘extended’ argumenthood defined above raises a question regarding the precise number of arguments allowed in a clause. As can be seen from the above characterization, the argumenthood thus defined is dependent on the ability to be selected for topic marking, which, as briefly introduced in (1), varies across constructions and is somewhat ‘fluid’ (to borrow Shibatani’s (2006) term ‘fluid voice’). Before introducing the constructional analysis for the ‘fluid’ argument pattern in Tsou, I illustrate that Tagalog also displays a similar constraint on the distribution of ‘peripheral’ elements, but in a slightly different manner. The similarities and variations bring us back to the issue regarding the effectiveness of conventional thematic roles for characterizing clausal syntax at a language-specific level.

4.2.3 Restricted Distribution of ‘Peripheral’ Elements, Language Variation, and Effectiveness of Conventional Thematic Roles

The above characterization of Tsou argumenthood illustrates that the boundary between obligatory and optional elements in Tsou is not defined along the same line as in English. In fact, even among genetically related languages the dividing line may be placed somewhat differently. The following examples reveal that Tagalog also imposes certain constraints on the occurrence of semantically ‘peripheral’ elements, but the restriction is not entirely Tsou-like. To begin with, Tagalog has a similar constraint on the distribution of instrument and companion-like elements. Examples (11b) and (12b) illustrate that instrument and companion-like elements have restricted occurrences and are preferably expressed in a separate clause for modifying a main event.9,10

9 All the Tagalog data listed in this section are based on Naonori Nagaya’s (p.c.) fieldwork in Manila. 1
However, Tagalog differs from Tsou in the treatment of purpose and beneficiary-like elements. Examples in (13) illustrate that purpose and beneficiary-like elements can be included in a monoclausal structure for modifying a main event in Tagalog in a relatively easy manner, contrary to the restriction in the Tsou examples in (9). (In the free translations below, the TOPIC nominal is set in boldface and the 'peripheral' element under question is underlined.)

(11) Tagalog instrument
a. ?labah-an =mo ang= damit ng= washing.machine
   wash-LF 2SG.GEN TOP clothes GEN washing.machine
   intended ‘You wash the clothes with the washing machine’

b. labah-an =mo ang= damit, gamit ang= washing-machine
   wash-LF 2SG.GEN TOP clothes use TOP washing.machine
   ‘You wash the clothes, using the washing machine.’

(12) Tagalog companion
a. *ni-labah-an =ko ang damit ni nori
   Realis-wash-LF 1SG TOP clothes GEN Nori
   intended ‘I washed the clothes with Nori.’

thank him for allowing me the access to the data and for double-checking the felicitous conditions of these examples with his consultants. A point to be noted regarding the Tagalog data is the gamit structure in (11b), which I characterize as a separate clause considering that gamit ‘use’ introduces another TOPIC nominal aside from the one in the main clause. Naonori Nagaya may not agree with my description but considers the structure a serial verb construction.

10 Naonori Nagaya (p.c.) points out that the instrument ‘washing machine’ can be introduced into a monoclausal structure using the CF (circumstantial focus) affix i- together with the prefix pang-, whose function is to form an instrumental noun, as shown in (i) below. However, he notes that this sentence is structurally acceptable but semantically unnatural to native speakers.

(i) ?i-p<in>ang-laba =mo ng= damit ang= washing.machine
   CF-PANG-wash 2SG.GEN GEN clothes TOP washing.machine
   ‘You wash the clothes with the washing machine.’

11 Naonori Nagaya (p.c.) points out that beneficiary elements can be introduced into a monoclausal structure using the CF affix i- together with the stem-forming prefix pag-, as in shown in (i) below.

(i) i-pag-laba =mo =ako ng= damit
   CF-PAG-wash 2SG.GEN 1SG.TOP GEN clothes
   ‘You wash clothes for me.’
b ni-labhan =ko ang damit kasama si nori
Realis-wash-LF 1SG TOP clothes accompany TOP Nori
‘Lit: I washed the clothes accompanying Nori.’

(13) Tagalog beneficiary and purpose
a labah-an =mo ang= damit para sa= bakasyon
wash-LF 2SG TOP clothes for DAT vacation
‘You wash the clothes for the vacation/holiday.’ (purpose)
b labah-an =mo ang= damit para sa= akin
wash-LF 2SG TOP clothes for DAT 1SG
‘You wash the clothes for me.’ (beneficiary)

A comparison of Tagalog and Tsou indicates that even among genetically related
languages, the distribution of ‘peripheral’ elements may display variation. This
variation raises the question of whether or not the same thematic roles are equally
useful/effective for describing argument realization in different languages (see Sections
2.4 and 3.8). For instance, while beneficiary-like elements form a coherent category
coded by the adposition para in Tagalog (Naonori Nagaya, p. c.), beneficiary-like
elements in Tsou are split into (at least) two types: the type which can be conflated into
a monoclausal structure and be selected for TOPIC marking, as shown by the catch-for
entity in (6), and the type which cannot be conflated into a monoclausal structure and
cannot be selected for TOPIC marking, as shown by the swim-for entity in (7). The
incoherent morphosyntactic properties of the two examples challenge the assumption
of beneficiary as a uniform category, which in turn weakens its effectiveness as a
descriptive tool for indicating why the Tsou language treats certain elements alike in
grammatical marking but others different. (The present study does not deny that
beneficiary is useful for describing argument structure in Tagalog, for this thematic role
effectively delineates a set of event participants with coherent morphosyntactic properties.

To summarize, the Tsou pattern reveals the restricted effectiveness of conventional thematic roles at a language-specific level. We therefore need descriptive tools that effectively portray how the Tsou language groups event participants in the way that is significant for encoding and behavioral characteristics. Additionally, due to the 'fluid' valency as summarized at the end of the previous section, we also need a framework that can accommodate multiple valency values. However, of the two descriptive needs (i.e., language-specific categories and a framework for handling alternating valency), the latter is in particular difficult to be accommodated into theoretical frameworks that treat argument realization as determined entirely by verb semantics, because these frameworks assume that alternation only arises in the case of polysemy and/or derivation. The need to explain alternating valency brings us to Construction Grammar, and also to the practice of adopting effective categories for configuring sentence patterns.

4.3 Construction Grammar and Argument Structure

Construction Grammar (Lakoff 1987; Fillmore and Kay 1993; Kay and Fillmore 1999; Goldberg 1995; Langacker 1987; Langacker 1991; Langacker 1999; Michaelis and Ruppenhofer 2001; Croft 2001) is a model of grammatical knowledge developed as a response to various versions of generative grammar. In generative grammar, syntactic categories and syntactic rules/constraints are primitive units of syntactic representation and apply across sentence patterns within a language (if not across
languages). These sentence patterns (such as the English transitive sentence) are derived from the combination of these primitive units (cf. Chomsky 1981; Radford 1988). In other words, categories and rules/constraints exist independent of the sentence patterns of which they form a part. Disagreeing with the above-mentioned assumption, Construction Grammar (henceforth CxG) argues that each sentence pattern, referred to under the name ‘construction’, carries unique meanings and functions that cannot be defined in terms of the atomic parts out of which it is built (Goldberg 1995; Croft 2001; Croft and Cruse 2004:285). Syntactic categories and rules are defined in terms of their relation to constructions and are essentially derivative and construction-specific. Constructions, not rules and categories, should be taken as the primitive units for exploring syntax.

In the earlier draft of this dissertation, generative grammar was characterized by the assumption that syntactic categories and rules constitute primitive elements of grammar. A reader questioned the characterization, stating that certain versions of generative grammar, such as Minimalism, are constraint-based. I appreciate the comment but would like to point out that the distinction between rule-based and constraint-based theories does not affect the evaluation of generative grammar relative to Construction Grammar. What is really crucial is the way the two approaches handle the relationship between rules/constraints and constructions. Generative grammar, be they rule-based or constraint-based, assumes that categories and rules/constraints are basic to syntactic representation and exist independently of the constructions they instantiate. That is, rules and constraints apply across constructions within a language. Construction Grammar, in contrast, proposes that it is constructions, not categories or rules/constraints, that have primitive status in grammar. Rules/constraints are construction-specific because they are defined relative to the constructions in which they occur. In addition, I would like to point out that most constraint-based theories still have rules in their infrastructure. Minimalism, the Principles and Parameters theory, and Lexical-Functional Grammar, to name three, all have rules specifying how constituent structures are formed.

But note that in the earlier stages of transformational grammar, rules and constraints were described as specific to the sentence patterns from which they are derived. For instance, Chomsky (1965:92, 94-96) stated that syntactic rules are analyzed in terms of the frame in which the particular rule applies. For example, the rule for determining the structure of VP in the English sentence a week elapsed is depicted as VP->V, but the rule for determining the structure of VP in The boy saved the book for John is VP->V NP Prep-Phrase.

Various abbreviations have been proposed for Construction Grammar. For instance, Michaelis and Ruppenhofer (2000) use CG for Construction Grammar, even though this abbreviation has already been in use for Langacker’s (1987; 1991; 1999) Cognitive Grammar. For the sake of clarification, I follow the Berkeley CxG mailing list and refer to Construction Grammar by the abbreviation ‘CxG’.

Croft (2001:34-40) states that categories are essentially construction-specific and are hardly identical across constructions, as specific constructions all carry their own peculiarities. For instance, the English Direct Object defined by the passive construction may share similarities, but not identity, with the Direct
Among the various constructions that a language has, argument structure constructions provide the basic means of clausal expressions in a language (Goldberg 1995:3), determining both the number of arguments required in a particular syntactic frame and the mappings of these arguments onto syntactic roles. Unlike the traditional 'predicate-oriented' approach which takes predicates to be the only contributor to valency patterns (cf. the Projection Principle of Government-Binding theory by Chomsky (1981); see also the discussion in Rappoport and Levin (1988) and Grimshaw (1990), for instance), CxG argues that information about argument roles is specified in the construction in which a predicate occurs. A predicate may interact with different constructions and derive different clause types. Examples (14) and (15) illustrate how the English caused-motion construction can add argument roles not contributed by the verb kick (Goldberg 1995:152-198).

(14) Joe kicked the ball.
(15) Joe kicked the ball into the cave.

The semantics of kick denotes two participant roles: a kicker relative to a kicked, as shown in (14). However, when kick interacts with the English caused-motion construction, as in (15), the construction contributes an additional goal argument not associated with the two participants denoted by the verb.\textsuperscript{16} Figure 4-1 presents another example where the English caused-motion construction adds argument roles to the

\textsuperscript{16} Argument roles are slots in the semantic representation of an argument structure construction, which are mapped to syntactic relations and which determine morphosyntactic expressions. What is specified in the predicate is a set of participants which makes reference to frame-semantic, culture-specific knowledge but which is not directly relevant to syntactic expression (Goldberg 1995:110). Participant roles are only made relevant to syntactic aspects after they are associated with argument roles of a particular construction.
verb sneeze (e.g., *I sneezed the handkerchief off the table*). The verb sneeze specifies a single participant role, the sneezer. The caused-motion construction, however, has three arguments: cause, goal, and theme. During the verb-construction integration, the verb-specific participant ‘sneezer’ fuses with the cause argument. The two construction-contributed arguments, theme and goal, are not associated with any participant role of sneeze but aligned directly with the object relation and the oblique relation.

![Figure 4-1 The English Caused-Motion Construction+sneeze (Goldberg 1995:53)](image)

**The Argument/Adjunct Distinction and Linking Principles in CxG**

Goldberg’s approach to argument structure contains a few assumptions about the argument/adjunct distinction and the linking of event participants and argument roles. These assumptions are directly relevant to the representation of argument structure in the present study and therefore deserve some discussion. First, Goldberg’s approach does not assume the conventional argument/adjunct distinction in which agent and patient are inherently more argument-like whereas others, such as location, are
inherently more adjunct-like. The alternating occurrence of the prepositional phrase into the cave in (14) and (15) is not an indication of adjuncthood but is the result when the same verb is compared across different constructions in which it occurs: example (14) illustrates the occurrence of kick in a transitive construction with agent and theme/patient, whereas (15) demonstrates kick in a caused-motion construction with agent, theme/patient, and goal arguments. By not adopting the conventional argument/adjunct distinction, the constructional approach enables the present study to describe Tsou argumenthood and its grammatical correlates without having to fit language data into the conventionally recognized patterns. An argument/adjunct distinction can still be established for Tsou, but the dividing line is placed somewhat differently. I will return to this issue in Section 4.4.

Second, even though Goldberg’s approach does not assume the conventional argument/adjunct distinction, she still considers conventional thematic roles (such as recipient and goal) to be self-evident and to show coherent behavior across constructions (in English). However, as has been repeatedly mentioned since Chapter 3, conventional thematic roles are not effective for portraying the groupings of Tsou nominals in ways that are significant morphologically and syntactically. To effectively describe Tsou argument structure, in Section 4.5 the present study uses categories that

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17 For instance, Kroeger (2004:2004) states that elements that express time, manner, and purpose are ‘almost always ADJUNCTS’ rather than arguments. Andrews (1985:66-130) states that Agent and Patient are ‘quintessential Participatory roles’ (Andrews 1985:69). By ‘Participatory roles’, Andrews means the actual participants in the situation implied by the verb and are closely related to complements/arguments.

18 Goldberg’s main point for not treating in the cave as an optional adjunct lies in its obligatoriness for the caused-motion construction, as far as I can tell. As pointed out by Goldberg (1995:152-179), the verb kick by itself does not have causative interpretations (p. 153); the causative meaning only emerges when kick occurs in the caused-motion construction, of which the goal element is an obligatory part. Since the causal interpretation cannot be dissociated from the occurrence of the goal element in the caused-motion construction, the goal element is taken to be an obligatory argument, not an adjunct in the construction.
are empirically justified: ACTOR, PATIENT, REFERENCE, LOCATION, TOPIC, and NON-TOPIC (see Chapter 5 for the empirical basis of these categories in Tsou).

4.4 Why the CxG Approach?

In organizing the valency patterns of Tsou, the present study adopts the CxG approach with the claim that constructions, not verbs, determine the number and type of arguments in a Tsou clause. I argue that focus constructions are a type of argument structure construction, registering a particular valency value and indicating how grammatical roles are linked to grammatical relations. The CxG approach brings descriptive advantages to the present study, as will be shown below.

First, the CxG approach is able to accommodate valency alternation without presuming a default pattern. Multiple valency values arise when a verb interacts with different constructions. As illustrated earlier in Section 4.2.2 and repeated here in (16), a fair number of Tsou verbs are associated with different valency patterns in different focus constructions. If we adopt the 'predicate-oriented' approach and take predicates to be the only contributor to valency, we are constantly confronted with the dilemma of how valency groupings should be organized: should we subsume the two focus forms of 'tiptoe' in (16), for example, under the same lexical entry despite the difference in valency? Or should we identify a basic form and treat the other as the result of derivational processes, probably applicativization (cf. M. Chang 2004)? If the derivational account is to be adopted, an explanation is required for why the two verb forms s-m-eha'o and seha'v-i in (16) are equally marked morphologically. Additionally,

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19 Levin's (1993) inventory of English verbs also suggests that most verbs in English allow multiple
the derivational account needs to justify how applicativization could be characterized
when there is no reliable evidence for a proven object relation in Tsou (see Section 3.8
for details).

(16) (FNB.XTRC0604a~b)
  a  mi='o  s<->eha'o (to phingi)
      AUX.AF.R=1SG  <AF>tiptoe NTOP door
          'I tiptoed to the door.'
  b  os='o  seha've-i 'o phingi
      AUX.NAF.R=1SG  tiptoe-LF TOP door
          'I tiptoed to the door.'

Second, the CxG approach does not simply attribute valency alternation to lexical
idiosyncrasies but chooses to investigate the possible regularity behind the
occurrence/non-occurrence of valency alternation (cf. H. Huang & S. Huang, 2007, see
Section 3.6). As mentioned in Section 4.2, valency alternation does not occur in every
Tsou verb. Predicate roots such as fi 'give' always require three grammatical roles (ACTOR,
REFERENCE, LOCATION) regardless of focus forms, as shown in (17), but predicates such as
miebocU 'fart' always take a sole argument (ACTOR), as shown in (18). If we treat the
valency alternation incurred in the LF form of 'tiptoe' as a lexical idiosyncrasy, we miss
the opportunity to capture the motivating factor behind why a location element is
always obligatory for 'give', optionally obligatory for 'tiptoe' (when selected as the
TOPIC), but never obligatory for 'fart' (never accessible to the TOPIC status). However, if
we acknowledge that constructions are capable of contributing arguments and
semantic properties, we can formulate the constraint on alternating valency by

argument structures.
observing the types of verbs that display valency alternation, the types of constructions that allow valency alternation, and the interaction of the two.\footnote{A reader questioned the validity of attributing meanings and constraints to constructions, calling it an arbitrary move. In response to this comment, I would like to point out that the predicate-oriented approach, which leaves the constraints on valency alternation to lexical idiosyncrasies, is equally, if not more, arbitrary. The predicate-oriented approach chooses not to formulate the constraints on alternating valency and therefore abandons the possibility of capturing the underlying regularities.}

(17) (FNC.DJUD064a–c)
\begin{itemize}
\item a \(m_{o}=\sigma_{i} \) \(m_{o}-m_{i} \) to tposU to oko 'o naau,
AUX.AF.R=3SG AF-give NTOP book NTOP child TOP Naau
\textbf{'Naau gave a child a book.'}
\item b \(i=s_{i} \) fa-eni to oko to naau, 'o tposU
AUX.NAF.R=3SG give-RF NTOP child NTOP Naau TOP book
\textbf{'Naau gave a child the book.'}
\item c \(i=s_{i} \) fi-\( i \) to tposU to naau, 'o oko
AUX.NAF.R=3SG give-LF NTOP book NTOP Naau TOP child
\textbf{'Naau gave the child a book.'}
\end{itemize}

(18) (FNC.DJUD033a–b)
\begin{itemize}
\item a \(m_{o}=\sigma_{i} \) miebocU (to hopo=si) 'o naau
AUX.AF.R=3SG fart.AF NTOP room=3SG TOP Naau
\textbf{'Naau farted in her room.'}
\item b \(*_{i}=s_{i} \) mieboc-\( i \) to naau, 'o hopo=si
AUX.NAF.R=3SG fart-LF NTOP Naau TOP room=3SG
intended \textbf{'Naau farted in her room.'}
\end{itemize}

Third, as mentioned in Section 4.3, the CxG approach does not adopt the conventional assumption that agent and patient/theme are inherently more obligatory than other elements such as location and beneficiary (see Footnote (17)). In this way, adopting the CxG approach allows the present study to formulate Tsou argument structure without having to split or merge the categories emerging from encoding and behavioral characteristics.
Fourth, and possibly most important of all, the CxG approach allows us to describe argument structure without necessarily assuming that one of the constructions involved is basic and that the features/constraints of that basic construction necessarily apply to other constructions. In this way, the properties/constraints of each construction, especially those that are construction-specific, can be carefully specified without being dismissed as 'non-fitting' data (relative to the presumed default). Additionally, in emphasizing construction-specific properties, the present study does not deny the existence of cross-construction generalizations. In the CxG framework, cross-construction generalizations can be captured by the various types of inheritance relations between constructions, as will be detailed in Figure 4-5 below. To summarize, the CxG framework argues that many properties are better stated at the level of constructions, but the emphasis on constructions does not imply that cross-construction generalizations do not exist and are not to be captured.

4.5 The Representation Format of Tsou Argument Structure

A constructional analysis of Tsou argument structure needs to address three aspects of a Tsou speaker's grammatical knowledge: the lexical entry, the construction, and the interaction of the two. In what follows I discuss the format adopted in the present study for representing these three aspects of grammatical knowledge.

Representing Lexical Items

In the present study, a lexical entry is represented as a unit with three kinds of specifications: phonological information (PHO), lexical-conceptual information (SEM),
and integration patterns (SYN). This is illustrated in Figure 4-2.

![Diagram of PHO: eobako 'beat', SEM: a volitional entity striking another entity with force, SYN: Construction(V=2.AF), Construction(V=2.PF), Construction(V=3.AF), Construction(V=3.PF), Construction(V=3.RF)](image)

Figure 4-2 is the representation of the verb stem eobako 'beat', which gives the phonological specification, the lexical-conceptual information denoted ('a volitional entity strikes another entity with force'), and the constructions with which eobako 'beat' can be integrated. For instance, the information of integration patterns (SYN) indicates that eobako is integratable with five different focus constructions; two of them have the valency value of two (Construction(V=2.AF) and Construction(V=2.PF)) and three of them have the valency value of three (Construction(V=3.AF), Construction(V=3.PF), and Construction(V=3.RF)).

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21 Following Fillmore (1975; 1977), Lakoff (1987), and Langacker (1987), the present study takes lexical items to contribute highly conventionalized conceptual information which is defined relative to a particular background called a 'frame' (Fillmore 1977). The frame-specific information makes reference to a speaker's world and cultural knowledge and reflects the conventionalized aspects of a speaker's understanding of the world. We also assume that the concept denoted by a lexical item represents a radial category (Lakoff 1987) which encompasses both prototypical members and less-prototypical extensions.
Representing Constructions and Verb-Construction Integration

For reasons already specified in previous sections regarding the effectiveness of conventional thematic roles relative to Tsou, the present study chooses the four focus-based grammatical roles ACTOR, PATIENT, REFERENCE, and LOCATION for representing Tsou argument structure (the empirical basis of the four roles will be specified in Chapter 5). Also utilized for describing Tsou argument structure are the TOPIC and NON-TOPIC relations. As will be discussed in Chapter 5, TOPIC and NON-TOPIC categories are more effective than 'SUBJ' and 'OBJ' in organizing clausal elements based on encoding and behavioral evidence. Additionally, TOPIC and NON-TOPIC come with less unwanted implications regarding the distribution of grammatical prominence—an issue I will return to in Section 5.4.2.

Some readers may oppose the practice of linking event-specific participants such as 'beater' and 'beaten' directly to focus-based, highly generalized grammatical roles, insisting that the linking be mediated by conventional thematic roles. My attempt to skip the layer of thematic roles is not new, as linguists such as Dixon (1979), Foley and Van Valin (1984), and Dowty (1991) all propose to study patterns of argument realization using generalized roles, which are neutralizations of multiple finer-grained thematic roles that pattern in the same way in terms of morphosyntax. Even though these generalized roles are not necessarily characterized by shared semantic criteria, all three linguists still see them as having a semantic basis (albeit only partially). The use of

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22 Dixon (1979) introduces the labels 'A', 'S', 'O' for stating the morphosyntactic realization of arguments. He sees the three roles as 'syntactic-semantic primitives' (p. 60). Foley and Van Valin (1984) and the subsequent RRG literature propose two macroroles Actor and Undergoer for stating the groupings of arguments that are grammatically critical. Dowty (1991) argues that only two generalized roles need to be identified for studying patterns of argument realization: AGENT PROTO-ROLE and PATIENT PROTO-ROLE. The two roles are prototype-based; their respective membership is typically not characterized by necessary and
generalized roles for configuring Tsou argument structure is therefore not theoretically unsupported.

In the present study, an argument structure construction is presented as a three-layered correspondence among verb-specific participant roles, the four grammatical roles ACTOR/PATIENT/REFERENCE/LOCATION, and the TOPIC/NON-TOPIC distinction. Figure 4-3 is an example of the Tsou Valency=2.AF construction integrated with the verb eobako 'beat'. The top layer specifies that the construction licenses two obligatory syntactic positions, TOPIC vs. NON-TOPIC. The bottom layer specifies that the construction subcategorizes for two obligatory arguments, ACTOR and PATIENT. The notation 'T/L' indicates that the construction may take an optional adjunct element specifying the temporal/location information of the predicated event. The intermediate layer specifies the two participant roles introduced by the predicate eobako 'beat', i.e., the beater and the beaten. The beater is linked to the ACTOR and the beaten to the PATIENT (see Chapter 5 for the linking principles). In terms of construction semantics, the V=2.AF construction represents the situation type in which the ACTOR outranks the PATIENT in relative topicality by a great degree (see Section 5.5). This semantic attribute is indicated in the figure by the notation sit: A»P. In correspondence with the relative topicality (i.e., ACTOR»PATIENT), the ACTOR is aligned with the TOPIC relation and the PATIENT with the NON-TOPIC relation. The ACTOR-TOPIC alignment triggers the appearance of AF marking on the verb (a zero morpheme in the case of eobako 'beat') and the use of a co-occurring AF auxiliary.\(^{23}\)
Constructions can add argument roles not contributed by verbs. Figure 4-4 illustrates that the Valency=3.RF construction contributes a reference role to *eobako* 'beat', instantiated in (19) as the entity that assists the beating. Sections 4.6-4.9 below will provide more details regarding how a construction can add roles not contributed by the associated verb.\(^{24}\)

(19) \(i=si\) \(eobak-\)en-i  to  \(pangka\)  to  \(naau\)  \(o\)  sof\(\text{U}\)  \\
\(AUX.NAF.R=3\text{SG}\) \(beat-\)RF  \(N\text{TOP}\)  \(table\)  \(N\text{TOP}\)  \(Naau\)  \(TOP\)  \(stick\)  \\
'Naau beat the table with the stick.' (FNC.DTXB002)

Representing the Connection between Constructions

Construction Grammar argues that constructions are related to each other via various representation of argument structure, following the convention in Goldberg's (1995) framework.  
\(^{24}\) Arguments are not added without constraints. See below.
kinds of inheritance relations; four of the most mentioned are polysemy, subpart, instance, and metaphor (Goldberg 1995:67-100). The linked constructions form an inheritance network in which a dominated construction inherits features from the dominating construction. Of the four types of inheritance relations, the instance link/relation explicates the relationship between a more schematic valency construction and a less schematic focus construction. For example, an instance link (labeled 'Ii' in Figure 4-5) is posited between Construction(V=2) and Construction(V=2.PF) in Figure 4-5 because the latter is a more specified version of the former. A similar case is seen between Construction(V=2.PF) and Construction(V=2.PF)+cu'hu 'butcher', as the latter not only inherits the syntax and semantics associated with the more schematic Construction(V=2.PF) but also carries lexical information imported by the verb 'butcher'.
In an inheritance network of constructions, a dominated construction inherits features from the dominating construction unless the dominated construction imposes overt specifications that override the inherited features (Goldberg 1995:97-98, 108-110; Michaelis and Ruppenhofer 2000:367). In this way, the dominated construction displays partial overlap of syntactic, semantic, or pragmatic properties with the

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25 Michaelis and Ruppenhofer (2000; 2001) describe the inheritance between constructions in terms of a metaphor involving the superimposition of slides. "Any slide (construction) can be superimposed upon any other as long as the semantic and syntactic specifications on each slide 'show through'—that is, provided there is no conflict among the specifications on the slides in the stack" (Michaelis and Ruppenhofer 2000:54).
dominating construction, on the one hand, and carries features specific to its own, on the other. The inheritance network so established allows the present study to describe not only the differences between two constructions but also the commonalities between them. Figure 4-6 below is a representation of the 'stay-wash' SVC in Tsou, which not only inherits features from two V=2 constructions but also imposes an overt specification that the second serial verb be non-finite (the grammatical roles associated with the second serial verb $tUpUtU$ 'catch' are set in gray fonts to indicate the non-finiteness of the second verb). I will return to the discussion of serial verbs in Chapter 7.

In what follows, I organize focus constructions by the number of required arguments, i.e., valency values. For convenience of reference, focus constructions with
identical valency values are referred to collectively as "Valency=X focus constructions". Sections 4.6-4.9 below illustrate the Valency=0 focus construction, the Valency=1 focus construction, the Valency=2 focus constructions, and the Valency=3 focus constructions, respectively.

4.6 The Valency=0 Focus Construction

The Valency=0 focus construction represents the situation type in which no clearly individuated participant can be identified. This situation typically pertains to meteorological events, seismological activities, and temporal indication. Encoding-wise, this construction does not subcategorize any obligatory argument, although locational or temporal adjuncts may be included in the construction frame. For convenience of reference, this construction is henceforth referred to as Construction(V=0). Example (20) below provides an example of Construction(V=0) integrated with the verb mUchU 'rain'. Although mUchU 'rain' does not bear any overt focus affix, we understand from the co-occurring AF auxiliary that it appears in the AF form given the general requirement that auxiliaries agree with verbs in focus (see Section 3.4.3 for detail). Figure 4-7 illustrates the internal structure of Construction(V=0). The notation sit: m/s/t in the figure indicates that the construction pertains to meteorological, seismological, and temporal events. The dashed line linking 'adjunct' to 'temporal/locational elements' indicates that this unit is not obligatory.

(20) mo mUchU (nehucma) AUX.AF.R rain.AF yesterday 'It rained yesterday.' (FND.DTXB005)
Examples (21), (22), and (23) provide three more instances when Construction(V=0) is integrated with verbs denoting meteorological features, seismological activities, and units of time, respectively.

(21) \textit{mo vovoezU maitan’e} \\
AUX.AF.R dry.AF now \\
(It) is dry now.’ (meteorological features; FND.DTXB006)

(22) \textit{te yUskU hohucma?} \\
AUX.IRR landslide.AF tomorrow \\
‘Will there be a landslide tomorrow?’ (seismological activities; FND.DTXB008)

(23) \textit{mo=0 muni ‘o sU’y0 ho mi=cu yoPna} \\
AUX.AF.R=3SG make.sound TOP bamboo.partridge when AUX.AF.R=PERF evening.A \\
‘Bamboo partridges twitter when (it is) evening.’ (textbook3:30)

4.7 The Valency=1 Focus Construction

The Valency=1 construction (henceforth Construction(V=1)) represents a single-participant situation. This single participant is the protagonist of the situation and is referentially prominent in discourse (see Section 5.5 for details on referential prominence/topicality). Encoding-wise, this referentially prominent participant is
coded as an obligatory actor argument linked to the topic relation. The actor-topic alignment triggers the occurrence of AF marking on the verb and a co-occurring AF auxiliary (in realis mood). Figure 4-8 presents the structure of Construction(V=1). In the figure, the notation sit: AT indicates that the actor is referentially prominent/topical. Example (24) illustrates the integration of noyano ‘warm’ with Construction(V=1).

![Figure 4-8 Construction(V=1)](image)

(24) mo noyano 'o paceofa
AUX.AF.R warm.AF TOP blanket
‘The blanket is warm.’ (FND.DTEL002)

Construction(V=1) interacts with verbs that extend over a wide range of semantic domains, including motion, grooming, bodily actions, properties, and emotions. Examples (25)-(27) illustrate the integration of Construction(V=1) with three motion verbs pkaako ‘run away’, eohU ‘depart (for hunting)’, and moftiti ‘jump’, respectively. All three verbs semantically denote an agentive participant moving in space. During the verb-construction integration, the agentive participant is associated with the actor and

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26 In Chapter 5 I will characterize the actor as the entity that is of primary relevance to the unfolding of an event. By this characterization, if a construction contains a sole argument, it is always the actor.
27 Hereafter, for the purpose of illustration, arguments and their syntactic manifestations are enclosed in the figures by a pair of brackets.
28 The listed semantic domains are notionally defined. They should not be taken as directly indicative of thematic contrasts or syntactic distinctions without a careful analysis. See below.
aligned with the TOPIC relation, as indicated by the occurrence of the AF affix ø and the use of the AF auxiliary mo in (26) and (27). Figure 4-9 is an illustration of the composite structure of Construction(V=1) and eohU 'depart'.

(25) te pkaako 'o yuansou ho la t<mo>alU no
AUX.IRR run.AF TOP animal when AUX.HAB <AF>listen NTOP
nte kaukeokeo
AUX.IRR rustle.AF
‘Animals will run away when they hear any rustle.’ (FNE.XNGO711)

(26) mo=øi eohU 'o amo=ui nehucla
AUX.AF.R=3SG depart.AF TOP father=1SG yesterday
‘My father departed (for hunting) yesterday.’ (FNC.DTXB013)

(27) mo=øi motfiti'i 'o oko,
AUX.AF.R=3SG jump.AF TOP child
‘The child jumped.’ (FND.XDCV013)

Construction(1.AF) also interacts with grooming verbs and verbs of bodily actions, as in (28)-(33). Verbs denoting bodily actions can be further divided into postures (e.g., yusuhungu ‘sit’ and yac’U ‘stand’), non-verbal expressions (e.g., yUeUsu ‘shed tears’), and non-controlled bodily actions (e.g., yuhaengi ‘sweat’). However, this three-way subclassification is not intended to be exhaustive, as it is always possible to propose finer distinctions.
(28) mo=cu m-amcino 'o 'o'oko?
AUX.AF.R=PERF AF-bathe TOP children
'Did children take a bath already?' (grooming; FND.XDCV018)

(29) o'a moso la to'si'si 'o ak'i='u
NEG AUX.AF.R.RMT HAB shave.AF TOP grandpa
'My grandpa did not shave.' (grooming; FNB.XTRC0406)

(30) mi=cu yusuhngu 'o naau ho i=si elU-a 'o ca'hU
AUX.AF.R=PERF sit.AF TOP Naau when AUX.NAF.R=3SG find-PF TOP chair
'Naau sat down as soon as she got the chair.' (posture; FNE.XNG0712)

(31) mo=0 manci yac'U 'o pasuya ta'e?
AUX.AF.R=3SG why stand.AF TOP Pasuya there
'Why did Pasuya stand over there?' (posture; FND.DJUD030)

(32) mi=ta, aoko yUesU 'e ino.
AUX.AF.R=3SG continue.AF shed.tear.AF TOP mother
'Mom kept shedding tears.' (bodily action, non-verbal expression; FNB.XTRC0503)

(33) mo=0 na'no yuhaengi 'o avai
AUX.AF.R=3SG very sweat.AF TOP Avai
'Avai was sweating a lot.' (bodily action, involuntary action; FNB.XTRC0501)

In addition to grooming verbs and verbs of bodily actions, Construction(V=1) can also be integrated with verbs that denote the emotional status of a sentient participant, as shown in (34) and (35) below.

(34) mo=0 sU'no 'o naau
AUX.AF.R=3SG angry.AF TOP Naau
'Naau is angry.' (emotion; FND.XTEL003a)

(35) mo=0 smoyo 'o naau ho mo muni
AUX.AF.R=3SG afraid.AF TOP Naau when AUX.AF.R make.sound.AF
'Naau is afraid when thunder strikes.' (emotion; FNE.XNGO713)

29 The verb stem papcino takes the Class III AF affix m...m, which deletes the stem initial p...p of papcino during the affixation process (Tsuchida 1976).
In Construction(V=1), the nature of the actor is so diversified that it cannot be characterized by any single criterion: the contributing properties of the actor range from agentivity, dynamicity, to emotion/sentience (comparing (24)-(35)). In some cases, the semantic nature of the actor is so vague that it can only be characterized as the sole argument to which a property pertains. For instance, for predicates such as kuaonga ‘black’, maeno ‘sharp’, and icangaya ‘leader’, particular properties are ascribed to a participant such as color, as in (36), shape, as in (37), or membership of a particular category, as in (38).

(36) mo kuaonga 'o ceopngu no mamespingi=to
   AUX.AF.R black.AF TOP headscarf NTOP woman=1PL
   'Our (Tsou) Women's headscarf is black.' (property; FNC.XCRE013)

(37) mo maeno 'o fu'fu
   AUX.AF.R sharp.AF TOP small.knife
   'The small knife is sharp.' (property; FNE.XNGO714)

(38) mo icangaya 'o voyu
   AUX.AF.R leader TOP Voyu
   'Voyu is a leader.' (property; FNE.XNGO511)

In Chapter 5 I will characterize the actor as an entity of primary relevance to the unfolding of an event. For now, the actor is taken to be a macro category that generalizes over agentive participants, sentient participants, or simply the single participant to which a predication pertains.\(^{30}\)

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\(^{30}\) The actor role of Construction(V=1) may even subsume patientive participants. See Chapter 5.
4.7.1 **Constrained Alternation between Construction\((V=0)\) and Construction\((V=1)\)**

Some of the verbs discussed above can be integrated with both Construction\((V=1)\) and Construction\((V=0)\), giving rise to the impression that these verbs have valency values of both zero and one. A readily available example is \(yUskU\) 'landslide', as in (39) (see (22) for the Construction\((V=0)\) example).

(39)  
\[
  \text{te} \quad yUskU \quad 'e \quad hcuyu? \\
  \text{AUX.IRR landslide.AF TOP hill} \\
  \text{‘Will there be landslide on this hill?’ (seismological phenomena; FNE.XNGO612)}
\]

The alternation between Construction\((V=0)\) and Construction\((V=1)\) is constrained by the compatibility of verb semantics and the semantics of the construction in question. Construction\((V=0)\) denotes an event whose occurrence makes reference to the whole environment, whereas Construction\((V=1)\) denotes an event which unfolds around a particular participant (the **actor**). Only verbs whose semantics can be construed equally into the two types of events are capable of interacting with both constructions. For instance, when \(yUskU\) 'landslide' is integrated with Construction\((V=0)\), as in (22), the sentence denotes a seismological phenomenon that makes reference to the whole environment. When the same verb interacts with Construction\((V=1)\), as in (39), the denoted seismological phenomenon instead pertains only to a particular hill. Semantic compatibility also explains why verbs such as \(pkaako\) 'run' (see (25)) only occur with Construction\((V=1)\) and why verbs such as \(taseona\) 'morning' only occur with Construction\((V=0)\). In the former case, running cannot make reference to the entire environment; instead, it is contingent upon the existence of an individuated participant who is capable of running. In the latter case, the unfolding of time is rarely specific to a
particular participant only; temporal indications always pertain to the whole environment.

4.8 The Valency=2 Focus Constructions

The Valency=2 focus constructions (henceforth Construction(V=2)) represent a two-participant situation and require two obligatory arguments in terms of encoding. At the top of Figure 4-10 is a schematic representation of Construction(V=2), which is underspecified for argument roles, alignment patterns, focus marking, and auxiliary marking. Construction(V=2) may instantiate various types of focus constructions depending on the types of argument roles and alignment patterns involved. The notation 'It' in the figure represents an instance link connecting the more specific focus constructions to the schematic Construction(V=2).
Figure 4-10 Valency=2 Constructions
The two obligatory arguments of Construction(V=2) may come in three types of relational pairs based on the four grammatical roles of Tsou: actor vs. patient; actor vs. reference; actor vs. location. The two obligatory argument slots are paired with two grammatical relations: topic and non-topic. The argument that is aligned with the topic relation determines both the type of focus affix on the verb and the type of co-occurring auxiliary (in realis mood). Depending on the relative topicality of the arguments and consequently the alignment of grammatical roles with grammatical relations, Construction(V=2) can instantiate four types of focus constructions, referred to as Construction(V=2.AF), Construction(V=2.PF), Construction(V=2.RF), Construction(V=2.LF) (see Figure 4-10).

Construction(V=2.AF) requires an actor-topic alignment, which triggers the appearance of an AF affix on the predicate and demands a co-occurring AF auxiliary. Construction(V=2.PF) demands a patient-topic alignment, which triggers the appearance of the PF suffix -a on the predicate and demands a NAF auxiliary. Construction(V=2.RF) requires a reference-topic alignment, which triggers the appearance of the RF suffix -nerd together with a NAF auxiliary. Construction(V=2.LF) demands a location-topic alignment, which triggers the appearance of the LF suffix -i together with a NAF auxiliary. Examples (40)-(42) below are examples of the four Valency=2 focus constructions.

(40) Construction(V=2)+ ‘catch’ (actor vs. patient)
   a mo=ɔ, ticunu to bohct ‘ɔ nglau,
   AUX.AF.R=3SG catch.AF NTOP rat TOP cat
   ‘The cat caught a rat.’ (Construction(V=2.AF); FNB.XTRC0207a)
In what follows I characterize each relational pair in terms of the types of verbs with which they are typically associated.

4.8.1 ACTOR-PATIENT: Construction(V=2.AF) and Construction(V=2.PF)

Construction(V=2) denotes a relation of two arguments; among the three types of role combinations is an ACTOR interacting with a PATIENT. Depending on the relative topicality of the two arguments, the ACTOR-PATIENT relation may be coded either in the Valency=2 AF construction (Construction(V=2.AF)) or the Valency=2 PF construction (Construction(V=2.PF)). When the ACTOR outranks the PATIENT to a great extent in terms of relative topicality (A>>P), the ACTOR is linked to the TOPIC and the PATIENT to the NON-TOpic, forming the V=2.AF construction. When the ACTOR and the PATIENT are both referentially...
prominent (A>Pt), the Patient is linked to the Topic and the Actor to the Non-Topic, forming the V=2.PF construction. Figure 4-11 below illustrates the internal structures of Construction(V=2.AF) and Construction(V=2.PF) using the verb stem cuhu ‘butcher’.

The Actor-Patient relation as presented in Construction(V=2.AF) and Construction(V=2.PF) is typically associated with verbs that denote two participants in a causal chain, such as killing, shooting, and cutting. The participant that is causally anterior imposes a force on/toward its posterior counterpart. In the verb-construction integration, the causally anterior participant is linked to the Actor and its posterior counterpart is linked to the Patient. The linking of verb-specific participants and grammatical roles is observed in (43), where the Actor-Patient relation interacts with the verb stem cuhu ‘butcher’ and the two participants it denotes, the butcher and the butchered. The AF marking in (43a) indicates that the Topic nominal, notionally the

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31 The notation A>Pt indicates that the Actor is still more topical than the Patient, even though the latter is also topical in the PF construction. See S. Huang (2002) and Section 5.5 for details.
32 To denote the killing of non-domesticated animals and human beings, the word opcoi 'kill' (AF form: opcoi; PF form: opcoz-a) is used.
butcher, bears the actor role in this specific instance of Construction(V=2.AF). The PF marking in (43b) indicates that the topic nominal, notionally the butchered, bears the patient role in this specific instance of Construction(V=2.PF).

(43) Construction (V=2)+ 'butcher'

a te c<m>uhu to teoua 'o ino hohucma
AUX.IRR <AF>butcher NTOP chicken TOP mother tomorrow
'Mom will butcher a chicken.' (Construction(V=2.AF); FNE.XNO812a)

b i=si chu-a to ino 'o teoua
AUX.NAF.R=3SG butcher-PF NTOP mom TOP chicken
'Mom butchered the chicken.' (Construction(V=2.PF); FNE.XNO812b)

Examples (44) and (45) below illustrate two more examples of the actor-patient relation using the verbs 'kill' (AF form: opcoi; PF form: opcoz-a) and 'shoot' (AF form: m-U'ho; PF form: Uh-a).

(44) Construction (V=2)+ 'kill'

a mo=0i opcoi to fkoi 'o ak'i, nehucma
AUX.AF.R=3SG kill.AF NTOP snake TOP grandpa yesterday
'Grandpa killed a snake yesterday.' (Construction(V=2.AF); FND.DFN002a)

b i=si opcoz-a to ak'i, 'o fkoi nehucma
AUX.NAF.R=3SG kill-PF NTOP grandpa TOP snake yesterday
'Grandpa killed the snake yesterday.' (Construction(V=2.PF); FND.DFN002b)

(45) Construction (V=2)+ 'shoot'

a hoci m-U'ho no fuzu 'o nia cou, o'a la osni-a papas a
if AF-shoot NTOP boar TOP past Tsou NEG HAB immediately-PF cut-PF
'If the ancient Tsou people shot a boar, (they) did not rip it apart immediately.'
(Construction(V=2.AF); FNE.XNO813a)

b i=si Uh-a to amo='u, 'o fuzu nehucma
AUX.NAF.R=3SG shoot-PF NTOP father=1SG TOP boar yesterday
'My father shot the boar yesterday.' (Construction(V=2.PF); FNE.XNO813b)

Even though the actor-patient relation typically denotes an actor imposing a force upon a patient, the force may or may not lead to a substantial change of state on the
PATIENT, as is evident from the integration of Construction(V=2.AF) and Construction(V=2.PF) with verbs such as 'search' in (46) and 'contact' in (47).

(46) Construction (V=2)+ 'search'

a  mo=θ,  b-ibimi  to  ak'i=si  'o  voyu,  
AUX.AF.R=3SG  AF-search  NTOP  grandpa=3SG  TOP  Voyu  
'Voyu is looking for his grandpa.' (Construction(V=2.AF); FND.XPRO402a)

b  i=si,  i'im-a  to  voyu,  'o  ak'i=si  
AUX.NAF.R=3SG  look.for-PF  NTOP  Voyu  TOP  grandpa=3SG  
'Voyu is looking for his grandpa.' (Construction(V=2.PF); FND.XPRO402b)

(47) Construction (V=2)+ 'touch'

a  mo=θ,  aaso  to  sapci=si  'o  voyu,  
AUX.AF.R=3SG  touch.AF  NTOP  forehead=3SG  TOP  Voyu  
'Voyu touched his forehead.' (Construction(V=2.AF); FND.XPRO404a)

b  i=si,  aas-a  to  voyu,  'o  sapci=si  
AUX.NAF.R=3SG  touch-PF  NTOP  Voyu  TOP  forehead=3SG  
'Voyu touched his forehead.' (Construction(V=2.PF); FND.XPRO404b)

The ACTOR-PATIENT relation even extends to cover the interaction of a sentient participant directing his/her sentiment to another participant, even though the two participants do not involve any direct force imposition.\(^{33}\) Examples in (48) illustrate the integration of Construction(V=2.AF) and Construction(V=2.PF) with the emotional verb sU'no 'angry', which is now associated with two arguments. The AF marking in (48a) indicates that the TOPIC nominal 'Naau', notionally the participant that experiences anger, is linked to the ACTOR. The PF marking in (48b) indicates that the TOPIC nominal 'her father', notionally the participant at which Naau's anger is directed, is linked to the PATIENT. Examples in (49) provide sentences where the ACTOR-PATIENT relation of Construction(V=2) is associated with the emotion verb sokoyu 'worry'.

\(^{33}\) There is more to say about the categorization of argument roles with regard to lexically-specific
Readers may notice that emotion verbs are described in the earlier section as integratable with Construction(V=1) for deriving a semantically complete sentence, as shown in (34). The fact that the same emotion verb *sU'no* ‘angry’ is also integratable with Construction(V=2.AF) and Construction(V=2.PF) gives rise to the impression of alternate argument structures and multiple valency values. I will elaborate on the pattern alternations in 4.8.4.

### 4.8.2 ACTOR-LOCATION: Construction(V=2.AF) and Construction(V=2.LF)

Construction(V=2) can also denote the relation of an ACTOR interacting with a LOCATION. Depending on the relative topicality of the ACTOR and the LOCATION, the ACTOR-LOCATION relation may be instantiated either as Construction(V=2.AF) or as the Valency=2 LF participants. See Chapter 5.
construction (Construction(V=2.LF)). When the actor outranks the location to a great extent in terms of relative topicality (A»L), the actor is linked to the topic and the location to the non-topic, forming Construction(V=2.AF). When the actor and the location are both referentially prominent (A>L), the location is linked to the topic and the actor to the non-topic, forming Construction(V=2.LF). Figure 4-12 below illustrates Construction(V=2.AF) and Construction(V=2.LF) using yon ‘stay’ as an example. Examples in (50) are the example sentences of Construction(V=2.AF) and Construction(V=2.LF).

(50) Construction (V=2)+ ‘stay’

a mo=qi. yon to ciengona no fuengu 'o amoconi=ui
AUX.AF.R=3SG stay.AF NTOP the.other.side NTOP mountain TOP uncle=1SG
‘My uncle stayed on the other side of the mountains.’ (Construction(V=2.AF); FNC.XCRE029)
The **ACTOR-LOCATION** relation typically interacts with verbs that semantically anchor an entity to a reference point in space. During the verb-construction integration, the anchored entity is linked to the **ACTOR** while the reference point is linked to the **LOCATION**. Examples in (50) demonstrate the integration of Construction(V=2.AF) and Construction(V=2.LF) with the verb *yon* 'stay', which denotes two event-specific participants. The AF marking in (50a) indicates that the **TOPIC** nominal 'my uncle', notionally the stay-er (the localizable entity), bears the **ACTOR** role in this specific instance of Construction(V=2.AF). The LF marking in (50b) indicates that the **TOPIC** nominal 'Mt. Jade', notionally the stay-at site (the reference point), bears the **LOCATION** role in this specific instance of Construction(V=2.PF). Examples (51) and (52) provide more examples of the **ACTOR-LOCATION** relation using the verbs *i'imi* 'originate' and *pkaako* 'run'.

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34 Some location-related verbs choose the **ACTOR-PATIENT** relation as the subcategorization frame. Consider the following:

(i) \[
\text{mo=0,} \quad \text{yUmeUmU to hopo 'o voyu,} \\
\text{AUX.AF.R=3SG enter.AF NTOP room TOP Voyu} \\
\text{'Voyu entered a room.' (FNA.XSSE128a)}
\]

(ii) \[
\text{i=sif yUmeUm-a to voyu, 'o hopo} \\
\text{AUX.NAF.R=3SG enter-PF NTOP voyu TOP room} \\
\text{'Voyu entered the room.' (FNA.XSSE128b)}
\]

See Chapter 5 for more details on the linking of event-specific participants and the four grammatical roles.
(51) Construction (V=2)+ ‘originate’

\[ a \] mo=\( a \) \( i^\prime \)imi ne takaw 'o paicU
AUX.AF.R=3SG originate.AF NTOP Kaohsiung TOP PaicU
'PaicU came from Kaohsiung (place name).’ (FNB.XNRC009a)

\[ b \] i=sij i'imz-i to paicU 'o takaw
AUX.NAF.R=3SG originate-LF NTOP PaicU TOP Kaohsiung
'PaicU came from Kaohsiung.’ (FNB.XNRC009b)

(52) Construction (V=2)+ ‘run away’

\[ a \] mi=cu pkaako to fuengU 'o yunsou ho mo
AUX.AF.R=PERF run.away.AF NTOP forest TOP animals when AUX.AF.R

\[ \text{motoevi} \]
earthquake.AF
'Animals ran away from the forest when the earthquake occurred.’ (FNC.XFPT211a)

\[ b \] i=sij atavei-a pkaak-i to naau, 'o vcongU=si
AUX.NAF.R=3SG finally-PF run-LF NTOP Naau TOP spouse=3SG
'Finally Naau ran away from her husband.’ (FNC.XFPT211b)

The **actor-location** relation is not restricted to verbs of space domain but in fact extends to the domains of perception and cognition (see Chapter 5 for the characterization of the **location** role in Tsou). Examples (53)-(55) below illustrate such an extension, in which perception and cognition events are categorized as specific instances of the **actor-location** relation. In (53), the perception verb ‘hear’ denotes an event in which a sentient participant (the hear-er) becomes audially aware of another participant (the heard). During the verb-construction integration, the hear-er is associated with the **actor** while the heard is associated with the **location**, as is evident from the patterns of focus marking and auxiliary marking. Examples (54) and (55) illustrate the integration of the **actor-location** relation with the perception verb ‘see’ and the cognition verb ‘know’.
(53) Construction (V=2)+ ‘listen’

a) mo=’u la t=’o alU to mo man’i ci h’oehangva
   AUX.AF.R=1SG HAB <AF> listen NTOP AUX.AF.R many.AF REL story
   no hicu
   NTOP spirit
   ‘I heard many ghost stories.’ (perception; FNE.XNGO831a)

b) la ahUy-a talU-i to ’o’oko ’o e’e to mamameoi
   AUX.HAB should-PF listen-LF NTOP child TOP word NTOP elders
   ‘Children should listen to the elders’ words.’ (perception FNE.XNGO832b)

(54) Construction (V=2)+ ‘see’

a) mi=ko ahtu b-aito to sU’yo?
   AUX.AF.R=2SG ever.AF AF-see NTOP bamboo.partridge
   ‘Have you ever seen (any) bamboo partridge?’ (perception; FNE.XNGO833a)

b) ta=ko ait-i ta pepe ’o mo pitu ci congeoha
   AUX.IRR=2SG see-LF NTOP sky TOP AUX.AF.R seven.AF REL star
   ‘You will see seven stars in the sky.’ (perception; FNE.XNGO834b)

(55) Construction (V=2)+ ‘know’

a) mo=’o b-ochio to a’ausna no homeyaya ’o ba’i?
   AUX.AF.R=3SG AF-know NTOP issue NTOP Homeyaya TOP grandma
   ‘Did Grandma know the details of Homeyaya (the name of a ritual)?’ (FNE.XNGO835)

b) o’a i=’o s’a cohiv-i sia na mo=’o etamaku nesoni
   NEG AUX.NAF.R=1SG ever know-LF who TOP AUX.AF.R=3SG smoke just.then
   ‘I do not know who just smoked.’ (in the context when the speaker smelled tobacco; FNE.XNGO836)

4.8.3 ACTOR-REFERENCE: Construction(V=2.AF) and Construction(V=2.RF)

Construction(V=2) can also denote the relation of an ACTOR interacting with a REFERENCE. Depending on the relative topicality of the ACTOR and the REFERENCE, the ACTOR-REFERENCE relation could be instantiated as either Construction(V=2.AF) or the Valency=2 RF construction (Construction(V=2.RF)). When the ACTOR outranks the REFERENCE to a great extent in terms of relative topicality (A>>R), the ACTOR is linked to the TOPIC and the REFERENCE to the NON-TOPIC, forming Construction(V=2.AF). When the ACTOR and the
REFERENCE are both referentially prominent (A>R1), the REFERENCE is linked to the TOPIC and the ACTOR to the NON-TOPIC, forming Construction(V=2.RF). Figure 4-13 below illustrates Construction(V=2.AF) and Construction(V=2.RF) using the verb yupteilU 'meet' as an example. Examples in (56) are the corresponding example sentences of Construction(V=2.AF) and Construction(V=2.RF).

(56) Construction (V=2)+ 'meet'

a mo=θushing yupteilU to kensacu 'o naau, taseona nehucma
AUX.AF.R=3SG meet.AF NTOP policeman TOP Naau morning yesterday
'Naau met a policeman yesterday morning.' (FND.XPRO403e)

b i=siying yupteilU-neni to naau, 'o kensacu
AUX.NAF.R=3SG meet-RF NTOP Naau TOP policeman
'Naau met the policeman.' (FND.XPRO0403g)

The ACTOR-REFERENCE relation is typically associated with verbs that denote sociative interactions, which in most cases do not lead to any substantive change/effect on either participant. Examples in (56) above illustrate the integration of the ACTOR-REFERENCE
relation with the sociative verb yupteilU 'meet'. In the verb-construction integration, the meet-er 'Naau' is linked to the actor and the met policeman is linked to the reference role, as shown by the focus marking in (56a) and (56b), respectively. Examples in (57) below provide another illustration of the actor-reference relation using the verb noteuyunu 'get together'.

(57) Construction (V=2)+ 'get together'
   a mi='o noteuyunu to mo'o hohucma
      AUX.AF.R=1SG get.together.AF NTOP Mo'o today
      'I got together with Mo'o today.' (FND.XPRO409a)

   b os='o noteuyunu-neni 'o mo'o
      AUX.NAF.R=1SG get.together-RF TOP Mo'o
      'I got together with Mo'o.' (FND.XPRO409b)

4.8.4 Constrained Alternation between Construction(V=1) and Construction(V=2)

As readers may notice, some of the verbs integrated with Construction(V=1) are also compatible with Construction(V=2). The most readily available examples are emotion verbs, posture verbs, and motion verbs, as in (58)-(60). However, the pattern alternation is not seen in verbs such as yUheUmU 'bleed', as in (61) (see also the use of miebocU 'fart' in (18)). The restriction raises a question: what constrains the integration of a verb with multiple constructions?

(58) 'angry' and valency alternation
   a mo=0 si'no 'o naau
      AUX.AF.R=3SG angry.AF TOP Naau
      'Naau is angry.' (Construction(V=1); FND.XTEL003-1)

   b mo=0 si'no to amo=si 'o naau
      AUX.AF.R=3SG angry.AF NTOP father=3SG TOP Naau
      'Naau is angry at her father.' (Construction(V=2.AF); FND.XTEL006-a)
c i=si, s'U'nov-a to naau, 'o amo=si
AUX.NAF.R=3SG angry-PF NTOP Naau TOP father=3SG
'Naau is angry at her father.' (Construction(V=2.PF); FND.XTEL006-b)

(59) 'sit' and valency alternation
a mi=cu nana yusuhngu ho mongs
AUX.AF.R=PERF HEARSAY sit.AF and cry.AF
'(The dwarf) reportedly sat down and cried.' (Tungl-24:031)

b mo=to yusuhngu to fatu 'o oko ho m'-ocu
AUX.AF.R=3SG sit.AF NTOP stone TOP child and AF-look.downward
'The child sat on a rock and looked downward.' (FNB.XTRC0402a)

c i=si yusuhng-i to oko ho m'-ocu
AUX.NAF.R=3SG sit-LF NTOP child TOP stone and AF-look.downward
'The child sat on the rock and looked downward.' (FNB.XTRC0402b)

(60) 'run away' and valency alternation
a ci nte la pkaako (na euansou) ho la t<m>alU
EVI AUX.IRR HAB run.away.AF TOP animal when HAB <AF>hear
no nte kaukeokeo
NTOP AUX.IRR rustle.AF
'because animals might run away when (they) hear any rustle.' (Tungl-10:003)

b mi=cu pkaako to fuengU 'o euansou ho mo
AUX.AF.R run.away.AF NTOP forest TOP animals when AUX.AF.R
motoevi
earthquake.AF
'Animals ran away from the forest when earthquake occurred.' (FNE.XNG0841d)

c i=si pkaak-i to naau 'o vcongU=si
AUX.NAF.R=3SG run-LF NTOP Naau TOP spouse=3SG
'Naau ran away from her husband.' (FNE.XNG0841c)

(61) 'bleed' and valency alternation
a mo=to yUheUmU (to hopo=si) 'o naau,
AUX.AF.R=3SG bleed.AF NTOP room=3SG TOP Naau
'Naau bled in her room.' (FNB.XTRC0501a)

b *i=si, yHeUmU-i to naau, 'o hopo=si
AUX.NAF.R=3SG bleed-LF NTOP Naau TOP room=3SG
intended 'Naau bled in her room.' (FNB.XTRC0501b)
The present study argues that valency alternation is constrained by the semantics of the constructions under question. In order for a verb to be integratable with Construction(V=2), the semantics of the verb needs to be compatible with that of Construction (V=2), which denotes an event whose attainment is dependent on two critically relevant entities. However, not every verb mentioned in (58)-(61) can be equally construed into a scene dependent upon two critically relevant participants. For instance, while the sitting action denoted by *yusuungu* 'sit' can be construed as an event whose successful attainment is dependent on a sitter and a sit-at place), the bleeding event denoted by *yUheUmU* 'bleed' cannot—the successful attainment of a bleeding event is not defined relative to any particular site. It is therefore less felicitous to construe bleeding as an event whose occurrence/non-occurrence is contingent upon two participants. The incompatibility of verb semantics with the semantics of Construction(V=2) is reflected in the inability of *yUheUmU* 'bleed' to associate a locational element with the LOCATION role for Construction(V=2.LF).

In Chapter 5 I will provide more details on how the notion of relevance influences the association of event participants with the four grammatical roles.

4.9 The Valency=3 Focus Constructions

The Valency=3 constructions (henceforth Construction(V=3)) represent a three-participant situation and encode the three-fold situation with three obligatory arguments. At the top of Figure 4-14 there is a schematic representation of Construction(V=3), which is underspecified for argument roles, alignment patterns, focus marking, and auxiliary marking. The three arguments involved in
Construction(V=3) come in three different arrays: ACTOR-PATIENT-LOCATION; ACTOR-PATIENT-REFERENCE; ACTOR-REFERENCE-LOCATION. In accordance with the argument slots are three syntactic positions: a TOPIC relation and two NON-TOPIC relations.

Depending on the relative topicality of the three arguments involved, the schematic Construction(V=3) may require different alignment patterns and form different focus
constructions. The argument that is aligned with the TOPIC relation determines both the type of focus affix on the predicate and the type of co-occurring auxiliary. Examples in (62) below illustrate the ACTOR-REFERENCE-LOCATION relation using the verb root fi 'give'.

Figure 4-15 illustrates the three specific focus constructions that arise from the integration of fi 'give' with the ACTOR-REFERENCE-LOCATION relation: Construction(V=3.AF), Construction(V=3.RF), and Construction(V=3.LF).

(62) Construction(V=3)+ 'give'
a mo=ø, mo-fi to poyave to yuozomu 'o yoifo, AUX.AF.R=3SG AF-give NTOP knife NTOP warrior TOP wizard 'The wizard gave a knife to a warrior.' (FNA.XSSE133a)

b i=si, fa-eni to yuozomu to yoifo, 'o poyave AUX.NAF.R=3SG give-RF NTOP warrior NTOP wizard TOP knife 'The wizard gave the knife to a warrior.' (FNA.XSSE133b)

c i=si, fi-i to poyave to yoifo, 'o yuozomu AUX.NAF.R=3SG give-LF NTOP knife NTOP wizard TOP warrior 'The wizard gave a knife to the warrior.' (FNA.XSSE133)
In Sections 4.9.1-4.9.3 I describe the Valency=3 focus constructions according to the arrays of grammatical roles involved: ACTOR-REFERENCE-LOCATION, ACTOR-PATIENT-LOCATION, and ACTOR-PATIENT-REFERENCE.

4.9.1 ACTOR-REFERENCE-LOCATION: Object Transferal

The ACTOR-REFERENCE-LOCATION relation represents the situation in which an ACTOR interacts with a REFERENCE and a LOCATION. Depending on the relative topicality, one of
the three arguments will be selected as the TOPIC relation whereas the other two are linked to the NON-TOPIC relations. The argument linked to the TOPIC is typically topical/referentially prominent within a particular span of discourse, but it may not be the most topical element in a clause, which in most cases is the ACTOR (S. Huang 2002).

The argument linked to the TOPIC relation determines the focus marking and the auxiliary marking (in realis mood), as can be observed in the three specific focus constructions to the left in Figure 4-15: Construction(V=3.AF), Construction(V=3.RF), or Construction(V=3.LF). In this section I concentrate on presenting the semantics of the ACTOR-REFERENCE-LOCATION relation and leave the discussion of TOPIC selection until Section 5.5.

The ACTOR-REFERENCE-LOCATION relation is typically associated with verbs that denote object transferal. The transfer can occur in space, as shown in the use of to'su 'throw' in (63), or between owners, as shown in the use of fi 'give' in (62). Even though the two types of transfers are conceptually distinct, they both are associated with the ACTOR-REFERENCE-LOCATION relation, as evident from the pattern of focus marking. The AF verbs in (62a) and (63a) indicate that the tosser and the giver are both linked to the ACTOR role. The RF verbs in (62b) and (63b) indicate that the tossed and the given are both linked to the REFERENCE role. The LF verbs in (62c) and (63c) demonstrate that the toss-to (the river) and the give-to are both linked to the LOCATION role.

(63) Construction(V=3)+ garbage tossing

<table>
<thead>
<tr>
<th>a</th>
<th>mo=s</th>
<th>to'su</th>
<th>to</th>
<th>puću</th>
<th>to</th>
<th>vahU</th>
<th>το</th>
<th>voyu</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUX.AF.R=3SG</td>
<td>throw.AF</td>
<td>NTOP</td>
<td>apple</td>
<td>NTOP</td>
<td>river</td>
<td>TOP</td>
<td>voyu</td>
<td></td>
</tr>
</tbody>
</table>

‘Voyu threw garbage into a river.’ (FNF.XTOB031a)
b  i=si,  to's-eni to vahU to voyu, 'o pucu  
AUX.NAF.R=3SG throw-RF NTOP river NTOP Voyu TOP garbage  
'Voyu tossed the garbage into a river.' (FNF.XTOB031c)

c  i=si,  to's-i to pucu to voyu, 'o vahU  
AUX.NAF.R=3SG throw-LF NTOP garbage NTOP Voyu TOP river  
'Voyu tossed garbage into the river.' (FNF.XTOB031d)

By common understanding, the toss-to river and the give-to entity are often kept distinct in the assignment of thematic roles. A transfer in space, such as the event of tossing, is often taken to denote a location (or goal). A transfer of ownership, such as the event of giving, is typically taken to denote a recipient. A comparison of (62), (63), and (64) illustrates that the location-recipient distinction is not critical to syntactic patterning in Tsou. Due to the syntactic indistinctiveness, I choose not to specify this distinction in Construction(V=3) but link both participants directly to the grammatical role of LOCATION, whose existence is empirically justified by the LF marking.

(64) Construction(V=3)+ 'toss'

a  mo=0  to'sU to linko to naau 'o voyu,  
AUX.AF.R=3SG toss.AF NTOP apple NTOP Naau TOP Voyu  
'Voyu tossed an apple to Naau.' (FNF.XTOB032a)

b  i=si,  to's-eni to naau to voyu, 'o linko  
AUX.NAF.R=3SG toss-RF NTOP Naau NTOP Voyu TOP apple  
'Voyu tossed the apple to Naau.' (FNF.XTOB032c)

c  i=si,  to's-i to linko to voyu, 'o naau  
AUX.NAF.R=3SG toss-LF NTOP apple NTOP Voyu TOP Naau  
'Voyu tossed an apple to Naau.' (FNF.XTOB033d)

4.9.2 ACTOR-PATIENT-LOCATION: Spatial Anchorage

Construction(V=3) can also denote a relation of an actor interacting with both a patient and a location. In the ACTOR-PATIENT-LOCATION relation, the actor imposes a force upon the patient, which causes the patient to be spatially anchored to a particular site.
Examples in (65) illustrate such a relation using the verb root si 'put', which lexically profiles three event-specific participants: the putter, the puttee, and the put-at place. When si 'put' is integrated with Construction(V=3), the three event-specific participants are associated with the ACTOR, the PATIENT, and the LOCATION, respectively, as shown in (65). Figure 4-16 below illustrates the internal structures of Construction(V=3.AF), Construction(V=3.PF), and Construction(V=3.LF).

Figure 4-16 The ACTOR-PATIENT-LOCATION relation of Construction(V=3)
(65) Construction(V=3)+ ‘put’

a  mo=0i  mo-si to pucu to coca 'o amo='u,
   AUX.AF.R=3SG AF-put NTOP garbage NTOP yard=1PL TOP father=1SG
   'My father put garbage in the yard.' (FNF.XTOB033a)

b  i=si,  si-a to coca to amo='u, 'o pucu
   AUX.NAF.R=3SG put-PF NTOP yard NTOP father=1SG TOP garbage
   'My father put the garbage in the yard.' (FNF.XTOB033b)

c  i=si,  si-i to pucu to amo='u, 'o coca
   AUX.NAF.R=3SG put-LF NTOP garbage NTOP father=1SG TOP yard
   'My father put garbage in the yard.' (FNF.XTOB033d)

The actor-patient-location is also integratable with verb stems such as mUm'U
'plant', even though 'plant' lexically only profiles two participants: a planter relative to
a planted entity. When 'plant' is integrated with the actor-patient-location relation of
Construction(V=3), the construction contributes a location argument which is
instantiated as the plant-in place in (66).

(66) Construction(V=3)+ ‘plant’

a  mo=0i  mUm'U to fue to coca=to 'o amo='u,
   AUX.AF.R=3SG plant.AF NTOP sweet.potato NTOP yard=1PL TOP father=1SG
   'My father planted sweet potatoes in our yard.' (FNC.XFPT311a)

b  i=si,  mUm'-a to coca=to to amo='u, 'o fue
   AUX.NAF.R=3SG plant-PF NTOP yard=1PL NTOP father=1SG TOP sweet.potato
   'My father planted the sweet potatoes in our yard.' (FNC.XFPT311b)

c  i=si,  mUm'-i to fue to amo='u, 'o coca=to
   AUX.NAF.R=3SG plant-LF NTOP sweet.potato NTOP father=1SG TOP yard=1PL.
   'My father planted sweet potatoes in our yard.' (FNC.XFPT311d)

The fact that mUm'U ‘plant’ is associated with a construction-contributed location
argument in (66) is most clearly illustrated when juxtaposed against examples in (67), in
which ‘plant’ is integrated with the actor-patient relation as a two-argument frame.
In a constructional approach, the n-argument frame is directly associated with the skeletal construction. A verb, such as 'plant', may interact with different constructions, displaying multiple valency values. In doing so, the present study avoids positing a new sense for 'plant' and using that sense to explain the existence of the syntactic frame. Circularity is thus avoided.

4.9.3 ACTOR-PATIENT-REFERENCE: Enabled Contact

Construction(V=3) may also denote a relation of an ACTOR interacting with both a PATIENT and a REFERENCE. In the ACTOR-PATIENT-REFERENCE relation, an ACTOR imposes a force upon a PATIENT and the force imposition is enabled by a mediator-like REFERENCE argument. The three instances of toyocU ‘cut’ in (68) illustrate the integration of the ACTOR-PATIENT-REFERENCE relation with the three event-specific participants denoted by ‘cut’. During the integration, the cutter ‘Grandpa’ is associated with the ACTOR (see the AF marking in (68a)), the cut ‘tree’ with the PATIENT (see the PF marking in (68b)), and the cut-with tool ‘axe’ with the REFERENCE (see the RF marking in (68c)). Figure 4-17 below illustrates the configuration of the ACTOR-PATIENT-REFERENCE relation in Construction(V=3).
(68) Construction(V=3) ‘cut’

a $m_0=m_{\text{top}}$ $t<\text{top}>\text{oycU}$ to $\text{evi}$ to $p'eUcUngU$ 'o $ak'i_i$.
AUX.AF.R=3SG <AF>cut NTOP banana NTOP axe TOP grandpa
'Grandpa cut (down) a tree with an axe.' (FNE.XNG0931a)

b $i=s_i\text{si}_i$ $t\text{top}>\text{tyoc-a}$ to $p'eUcUngU$ to $ak'i_i$ 'o $\text{evi}$
AUX.NAF.R=3SG cut-PF NTOP axe NTOP grandpa TOP tree
'Grandpa cut (down) the tree with an axe.' (FNE.XNG0931b)

c $i=s_i\text{si}_i$ $t\text{top}>\text{tyoc-neni}$ to $\text{evi}$ to $ak'i_i$ 'o $p'eUcUngU$
AUX.NAF.R=3SG cut-RF NTOP tree NTOP grandpa TOP axe
'Grandpa cut (down) a tree with the axe.' (FNE.XNG0931c)
Of the three arguments of the ACTOR-PATIENT-REFERENCE relation, the REFERENCE argument may be the most difficult case for a semantic characterization, which is due in large part to its coverage of participant roles that are typically kept distinct in the theories of thematic roles. Depending on the semantics of the associated verbs, the REFERENCE argument could be related to either beneficiary-like or instrument-like participants. Example (68c) above illustrates the association of the REFERENCE role with
the cut-with instrument ‘axe’. Example (69c) below illustrates the association of the
REFERENCE with the wash-for participant ‘grandma’.\textsuperscript{35}

(69) Construction(V=3)+ ‘wash’
a \begin{align*}
\text{mo}=i_{i} & \quad \text{tu}fku \text{ to } \text{yUsU to } \text{ba'i to naau}_{i} \\
\text{AUX.AF.R=3SG wash.AF NTOP clothes NTOP grandpa TOP Naau}
\end{align*}
\begin{align*}
\text{’Naau washed clothes for Grandma.’ (FNE.XNG0932a)}
\end{align*}

b \begin{align*}
\text{i}=s_{i} & \quad \text{tu}fku-a \text{ to } \text{naau} \text{ to } \text{ba'i} \\
\text{AUX.NAF.R=3SG wash-PF NTOP Naau TOP clothes NTOP grandma}
\end{align*}
\begin{align*}
\text{’Naau washed the clothes for Grandma.’ (FNE.XNG0932b)}
\end{align*}
\begin{align*}
\text{Lit.’Naau washed Grandma’s clothes.’}
\end{align*}

c \begin{align*}
\text{i}=s_{i} & \quad \text{tu}fku-neni \text{ to } \text{yUsU to } \text{naau to } \text{ba'i} \\
\text{AUX.NAF.R=3SG wash-RF NTOP clothes NTOP Naau TOP grandma}
\end{align*}
\begin{align*}
\text{’Naau washed clothes for \underline{Grandma}.’ (FNE.XNG0932c)}
\end{align*}

Examples (70) and (71) below provide two more sets of examples of the
\textit{actor-patient-reference} relation using the verb stems \textit{futu} ‘bind’ and \textit{tUtpUtU} ‘catch’.\textsuperscript{36}

The encoding of the bind-with instrument in (70c) and the catch-for beneficiary in (71c)
indicates that both participants are linked to the \textit{reference} role even though they are
conventionally separated into different thematic roles. However, the fact that we
cannot predict the convergence of beneficiary-like and instrument-like participants
do not mean the encoding has no semantic basis. Both types of participants can be
viewed as a mediator that enables/facilitates the attainment of the predicated event. As
an inanimate mediator, the rattan in (70c) assists the contact of the Tsou people and
corpses. As an animate mediator, ‘Pasuya’ in (71c) is the participant for whose benefit
the pheasant catching is done. Pasuya’s existence enables the event of

\textsuperscript{35} The three examples in (69) are not equally felicitous. The consultants prefer to have a definite
beneficiary-reference in the \textit{topic} relation, as in (69c). Examples (69a) and (69b) are considered somewhat
‘forced’.

\textsuperscript{36} The root \textit{futu} ‘bind’ is integratable with both Construction(V=2) and Construction(V=3). See below.
pheasant-catching and mediates the contact between the catcher ‘Naau’ and the caught pheasant. More detail on the linking of the reference role and the various types of event participants will be specified in Chapter 5.

(70) Construction(V=3)+ ‘bind’

a moso=0, m-futu to feango no ue ‘o nia cou,
AUX.AF.R=3PL AF-bind NTOP corpse NTOP rattan TOP past Tsou
‘The ancient Tsou people bound up corpses with rattan.’ (FNC.XFPT321a)

b o=si naa fut-a no mo tacvoh’i ci teesi
AUX.NAF.R=3SG HEARSAY bind-PF NTOP AUX.AF.R long.AF REL cord
na iachi=si emucu
TOP self=3SG hand
‘She reportedly bound up her own hand with a long cord.’ (Tung1-29:005)

c o=he, fut-neni to feango to nia cou, ‘o ue
AUX.NAF.R.=3PL bind-RF NTOP corpse NTOP ancient Tsou TOP rattan
‘The ancient Tsou people bound up corpses with the rattan.’ (FNE.XFPT321c)

(71) Construction(V=3)+ ‘catch’

a mo=0, tUtpU to toebosU to pasuya ‘o naau,
AUX.AF.R=3SG catch.AF NTOP pheasant NTOP Pasuya TOP Naau
‘Naau caught a pheasant for Pasuya.’ (FNC.XFPT331a)

b i=si, tUtpUt-a to naau, ‘o toebosU to pasuya
AUX.NAF.R=3SG catch-PF NTOP naau TOP pheasant NTOP Pasuya
‘Naau caught the pheasant for Pasuya.’ (FNC.XFPT331b)
Lit.’Naau caught Pasuya’s pheasant.’

c i=si, tUtpUt-neni to toebosU to naau, ‘o pasuya
AUX.NAF.R=3SG catch-RF NTOP pheasant NTOP Naau TOP Pasuya
‘Naau caught a pheasant for Pasuya.’ (FNC.XFPT331c)

4.9.4 Constrained Alternation between Construction(V=2) and Construction(V=3)

I proposed in the preceding sections that Construction(V=3) can contribute additional arguments not directly associated with the semantics of a verb, mostly the reference or the location. However, the alternation between Construction(V=2) and
Construction(V=3) is again restricted, as shown in the ungrammaticality of (72c) and (72d). From another perspective, not every semantically beneficiary-like participant can be introduced as a REFERENCE argument into Construction(V=3), nor can every semantically location-related participant be introduced as a LOCATION argument (in terms of the ability to be selected for TOPIC marking and to trigger the LF marking).

(72) Construction(V=3)+ 'kill'

a \[ mi=ta, \quad opcoi \; to \; cmoi \; 'e \; yuozomU, \quad \text{AUX.AF.R=3SG \; kill.AF \; NTOP \; bear \; TOP \; warrior} \]

'The warrior killed a bear.' (FNE.XNG0931a)

b \[ i=ta, \quad opcoz-a \; ta \; yuozomU, \; 'o \; cmoi \quad \text{AUX.NAF.R=3SG \; kill-PF \; NTOP \; warrior \; TOP \; bear} \]

'The warrior killed the bear.' (FNE.XNG0931b)

c \[ *i=ta, \quad opcoz-neni \; to \; cmoi \; ta \; yuozomU, \; 'o \; yoifo \quad \text{AUX.NAF.R=3SG \; kill-RF \; NTOP \; bear \; NTOP \; warrior \; TOP \; wizard} \]

intended 'The warrior killed a bear for the wizard.' (FNE.XNG0931c)

d \[ *i=ta, \quad opcoz-i \; to \; cmoi \; ta \; yuozomU, \; 'o \; iskiana \quad \text{AUX.NAF.R=3SG \; kill-LF \; NTOP \; bear \; NTOP \; warrior \; TOP \; Iskiana} \]

intended 'The warrior killed a bear at Iskiana (place name)' (FNE.XNG0931d)

The integratability with Construction(V=3) is dependent on whether the semantics of the verb can be conceptualized as a scene compatible with the semantics of Construction(V=3), which denotes an event whose occurrence/non-occurrence is dependent on three critically relevant participants. Let us start with the ACTOR-PATIENT-LOCATION relation. A verb can only be integrated with this particular three-participant relation and be associated with a construction-contributed LOCATION argument when it denotes an event whose occurrence/non-occurrence is defined relative to a particular site. Consider the following: 

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37 For ease of comparison I list only the LF form of each verb, which provides the most apparent encoding
(73) Construction (V=3)+ LOCATION

a  \( t=si_i \quad mUm'U-i \quad to \quad fue \quad to \quad amo'=u, \quad o \quad coca=to \)
AUX.NAF.R=3SG plant-LF NTOP sweet.potato NTOP father=1SG TOP yard=1PL.
'My father planted sweet potatoes in our yard.' (FNE.XNGO942a)

b  \(*i=si_i \quad tyoc-i \quad to \quad evi \quad to \quad naau, \quad si \quad coca\)
AUX.NAF.R=3SG cut-LF NTOP tree NTOP Naau TOP yard
intended 'Naau cut down a tree in the yard.' (FNE.XNGO942b)

c  \(*os='o \quad su'nov-i \quad ta \quad naau \quad o \quad coca\)
AUX.NAF.R=1SG angry-LF NTOP Naau TOP yard
intended 'I was angry at Naau in the yard.' (FNE.XNGO942c)

d  \(*i=si_i=n'a \quad tote-i \quad to \quad ino=si \quad to \quad naau, \quad o \quad kuba\)
AUX.NAF.R=3SG=PROG wait.for-LF NTOP mother=3SG NTOP Naau TOP Ritual.Place
intended 'Naau was waiting for her mother in the Ritual Place.' (FNE.XNGO942d)

In (73a), the integration of \( mUm'U \) 'plant' with a LOCATION-TOPIC is acceptable because
the act of planting requires the planted-PATIENT 'sweet potatoes' to be located at a
particular site, represented by the LOCATION argument 'yard'. However, a clearly
specified site is not critically relevant for the events of cutting and feeling angry; the
attainment of a cutting action or feeling angry does not require the cut entity or the
angry-at participant (the PATIENT) to be located at any particular site. The irrelevance of
a clearly specified location to cutting or feeling angry is linguistically reflected in the
unacceptable examples in (73b), (73c), and (73d).

Now let us turn to the ACTOR-PATIENT-REFERENCE relation. I argued in Section 4.9.3 that
this three-participant relation characterizes an interaction between an ACTOR and a
PATIENT, mediated/enabled via a third argument REFERENCE. A verb is only integratable

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\[ \text{evidence for the association of a verb with a LOCATION argument.} \]
with this particular relation when it designates an event that can be achieved via an intermediary. Consider the following:\(^{38}\)

(74) Construction(V=3) and the reference role

\(a\) \(i=si\) \(sef'tUng\)-neni to evi to pasuya, 'o noko
AUX.NAF.R=3SG fell-RF NTOP tree NTOP Pasuya TOP saw
'Pasuya felled a tree with the saw.' (FNE.XNGO943a)

\(b\) \(i=si\) aas-neni to av'u to pasuya, 'o s'ofU
AUX.NAF.R=3SG pat-RF NTOP dog NTOP Pasuya TOP stick
intended 'Pasuya patted a dog with his stick.' (FNE.XNGO943b)

In (74a), the integration of \(sef'tUng\) 'fell' with a reference-topic is acceptable because the felling event can be accomplished via the mediation of a tool. It is conventional for the contact between a tree and a fell-er to be mediated by a tool. On the contrary, (74b) is unacceptable. Patting a dog is not conventionally mediated via a third entity—the patting event is rarely enabled via the assistance of an instrument (the proposition 'patting a dog with one's hands' is considered by the three consultants to be redundant and 'not-Tsou-like').

The reference role as a mediator can also refer to an animate entity that enables the accomplishment of an event, particularly if the accomplishment of the event typically derives deliverable gains. In (75a) below, the reference-topic 'Naau' is the participant for whose benefit the pheasant-catching is done. In (75b), the reference-topic 'Naau' enables the singing and thus incurs the (metaphorical) interaction between the singer 'I' and the song. Both pheasant-catching and singing derive transferable gains. In contrast, (75c) is unacceptable because the event of remembering does not derive deliverable gains, at least not in a conventional way.

__________

\(^{38}\) For convenience of comparison I list only the RF form of each verb item, which provides the most
Among verbs that are semantically compatible with a mediated action, a noticeable tendency emerges: the more means-specific or manner-specific information a verb encodes, the more likely it can be integrated with the Actor-Patient-Reference relation and be given an instrument reading. The three examples in (76) reveal that the means-specific verb ‘poison’ is compatible with a construction-contributed Reference role, but such compatibility is not seen in the use of ‘hurt’ and ‘kill’, whose semantics does not contain specifications of means or manners.

(76) Construction(V=3)+ REFERENCE

a ??i=si, aalong-neni to av'u to oko, 'o noko
AUX.NAF.R=3SG hurt-RF NTOP dog NTOP child TOP saw
intended ‘The child hurt a dog with the saw.’ (FNE.XNGO945a)

b ??i=si, opcoz-neni to av'u to oko, 'o noko
AUX.NAF.R=3SG kill-RF NTOP dog NTOP child TOP saw
intended ‘The child killed a dog with the saw.’ (FNE.XNGO945b)

c i=si, otfo-neni to av'u to oko, 'o s'os'o
AUX.NAF.R=3SG poison-RF NTOP dog NTOP child TOP drug
‘The child poisoned a dog with the drugs.’ (FNE.XNGO945c)
Readers may notice that the reference role is given either a beneficiary reading or an instrument reading, depending on the frame-specific knowledge of the associated verb. If the reference role is associated with a verb that denotes a manner-specific or means-specific manipulation, the reference role is given an instrument reading such as 'the drugs used to poison a dog'. If the reference is associated with verbs that designate a conventionalized beneficial act, the reference is given a beneficiary reading. A reference role considered unacceptable for an instrument reading may be felicitously interpreted as an event-specific beneficiary (and vice versa), as in (77). If a beneficiary reading and an instrument reading are both possible, the reference will be given either reading depending on the most felicitous interpretation, as in (78).

(77) Construction(V=3)+ reference
a *os='o i'im-neni to zomU 'o mekane
  AUX.NAF.R=1SG look.for-RF NTOP bird TOP telescope
  'I looked for birds with telescopes.' (FND.XPRO402c2)

b os='o i'im-neni to sapiei 'o ba'i
  AUX.NAF.R=1SG look.for-RF NTOP shoes TOP grandma
  'I looked for a pair of shoes for Grandma.' (FND.XPRO405c1)

(78) Construction(V=3)+ reference
a i=si, tUpU-t-neni to toebosU to pasuya, 'o naau
  AUX.NAF.R=3SG catch-RF NTOP pheasant NTOP Pasuya TOP Naau
  'Pasuya caught a pheasant for Naau.' (FNE.XNG0946a)

b i=si, tUpU-t-neni to toebosU to pasuya, 'o yungku
  AUX.NAF.R=3SG catch-RF NTOP pheasant NTOP Pasuya TOP basket
  'Pasuya caught a pheasant with the basket.' (FNE.XNG0946b)

39 The inability to derive an instrument reading for the reference argument in (77a) is motivated by the fact that i'imneni 'search' does not denote a specific manner of manipulation, nor is the denoted searching act conventionally mediated via the assistance of a tool. However, searching can be a beneficial act because the sought entity can be delivered to a third participant as a benefit.
4.10 Interim Conclusion: Reflections on the Symmetry/Asymmetry Claims and Construction-Specific Properties

This chapter describes the valency patterns in Tsou argument structure using the CxG approach. It is argued that valency patterns, and more fundamentally, patterns of argument realization, are determined by constructions. Constructions contribute arguments and skeletal semantics (e.g., an \textit{actor} interacting with a \textit{patient}) while verbs denote event-specific participants defined relative to frame-specific knowledge (which makes reference to world and cultural knowledge). The constructional approach recognizes that constructions and verbs are independent but interrelated and that there are many-to-many associations between verbs and constructions. On the one hand, the lexical entry of a verb specifies the construction(s) in which the verb may occur. On the other hand, the semantics of a particular construction also specifies and constrains the types of verbs with which the construction can be integrated.

The constructional approach provides a model for describing the syntactic, semantic, and pragmatic properties of constructions without having to choose a particular pattern as the default. In this way, the present study is able to depict alternating valency without necessarily assuming that a particular pattern is basic or derived. Alternating valency is captured by allowing the same verb to interact with different focus constructions. The constructional framework is especially important when no reliable evidence, morphological or syntactic, can unambiguously identify the existence of a basic pattern in Tsou (see Chapter 5 for details).

\footnote{For instance, the stem \textit{cuhu} 'butcher' specifically refers to the slaughtering of domesticated animals for food while \textit{opcoi} 'kill' refers to the killing of non-domesticated creatures.}
By not assuming a particular pattern as the default, the constructional approach raises the question of how the present study should be characterized relative to the symmetry/asymmetry claims in the Austronesian literature (summarized earlier in Section 2.1). By not choosing any particular pattern as the default, the present study is a clear departure from the asymmetry claim. I do not assume that a particular focus construction is basic while others are derived, given the lack of reliable evidence. However, the no-default feature does not make the present study fully compatible with the symmetry claim, as proposed by Foley (1998). It is true that the present study shares with Foley the view that there is no default alignment pattern, and the alternation of focus marking does not involve valency reduction. However, disagreeing with Foley, the present study does not subscribe to the idea that every verb has an identical array of arguments and an identical set of alignment patterns linking these arguments to syntactic relations. Constraints occur to restrict the valency value(s) and alignment pattern(s) of a verb, and the present study chooses to frame these constraints relative to the construction instead of to the verb.

By framing constraints relative to constructions, the present study intends to capture morphosyntactic regularities in Tsou without overgeneralizing or dismissing construction-specific features. However, in capturing construction-specific properties, the present study does not ignore systematic generalizations across constructions, if these generalizations are empirically justified. In Construction Grammar, constructions are linked by inheritance relations, which motivate the overlap of properties across constructions. In Tsou, one of the observable generalizations across constructions is the
association of event-specific participants with the four grammatical roles (ACTOR, PATIENT, REFERENCE, and LOCATION), and this brings us to Chapter 5.
Chapter 5  Grammatical Roles and Grammatical Relations of Tsou

5.1 Overview

In Chapter 4 I argued that Tsou argument structure should be described as a three-layered correspondence: the ACTOR/PATIENT/REFERENCE/LOCATION distinction, the TOPIC/NON-TOPIC contrast, and verb-specific participant roles. In this chapter I explore the internal structure of these three layers and examine the alignment patterns between them. Section 5.2 specifies the empirical basis of the ACTOR/PATIENT/REFERENCE/LOCATION distinction. Section 5.3 investigates the alignment of verb-specific participant roles with the ACTOR/PATIENT/REFERENCE/LOCATION distinction. In Section 5.4 I look into the interaction of the ACTOR/PATIENT/REFERENCE/LOCATION distinction and the TOPIC/NON-TOPIC contrast, focusing on the distribution of grammatical prominence between the two layers of representation. I then establish the core-oblique distinction for Tsou based on the distribution of grammatical prominence and discuss how subjecthood should be defined in this language. Section 5.5 examines the TOPIC selection process and explores the factors that motivate one alignment pattern over the others, including but not limited to referential prominence. Section 5.6 is the conclusion.

5.2 Empirically-Identified Categories and A Distributional Analysis

In the preceding chapters I argued that the use of conventional categories in Tsou leads to incoherent encoding and behavioral properties. To appropriately state the generalizations in Tsou argument structure, we need categories that are not simply
carried over from another language, but are empirically justified by the Tsou data. The question then emerges: what does it mean to define categories using empirical evidence? As pointed out by American structuralist linguists and later by Dryer (1997) and Croft (2001), categories are empirically justified if they are defined by distributional regularities of certain features across utterances in a particular language. When different linguistic items display identical patterns of occurrence and non-occurrence according to a particular feature, these items are taken to be members of the same class, justifying the existence of a particular category.

Let us first illustrate how various verb-specific participants in Tsou can be organized into four grammatical roles (ACTOR, PATIENT, REFERENCE, and LOCATION) using the distributional method. Consider the list of two-participant propositions in (1)-(4) below, which includes in total eight different participants: children who beat something (beater), children who snatched something (snatcher), children who encountered someone (encounter-er), children who sat on something (sitter), a beaten dog, a snatched rat, an encountered policeman, and a sit-on tree.

(1) beater vs. beaten (FNC.DTXB002a–b)

\begin{verbatim}
(1a) mi=hin'\textsubscript{i} eobako to av'u 'e 'o'oko\textsubscript{i}
AUX.AF.R=3PL beat.AF NTOP dog TOP children
'The children beat a dog.'

(1b) i=hin'\textsubscript{i} eobak-a ta 'o'oko\textsubscript{i} 'o av'u
AUX.NAF.R=3PL beat-PF NTOP children TOP dog
'The children beat the dog.'
\end{verbatim}
(2) snatcher vs. snatched (FNB.XTRC0208a-b)

a mi=hin'i, ticunu to bohci 'e 'o'oko,
AUX.AF.R=3PL snatch.AF NTOP rat TOP children
'The children snatched a rat.'

b i=hin'i, ticun-a ta 'o'oko, 'o buhci
AUX.NAF.R=3PL snatch-PF NTOP children TOP rat
'The children snatched the rat.'

(3) encounter-er vs. encountered (FND.XPRO402i,k)

a mi=hin'i, yupteilU to kensacu 'e 'o'oko,
AUX.AF.R=3PL meet.AF NTOP police TOP children
'The children encountered a policeman.'

b i=hin'i, yupteilU-neni ta 'o'oko, 'o kensacu
AUX.NAF.R=3PL meet-RF NTOP children TOP police
'The children encountered the policeman.'

(4) sitter vs. sit-on (FNE.XNG0851a,c)

a mi=hin'i, yusuhungu (to evi) 'e 'o'oko,
AUX.AF.R=3PL sit.AF NTOP tree TOP children
'The children sat (on a tree).'</n

b i=hin'i, yusuhung-i ta 'o'oko, 'o evi
AUX.NAF.R=3PL sit-LF NTOP children TOP tree
'The children sat on the tree.'

Of the eight participants, the beater, the snatcher, the encounter-er, and the sitter form a class because they all trigger the occurrence of the auxiliary mi when selected as the topic.1 The pronominal marking on the auxiliary also references the same class of participants, regardless of whether they are the topic or the non-topic of the sentence.

1 I simplify the complexity of AF auxiliaries here for convenience of illustration (see Section 3.4.3 for details).
Additionally, the four participants all co-occur with a zero marking on the verb when selected as the *topic.* The category formed by these four participants is given the mnemonic label *actor,* following the name traditionally given to the focus marking triggered by this role.

In contrast to the *actor* role, the beaten dog, the snatched rat, the encountered policeman, and the sit-on tree form a category defined by the inability to trigger pronominal clitics. The existence of this *counter-actor* (or *non-actor*) category is made evident by the recurring realis auxiliary *i* when the four verb-specific participants are selected as the *topic.* The *non-actor* role can be further specified given the occurrence of distinct morphosyntactic properties: the beaten dog and the snatched rat form a class because they both trigger the occurrence of the suffix *-a* on the verb when selected as the *topic.* This category is given the label *patient,* following the name traditionally assigned to the category defined by the suffix *-a* in the Tsou literature. The encountered policeman and the sit-on tree are each sorted into a distinct category considering the different focus markings they trigger when selected as the *topic:* the encountered policeman falls under the *reference* category, marked by the suffix *-neni* on the verb; the sit-on tree falls under the *location* category, marked by the suffix *-i* on the verb.

The existence of the four grammatical roles is also seen in one-participant and three-participant propositions. The pattern of auxiliary selection and pronominal marking in (5a) and (5b) below demonstrates that farting children and running children are instances of the *actor* category. Entities involved in three-participant

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*I simplify the complexity of AF marking here (see Section 3.4.2 for details).*
propositions also fall into the four-way groupings. Examples (6a)-(6c) show that the tosser is an actor; the tossed garbage patterns with the encountered policeman and is a member of the reference role. The toss-to river patterns with the sit-on tree and is a member of the location role.

(5) farther and runner

a  \text{mi}=\text{hin}'i, \text{mieboc}U \ 'e \ 'o'oko \n\text{AUX.AF.R=3PL fart.AF TOP children}
\text{The children farted.}' (FNE.XGAU735a)

b  \text{mi}=\text{hin}'i, \text{pkaako} \ 'e \ 'o'oko \n\text{AUX.AF.R=3PL run.away.AF TOP children}
\text{The children ran away.}' (FNE.XGAU713a)

(6) tosser, tossed, toss-to

a  \text{mi}=\text{hin}'i, \text{to'sU} \ NTOP \text{pucu} \ NTOP \text{vahU} \ 'e \ 'o'oko \n\text{AUX.AF.R=3PL toss.AF NTOP garbage NTOP river TOP children}
\text{The children tossed garbage to a river.}' (FNE.XGAU943a)

b  \text{i}=\text{hin}'i, \text{to's-eni} \ NTOP \text{vahU} \ NTOP \text{ta} \ 'o'oko \ 'o \text{pucu}
\text{AUX.NAF.R=3PL toss-RF NTOP river NTOP children TOP garbage}
\text{The children tossed the garbage to a river.}' (FNE.XGAU943b)

c  \text{i}=\text{hin}'i, \text{to's-i} \ NTOP \text{pucu} \ NTOP \text{ta} \ 'o'oko \ 'o \text{vahU}
\text{AUX.NAF.R=3PL toss-LF NTOP garbage NTOP children TOP river}
\text{The children tossed garbage to the river.}' (FNE.XGAU943c)

In the following sections I characterize the four grammatical roles in detail, focusing on the linking patterns and the motivating factors that associate the four roles with verb-specific participants. Before introducing the semantic factors that link a particular type of event participant to a particular grammatical role, I argue that the
notion of relevance underlies these semantic factors for each of the four grammatical roles.

5.3 Participant Roles, Grammatical Roles, and The Notion of Relevance

The present study argues that the four grammatical roles ACTOR, PATIENT, REFERENCE, and LOCATION can be characterized as entities of primary relevance, secondary relevance, tertiary relevance, and quaternary relevance, respectively. By 'relevance' I refer to the contribution of an entity to the successful attainment of an event. Of the four roles, the ACTOR is of primary relevance to the described event in the sense that it is the participant around which the event unfolds. None of the other three roles is as critically relevant as the ACTOR due to the lesser degree of contribution they make to the successful attainment of the event (see the following paragraphs for more details). Additionally, the characterization of the three NON-ACTOR roles as numerically ranked does not suggest an implicational hierarchy. That is, the existence of a tertiary-relevance role does not entail the existence of a secondary-relevance role, nor does the existence of a quaternary-relevance role entail the existence of a secondary-relevance and a tertiary-relevance role.

The attempt to characterize grammatical roles using order-suggestive labels is not new; both Tesnière (1953; 1959) and proponents of Relational Grammar, as seen in the two volumes edited by Perlmutter (1983; 1984), adopt labels which suggest ranking differences between grammatical roles. Tesnière divided actants required by a verb as 'prime actant' (roughly 'subject'), 'second actant' (roughly 'object'), and 'tier actant'
Proponents of Relational Grammar refer to core grammatical relations as '1' (subject), '2' (object), and '3' (indirect object). To characterize grammatical roles using order-subjective labels therefore is not entirely devoid of any theoretical basis.

Prior to the present study, the idea that the notion of relevance is critical to the pattern of argument realization was proposed in Shibatani (1994) for a series of constructions ranging from possessor raising, ethical dative, adversative passive, and topic construction. Shibatani (1994:465) argues that these constructions share the characteristic of introducing an argument outside of the case frame of the verb, as found in the English expressions *Dave hit Mary's head/Dave hit Mary on the head*. According to him (1994:468), the occurrence of this 'extra' element (his 'extra-thematic argument') is motivated and constrained by the notion of constitutive relevance, i.e., the involvement of a particular entity in the predicated event. The more relevant an entity is to the described scene, the easier it is to be integrated linguistically. Shibatani (2006) later extends the notion of constitutive relevance to all entities that may be involved in the evolutionary course of an action, from the way it arises, through the process it develops, to the manner it terminates. Of the entities that may participate in the evolutionary course of an action, agent and patient are of quintessential constitutive relevance to a transitive event type, in the sense that without their involvement, the predicated event will not be obtained (2006:256). What is critical about (constitutive) relevance is that, according to Shibatani, it correlates with syntactic prominence. A participant of high constitutive relevance to a particular event is accorded higher syntactic prominence (usually embodied as a core argument), whereas a participant with lower constitutive relevance is assigned lower syntactic
prominence (usually realized as a peripheral constituent).

Aside from constitutive relevance, Shibatani (2006) proposes that the notion of relevance also encompasses discourse relevance. While constitutive relevance is concerned with the involvement of an entity in the evolutionary course of an action, discourse relevance is concerned with both the information value of an entity to the understanding of an event and the relation that the entity has to speech act participants (speakers and hearers). There is a natural interest for people to talk about event participants that are familiar to them and to identify with these familiar participants in the sense of sharing a point of view. In most cases, a participant of high discourse relevance is also of high constitutive relevance because people are inclined to talk about what they do and what happens around them.4

In what follows, I characterize the correspondence of the four grammatical roles and the groupings of participant roles using the notion of constitutive relevance; attention is given to the factors controlling the extent of relevance.

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4 Shibatani’s (1994; 2006) notion of relevance is independent of Kuno’s (1976) notion of empathy. Kuno’s work deals with speaker identification with a particular event participant and its grammatical correlates in terms of argument realization. The event participant that the speaker shares a point of view with is often coded as a core argument as opposed to being encoded as an oblique nominal. To a certain extent, Kuno’s work corresponds to what Shibatani (2006) calls discourse relevance. However, Kuno’s work is irrelevant to Shibatani’s (1994; 2006) constitutive relevance, which is concerned with the arguments that can/must occur for a predicated event to be obtained. It is the constitutive relevance that is directly relevant for the description of the four grammatical roles in Tsou.
5.3.1 ACTOR

It was mentioned in Section 5.2 that, morphosyntactically, the ACTOR role is referenced by the pronominal clitic on the auxiliary. Additionally, when the ACTOR is selected as the TOPIC, it also triggers the occurrence of a particular affix among a set of seven on the verb, jointly referred to as AF affixes: mo-, mU-, mu-, m-, b-, -m-, and a zero morpheme ø (see Section 3.4.2 for details). The choice of AF affixes is lexically determined and unpredictable.

The Tsou ACTOR is a category broader than what is typically treated as the agent in English. In Section 4.7 I mentioned that the Tsou ACTOR subsumes a wide variety of event participants and correlates with a set of semantic properties including force initiation, volitionality, sentience, and even a change of state. In examples (7) and (8) below, for instance, the Tsou ACTOR is linked to event participants that exert force. However, the exerted force does not always cause a change of state in another entity. The force tendency exerted in running and jumping in (8) is mainly manifest in the ACTOR's volitional participation in the depicted event.

(7) cutter and putter

a mosø=øi nana t;m>oycu no emucu no hangU òo yuozomU=to
AUX.AF.R=3SG HEARSA Y <AF>cut NTOP hand NTOP enemy TOP warrior=lPL.
'Our warrior was said to cut off an arm of the enemy.' (cutter=ACTOR; FNB.XTRC0103e)

5 The AF affix ø will not be listed as a morpheme attached to a stem in the following examples because there is no way we can ascertain the nature of ø as a prefix, a suffix, or an infix.
b mo=∅₁ mo-si to emi ta pangka 'o amo₁
AUX.AF.R=3SG AF-put NTOP wine NTOP table TOP father
‘Father put wine on the table.’ (putter=ACTOR; Zeitoun 2005:266)

(8) volitional participants

a mo=∅₁ mayahe ho mayUcU 'o pasuya₁
AUX.AF.R=3SG run.fast.AF and jump.far.AF TOP Pasuya
‘Pasuya ran fast and jumped far.’ (FND.DCV111)

b mo=∅₁ n’a m-eobango to thokeainU 'o kensacu₁
AUX.AF.R=3SG=PROG AF-chase NTOP thief TOP police
‘The policeman was chasing thieves.’ (FND.DCV213)

Even though the Tsou ACTOR is often associated with the properties of force exertion and volitionality, the two properties do not constitute necessary and sufficient conditions for the ACTOR. The Tsou ACTOR is also associated with sentient participants that are inactively involved in an event, such as the distressed leader in (9a), the fearful child in (9b), and the seeing policeman in (9c). These event participants profile a sentient entity possessing a particular affective or cognitive state in response to his or her current environment.

(9) sentient participants

a mi=cu nana nacʔo na nia peongsí no takupueanU
AUX.AF.R=PERF HEARSAY distress.AF TOP ancient leader NTOP TakupueanU
‘The ancient leader of TakupueanU was distressed.’ (Tung1-57:005)

b mi=ta₁ smoyo to fkoi 'e oko₁
AUX.AF.R=3SG fear.AF NTOP snake TOP child
‘The child is afraid of snakes.’ (FNC.XFPT231a)
In still other cases, the *actor* may simply denote an entity to which a state applies. The state could refer to an inherent property, as in (10a), a transitory property, as in (10b), or a process that the entity undergoes, as in (10c).

(10) non-agentive participants

a  

\[ \text{mo meosi 'o pangka} \]

\text{AUX.AF.R big.AF TOP table}

\text{‘The table is big.’ (FNA.XSSE112)}

b  

\[ \text{mo ca'i 'o pangka} \]

\text{AUX.AF.R dirty.AF TOP table}

\text{‘The table is dirty.’ (FNC.XFPT103)}

c  

\[ \text{mo na'no congo 'o t'ango=si} \]

\text{AUX.AF.R very hurt.AF TOP leg=3SG}

\text{‘His leg hurt very much.’ (FNC.XFPT104)}

The above examples indicate that the Tsou *actor* is a grouping of what Dixon (1979) and Comrie (1978) refer to as ‘S’ and ‘A’, admitting both the sole argument of an intransitive predicate and the agentive argument of a transitive predicate. Questions then emerge as to how the convergence of S and A can be consistently characterized in discrete semantic terms. I have shown in the above that neither force exertion nor volitionality adequately and exhaustively defines the linking of the *actor* and the various event-specific participants. The linking problem is even more apparent when non-agentive participants, such as the hurting leg in (10c), are aligned with the *actor*. In the hurting event, the leg is involuntarily involved in a state of change, a feature
that is typically associated with patients. The convergence of agentive properties (i.e., force exertion and volitionality), semi-agentive properties (sentience), and even patientive properties (undergoing a state of change) renders the actor less like a coherent semantic category at first glance, giving rise to the idea that the Tsou actor is but a category of generalization across several semantic categories.

The present study argues that the notion of primary relevance provides a semantic basis for linking the actor and various event-specific participants. The actor is an entity around which an event unfolds, or, in Schachter's (1977:291) term, the protagonist of an event. It is of primary relevance to the depicted event because the initiation of the event is contingent upon the actor's existence. Without the involvement of the actor, the predicated event will neither start nor be successfully completed. For instance, for a cutting event to successfully occur, there must exist a participant exerting its force and initiating the cutting act (this is less true for the affected participants, see Section 5.3.2 on patient). For events that involve a cognitive or affective response to the environment around, such as knowing and frightening, the cognitive response is dependent on the existence of a sentient actor. A snake will not be frightening if not perceived by a sentient entity. Sentient entities therefore are also of primary relevance to the attainment of the predicated event. For events that

\[\text{6 A reader commented on the notion of primary relevance as being stipulative. In response to this comment, I would like to point out that the actor's primary relevance to the predicated event is warranted by its presupposed prior existence. For instance, the occurrence/non-occurrence of digging a hole is dependent on the prior existence of the actor who digs, but such dependence and the prior existence is not true of the hole (see example (12)). Additionally, the primary relevance of the actor is also reflected in referential prominence—actor, according to S. Huang's (2002) study, is the most topical element in a Tsou clause (even when it is not selected for topic marking).}\]
manifest a particular state or process, such as the leg that hurts, the existence of the leg must precede the event of feeling hurt before this event can be said to successfully occur. The notion of primary relevance thus picks out an agentive participant as the actor in an event involving force exertion, as in (11a), but a non-agentive participant in an event that manifests a property or a process undergone, as in (11b).

\[ (11) \]
\[ a \text{ mo} \text{=} \text{o} \quad \text{skoftUngU} \text{ to} \quad \text{teesi} \quad \text{'o} \quad \text{oko} \]
\[ \text{AUX.AF.R=3SG} \quad \text{cut.AF} \quad \text{NTOP} \quad \text{rope} \quad \text{TOP} \quad \text{child} \]
\[ '\text{The child cut off a rope.}' \quad \text{(agentive} \text{ actor; FNB.XTRC0113)} \]

\[ b \text{ mo} \text{=} \text{o} \quad \text{ekosU} \quad \text{'o} \quad \text{oko} \quad \text{ho} \quad \text{mo} \text{=} \text{o} \quad \text{coeconU} \text{ ta} \quad \text{colan} \]
\[ \text{AUX.AF.R=3SG} \quad \text{trip.AF} \quad \text{TOP} \quad \text{child} \quad \text{when} \quad \text{AUX.AF.R=3SG} \quad \text{walk.AF} \quad \text{NTOP} \quad \text{corridor} \]
\[ '\text{The child tripped when he walked along the corridor.}' \quad \text{(patientive} \text{ actor; FNE.XNG0719)} \]

5.3.2 PATIENT

The patient role in Tsou is morphosyntactically indicated by the PF suffix -a on the verb when the nominal assigned this grammatical role is selected as the topic. Semantically, the patient is the entity that contributes to the depicted event in alliance with the actor. However, the patient's contribution to the predicated event is arguably not as critical as the actor, as shown in the events of pit digging and story telling in (12) and (13), respectively. While the occurrence/non-occurrence of pit digging and story telling

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\[ ^7 \text{The primary relevance of the actor can be seen in its supreme status in terms of topicality. The actor is always the most topical element among the set of participants involved in an event. See Section 5.5 for details. A reader was inquiring for supporting data from intonation patterns. The present study did not collect nor analyze data along this direction and therefore is unable to address this issue.} \]
is contingent upon the (prior) existence of the digger and the story-telling policeman (the ACTOR), the existence of the dug hole and the told story (the PATIENT) is instead dependent on the acts of digging and story telling.

(12) \textit{te=c?u pae-a o pueueua}
\begin{align*}
\text{AUX.IRR=PERF dig-PF TOP pit} \\
\text{‘(One) will dig a pit.’ (pit=PATIENT;Tung1-12:003)}
\end{align*}

(13) \textit{i=s?i eUsvUt-a to kensacu, o h‘oehangva to nivnu}
\begin{align*}
\text{AUX.NAF.R=3SG tell-PF NTOP police TOP story NTOP Nivnu} \\
\text{‘The policeman told the story of Nivnu (a Tsou spirit).’ (story=PATIENT; FNE.XNG0861)}
\end{align*}

The secondary relevance of the PATIENT profiles the end state of an event, which is related to but not fully identical with the notion of affectedness. Even though the PATIENT is often linked to event participants that manifest an overt change of state induced by the ACTOR, as shown in (14), examples in (15) indicate that the Tsou PATIENT is more than an affected participant. The scolded children in (14c) and the reached destination in (15) are clearly not physically affected, even though they might be conceptualized as being affected (e.g., the verbal reproach imposed upon scolded children is likely to affect their subsequent behavior; a site is likely to undergo a change of state after being visited). However, if the notion of secondary relevance and the profiling of an end state are adopted, the convergence of the told story, the killed warrior, the scolded children, and the reached endpoint is understandable because they share the commonality of profiling what the end state of an event is like, if the event does occur. The notion of secondary relevance provides a unifying semantic basis for the above participants; in this way the notion of affectedness need not be stretched laboriously.
affected participants

a) os='o skoftUng-a 'o teesi
   AUX.NAF.R=1SG cut-PF TOP rope
   'I cut the rope.' (FNB.XTRC0113b)

b) i=si=cu nana ausk-a opcoz-a na nia yuozomU
   AUX.NAF.R=3SG=PERF HEARSAY in.turn-PF kill-PF TOP ancient warrior
   no taibueanU
   NTOP TaibueanU
   'He in turn killed the ancient warrior of TaibueanU.' (Tung1-55:013)

c) os='o koic-a 'o 'o'oko
   AUX.NAF.R=1SG scold-PF TOP children
   'I scolded the children.' (FNC.DTXB162b)

reached destination

a) i=si yUmeUm-a 'o teova
   AUX.NAF.R=3SG enter-PF TOP hut
   'He entered the hut.' (FNA.XSSE123)

b) ho moh=cu feyna, o=he=cu us-a
   when AUX.AF.R=PERF evening.AF, AUX.NAF.R.=3PL=PERF go-PF
   na mo m-imo ho acUh-a opcoz-a
   TOP AUX.AF.R AF-drink and all-PF kill-PF
   'When the evening came, they went to the drinking (people) and killed (them) all.'
   (Tung1-40:008)

The notion of secondary relevance also accounts for why certain patiientive participants are aligned with the actor instead of the patient in certain situations, as shown in the various encodings of the broken cup in (16). The notion of secondary relevance argues that the alignment depends on how the breaking event is construed.
The broken cup in (16) is aligned with the actor when the breaking event is viewed as a process undergone by the cup alone. That is, the event is construed as unfolding around the cup; the occurrence and non-occurrence of breaking is contingent upon the existence of the cup. The broken cup becomes the primarily relevant participant under such construal. However, if the event of breaking is viewed as a transmission of force and an agentive participant is also present in the construed scene aside from the broken cup, the agentive participant as the force initiator assumes the actor role; the broken cup is now of secondary relevance to the breaking event and is accordingly linked to the patient role.

(16)

a mo afoyU 'o kopu
AUX.AF.R break.AF TOP cup
‘The cup broke.’ (FNE.XNO871a)

b mi='o afoyU to kopu
AUX.AF.R=1SG break.AF NTOP cup
‘I broke a cup.’ (FNE.XNO871b)

c i='o afoy-a 'o kopu
AUX.NAF.R=1SG break-PF TOP cup
‘I broke the cup.’ (FNE.XNO871c)

5.3.3 Reference

The reference role is morphosyntactically indicated by the suffix -neni on the predicate when the nominal bearing this grammatical role is selected as the topic. The Tsou literature typically takes this particular suffixation (referred to as the RF marking) as a
surface encoding subsuming a wide variety of thematic roles, among which three of the most mentioned are beneficiary, instrument, and theme (see Section 3.6 for the Tsou literature). The present study argues that the reference role can be given a semantic basis using the notion of tertiary relevance, usually linked to event participants that neither manifest the closing of an event nor undergo any overt change of state.

Event participants linked to the reference role typically are not subject to the impact of intense force. As a consequence, these event participants usually undergo a less obvious change of state (e.g., shape or life status) and are considered less affected in the event, as shown by the given dog, the attached photo, and the pressed head in (17a)-(17c) below.

(17) less affectedness

(a) \text{os}=\text{'o} \quad \text{fa-eni} \quad \text{to} \quad \text{kensacu} \quad \text{'o} \quad \text{av'u}
AUX.NAF.R=1SG give-RF NTOP police TOP dog
'I gave the dog to the policeman.' (theme-like reference; FNC.DJUD063b)

(b) \text{os}=\text{'o} \quad \text{topc-eni} \quad \text{to} \quad \text{tonghivia} \quad \text{'o} \quad \text{ongko}
AUX.NAF.R=1SG attach-RF NTOP wall TOP photo
'I attached the photo onto the wall.' (theme-like reference; FNC.XFPT323b)

(c) \text{os}=\text{'o} \quad \text{zotUkc-eni} \quad \text{to} \quad \text{tonghivia} \quad \text{'e} \quad \text{fnguu='u}
AUX.NAF.R=1SG press-RF NTOP wall TOP head=1SG
'I pressed my head against the wall.' (theme-like reference; FNC.XFPT324b)

The less affectedness of the reference role is also manifest in its association with entities that are auxiliary to the execution of an event. These event participants have the potential of assisting the initiation or accomplishment of an event, but their participation is not deterministic to the attainment of the event, unlike the actor and
The assistance/enabling may be conducted by inanimate or animate participants. When the assisting participant is inanimate, mostly it denotes a physical object lending its force to a force initiator and jointly causing the intended change, as shown in the hit-with stick, the tie-with rope, and the stab-with knife in (18a), (18b), and (18c), respectively. If the assisting participant is animate, it/he/she mostly denotes an entity for whose benefit an event is initiated and attained. For instance, the act of clothes washing in (19a) is enabled for Naau's benefit. Although Naau is not physically intermediate between the washer and the washed clothes, her existence enables the possible contact between the two and leads to the bringing about of the washing event. Example (19b) provides another example where the reference enables the attainment of singing.

(18) physical assistance/enabling

a. i=si eobak-neni no ceoa to ak'i na s'ofU=si
   AUX.NAF.R=3SG hit-RF NTOP ground NTOP grandpa TOP stick=3SG
   'Grandfather struck the ground with his stick.' (FNE.XNGO931b)

b. os='o fut-neni to mucu=si 'o teesi
   AUX.NAF.R=1SG tie-RF NTOP hand=3SG TOP rope
   'I tied his hands with the rope.' (FNC.XFPT325c)

c. i=si seU'c-neni to fuzu to yuozomu si poyave
   AUX.NAF.R=3SG stab-RF NTOP pig NTOP warrior TOP knife
   'The warrior stabbed a pig with the knife.' (FNC.XFPT341c)

(19) non-physical assistance/enabling

a. os='o tusk-neni no yUsU 'o naau
   AUX.NAF.R=1SG wash-RF NTOP clothes TOP Naau
   'I washed clothes for Naau.' (FNB.XTRC0407c)
b os='o pasunaenv-neni to yayongo 'o naau
AUX.NAF.R=1SG sing-RF NTOP catch.crab TOP Naau
'I sang the song ‘catch crabs’ for Naau.’ (FNE.XNGO720c)

It was mentioned in Sections 3.6, 4.2, and 4.4 that conventional thematic roles such as beneficiary are not effective for uncovering the pattern of the RF category and the nature of the REFERENCE role. This is because not every constructable beneficiary-like or instrument-like element can be aligned with the REFERENCE role and be integrated into a Tsou clause. A ‘beneficiary’ person can be integrated into a pheasant-catching event but not a remembering event, as in (20). An ‘instrument’ drug can be integrated into a poisoning act; but an ‘instrument’ saw cannot be integrated into a hurting act, as in (21).

(20) REFERENCE and beneficiary-like elements

a i=sij tUpUt-a to pasuya, 'o toebosU to naau
AUX.NAF.R=3SG catch-PF NTOP Pasuya TOP pheasant NTOP Naau
‘Pasuya caught the pheasant for Naau.’ (Construction (3.PF); FNE.XNGO932b)
Lit. ‘Pasuya caught Naau’s pheasant.’

b i=sij tUpUt-neni to toebosU to pasuya, 'o naau
AUX.NAF.R=3SG catch-RF NTOP pheasant NTOP Pasuya TOP Naau
‘Pasuya caught a pheasant for Naau.’ (Construction (3.RF); FNE.XNGO932c)

c *os='o talU-a ta naau 'o ongko
AUX.NAF.R=1SG remember-RF NTOP Naau TOP name
intended ‘I remembered the name for Naau.’ (FNC.XFPT247c)

d *os='o talU-eni ta yayongo 'o naau
AUX.NAF.R=1SG remember-RF NTOP catch.crab TOP Naau
intended ‘I remembered the song ‘catch crabs’ for Naau.’ (FNC.XFPT247e)
In response to the limited effectiveness of conventional thematic roles, the present study argues that the reference role should be characterized by the notion of tertiary relevance. The more relevant an ancillary participant is to the constitution of an event, the easier it is to be integrated into a Tsou clause as the reference role, either as a non-topic or as a topic. For instance, catching/hunting animals for others’ benefit is a common event in Tsou; a beneficiary-like participant therefore contributes to the attainment of hunting/catching. It is, therefore, expected that its information value would be clearly specified. However, remembering a name for others’ benefit is less conventional, and a clearly individuated beneficiary is not necessary for the attainment of a remembering act. The difficulty in integrating a beneficiary semantically into a remembering event is reflected in the difficulty of associating this remember-for entity with the reference role. The notion of tertiary relevance provides a motivating account of the behavioral differences among different types of ancillary participants.

In employing the notion of relevance for characterizing the reference role, the present study is careful not to assume that this notion is given equal weight across
languages, for languages may differ in the extent to which the notion of relevance can be stretched. For example, while an instrument-like entity is felicitously integrated into a means-specific event but not so in the case of a means-unspecified event in Tsou (see the contrast between poisoning and killing in (21a) and (21c)), English has no problems integrating an instrument-like entity into both the killing action and the poisoning action, as in *The child killed a dog with the saw* and *The child poisoned a dog with the drugs*. The comparison of Tsou and English reveals that patterns of argument realization are essentially language-specific. Even though categories across languages may appear to be controlled by similar notions (e.g., relevance), the range of participants which conform may vary from language to language.

5.3.4 LOCATION

The *LOCATION* role is morphosyntactically indicated by the occurrence of the LF suffix -i on the verb when the nominal bearing this role is selected as the *TOPIC*. The present study characterizes the *LOCATION* role as an entity that is of quaternary relevance, not directly related to the intended change of state but still important to the attainment of the predicated event.\(^8\) As will be shown below, quaternary relevance provides an

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\(^8\) A reader inquired about the relevance of the *LOCATION* role to Bohnemeyer's (Bohnemeyer and Stolz 2006; Bohnemeyer 2007) notion of *PATH*, which is concerned with the encoding patterns of path information in a motion event (specifically, whether it is encoded on the motion verb or outside the verb, in the ground phrase or outside the ground phrase). In Tsou, a typical motion event indicates path information on the verb. The *LOCATION* role and its corresponding nominal do not carry any overt marking of *PATH*. 
adequate account of why certain space-related entities are not aligned with the location role.

The Tsou literature (cf. Section 3.6) typically treats the LF suffixation as a surface encoding generalizing across 'true' and 'non-true' locational elements (such as the perceived stimuli in (23a) and (23b)). When the LF suffixation encodes a 'true' locational element in an event that marks an entity's tendency to move or rest in space, the location role designates a particular portion of space that orients the moving/resting entity, as in (22a) and (22b). In certain cases, the motion is metaphorical, extending to the domain of ownership transfer. Example (22c) illustrates the association of a location role with a child who received a book.

(22) motion and location

a  $i=s_{t_{i}}$  to's-i to  pucu  to  naau,  'o  vahU
AUX.NAF.R=3SG toss-LF NTOP garbage NTOP Naau TOP stream
'Naau tossed garbage into the stream.' (FND.XPRO407c)

b  $i=s_{t_{i}}$  yusuhng-i to  naau,  'o  ceoa
AUX.NAF.R=3SG sit-LF NTOP Naau TOP ground
'Naau sat on the floor.' (FNC.XFPT411d)

c  $i=s_{t_{i}}$  fi-i to  tposU  to  lema'cohio,  'o  oko
AUX.NAF.R=3SG give-LF NTOP book NTOP teacher TOP child
'The teacher gave the child a book.' (FNC.DJUD063)

When the LF suffixation encodes a 'non-true' locational element, the location role is associated with entities which a sentient participant (the actor) directs his/her attention to and derives cognitive/emotive responses from (see H. Huang & S. Huang,
Example (23a) demonstrates the association of a \textit{location} role with a seen snake; (23b) illustrates the association of a \textit{location} with a laugh-at policeman.

(23) cognition and emotion

\begin{verbatim}
a ne os='o ait-i 'o fkoi, mi='o mukeici
when AUX.NAF.R=1SG see-LF TOP snake, AUX.AF.R=1SG scream.AF
'When I saw the snake, I screamed.' (FNC.DJUD056)
\end{verbatim}

\begin{verbatim}
b i=hin'i, cocv-i ta haahocngu, 'o mo
AUX.NAF.R=3PL laugh-LF NTOP crowd.of.people TOP AUX.AF.R
nongonongo ci kensacu
stupid.AF REL police
'The people laughed at the stupid policeman.' (FNE.XNGO757b)
\end{verbatim}

However, splitting the \textit{location} role into 'true' and 'non-true' locational elements does not provide an adequate account of the pattern of argument realization. First, there is no convincing formal evidence that such a distinction enters into significant linguistic generalizations. In the events of tossing and giving in (22a) and (22c) above, a notional location and a notional recipient are treated alike in both nominal and focus markings. The two participants are both selected as the \textit{topic}, triggering the occurrence of the -\textit{i} suffix on the verb. It is therefore unclear to what extent the distinction

\footnote{It is not uncommon for events of cognition and perception to be construed as motion in space, where a sentient participant projects his attention to the designated target. Doesschate (1962) and Winer et al. (2002) show that the projection model was widely assumed in ancient Greek schools and is still erroneously held among non-scientists as the correct model of visual perception. It is important to note that visual perception does not work in the projection model but involves receiving and assimilating information reaching the back of the eyes.}
between 'true' and 'non-true' locations is critical for the encoding of the toss-to entity and the give-to entity. Second, the true/non-true distinction cannot explain why certain space-related nominals can be selected as the LOCATION role but others cannot. As mentioned in Section 4.2, for events such as farting and eating, the site where the two events take place is never linked to the LOCATION role. It remains invariably as a NON-TOPIC adjunct, as shown in (24) and (25) below.

(24) 'non-critical' location: farting

a  mo=∅  miebocU
AUX.AF.R=3SG  fart.AF
    'He farted.' (FNE.XGAU734a)

b  mo=∅  miebocU ne  oyonapei'i
AUX.AF.R=3SG  fart.AF  NTOP  kitchen
    'He farted in the kitchen.' ('non-critical' location; FNE.XGAU734b)

c  *i=si  mieboc-i  'o  oyonapei'i
AUX.NAF.R=3SG  fart-LF  TOP  kitchen
    intended 'He farted in the kitchen.' (FNE.XGAU734c)

(25) 'non-critical' location: eating

a  i=si  an-a  'o  cnUmU
AUX.NAF.R=3SG  eat-PF  NTOP  banana
    'He ate the banana.' (FNB.XNRC241a)

b  i=si  an-a  'o  cnUmU ne  coca
AUX.NAF.R=3SG  eat-PF  NTOP  banana  NTOP  yard
    'He ate the banana in the yard.' (FNB.XNRC241b)

c  *i=si  an-i  to  cnUmU  'o  coca
AUX.NAF.R=3SG  eat-LF  NTOP  banana  TOP  yard
    intended 'He ate bananas in the yard.' (FNB.XNRC241c)
In response to examples in (24) and (25), I argue that the location role should be characterized as an entity of quaternary relevance, which is less-affected or non-effected by the predicated action but still provides the reference frame for evaluating the occurrence/non-occurrence of the event. The location role does not manifest an overt change of state in response to the predicated event; instead, it specifies the expected condition of an event if the event does occur. For instance, the events of sitting, tossing, and giving in (22) can only be said to successfully occur when evaluated relative to the sit-at entity, the toss-to entity, and the give-to entity, respectively. In a similar manner, the see-er’s visual perception in (23a) is only successfully accomplished when his/her eyesight (metaphorically) reaches the seen snake. The specific existence of these locational or para-locational entities therefore is of information value for the speaker to frame the event and for the hearer to perceive the event. The critical relevance of these participants to the constitution of the predicated events is reflected linguistically in their ability to be selected as the location role and to be aligned with the topic relation.

Critical constitutive relevance is less true for locational entities involved in events such as eating and farting, and the lesser degree of relevance has grammatical correlates in argument realization. For the event of eating, for example, the eat-at site marks the larger setting concomitant with the eating act but does not contribute to the successful attainment of the eating;\textsuperscript{10} the occurrence/non-occurrence of an eating act

\textsuperscript{10} The distinction between “critical” and “non-critical” locations corresponds roughly to Andrews’ (1985) inner-locative (plus directional) and outer-locative. However, in associating Andrews’ ideas with the Tsou location role, I do not claim that the distinction proposed by Andrews is fully compatible with the distinction made in Tsou. I emphasize again that by promoting language-specificity, the present study
is not defined relative to a clearly-specified eat-at site. The lesser degree of relevance is reflected in the inability of the eat-at site to be selected for \textsc{topic} marking and to be associated with the \textsc{location} role (in simplex predicate constructions). Example (25c) illustrates that the putative LF form *an-\textit{i}, intended for the alignment of the eat-at site with a \textsc{location} \textsc{topic}, is not acceptable. The only way to have the "non-critical" location of 'eat' aligned with the \textsc{topic} relation is to incorporate the predicate \textit{yon-i} 'stay, LF' and to form a serial verb construction as:

\begin{verbatim}
(26)\quad i=si \quad yon-i \quad b-onU \quad o \quad oyonapei'i
\end{verbatim}

\textsc{aux.functional} R=3SG stay-LF AF-eat TOP kitchen

'He ate in the kitchen.' (FNA.XSSE301)

I will discuss in Chapter 7 how verb serialization aligns the locational participants of eating and farting with the \textsc{topic} relation and thus the \textsc{location} role.

To summarize, the degree of constitutive relevance motivates the ability/inability of a location-related participant to be selected for \textsc{topic} marking and be associated with the \textsc{location} role. At the level of simplex predicates, only critically relevant locations can be associated with the \textsc{location} role. Non-critical locations cannot be aligned with the \textsc{location} role; they remain as \textsc{non-topic} nominals and are freely attachable to most predication (see Section 4.2 and Figure 4.1). A question then arises regarding the unrestricted distribution of \textsc{non-topic} locations: why do \textsc{non-topic} locations have unrestricted distribution but instrument and beneficiary-like entities do not? The present study argues that the behavioral difference between different types of event does not oppose any cross-linguistic comparison. What the present study opposes is assuming the categories derived from other languages and ignoring the 'non-fitting' data in the surveyed language.
participants can still be accounted for by looking into the degree of constitutive relevance. Most predication entails that some event occurs at some place at some time, even though the place and time may not be critical to the attainment of the event,\textsuperscript{11} as argued above. However, such entailment is less true for beneficiary-like and instrument-like entities, because not every event presupposes assistance or is intended for the benefit of others. The occurrence of these two types of participants is therefore not always compatible with the depicted event, as seen in the difficulty to associate a beneficiary entity with a remembering act in Section 5.3.3.

Table 5-1 below illustrates the association of the four grammatical roles, the four types of constitutive relevance, and the relevant semantic attributes.\textsuperscript{12} The association applies across constructions and represents the cross-construction generalization that needs to be captured. For instance, the semantic attribute 'agentive' contributes to the \textsc{actor} role across both Construction(V=2.AF) in (27a) and Construction(V=2.PF) in (27b). In both constructions, the 'agentive' property picks out the catcher participant and associates the catcher with the \textsc{acto}r. It is not the case that the 'agentive' property points to the \textsc{actor} in one focus construction but to the \textsc{patient} in another construction,

\textsuperscript{11} But note that time and location information is critical to the truth value of an event.

\textsuperscript{12} A reader questioned the relevance of Table 5-1 to the Construction Grammar approach adopted earlier in this dissertation. I would like to point out that the association of event-specific participant roles and generalized argument roles/thematic roles is theory-internal to Construction Grammar. When arguing that valency and alignment should be characterized on a construction-specific basis, Construction Grammar does not abandon the assumption that the association of event-specific participants with argument roles is systematic across constructions. Goldberg (1995:50), for instance, leaves the linking of \texttt{kicker-Agent} to what she terms 'general categorization principles', even though she does not address the exact linking mechanism. See Section 4.4 for details.
as can be seen in the failed attempt to associate the butchered chicken with the AF marker -m- in (27c).

<table>
<thead>
<tr>
<th>Roles</th>
<th>Relevance</th>
<th>Semantic Properties</th>
<th>Event Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTOR</td>
<td>primary</td>
<td>agentive</td>
<td>t&lt;m&gt;øyCU ‘cutter’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>volitional</td>
<td>mayahe ‘runner’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sentient</td>
<td>b-aito ‘see-er’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>being in a state</td>
<td>meois ‘big’</td>
</tr>
<tr>
<td>PATIENT</td>
<td>secondary</td>
<td>overt change of state</td>
<td>opcoz-a ‘killed’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>created</td>
<td>p’ae-a ‘dug’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reached destination</td>
<td>yUmeUm-a ‘entered’</td>
</tr>
<tr>
<td>REFERENCE</td>
<td>tertiary</td>
<td>transfer</td>
<td>to’s-eni ‘tossed’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>animate assistance</td>
<td>chu-eni ‘butcher-for’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inanimate assistance</td>
<td>otfo-neni ‘poison-with’</td>
</tr>
<tr>
<td>LOCATION</td>
<td>quaternary</td>
<td>location-related</td>
<td>yon-i ‘stay-at’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cognition</td>
<td>ait-i ‘seen’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>affection</td>
<td>cocv-i ‘laugh-at’</td>
</tr>
</tbody>
</table>

Table 5-1 Alignment of grammatical roles with event participants: A sample

(27)

a  
\[a \ t e \ c<m>øyU_i \ t o \ t e o u a \ 'o \ i o _i, \ h o h u c m a\]
AUX.IRR <AF>-butcher NTOP chicken TOP mother tomorrow
‘Mom will butcher a chicken tomorrow.’ (Construction (2.AF), butcher=ACTOR, butchered=PATIENT; FNE.XNG0812a)

b  
\[b \ i=s i \ \ t h a u-a_i, \ t o \ i o \ 'o \ t e o u a_i,\]
AUX.NAF.R=3SG butcher-PF NTOP mother TOP chicken
‘Mom butchered the chicken.’ (Construction (2.PF), butcher=ACTOR, butchered=PATIENT; FNE.XNG0812b)

c  
\[c *n o=0 c<m>øyU_i \ t o \ i o \ 'o \ t e o u a_i,\]
AUX.AF.R=3SG <AF>-butcher NTOP mother TOP chicken
intended 'Mom butchered the chicken.' (butchered=ACTOR, FNE.XNGO871f)

Readers may question whether an attempt to capture cross-construction generalizations conflicts with the emphasis within Construction Grammar on construction-specific properties. I want to emphasize again that the emphasis on construction-specific properties does not mean ignoring generalizations across constructions. If two or more constructions do display recurring commonalities, as in the association of the four grammatical roles with the relevant semantic properties in Table 5-1, these commonalities represent cross-construction generalizations, and Construction Grammar captures them using the inheritance relations between constructions. In Chapter 6 I will illustrate that the association of the ACTOR role with the relevant semantic properties also applies to the poa-causative construction, motivating the alignment of the causer with the ACTOR role.

5.4 Grammatical Relations, Subject, and Syntactic Saliency

5.4.1 The Four Grammatical Roles and TOPIC vs. NON-TOPIC Relations
The four grammatical roles discussed above represent the different types of relations contracted between a nominal and a verb. The need to establish another layer of relations arises when regrouping occurs. Aside from the ACTOR/PATIENT/REFERENCE/LOCATION distinction, nominal marking further groups nominals into two types: TOPIC vs. NON-TOPIC. Of the various nominals that can co-occur in a Tsou clause, one nominal is selected as the TOPIC relation, whereas everything else assumes the NON-TOPIC relation. The TOPIC nominal is treated grammatically different
from all the others: aside from the unique nominal marking it commands, it has the potential of controlling certain syntactic processes. In contrast to the TOPIC nominal, NON-TOPIC nominals, except for the NON-TOPIC ACTOR, lack such grammatical prominence over syntactic processes (see Section 5.4.3 for details).

The four grammatical roles are closely related to the TOPIC and NON-TOPIC relations, but the roles and the relations are grammatical constructs at different levels and should be kept distinct. The four grammatical roles represent the four types of relations contracted between a TOPIC nominal and a verb. Overarching these four roles lies the TOPIC/NON-TOPIC contrast, i.e., the level of generalization that pertains to the entire clause. The TOPIC/NON-TOPIC contrast and the ACTOR/PATIENT/REFERENCE/LOCATION distinction are each associated with a set of syntactic processes/properties. As will be shown in Section 5.4.3, while some syntactic operations make reference to the TOPIC/NON-TOPIC contrast, others make reference to the ACTOR/NON-ACTOR distinction. Still others make reference to both the ACTOR and the TOPIC. The difference in the distribution patterns of these syntactic properties indicates that the TOPIC/NON-TOPIC contrast and the ACTOR/PATIENT/REFERENCE/LOCATION distinction exist at two separate levels.

If both the ACTOR and the TOPIC, when they diverge, are capable of controlling certain syntactic properties, questions then arise as to whether there is a grammatical relation comparable to subject, and if so, which of them is a closer equivalent to the subject relation, typically defined as the grammatical relation that displays the highest degree of accessibility to various syntactic operations (cf. Keenan 1976). However, we must bear in mind that this is not the only approach to subjecthood. I will address these two questions in the following section.
5.4.2 ACTOR, TOPIC, and SUBJECT

Two Approaches to Subjecthood: Keenan (1976) and Dixon (1979)

A brief review on the definitions of subjecthood made in the linguistic literature is necessary before any attempt to identify the subject relation in Tsou. For many years, subject has been taken by both formal and functional linguists to be a universal category that displays the greatest syntactic prominence in a basic clause. Among the methods advanced for subject identification, Keenan (1976) proposes a checklist of encoding and behavioral properties for identifying the NP that displays the maximal subjecthood across languages.\(^{13}\) The checklist approach is adopted by Schachter (1976) for assessing subjecthood in Tagalog and by Shibatani (1988) for Cebuano, among many others. However, both Schachter’s and Shibatani’s studies illustrate the difficulty of applying the checklist approach in Philippine-type languages, for subject properties in these languages are often found distributed between two nominals (see Chapter 2 for details).

The difficulty encountered in Schachter’s and Shibatani’s studies illustrates a problematic assumption of the checklist approach—that subject properties are features of a single unitary category and necessarily cluster around one nominal. This assumption may be true in some languages but less true in others. Schachter (1977) argues that the grammatical properties conventionally employed for assessing

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\(^{13}\) Keenan’s (1976) checklist includes: independent existence, indispensability, autonomous reference, the ability to control reflexive pronouns, the ability to trigger coreferential deletion and pronominalization, the ability to control backward pronominalization, the ability to control switch reference, verb agreement, and the ability to trigger coreference across clause boundaries.
subjecthood can be functionally divided into two sets, referred to as ‘role-related’ and ‘reference-related’, respectively. Comrie (1981:107) states that the prototype of subject represents the intersection of the two categories of agent and topic. Presupposing subject properties as features of a single unitary category therefore runs the risk of conflating categories that may be separate in certain languages, such as the ACTOR and the TOPIC in Tagalog. That is, if we simply conflate all the subject properties without distinction, we may inappropriately blur the division maintained in some languages between different functional categories, which may compete for syntactic prominence and therefore create a dilemma for subject identification based on the concept of maximal syntactic prominence in a single unitary category.

Dixon (1979) provides a different definition of subject without assuming that syntactic prominence necessarily clusters in a single nominal. To Dixon, subject is to be defined by the grouping of S and A; the S+A grouping is always available to grammars but syntactically may not be the most prominent relation. In Dyirbal, for instance, the S+A grouping controls the reference of the imperative addressee but is syntactically inactive to relativization and conjunction reduction (the two processes are controlled by the grouping of S and P instead). The notion of ‘pivot’ is introduced for a category specific to the operation of certain syntactic processes, especially when this category diverges from the S+A grouping. Dyirbal therefore has a subject (the S+A grouping) and

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14 Dixon (Dixon 1979:60,102-107; see also Dixon 1972) introduces the label ‘S’, ‘A’, and ‘O’ for the single argument of an intransitive predicate, the agentive argument of a transitive predicate, and the patientive argument of a transitive predicate, respectively. Dixon (1979:60) sees these labels as ‘syntactic-semantic primitives’ that provide a semantic basis for the definition of grammatical relations such as subject and object. Comrie (1978; 1981:104-123) provides a similar framework using the labels ‘S’, ‘A’, and ‘P’.

a pivot (the S+P grouping), and the pivot is syntactically more prominent than the subject.

**ACTOR, TOPIC, and SUBJECT in Tsou**

Tsou displays a splitting of syntactic properties between the **ACTOR** and the **TOPIC** (when they diverge), constituting a condition in which the Dixonian approach is arguably more adequate for the inquiry of subjecthood than the checklist approach. That is, if we can dissociate the notion of subject from the concept of *maximal grammatical prominence in a unitary category*, we have a better chance to uncover the functional categories at work without blurring the functional divisions. As introduced in Section 5.3.1, the Tsou **ACTOR** is a relational category embracing both S and A. Its existence is attested by auxiliary marking, pronominal marking (see Section 5.2), and a few other syntactic phenomena to be discussed in Section 5.4.3 below. In addition to the **ACTOR**, Tsou has the **TOPIC** relation, which controls a set of syntactic phenomena including but not limited to focus marking and nominal marking (see Section 5.4.3 for syntactic processes that make reference to the **TOPIC** relation). The **TOPIC** may diverge from the **ACTOR**, aligning with any of the three **NON-ACTOR** roles when they are definite and/or referential (see Section 5.5 for details). In the case of Tsou, the **ACTOR** embodies Dixon's characterization of subject as the S+A grouping, whereas the **TOPIC** embodies a pivot-like category specific to the operation of certain morphosyntactic processes. The **ACTOR**/subject may not be syntactically the most prominent relation. However, as long as there are syntactic phenomena sensitive to the **ACTOR** (i.e., the S+A grouping), we must recognize its existence.

Questions then arise regarding the category labels adopted in the present study: if
the Tsou actor is the subject à la Dixon, why not call it 'subject'? Likewise, if the Tsou patient is a category broader than a semantic patient (see Section 5.3.2), why not call it 'object'? The main concern here is to avoid unnecessary implications, especially the improper inference about the core-oblique distinction and the relation-changing mechanisms. To begin with, the use of 'subject' and 'object' implies a system with two core relations, one agent-based and the other patient-based (although the semantic basis may be loose and only partial). All the other grammatical relations, if available, are syntactically oblique. The assignment of the three (or more) grammatical relations can be changed, and the relation-changing mechanisms operate in the pattern that oblique can be advanced to object and object to subject but not oblique directly to subject. However, as will be illustrated below, of the four grammatical roles in Tsou, only the actor is justifiably a core argument. There is no convincing evidence that the patient, when not selected as the topic, is more core-like than the reference and the location. More importantly, the assignment of the actor and the patient cannot be (easily) altered (at the level of simplex predicates), unlike subject and object, which are targets of relation-changing processes. Examples in (28) below show that a patient cannot be changed to an actor, as seen in the pattern of pronominal marking. Examples in (29) indicate that a reference cannot be changed to a patient, as seen in the use of focus marking. The use of 'subject' and 'object' therefore does not properly characterize the Tsou patterns and is therefore intentionally avoided in the present

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15 Schachter and Otanes (1972) also avoid the label 'subject' throughout their description of Tagalog. But note that Schachter and Otanes use 'object' to describe a set of focus forms (their 'object focus') such as ipa-ligo 'bathe with', pag-tiis-an 'endure', abut-in 'reach for', and basag-in 'break' (cf. Schachter and Otanes 1972:293-301).
study in order not to suggest that the Tsou clausal structure is analogous to those of English and others, in which syntax revolves around the grammatical relations of subject and object.

(28) beater vs. beaten

a  \text{mi=hin'i,}  \text{eobako to av'u 'e 'o'oko,}
   \text{AUX.AF.R=3PL beat.AF NTOP dog TOP children}
   'The children beat a dog.' (FNE.XNGO815a)

b  \text{i=hin'i,}  \text{eobak-a ta 'o'oko, 'o av'u}
   \text{AUX.NAF.R=3PL beat-PF NTOP children TOP dog}
   'The children beat the dog.' (FNE.XNGO815b)

c  *\text{i=sij}  \text{eobak-a ta 'o'oko 'o av'u,}
   \text{AUX.NAF.R=3SG beat-PF NTOP children TOP dog}
   intended 'The children beat the dog.' (PATIENT and pronominal marking; FNE.XNGO815c)

(29) cutter vs. cut

a  \text{os='o tyoc-neni,}  \text{to evi 'e noko,}
   \text{AUX.NAF.R=1SG cut-RF NTOP tree TOP saw}
   'I cut a tree with the saw.' (saw=REFERENCE, FNE.XNGO916a)

b  *\text{os='o tyoc-neni-a,}  \text{to evi 'e noko,}
   \text{AUX.NAF.R=1SG cut-RF-PF NTOP tree TOP saw}
   intended 'I cut a tree with the saw.' (saw=PATIENT, FNE.XNGO916b)

c  *\text{os='o tyoc-a,}  \text{to evi 'e noko,}
   \text{AUX.NAF.R=1SG cut-PF NTOP tree TOP saw}
   intended 'I cut a tree with the saw.' (saw=PATIENT, FNE.XNGO916c)
5.4.3 Syntactic Prominence: Core and Oblique

In the preceding sections two layers of representation were recognized for Tsou argument structure: the TOPIC/NON-TOPIC contrast and the ACTOR/PATIENT/REFERENCE/LOCATION distinction. The ACTOR embraces S and A, embodying the subject relation à la Dixon. The ACTOR and the other three grammatical roles are all eligible to be aligned with the TOPIC relation in the appropriate constructions. In this section I examine the degree of grammatical prominence of this ACTOR-subject vis-à-vis other types of arguments. The results of the investigation are important for delineating the core-oblique distinction in Tsou. The diagnosis here is especially important given that in Section 4.2 I re-defined Tsou argumenthood using the omissibility test and semantic constraints.

It was mentioned in Section 5.4.1 that the TOPIC/NON-TOPIC contrast interacts with the ACTOR/PATIENT/REFERENCE/LOCATION distinction in Tsou argument structure. The interaction yields eight nominal categories in total: ACTOR-TOPIC, PATIENT-TOPIC, REFERENCE-TOPIC, LOCATION-TOPIC, NON-TOPIC ACTOR, NON-TOPIC PATIENT, NON-TOPIC REFERENCE, and NON-TOPIC LOCATION. The eight categories will be examined for grammatical prominence using diagnostics listed in Table 5-2, but some of the categories may be lumped together later when they are shown grammatically insignificant. For instance, if relativization is shown to make reference to the TOPIC nominal but does not distinguish among ACTOR-TOPIC, PATIENT-TOPIC, REFERENCE-TOPIC, and LOCATION-TOPIC, we are likely to conclude that only one grammatical relation, i.e., the TOPIC relation, is syntactically recognized by relativization.
Methodology and Indices of Grammatical Prominence

The present study applies eight diagnostics for examining grammatical prominence: control, raising, relativization/nominalization, reflexivization, conjunction reduction, indispensability, pronominal marking on auxiliaries, and the ability to trigger focus marking. These eight diagnostics were given equal weight in the present study. Based on the diagnostic results, an index of grammatical prominence was calculated; this index is displayed in the rightmost column of Table 5-2. The index is the sum of grammatical diagnostics positively satisfied by a proposed grammatical category. Table 5-2 is followed by a discussion of each of the eight diagnostics.

16 I understand that these diagnostics were given different weights by different linguists, as between Anderson (1976:7) and Manning (1996:1-77). Anderson argues that control, raising, reflexivization, and conjunction reduction reflect the 'deep' nature of a language and therefore should be given more weight than morphological characteristics. Manning instead proposes to give more weight to relativization, raising, and coordinate reduction but less weight to control and reflexivization. To avoid giving undue weight to any of the diagnostics, I assign equal weight to the eight diagnostics.
Pronominal Marking on Auxiliaries

In Tsou, auxiliaries attract pronominal clitics. The clitics always reference the ACTOR nominal, including both the ACTOR-TOPIC and the NON-TOPIC ACTOR. Non-ACTOR nominals do not trigger pronominal cliticization, even when they are selected as the TOPIC (cf. Section 3.4 for details).

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17 The property of indispensability is proposed by Keenan (1976:313) as one of the criteria for identifying a basic subject. A non-subject may often be eliminated from a sentence with the result remaining grammatically acceptable (e.g., John hunts lions (for a living); John hunts (for a living)). However, this is usually not true of a subject (e.g., *hunts lions).
Focus Marking

In Tsou, focus marking indexes the grammatical role of the **TOPIC** nominal relative to its governing predicate. **NON-TOPIC** nominals do not trigger the operation of focus marking, even when they bear the **ACTOR** role (cf. Section 3.4).

Indispensability

The **TOPIC** nominal is the indispensable element in the major clause types of Tsou. Following Shibatani (2006:259), indispensability is defined in the sense that every proposition requires an item to be predicated over. This indispensable item is critical to a propositional act because it points out what is being talked about. In Tsou, a proposition manifests the structure of a predicate and an indispensable **TOPIC**, and the **TOPIC** identifies the referent to which the predication pertains. The indispensability of the **TOPIC** nominal is not dependent on any particular grammatical role. When serving as the sole argument in a proposition, the **TOPIC** nominal can bear an **ACTOR** role, as in (30), or no grammatical role at all, as in the equational construction in (31). The copula and the nominal predicate *lema'cohio* ‘teacher’ together identify the entity

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18 This claim applies to equational expressions but excludes existential expressions, which do not require a **TOPIC** nominal. The absence of **TOPIC** nominals in example (i) is motivated given that existential expressions function to introduce previously unknown entities into discourse. The **TOPIC** nominal, which often encodes a referentially prominent entity, is therefore avoided.

(i) *pan to la na'no emomcovhi*

`EXI NTOP HAB very walk.far.AF`

‘There may be some (prey) which goes very far (after struggling out of a snare).’ (Tung1-12:019)

19 Equational expressions do not take any auxiliary, which indicates modality and focus markings. We know from this co-occurrence constraint that equational expressions do not bear any focus marking and that the **TOPIC** nominal in equational expressions is not associated with any of the four grammatical roles.
'Naau' as an instance of the category 'teacher'. In such an equational relation, the TOPIC nominal does not bear any grammatical role but only points out the reference of the predicated entity.

(30) \( mo=\varphi=\text{cu} \quad b-\text{onU} \quad 'o \quad \text{ak’i} \)
    \quad AUX.AF.R=3SG=PERF  AF-eat  TOP  grandpa
    'Grandpa already ate.' (FND.XDCV025)

(31) \( \text{zou lema’cohio} \quad 'o \quad \text{naau} \)
    \quad COP  teacher  TOP  Naau
    'Naau is a teacher.' (FNE.XNGO053)

According to Keenan (1976), indispensability is one of the grammatical features separating subject from all the other grammatical relations.\(^{20}\) A non-subject relation can be eliminated from a sentence with the result remaining grammatically acceptable. This is not true of the subject relation, which is taken as the indispensable argument of a sentence. The notion of indispensability/dispensability, however, should not be mixed up with the phenomenon of pro-drop, although on the surface they both involve an element being covertly expressed. The phenomenon of pro-drop occurs when the referent of a nominal is definite and retrievable from the context. An indispensable nominal may be pro-dropped, but its specific identity can still be recovered from the context, as pointed out by Fillmore (1986). Let us imagine a scene in front of pest

\(^{20}\) Keenan’s (1976) discussion of indispensability does not include contextual information as a possible factor motivating the elimination of a nominal. For the present study, I define indispensability/dispensability as the elimination of a nominal in the condition of being indefinite and contextually non-retrievable. The ellipsis of a nominal in the condition of being definite and contextually retrievable is considered an instance of pro-drop (see the following paragraph).
control products at a grocery store. The notepad in front of Raid’s cockroach-killer, for instance, may read ‘Kills cockroaches fast’, but we have no problem identifying what the omitted subject refers to. However, such a definite interpretation is not necessarily true of a dispensable nominal, which receives an indefinite interpretation when omitted. For instance, in the example Speed kills, the specific identity of what gets killed is not identifiable and is typically considered irrelevant for the unfolding of discourse.

By this criterion, the covertly expressed topic in the Tsou example (32) below, indicated by square brackets, is a case of pro-drop, not an example of a dispensable nominal. The identity of the omitted argument is understood to be the human beings who lived on Mt. Jade, not just any human beings.

(32) ho moh=cyon ne patungkuonU na eatatiskova, when AUX.AF.R=PERF stay.AF NTOP Mt.Jade TOP human

moso c'o onou no euansou []
AUX.AF.R just eat.only NTOP animal
‘When human beings lived on Mt. Jade, (they) only ate animals.’ (pro-dropping; Tung1-38:012)

Relativization/Nominalization

In the Tsou literature, a relative clause construction (henceforth ‘RC construction’) is often presented as a composite of a head noun, a relative clause, and the relativizer ci. The relative clause contains a gap that is invariantly interpreted as coreferential with

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21 I thank Claire Bowern (p.c.) for pointing out this example to me.

22 A reader pointed out that the identity of who gets killed in Speed kills is not specifically identifiable but is inferable pragmatically. Typically, the entity being killed is animate and human. However, a quick google search illustrates that Speed kills is also used for expressing the tradeoff of quality and speed in customer service, or even the tradeoff of fuel consumption and vehicle speed. In both examples, what gets killed is non-human, non-specific, and cannot be individuated.
the head noun. For instance, in (33a), the RC construction begins with a head noun to `cnUmU‘(the) bananas’ followed by first the relativizer `ci and then the relative clause `i=si toa-i to ino nehucma‘(that) Mom picked yesterday.’ The gap in the relative clause is interpreted as coreferential with the head noun ‘(the) bananas’. Example (33b) is the corresponding simple clause of (33a).

(33)

(a) `ci i=si toa-i to ino, Ø, nehucma`

   NTOP banana REL AUX.NAF.R=3SG pick-LF NTOP mom GAP yesterday

   ‘(the) bananas [that Mom picked Ø yesterday]’ (Ø=bananas; FNC.DJUD011a)

(b) `i=si toa-i to ino, si cnUmU nehucma`

   AUX.NAF.R=3SG pick-LF NTOP mom TOP banana yesterday

   ‘Mom picked the bananas yesterday.’ (FNC.DJUD011b)

In example (33a), the relative clause occurs after the head noun in the postnominal position. However, as pointed out by M. Chang (1998) and Zeitoun (2000; 2005), relative clauses in Tsou can occur either in the postnominal position, as in (33a), or in the prenominal position, as shown in (34). When a relative clause appears as a prenominal modifier, the relativizer `ci occurs instead at the end of the relative clause, marking a clear boundary between the head noun and the relative clause.23 Despite the difference in constituent order, the prenominal RC construction also contains a gap.

23 M. Chang (1998) and Zeitoun (2000; 2005) argue that the prenominal relative clause of Tsou is of the restrictive function while the postnominal relative clause is of the non-restrictive function.
In addition to prenominal and postnominal relative clauses, Tsou also allows a headless RC construction that contains only a relative clause without any accompanying head noun and relativizer. The headless relative clause as a whole is preceded by a prenominal particle indicating its grammatical function in the main clause. For instance, the TOPIC marker 'o in (35) indicates that the relative clause ‘(the thing) that Mom picked yesterday’ functions as a TOPIC nominal in the main clause. Like its prenominal and postnominal counterparts, the headless RC construction also contains a gap.

(35) i=ko  
   haf-a  'o [i=si, toa-i to ino, Ø nehucma] ci  
   AUX.NAF.R=2SG take-PF TOP AUX.NAF.R=3SG pick-LF NTOP mom
   Ø  nehucma]?  
   GAP  yesterday  
   'Did you bring [(the thing) that Mom picked Ø yesterday]?' (FNC.DJUD011d)

The three types of Tsou RC constructions all have a gap in the relative clause, and this gap is always understood to reference an omitted TOPIC nominal whose grammatical role is indicated by the focus affix on the predicate. Let us compare (36), (37), and (38). Given the basic clause (36a), in which there is an ACTOR TOPIC ‘child’ and a NON-TOPIC PATIENT ‘dog’, it is only possible to relativize the ACTOR TOPIC but not the NON-TOPIC PATIENT (compare (37a) and (38a)). On the other hand, given the basic clause (36b), in which there is a PATIENT TOPIC and a NON-TOPIC ACTOR, it is possible to relativize
the patient topic but not the non-topic actor (compare (37b) and (38b)). Since relativization in Tsou is unique to the topic nominal, the contrast between (37a) and (37b) illustrates that the topic nominal is syntactically more prominent than other types of nominals in Tsou in this regard.

(36)

a \[ i=\text{si}, \quad m-\text{eobango to av'u 'o oko}, \]
AUX.AF.R=3SG AF-chase NTOP dog TOP child
'The child chased a dog.' (FNC.DJUD013a)

b \[ i=\text{si}, \quad \text{peobang-a to oko, 'o av'u} \]
AUX.NAF.R=3SG chase-PF NTOP child TOP dog
'The child chased the dog.' (FNC.DJUD013b)

(37)

a \[ i=\text{si}, \quad koiic-a to lema'cohio, 'o oko, ci \]
AUX.NAF.R=3SG scold-PF NTOP teacher TOP child REL

\[ m=\varnothing, \quad m-\text{eobango to av'u o} \]
AUX.AF.R=3SG AF-chase NTOP dog GAP
'The teacher scolded the child that \(\varnothing\) chased a dog.' (\(\varnothing=\text{child}=\text{actor topic;} \)
FNC.DJUD014a)

b \[ i=\text{si}, \quad koiic-a to lema'cohio, 'o av'u, ci \]
AUX.NAF.R=3SG scold-PF NTOP teacher TOP child REL

\[ i=\text{si}, \quad \text{peobang-a to oko, } \varnothing \]
AUX.NAF.R=3SG chase-PF NTOP child GAP
'The teacher scolded the dog that the child chased \(\varnothing\). ' (\(\varnothing=\text{dog}=\text{patient topic;} \)
FNC.DJUD014b)
The fact that the three RC constructions\(^{24}\) in Tsou all pick out the TOPIC instead of other types of nominals has often been cited as evidence for the subjecthood of the TOPIC (cf. M. Chang 2004), following the Accessibility Hierarchy by Keenan and Comrie (1977), who state that if only a single argument of any clause can be relativized, that argument is the subject. However, the necessary association of relativization and subjecthood has been challenged by Shibatani (2008a; 2008b) based on his study of two

\(^{24}\) The present study assumes that the three RC structures are the same type of construction given their shared function of selecting the TOPIC as the target. If instead they were analyzed as three separate constructions, it may give more weight to the TOPIC nominal when assessing grammatical prominence. However, this does not affect the analysis presented here because I do not define subject by maximal grammatical prominence, following Dixon’s (1979) definition.
eastern Indonesian languages, whose RC constructions involve a gap in the relative clause (i.e., the gap strategy). According to Shibatani, the gapped relative clause seen in eastern Indonesian languages and Philippine languages is a nominalized clause juxtaposed to a head noun in the function of nominal modification; the gap is created in the process of nominalization and is not part of the relativization process, which, according to Keenan and Comrie (1977), should involve a full clause. It is then questionable whether a gapped relative clause in these languages still picks out the subject as the target; it is even more doubtful whether the gapped clause is still a valid diagnostic for subjecthood.

Despite this possibility, the present study continues to use the traditional relative clause analysis, just to show how the TOPIC nominal behaves in the traditional approach to subject identification. As long as the gapped relative clause in Tsou still organizes nominals into different classes in terms of the ability to control relativization, it is a viable diagnostic for syntactic prominence.

**Reflexivization**

Reflexivity in Tsou is marked by the free pronoun *iachi* meaning 'self', which is always preceded by a prenominal particle indicating its dependency relation to the clause (Zeitoun 2000; S. Huang, Su, and Sung 2001; H. Chang and Tsai 2001; M. Chang 2004). For instance, the occurrence of *iachi* is preceded by the NON-TOPIC marker *to* in (39a) but by the TOPIC marker 'o in (39b). In the latter case, the grammatical role of *iachi* is also indexed by the focus suffix -a as a PATIENT.
(39)
a  mo=\sigma_i \quad sU'no \quad to \quad iachi_i \quad 'o \quad voyu_i \\
AUX.AF.R=3SG \quad angry.AF \quad NTOP \quad self \quad TOP \quad voyu \\
'Voyu is angry at himself.' (FNC.DJUD024a)

b  i=si_i \quad sU'nov-a \quad to \quad voyu_i \quad 'o \quad iachi_i \\
AUX.NAF.R=3SG \quad angry-PF \quad NTOP \quad voyu \quad TOP \quad self \\
'Voyu is angry at himself.' (FNC.DJUD024b)

The occurrence of *iachi* may be accompanied by a pronominal enclitic which agrees with the person and number of the antecedent of the reflexive, as shown in the third person singular invisible clitic =*si* in (40). Nevertheless, readers are reminded that the co-occurrence of a pronominal clitic is not obligatory, as seen in (39b) and (40).

(40)  i=si_i \quad sU'nov-a \quad to \quad pasuya_i \quad 'o \quad iachi=si_i \\
AUX.NAF.R=3SG \quad angry-PF \quad NTOP \quad pasuya \quad TOP \quad self=3SG \\
'Pasuya is angry at himself.' (FNC.DJUD024c)

The reflexive pronoun may occur immediately before a noun as a nominal modifier. For instance, in example (41) below, *iachi* specifies the referent of the head noun *emucu* 'hand' as that of the ACTOR (which is the only semantically felicitous clause-mate of *iachi* here).

(41)  o=si_i \quad nana \quad fut-a \quad no \quad mo \quad tacvoh?i \quad ci \quad teesi \\
AUX.NAF.R=3SG \quad HEARSAY \quad tie-PF \quad NTOP \quad AUX.AF.R \quad long.AF \quad REL \quad rope \\
na \quad iachi=si_i \quad emucu \\
TOP \quad self=3SG \quad hand \\
'(She) reportedly tied her (own) hand(s) with a long rope.'(Tung 1-29:005)
Reflexivization has long been cited as evidence for the subjecthood/grammatical prominence of the Tsou ACTOR, regardless of whether the ACTOR has TOPIC status or not. M. Chang (2004) states that the ACTOR is the only antecedent of the reflexive in Tsou. For instance, the reflexive in (39a) is bound by the ACTOR TOPIC 'Voyu', while the reflexive in (39b) is bound by a NON-TOPIC ACTOR.

However, the claim that reflexivization is uniquely controlled by the ACTOR may be an overstatement. It is true that the ACTOR is always among the possible antecedents of the reflexive in Tsou, but it is not the only one. In (42) below, the antecedent of the reflexive iachi could be either the NON-TOPIC ACTOR 'the living people' or the (omitted) PATIENT TOPIC 'the dead person'.

(42) ho o=ho, la efo-a no iachi_u emoo, aacni-a
   when AUX.NAF.R.=3PL HAB bury-PF NTOP self house always-PF
   eomi-a no ue ho fut-a
   use-PF NTOP rattan and wrap-PF

   'When they (i.e., the living people) buried (the dead person) in his/their house, they always used rattan to wrap up (the dead).' (Tung 1-6:12)

Example (42) is ambiguous in Tsou. The English translation indicates that the reflexive pronoun iachi can refer to either the living people who conducted the burying or the dead person who was buried. The whole sentence is ambiguous in meaning, translated as either 'The living people buried the dead person in the dead person's house' or 'The living people buried the dead person in their own house.' For the sake of simplicity and ease of reference, let me illustrate the ambiguity with the elicited example (43).
In (43), the reflexive can be bound by the NON-TOpic ACTor 'Pasuya', yielding the interpretation 'Pasuya gave Naau a picture of (Pasuya) himself. The reflexive can also be bound by the LOCATION TOPic 'Naau', leading to the interpretation 'Pasuya gave Naau a picture of (Naau) herself. Examples such as (42) and (43) indicate that the ACTOR is not the only possible antecedent of a reflexive; a NON-ACTOR TOPic can also be the antecedent of a reflexive pronoun in the proper context.

Raising

Raising is generally defined as a construction in which a nominal interpreted as the argument of a subordinate clause occurs as a syntactic constituent of a matrix clause. In Tsou, raising is structurally realized as a matrix clause followed by a subordinate clause introduced by the complementizer ho. With the occurrence of the complementizer, the raising process is made evident by the fact that the raised argument occurs in the pre-complementizer position and becomes a constituent of the matrix clause. In the following examples, (44a) is a basic bi-clausal construction that does not undergo any raising process. Example (44b) is the corresponding raising construction.

(44) Raising

a  i=ta,  ta'uiv-a  ta  pasuya,  ho  i=sij,  peoeoz-a
  AUX.NAF.R=3SG  believe-PF  NTOP  pasuya  COMP  AUX.NAF.R=3SG.invis  steal-PF
to mo'o\_j 'o peisu
NTOP Mo'o TOP money
'Pasuya believed that Mo'o stole the money.' (FNC.DJUD031a)

b i=ta, ta'ui\_v-a ta pasuya, 'o peisu\_k ho
AUX.NAF.R=3SG believe-PF NTOP pasuya TOP money COMP

i=sij peoeoz-a to mo'o\_j \_Ø\_k
AUX.NAF.R=3SG steal-PF NTOP Mo'o GAP
'Pasuya believed Mo'o stole the money.'
Lit. 'Pasuya believed the money that Mo'o stole \_Ø.' (\_Ø=money, PATIENT-TOPIC; FNC.DJUD031b)

In (44b), the TOPIC nominal 'money' of the subordinate clause is raised to the main clause and appears before the complementizer ho. Specifically, the raised nominal 'money' is the PATIENT-TOPIC of the subordinate clause; after raising it functions as the TOPIC of the matrix clause.\(^{25}\) Note that raising is not limited to PATIENT-TOPIC nominals only. Examples (45)-(46) below indicate that raising applies to TOPIC nominals in all four grammatical roles. Examples (45) and (46a) illustrate that ACTOR-TOPIC nominals qualify as candidates for raising while (46b) and (46c) show that REFERENCE-TOPIC and LOCATION-TOPIC nominals, respectively, also qualify as candidates. Finally, (46d) demonstrates that a NON-TOPIC LOCATION cannot be raised.

(45) i=ta, ta'ui\_v-a ta pasuya, 'o mo'o\_j ho mo=\_Ø=\_cu
AUX.NAF.R=3SG believe-PF NTOP pasuya TOP Mo'o COMP AUX.AF.R=3SG=PERF

---

\(^{25}\) However, the raised nominal is still not governed by the matrix clause semantically. 'Pasuya believed Mo'o' has a different truth-conditional value from 'Pasuya believed Mo'o to have stolen the money.'
m-eoeoi to peisu 0
AF-steal NTOP money GAP
'Pasuya believed that Mo'o stole money.'
Lit. 'Pasuya believed Mo'o to have stolen money.' (0=Mo'o, ACTOR-TOPIC; FNC.DJUD031c)

(46)
a  i=ta, ta'uiv-a ta pasuya, 'o mo'o, ho mo=0j
AUX.NAF.R=3SG believe-PF NTOP pasuya TOP Mo'o COMP AUX.AF.R=3SG
mo- finalists to peisu to naau 0
AF-give NTOP money NTOP Naau GAP
'Pasuya believed that Mo'o gave money to Naau.'
Lit. 'Pasuya believed Mo'o to have given money to Naau.' (0=Mo'o, ACTOR-TOPIC; FNC.DJUD032a)
b  i=ta, ta'uiv-a ta pasuya, 'o peisu, ho i=sij
AUX.NAF.R=3SG believe-PF NTOP pasuya TOP money COMP AUX.NAF.R=3SG
fa-eni to naau to mo'o, 0
give-RF NTOP Naau NTOP Mo'o GAP
'Pasuya believed that Mo'o gave the money to Naau.'
Lit. 'Pasuya believed the money that Mo'o gave 0 to Naau.' (0=money, REFERENCE-TOPIC; FNC.DJUD032b)
c  i=ta, ta'uiv-a ta pasuya, 'o naau, ho i=sij
AUX.NAF.R=3SG believe-PF NTOP pasuya TOP Naau COMP AUX.NAF.R=3SG
fi-i to peisu to mo'o, 0
give-LF NTOP money NTOP Mo'o GAP
'Pasuya believed that Mo'o gave money to Naau.'
Lit. 'Pasuya believed Naau that Mo'o gave money to 0.' (0=Naau, LOCATION-TOPIC; FNC.DJUD032c)
Note that raising is not limited to the *TOPIC*; (47) makes evident that raising applies equally to the *ACTOR* even when the *ACTOR* is not the *TOPIC* of the subordinate clause. In (47) below, the *NON-TOPIC ACTOR* of the subordinate clause, Mo'o, is raised to the matrix clause. (We understand from the PF-marking of the subordinate predicate 'steal' that the raised *ACTOR* is a *NON-TOPIC* nominal in the complement clause). The raised *ACTOR* receives the *TOPIC* marking in the matrix clause and becomes the *TOPIC* nominal.\(^{26}\)

\[(47) \quad i=ta_i, \quad ta'uiv-a \quad ta \quad pasuya, \quad to \quad naau_k \quad ho \quad mo=\sigma_j\]

\[
\begin{align*}
\text{AUX.NAF.R=3SG} & \quad \text{believe-PF} \\
\text{NTOP} & \quad \text{pasuya} \\
\text{NTOP} & \quad \text{Naau} \\
\text{COMP} & \quad \text{AUX.AF.R}
\end{align*}
\]

\[
\begin{align*}
\text{mo-fi} & \quad \text{to} \quad \text{peisu} \quad \emptyset_k \quad \text{'}o \quad \text{mo'}o_j \\
\text{AF-give} & \quad \text{NTOP} \quad \text{money} \\
\text{GAP} & \quad \text{TOP} \quad \text{Mo'}o \\
\text{intended (Lit.)} & \quad \text{'}Pasuya believed Naau that } \text{Mo'}o \text{ gave money to } \emptyset. \quad (\emptyset=\text{Naau, NON-TOPIC LOCATION; FNC.DJUD032d})
\end{align*}
\]

\(^{26}\) Raising in Tsou has a strong tendency to set the matrix predicate in *NON-ACTOR-FOCUS*. An AF matrix predicate is considered inappropriate and is in general avoided, as in (i).

\[(i) \quad *m'=ta_i, \quad t<m>a'uio \quad si \quad pasuya, \quad 'o \quad \text{peisu}_k \quad ho\]

\[
\begin{align*}
\text{AUX.AF.R=3SG} & \quad \text{believe<AF>} \\
\text{TOP} & \quad \text{pasuya} \\
\text{TOP} & \quad \text{money} \\
\text{COMP} & \quad \text{AUX.AF.R=PERF}
\end{align*}
\]

\[
\begin{align*}
\text{peoeoz-a} \quad \emptyset_j \quad \text{'}o \quad \text{peisu} \\
\text{steal-PF} & \quad \text{GAP} \\
\text{TOP} & \quad \text{money}
\end{align*}
\]

in this way the potential structural infelicity of having two *TOPIC* nominals in a matrix clause is avoided.
Pasuya believed that Mo'o stolen money. (Ø=Mo'o, PATIENT-TOPIC; FNC.DJUD031e)

The above examples thus illustrate that both the ACTOR and the TOPIC can undergo raising in Tsou.

Control

A control construction\(^{27}\) involves an unexpressed argument due to a shared reference between a matrix clause nominal and a subordinate clause nominal. The studies by H. Chang and Tsai (2001) and M. Chang (2004) present the Tsou control construction as two verbs juxtaposed to each other, as shown in (48a) below. The two juxtaposed verbs share the same ACTOR, regardless of whether or not the ACTOR obtains the TOPIC status, as seen in (48b) and (48c).\(^{28}\) The ACTOR coreference is stringently required, such that the juxtaposed control construction can not govern a complement clause whose ACTOR is not coreferential with that of the matrix clause, as shown in (48d) and (48e). The ACTOR coreference is adopted by H. Chang and Tsai (2001) and M. Chang (2004) as evidence for identifying the ACTOR as the Tsou subject.\(^{29}\)

\[ (48) \]
\[ a \ mo=\emptyset, m-ici \ koicU \ to \ 'o'ok'o \ 'o \ ino, \]
\[ AUX.AF.R=3SG \ AF-want \ AF.scold \ NTOP \ children \ TOP \ mother \]
\[ 'Mother \ wanted \ to \ scold \ (the) \ children.' \]

\(^{27}\) Early work on generative grammar often referred to the control construction as Equi-NP Deletion.

\(^{28}\) The juxtaposition of 'want' and 'scold' also leads H. Chang (2005; 2006) to treat them as serial verbs. I will discuss this issue in Chapter 7.

\(^{29}\) M. Chang (2004) only considers the juxtaposed control construction in her analysis, as do H. Chang and Tsai (2001).
Lit. 'Mother wanted that Ø scold (the) children.' (Ø=mother; FNE.XNG0341a)

b  i=sij uci-a koic-a to ino, 'o 'o'oko
AUX.NAF.R=3SG want-PF scold-PF NTOP mother TOP children
'Mother wanted to scold (her) children.'
Lit. 'Mother intended that Ø scold the children.' (Ø=mother; FNE.XNG0341b)

c  *i=sij uci-a koicU 'o 'o'oko to ino
AUX.NAF.R want-PF scold.AF TOP children NTOP mother
intended ‘Mother wanted to be scolded by (the) children.’
Lit. 'Mother intended that the children scold Ø.' (Ø=mother; FNE.XNG0341c)

d  *mo=ø, m-ici [koicU to voyu Ø] 'o ino
AUX.AF.R=3SG AF-want AF.scold NTOP Voyu GAP TOP mother
intended ‘Mother wanted (someone) to scold Voyu.’
Lit. 'Mother intended that Ø scold Voyu' (Ø=someone; FNE.XNG0341d)

e  *mo=ø, m-ici [koicU to voyu ta koatu] 'o ino
AUX.AF.R=3SG AF-want AF.scold NTOP Voyu NTOP Koatu TOP mother
intended ‘Mother wanted Koatu to scold Voyu.’
Lit. 'Mother intended that Koatu scold Voyu.' (FNE.XNG0341e)

In addition to the construction presented above, Tsou has another type of control construction referred to as ‘the non-juxtaposed type’ in the present study. In the non-juxtaposed control construction, a complementizer ho occurs between a matrix and a subordinate predicate, marking a clear boundary between the matrix clause and the subordinate clause, as shown in (49a) and (49b).

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30 It is not typologically unusual for a language to possess more than one control construction. For instance, English has the promise-type control construction and the persuade-type control construction.
In the non-juxtaposed control construction, the occurrence of the complementizer ho makes evident that the subordinate clause contains a gap, indicated by the label $\emptyset$. This gap is always understood to be the ACTOR regardless of nominal marking. A NON-TOPIC ACTOR, as in (49a), and an ACTOR-TOPIC, as in (49b), can equally assume the role of a controlled gap in the complement clause. On the contrary, a NON-ACTOR nominal cannot be the controlled gap, even if it bears the TOPIC status. Example (50) below demonstrates that a PATIENT-TOPIC cannot be the controlled gap in the complement clause.

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31 The pronominal clitic of a third person singular TOPIC is a zero morpheme.

32 The linguistic item $ho$ is a highly versatile particle in Tsou as it can be used as a complementizer, a coordinate conjunction, and a marker of temporal adverbial clause (Lin 2002).
The non-juxtaposed control construction is functionally distinguished from the juxtaposed type in terms of the choice of the controller (the argument that determines the reference of the gap). In the non-juxtaposed type, the gapped ACTOR in the subordinate clause is understood to be controlled by the NON-ACTOR of the matrix clause, regardless of nominal marking. Examples (49a) and (49b) show that the gap is controlled by the LOCATION-TOPIC ‘Voyu’ in the matrix clause. Example (51) below illustrates that a NON-TOPIC nominal ‘Voyu’ is equally capable of controlling the gap.

Although the non-juxtaposed control construction is distinguished from the juxtaposed type by the choice of the controller, the two control constructions both pick out the ACTOR nominal as the gap (i.e., the target of coreference), regardless of whether or not the ACTOR nominal bears the TOPIC status in the complement clause. Both types of
Conjunction Reduction

Conjunction reduction refers to the ellipsis of constituents in the condition of coreference in a coordinate construction. It was suggested by Dixon (1972) that this type of ellipsis is a syntactic process sensitive to subjecthood, and since then it has been widely used to assess subjecthood for various languages. In Tsou, the coordinate construction is signaled by the occurrence of the conjunction ho. In (52), ho comes between the two noun phrases 'passion fruit here' and 'strawberries there' and conjoins them.

(52) te=a an-a si tokeiso tan'e ho ta taumu ta'e
AUX.IRR=1SG eat-PF TOP passion.fruit here and TOP strawberry there
'I will eat the passion fruit here and the strawberries there.' (FNE.XNGO351)

The coordinate construction of Tsou often involves coreferential constituents. When co-reference occurs, it is common for the second element of the same reference to be omitted and thus leave a gap. For the sake of simplicity, let me illustrate the gapping pattern with elicited examples. In (53a), the ACTOR-TOPIC nominal 'leave' is gapped in the second coordinated clause. The gapped nominal is understood to be coreferential with the ACTOR-TOPIC nominal in the first clause. In (53b), again the...
ACTOR-TOPIC nominal of the second clause is gapped; but this time the gap is understood to be coreferential with the NON-TOpIC-ACTOR ‘his parents’ in the first clause.

(53)

a. \( mi=\varnothing=\text{cu} \ koicU \ to \ oko \ 'o \ pasuya, \ ho \ mongoi \ \varnothing, \)  
   AUX.AF.R=3SG=PERF scold.AF NTOP child TOP Pasuya and leave.AF GAP  
   ‘Pasuya scolded a child and \( \varnothing \) left.’ (\( \varnothing = \text{Pasuya}; \text{FNE.XNGO352a} \))

b. \( i=si=\text{cu} \ koic-a \ to \ pasuya, \ 'o \ oko \ ho \ mongoi \ \varnothing, \)  
   AUX.NAF.R=3SG=PERF scold-PF NTOP Pasuya TOP child and leave.AF GAP  
   ‘Pasuya scolded the child and \( \varnothing \) left.’ (\( \varnothing = \text{Pasuya}; \text{FNE.XNGO352b} \))

In the above examples, it may appear as though only the ACTOR, regardless of whether it has the TOPIC status or not, can control the gap in coordinated clauses. Examples (54) and (55) below reveal that a NON-TOpIC can also control the gap. In (54), the PATIENT-TOPIC nominal of the second clause is gapped. The gap is understood to be coreferential with the PATIENT-TOPIC of the first clause. In other words, a PATIENT-TOPIC nominal is also capable of controlling the gap in coordinated clauses. Likewise, (55) shows that the LOCATION-TOPIC in the first coordinated clause controls the gap. Together, (54) and (55) reveal that any (NON-TOpIC) role can control the gap in coordinated clauses as long as it is selected as the TOPIC.

(54) \( i=si, \ koic-a \ to \ pasuya, \ 'o \ naau, \ ho \ eobak-a \)  
   AUX.NAF.R=3SG scold-PF NTOP Pasuya TOP Naau and hit-PF  
   to voyu \( \varnothing, \)  
   NTOP Voyu GAP  
   ‘Pasuya scolded Naau and Voyu hit \( \varnothing \).’ (\( \varnothing = \text{Naau}; \text{FNE.XNGO352c} \))
The above examples illustrate that both the *ACTOR* and the *TOPIC* can control the gap in the conjunction reduction construction of Tsou, indicating that both nominals, when they diverge, are syntactically prominent.

5.4.4 Grammatical Prominence of ACTOR, TOPIC, and Others: A Core-Oblique Distinction

Based on the diagnostic results listed above, the eight categories examined in Table 5-2 can be reduced to four: *ACTOR TOPIC*, *NON-ACTOR TOPIC* (including *PATIENT TOPIC*, *REFERENCE TOPIC*, and *LOCATION TOPIC*), *NON-TOPIC ACTOR*, and *NON-TOPIC NON-ACTOR* (including *NON-TOPIC PATIENT*, *NON-TOPIC REFERENCE*, and *NON-TOPIC LOCATION*). Of the four categories, the *ACTOR TOPIC* satisfies all the diagnostics examined, with an index value of eight. The *NON-TOPIC NON-ACTOR* fails all the diagnostics and is syntactically inert, with an index value of zero. The *NON-ACTOR TOPIC* and the *NON-TOPIC ACTOR* each display a certain degree of grammatical prominence, with the index value of six and five, respectively. In general, when the *ACTOR* and the *TOPIC* converge (i.e., the *ACTOR TOPIC*), together they display the highest degree of grammatical prominence and bear the most resemblance to what Keenan (1976) identifies as subject. When the *ACTOR* and the *TOPIC* diverge, they each display a certain degree of grammatical prominence: the *ACTOR* (NON-TOPIC ACTOR) controls reflexivization, raising, control, conjunction reduction, and pronominal...
cliticization; the TOPIC (NON-ACTOR TOPIC) controls relativization, reflexivization, raising, conjunction reduction, focus marking, and indispensability. Neither the ACTOR nor the TOPIC, when they diverge, is convincingly more prominent than the other.

The grammatical indices in Table 5-2 raise the question as to how the core/oblique distinction should be defined for Tsou. Should we take all the TOPIC nominals as core elements and treat all the NON-TOPIC nominals as oblique elements, given the uniformity in nominal marking? Or should we take the ACTOR TOPIC, the NON-ACTOR TOPIC, and the NON-TOPIC ACTOR as core elements but the NON-ACTOR NON-TOPIC as oblique? There does not seem to be any easy solution if we do not recognize that the ACTOR/NON-ACTOR contrast needs to be separated from the TOPIC/NON-TOPIC distinction. That is, if we compare a NON-TOPIC ACTOR with a TOPIC-PATIENT, we are not comparing like with like. Any core/oblique distinction thus defined will not be meaningful.

If we separate the TOPIC/NON-TOPIC distinction from the four grammatical roles, it becomes clear that Tsou has a core/oblique distinction along the ACTOR/NON-ACTOR contrast. The common assumption that agent and patient are more core-like than anything else is not borne out in Tsou (see Section 4.2 for the discussion on the argument/adjunct distinction in Tsou). The Tsou ACTOR displays more grammatical prominence than NON-ACTORS in terms of encoding (pronominal cliticization) and the

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33 Core elements are typically taken to be capable of controlling syntactic operations; oblique elements are inert to most syntactic operations.

34 For instance, Andrews (1985:81) states that “[t]hus the core functions are by definition A, S, O and whatever other grammatical functions are sufficiently like them to be plausibly grouped with them and opposed to the others, which are the oblique functions.” In the following sections in the same paper, he states that “an A is an NP in a transitive sentence receiving the treatment normally accorded to the Agent of PTV (Primary Transitive Verb); an O is an NP in a transitive sentence receiving the treatment normally accorded to the Patient of a PTV” (Andrews 1985:98).
ability to control syntactic processes (reflexivization, raising, control, and conjunction reduction). These properties are associated with the actor even when the actor is not selected as the topic. Among the non-actors, however, no further distinctions can be made. The patient, when not selected as the topic, is not grammatically any more prominent than other non-actors (i.e., the reference and the location). Morphosyntactically, a non-topic patient is not marked differently from other semantic elements such as temporal expressions, as seen in (56a)-(56c). This indistinctiveness is also seen in the ability to control syntactic processes. Table 5-2 demonstrates that a non-topic patient is just as inactive as a non-topic reference and a non-topic location in terms of the ability to trigger focus marking, pronominal cliticization, indispensability, relativization, reflexivization, raising, control, and conjunction reduction. There is no syntactic property that is specific to the non-topic patient but not to the non-topic reference and the non-topic location. The three non-actor roles are semantically different, but their semantic difference does not have observable grammatical correlates in terms of a core/oblique distinction.

(56)

a mo nana tibkobkocU no maeevi
AUX.AF.R HEARSAY pull.off NTOP trees
‘(She) reportedly pulled off all kinds of trees.’ (Tung1-24:004; no for non-topic patient)

---

35 Certain temporal expressions, such as the expression 'now' in (i) below, occur without any prenominal markers.

(i) ?e feohU maitan?e mo pitva
TOP month now AUX.AF.R seven
‘The present month is the seventh month.’ (Tung 1-2:001)
Some readers may object to the above analysis that the Patient is not a core argument, and disagree with the proposal to dissociate the Topic status from the core-oblique distinction. The Patient is the preferred choice of the Topic and therefore is inherently aligned with Topic-related grammatical prominence (see Table 5-2), they may argue. However, I argue that Topic prominence and Patient prominence are two different issues. As will be shown in Section 5.5, Topic selection is not role-based; it operates mainly on the basis of referential prominence/topicality. Only referentially prominent Patients are aligned with the Topic and therefore with Topic-related grammatical prominence observed in Table 5-2. Referentially non-prominent Patients are not selected as the Topic and therefore are not associated with Topic-related grammatical prominence (see Section 5.5 and Table 5-3 and Table 5-4). In addition, other grammatical roles, such as the Reference and the Location, are associated with the same Topic-related grammatical prominence when they are referentially prominent and are linked to the Topic relation. Being linked to the Topic is thus not an inherent property of the Patient. The Patient does not have any inherent prominence specific to its being a particular grammatical role relative to the verb and this is why I do not
identify the Tsou Patient as the second core argument/the object relation in a clause (cf. 5.4.2).

The questionable existence of Patient prominence also affects the treatment of Reference-focus and Location-focus constructions, identified by some linguists as applicative constructions in Tsou (see Section 3.8). Applicativization by definition promotes syntactically oblique or adjunct elements to the syntactic position of object (Peterson 2007:1). To prove the existence of applicativization in Tsou, we need solid evidence that the Reference and the Location are syntactically oblique and are derivationally promoted to the object relation in RF and LF constructions. However, we do not have a proven object relation, nor can we identify any syntactic property that is specific to the Patient but not to the Reference and the Location (before the assumed promotion). The claim that the RF and LF constructions involve applicativization is therefore not borne out by the Tsou data.

In summary, Tsou distinguishes core and oblique elements along an Actor/Non-Actor contrast, but the contrast interacts with the Topic/Non-Topic distinction and may become difficult to delineate. In addition, the core-oblique distinction thus established is not only indicative of the distribution of grammatical prominence but is also useful for identifying arguments of structurally more complex constructions. Given the assumption that a core element is also an argument, the Tsou Actor as a core element is therefore an argument in the clause in which it occurs. Actor marking is thus indicative of argumenthood in Tsou, aside from Topic marking (see Section 4.2 for details). In Chapters 6 and 7 I will employ Actor and Topic markings for identifying the arguments involved in the poa-causative construction and in non-harmonizing serial verb constructions.
5.5 Linking Patterns of Grammatical Roles and Grammatical Relations: Topic Selection

In Sections 5.2 and 5.3 I argued that four grammatical roles and two grammatical relations can be established in Tsou. Of the four grammatical roles, only one role per clause is aligned with the TOPIC relation; everything else, if allowed by the construction, is linked to the NON-TOPIC relation. The alignment of grammatical roles with grammatical relations raises two questions: How is the TOPIC relation selected? What are the factors that pre-empt the ACTOR-TOPIC alignment over the PATIENT-TOPIC alignment and vice versa?

The present study proposes that the alignment of the four grammatical roles with the two grammatical relations in Tsou is constrained by both discourse and structural considerations. I will first illustrate that TOPIC selection is oriented toward discourse referentiality (Givón’s (1979; 1983a; 1983b) topicality, see also S. Huang (2002) on Tsou). The argument that is selected as the TOPIC is referentially prominent, i.e., topical, in the unfolding of discourse. Nevertheless, the preference for a referential TOPIC is not inviolable. There are cases where a Tsou TOPIC can occur even where the degree of referentiality/topicality is low. The dissociation from pragmatic constraints makes evident that TOPIC selection is more than a discourse phenomenon. Instead, it is a discourse-oriented phenomenon that has acquired a solid grammatical status in Tsou grammar.

36 In what follows, I use the terms ‘discourse referentiality’ and ‘topicality’ interchangeably for the discourse prominence of the TOPIC nominal, as suggested by Payne (1997:346).
5.5.1 TOPIC Selection and Referential Prominence

The TOPIC relation is predominantly associated with nominals that are referentially prominent/topical, carrying a continuing importance over a portion of text (S. Huang 2002). In other words, a nominal is selected for TOPIC marking when it is topical/referentially prominent. In the scenario where an ACTOR participant is topical and everything else is not, the ACTOR is linked to the TOPIC and forms an AF construction. In the scenario where a NON-ACTOR participant is topical and is of information value to the unfolding of discourse, the NON-ACTOR participant is linked to the TOPIC relation and forms a NAF construction (the ACTOR is still more topical even in NAF constructions, see 5.5.2).

In most cases, the knowledge of a topical nominal is understood to be given/old in the consciousness of the interlocutors at the time of utterance. In Tsou, one of the commonest ways to establish the referential status of a nominal is via prior mentioning. If a nominal was introduced in the preceding discourse (which was not far away from current utterances), its reference is considered already given in the consciousness of the interlocutors; subsequent mentions of the same nominal entail high referentiality and are often encoded in the TOPIC relation. In (57) below, the referent of zomU 'bird' is introduced into the discourse for the first time as a NON-TOPIC relation. The subsequent mention of the same referent is considered already topical and is associated with the TOPIC relation.

(57) ho la=c'u e'ohU, la t<\~m\>aeaezoyU to zomU to ceonU,
when AUX.HAB=PERF hunt.AF AUX.HAB <AF>listen NTOP bird NTOP road
When (the ancient Tsou) go hunting, (they) listen to birds on the road. If the bird (i.e., the bird's chirping) is inauspicious, (they) return home first.’ (hunting:5-6)

Prior mentioning is not the only way for a nominal to be identified as referentially prominent/topical. A nominal whose referent is present in the immediate speech context is also considered topical even without overt prior mentions. For example, the referent of ngaku ‘accessories’ was present in the immediate speech context when the conversation in (58) occurred. Even though the nominal ‘accessories’ in (58c) is the first overt mention in the text, it is still considered topical and is encoded in the TOPIC relation.

(58)

a A: manci la 'ote asngUc-a tith-a? mo ca'i.
   why AUX.HAB NEG often-PF use-PF AUX.AF.R dirty.AF
   ‘Why is (the table) not often used? It’s dirty.’

b B: mo no ca'i=he 'o numza
   AUX.AF.R indeed dirty.AF=COMPR NTOP mine
   ‘Mine (the one in my house) is much dirtier.’

c A: 'a i=si no acUh-a tea-i to yangui si ngaku!
   EVI AUX.NAF.R=3SG indeed all-PF make-LF NTOP Yangui TOP accessory
   (Looking at the accessories on the table) Yangui made all these accessories!
   (Auntie:004-006)

37 The dialog in (58) is an excerpt from a conversation that occurred when A and B visited their aunt C. The conversation began with a dialog between A and B talking about the dirty table in C’s living room.
A nominal is also topical when its referent is part of a semantic frame already mentioned in the preceding discourse (see Chafe (1976) for discussions on inferred referentiality based on semantic frames). For instance, although the nominal 'streets' in (59e) occurs as a first mention in the passage, it is part of the semantic frame of 'city', which is already mentioned in (59a). Given that the 'city' frame includes streets, by the time the nominal 'street' occurs as an explicit mention, it is considered topical in the context and is assigned the TOPIC relation. The referentiality of 'streets' is confirmed when the interlocutor B can correctly identify the referent of 'streets' and maintain the communication interaction.

(59)
a A: cuma na te=mu yon-i ho te=mu uh ne maibayu? what TOP AUX.IRR=2PL stay-LF when AUX.IRR=2PL go.AF NTOP Chiayi
   'What is the vehicle you will stay in when you go to Chiayi?'

b B: te unten to kuyai 'o amo='u
   AUX.IRR drive.AF NTOP car TOP father=1SG
   'My father will drive a car.'

c A: sia na te=n'a fiho muu?
   who TOP AUX.IRR=PROG follow.AF 2PL
   'Who is going with you?' (Lit. Who is the person that will follow you?)

d B: 'o ino='u
   TOP mother=1SG
   'My mom.'

e A: i=ko cohiv-i na maceeonU ne ngeesansi?
   AUX.NAF.R=2SG know-LF TOP streets NTOP city
   'Do you know the streets in the city?'
Although topic selection operates on the basis of referential prominence, the requirement for a referential topic is not inviolable. In Chapter 3 it was mentioned that the topic is an obligatory constituent of the major clause types in Tsou. The grammatical status of the topic as an obligatory clausal constituent may outweigh the discourse requirement, having a topic in context where topicality is low. Example (60) occurs at the beginning of a narrative and neither of its clausal participants is topical. However, under the structural pressure that every Tsou clause must have a topic, the non-topical actor 'woman' is singled out and is associated with the topic relation.

(60) moso nana noupu no fkoi na mamespingi
AUX.AF.R HEARSAY live.together NTOP snake TOP woman
'A woman lived together with a snake.' (Tung1-28:001)

Example (60) demonstrates that the topic is assigned even where the requirement of referential prominence is not met. The status of the topic as an obligatory clausal constituent, together with its dissociation from the discourse constraint, indicates that topic selection should not be interpreted as a pure discourse phenomenon unrelated to Tsou syntax. Rather, topic selection is a discourse-oriented phenomenon that has obtained a solid grammatical status.\(^{39}\)

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\(^{38}\) This is a constructed dialog taken from the Tsou Textbook for Fifth Graders, under Lesson 9. The textbook was edited by the Bureau of Education of Chiayi County and was used for the Tsou language revitalization program in the county.

\(^{39}\) According to Shibatani (1991:111), a genuine discourse phenomenon like the Japanese topic does not
5.5.2 Preference for the PATIENT-TOPIC Alignment

Even though TOPIC selection operates mainly on the basis of referential prominence/topicality, the TOPIC nominal is not necessarily the most topical constituent in a clause. S. Huang's (2002:671) discourse study on Tsou focus marking reveals that when a clause contains both a topical ACTOR and a topical PATIENT, in most cases it is the topical PATIENT that is aligned with the TOPIC relation. The preference for the PATIENT-TOPIC alignment is seen even when the PATIENT is not as topical as the ACTOR. Measuring topicality by referential distance (RD) and topic persistence (TP), S. Huang illustrates that the ACTOR is predominantly the most topical nominal in both ACTOR-TOPIC (AF) and NON-ACTOR TOPIC (NAF) clauses, as shown in Table 5-3 and Table 5-4:

interact with syntactic processes such as reflexivization and conjunction reduction. The fact that the Philippine topics actively participate in syntactic processes indicates their grammatical status as a constituent critical to clausal syntax.

S. Huang (2002:667) reports that his corpus consists of three Pear narratives, two folktales, two conversations, and elicitation work. The counts are based on independent declarative clauses. However, he does not specify to what extent elicitation work may affect the evaluation of topicality based on natural discourse.

Referential Distance (RD) and Topic Persistence (TP) are two kinds of measurements proposed by Givón (1983a; 1983b) to evaluate the topicality of a nominal in a discourse. RD calculates the number of clauses between the present occurrence and its nearest prior mention. A more topical nominal exhibits smaller referential distance. TP calculates the number of contiguous subsequent clauses in which a participant remains a semantic argument of the clause, following the present occurrence. Aside from RD and TP, S. Huang also compares the encoding devices employed for actors and patients (e.g., zero anaphora, pronouns, and lexical NPs). However, note that actors are obligatorily indexed by pronoun clitics but patients (and all the other non-actors) are not; the two types of participants therefore may not be fully comparable in terms of encoding devices. I do not include S. Huang's results in the present study.

S. Huang (2002:671) points out that "...nominative NPs [in Seediq and Tsou] are not necessarily the
of referential distance, ACTOR nominals in both ACTOR-TOPIC and NON-ACTOR-TOPIC clauses have smaller RD values than PATIENT nominals (and are arguably more contiguous and topical). The measurement of topic persistence returns similar results. ACTOR nominals in both ACTOR-TOPIC and NON-ACTOR-TOPIC clauses have larger TP values than PATIENT nominals, indicating that ACTOR nominals are more capable of maintaining topic continuity in subsequent discourse.

<table>
<thead>
<tr>
<th>Topic Selection</th>
<th>Actor-Topic</th>
<th>Non-Actor-Topic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A/S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>High (RD&lt;2)</td>
<td>52</td>
<td>78.8</td>
<td>2</td>
</tr>
<tr>
<td>Med (RD=2~10)</td>
<td>13</td>
<td>19.7</td>
<td>8</td>
</tr>
<tr>
<td>Low (RD&gt;10)</td>
<td>1</td>
<td>1.5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>100</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 5-3 Topic Selection and Referential Distance (S. Huang 2002:685)

<table>
<thead>
<tr>
<th>Topic Selection</th>
<th>Actor-Topic</th>
<th>Non-Actor-Topic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A/S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>High (RD&gt;=3)</td>
<td>30</td>
<td>45.4</td>
<td>2</td>
</tr>
<tr>
<td>Med (RD=2)</td>
<td>13</td>
<td>19.7</td>
<td>4</td>
</tr>
<tr>
<td>Low (RD&lt;=1)</td>
<td>23</td>
<td>34.8</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>100</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 5-4 Topic Selection and Topic Persistence (S. Huang 2002:686)

most topical elements of their clauses. Indeed, in NAF clauses in Seediq and Tsou, it is usually the agents, marked with a genitive case marker [our 'NON-TOPIC marker'], that are significantly more topical than patients, marked with a nominative case marker." Note that S. Huang uses the case labels 'genitive' and 'oblique' interchangeably.

43 S. Huang claims that a Tsou nominal is highly topical if it has an RD less than two, moderately topical if it has an RD between two and ten, low in topicality if it has an RD more than ten.

44 S. Huang claims that a Tsou nominal is highly topical if it has a TP value more than three, moderately topical if it has a TP value equal to two, low in topicality if it has a TP value less than one. Note that his
S. Huang’s result indicates that the actor is highly topical in both actor-topic and non-actor-topic clauses. However, when a clause contains both a topical actor and a topical patient, even just a moderately topical patient, it is the patient that is aligned with the topic. A topical patient outweighs a topical actor in topic selection, which then outweighs a non-topical patient, as shown in the following continuum.

- topical patient > topical actor > Non-topical patient

S. Huang’s study presents a critical insight: a topical patient is preferred to a topical actor in Tsou topic selection (this is arguably an Austronesian trait—Shibatani’s (1988) study on Cebuano also reveals a similar preference for the patient-topic alignment). However, there are two important points to note regarding the two tables above. First, S. Huang uses the labels O, P, and patient interchangeably without specifying the kind of nominals referred to: nominals defined by the PF marking? Or nominals that correspond to a semantic patient in English (which include nominals marked by PF, RF, and LF in Tsou)? The lack of specifications prevents us from uncovering the relative topicality among non-actors (i.e., patient, reference, and location) from his results. Second, it is not readily clear from the tables why 55 A nominals are compared to 44 O/P/patient nominals in non-actor topic clauses when one would expect the same amount of A and O for comparison. Are the 11 missing Os pro-dropped nominals? The topicality of O nominals in non-actor-topic sentences may be altered to a certain degree.

original table mistypes ‘RD’ for ‘TP’.
if the 11 missing Os were included.

The present study also conducted a small-scale analysis regarding the TOPIC selection in Tsou based on twenty narratives randomly selected from Tung (1964). The result is shown in Table 5-5 below. Of the 298 sentences from the twenty narratives, 101 sentences contain two or more ‘focusable’ nominals that are overtly expressed.\(^4\) \(44\%\) of these 101 sentences are ACTOR-TOPIC (45 out of 101) and \(40\%\) are PATIENT-TOPIC (41 out of 101). REFERENCE-TOPIC and LOCATION-TOPIC sentences each take up \(7.9\%\) and \(6.9\%\) of the 101 sentences (8 out of 101 and 7 out of 101). The results indicate that ACTOR-TOPIC (AF) sentences, unlike active sentences in English, are not overwhelmingly predominant in textual frequency. ACTOR-TOPIC sentences therefore are not the most common clause type for two-participant (or three-participant) propositions in Tsou; neither are they the most dispreferred type, unlike what is expected for antipassive constructions in ergative languages. The results are compatible with Shibatani’s (1988) observation that ACTOR-TOPIC (AF) sentences in Philippine languages are distinct from both active constructions in accusative languages and antipassive constructions in ergative languages (see Section 2.3.2).

<table>
<thead>
<tr>
<th>AF</th>
<th>N</th>
<th>%</th>
<th>NAF</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>45</td>
<td>44%</td>
<td>56</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>41</td>
<td>40%</td>
<td>8</td>
<td>7.9%</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 5-5 Distribution of Tsou focus forms based on Tung’s corpus

\(^4\) I confine the study to ‘focusable’ nominals that are overtly expressed in full NPs, pronouns, and pronominal clitics (as understood from auxiliary marking).
5.5.3 Can a Topical PATIENT be Aligned with the NON-TOPIC Relation?

Even though a topical PATIENT is preferably aligned with the TOPIC relation, it is important to note that the preference is merely a tendency, not a rule. Example (61b) shows that a topical PATIENT can still be aligned with the NON-TOPIC relation in an AF sentence. Examples (61b) and (61c) are equally possible, even although the latter is more favored. Example (61d) indicates that the alignment of a topical PATIENT with the NON-TOPIC relation is seen not only in elicited sentences but also in narratives. The nominal meefucu is the name of a dwarf in Tsou folktales and is referentially prominent. It is understood to be a PATIENT relative to the verb 'afraid of'. However, this referentially prominent PATIENT is not linked to the TOPIC but to the NON-TOPIC instead.

(61)

\( a \) \( 'u \) smoyo to av'u
AUX.HAB=1SG afraid.AF NTOP dog
'I am afraid of dogs.' (non-topical PATIENT= NON-TOPIC; FNE.XGAU401a)

\( b \) mi='o smoyo ta av'u=su
AUX.AF.R=1SG afraid.AF NTOP dog=2SG
'I am afraid of your dog.' (topical PATIENT= NON-TOPIC; FNE.XGAU401b)

\( c \) i='o smoyo-a si av'u=su
AUX.AF.R=1SG afraid-PF TOP dog=2SG
'I am afraid of your dog.' (topical PATIENT=TOPIC; FNE.XGAU401c)

\( d \) oa mo nana smoyo to meefucu
NEG AUX.AF.R HEARSAY afraid.AF NTOP Dwarf
'(The boy) did not fear the Dwarf.' (topical PATIENT= NON-TOPIC; Tung 1-23:002)
Even though sentences such as (61b) may be permissible in elicitation, in general their occurrence in narratives is highly marked. My survey of Tsou narratives indicates that the choice of a **NON-TOPIC PATIENT** in the context of high referential prominence is but a statistical minority. Of the 101 sentences investigated in the present study (see Table 5-5 above), only 11.8% have a referentially prominent **PATIENT** linked to the **NON-TOPIC** relation (12 out of 101 sentences). Tsou therefore displays a pattern similar to Cebuano as reported by Shibatani (1988), in which the alignment of a topical **PATIENT** with the **NON-TOPIC** relation is permitted but not preferred.

The preference for a topical **PATIENT** to be selected as the **TOPIC** is also violable when structural requirements are considered. In (62), the RC construction 'the one who bullied Pasuya yesterday' requires an **ACTOR** to be the relativized NP, and consequently an **ACTOR-TOPIC** RC clause (the relativized NP must bear the **TOPIC** relation in the Tsou RC clause, see Section 5.4.3). Even though the **PATIENT** 'Pasuya' in the relative clause is referentially prominent, still the **PATIENT**-preference gives way to structural pressure and the **ACTOR TOPIC** is chosen over the **PATIENT TOPIC**.

(62) \[ i=si \quad koic-a \quad to \quad sensei \quad 'o \quad mo \quad pohcinghi \quad ta \]
\[ AUX.NAF.R=3SG \quad scold-PF \quad NTOP \quad teacher \quad TOP \quad AUX.AF.R \quad bully.AF \quad NTOP \]
\[ pasuya \quad nehucma \]
\[ Pasuya \quad yesterday \]
\[ 'The \ teacher \ scolded \ the \ (one) \ who \ bullied \ Pasuya \ yesterday.' \ (FNE.XGAU402) \]

5.6 Conclusion

In this chapter I examined the alignment between the three layers of representation
proposed in Chapter 4: the verb-specific event participants, the
actor/patient/reference/location distinction, and the topic/non-topic contrast. I argue
that the association of verb-specific event participants with the four grammatical roles
should be characterized by the notion of constitutive relevance. The more integrated
an entity is into the evolutionary process of an action, the easier it is to be associated
with the appropriate grammatical role and be selected as the topic. The notion of
relevance motivates why certain event participants can be integrated into a Tsou
clause as a reference or a location but others cannot. Aside from the alignment of event
participants with the four grammatical roles, Tsou argument structure also
encompasses the alignment of the four grammatical roles with the topic and non-topic
relations. The alignment is not role-based but operates mainly on the basis of
referential prominence. A nominal is selected as the topic when it is referentially
prominent in the continuation of discourse, but the topic nominal is not necessarily the
most topical element in a clause.

The present study endeavors to investigate grammatical relations and grammatical
roles internal to Tsou using empirical evidence instead of assumed categories. However,
the emphasis on language-specific evidence does not prevent the present study from
comparing the Tsou categories with the categories found in other languages, including
but not limited to the subject and the core/oblique distinction. I argue that the Tsou
actor manifests the grouping of S and A and represents the subject à la Dixon (1979),
but this actor-subject does not display the maximal amount of grammatical
prominence as would be expected for the subject à la Keenan (1976). A fair amount of
grammatical prominence instead clusters around the topic. Considering that topic
selection is not role-based and is not the inherent property of any particular role, I
dissociate the \textsc{topic/non-topic} contrast from the investigation of the core/oblique distinction. The results indicate that Tsou places the core/oblique distinction along the \textsc{actor/non-actor} contrast. The \textsc{patient} is not inherently more core-like than the other two \textsc{non-actor} roles when not selected as the \textsc{topic}. 
Chapter 6 Complex Predicates: the Poa-Causative Construction

In Chapters 4 and 5 I illustrated the configuration of Tsou argument structure at the level of simplex predicates. In this chapter and the following one, I explore the argument structure of two types of complex predicates in Tsou, the poa-morphological causative construction and (non-harmonizing) serial verb constructions, and investigate how these complex predicates affect the argument structure of the component verbs involved. Following Alsina (1997), complex predicates are defined in the present study as structures composed of two or more grammatical elements, each of which contributes part of the predicational information to a monoclausal frame but need not have word status. By this definition, complex predicates need not be formed by two independent words but can encompass both morphologically complex verbs which are instantiated as a single word (such as morphological causatives in general) and verb complexes composed of two separate verbs (such as serial verbs).¹

The inclusion of the two types of complex predicates is motivated by the theoretical implications they provide to the overall understanding of argument structure. In the case of morphological causatives, previous literature generally concurs that a causativized predicate is associated with one more actor/agent

¹ A reader questioned the validity of analyzing morphological causatives as a type of complex predicate when the present study apparently does not work within the Government and Binding framework. I assume the question is concerned with the status of morphological causatives as a single word; analyzing such a structure as a complex predicate requires a theory that allows the terminal node of the phrase structure to be an affix. However, such a question becomes irrelevant under Alsina's (1997) analysis that complex predicates should be defined by the configuration of the argument structure rather than by a particular configuration of the phrasal structure. Additionally, Alsina's comparative study on the causative constructions in Chichewa and Catalan is clearly not conducted within the GB framework.
argument than the basic predicate. Despite this change in the array of arguments involved, there is a very strong tendency, as explicitly pointed out by Aissen (1979) and Kemmer and Verhagen (1994), for the clausal structure of a morphological causative construction to conform to the structure of a simple clause with the same number of arguments.\footnote{Thus the subcategorization of a causative derived from an intransitive verb is usually the same as that of a basic transitive verb; the subcategorization of a causative derived from a transitive verb is usually very similar to, if not the same as, that of a basic ditransitive verb.} In this way, the Tsou poa-causative construction brings to our attention how this language adapts its clausal syntax in response to the change in valency. In the case of serial verbs, on the other hand, previous literature typically portrays them as a mechanism by which actions encoded by two or more verbs are conceptualized as a single event. An investigation of serial verbs will then shed light on how event integration may incur change in argument structure.

In this chapter I concentrate on the Tsou poa-causative construction and in the next I will examine serial verb constructions. The structure of this chapter is organized as follows: In Section 6.1 I present a literature review on complex predicates, focusing on the paradoxes they bring to the understanding of argument structure and predicatehood/wordhood. I will pay attention to the possible multi-faceted nature of complex predicates—that a complex predicate may form a single word at one level of linguistic representation (e.g., morphological) but comprises a complex structure at another (e.g., syntactic). Section 6.2 summarizes the criteria that have been suggested as diagnostics for examining the wordhood of complex predicates at different levels of linguistic representation. In Section 6.3 I describe the morphosyntax of the Tsou poa-causative construction within the Construction Grammar framework. In Section 6.4
I examine the nature of *poa*-causatives at different levels of linguistic representation using the diagnostics outlined in 6.2. The diagnostic results are useful not only for indicating the predicatehood of *poa*-causatives at different levels of linguistic representation, but also for revealing properties specific to the *poa*-causative construction. Section 6.5 discusses how the *poa*-causative construction adds to our understanding of clausal syntax and argument structure in Tsou.

6.1 Complex Predicates and Wordhood

The phenomenon of complex predicates is reported in many languages around the world, and recent years have witnessed a growing typology of the phenomenon from different theoretical perspectives (cf. Bowern 2006; 2008). The current definitions of complex predicates such as found in Butt (1995:2; 1997:108; 2003:3) typically refer to three defining properties as summarized below.\(^3\)

a. A complex predicate is composed of two or more grammatical elements, each of which contributes part of the predicational information normally associated with a head.

b. Despite multi-headedness,\(^4\) the grammatical functional structure of a complex predicate is that of a single predicate (as defined by a syntactic clause).

---

\(^3\) Butt’s definition of complex predicates is shared by Alsina, Bresnan, and Sells (1997) and Butt and Geuder (2001), to name two.

\(^4\) Note that different linguists have different stances on the requirement of multi-headedness, or, to be more precise, on the relationship of headedness and wordhood. While Butt’s (1995; 1997; 2003) definition requires that a complex predicate be composed of multiple heads and of multiple words, Alsina (1997) does not require a complex predicate to be composed of multiple words (see footnote 1). He argues that
c. A complex predicate has complex argument structure.

Butt claims that the three properties can be applied across languages for identifying complex predicates at a cross-linguistic level.

Different linguistic structures have at various times been labeled as complex predicates—causatives (both morphological and analytical), serial verbs, and light verbs, among others (see Bowern 2008 for a thorough survey). Depending on the phenomenon under question, one may arrive at divergent interpretations regarding the nature of complex predicates and the formation of ‘complex argument structure’ (see feature (c) above). The analyses can be so divergent that it is not entirely clear whether the linguistic structures under discussion share sufficient similarities to be called instantiations of the same construction. On the one hand, linguists who take causatives and serial verbs as instantiations of complex predicates argue that the predicative elements each contribute theta roles to the complex predicate; the resulting argument structure is jointly determined by each component element (see Comrie 1976; 1981; 1985 for a characterization of causatives; see Foley and Olson 1985, Baker 1989, Durie 1997, and Aikhenvald 2006 for characterizations of serial verbs, among others). On the other hand, linguists who take light verb constructions as the core of complex predicates claim that only one predicative element in the verb the Chichewa morphological causative, formed by a verb and the causative morpheme -itsa, is also a type of complex predicate.

5 Causative constructions are prevalently interpreted as a structure in which the causative morpheme introduces an additional actor to the valency of the corresponding basic predicate (cf. Alsina 1996; 1997 on the Romance causatives). Serial verb constructions, as portrayed by Foley and Olson (1985), Baker (1989), Durie (1997), and Aikhenvald (2006), are described as a structure in which serialized verbs each contribute theta roles to the resulting verb complex.
complex, sometimes referred to as the ‘host’, is significant in determining the resulting argument structure (see, for example, Butt 1995; 1997; 2003 and T. Mohanan 1997). The other predicative element, referred to as the ‘light verb’, cannot license arguments and has an empty or deficient argument structure. Given the divergent analyses, it is not entirely clear whether these linguistic structures share sufficient similarities or whether they represent fundamentally different constructions that need to be dealt with separately.

The contention about the nature of ‘complex argument structure’ is related to the difficulty in explicating what is meant by two predicative elements jointly determining the grammatical function structure that is of a single predicate (see a–c on page 290)—an issue that concerns the notions of wordhood in which a single predicate is framed. Alsina (1997), T. Mohanan (1994; 1997), and Shibatani (2007) all remind us that linguistic information can be simultaneously defined at multiple, parallel levels, which may mismatch or overlap (see below). In the assessment of wordhood, at least three levels of linguistic representation need to be considered: phonological, morphological, and syntactic. Although ideally what counts as a word should be consistent across the three levels of representation, in reality linguists are often forced to recognize the mismatch between the three levels (cf. Di Sciullo and Williams 1987; Mohanan 1997; T. Mohanan 1997).

Butt (1995; 1997; 2003) and T. Mohanan (1997) argue that light verbs are semantically bleached and must depend on the host element for the information of argument structure. The main function of light verbs is to provide details on tense, mood, and aspect. Example (i) below is an Urdu light verb construction in which the host verb ‘make’ determines the argument structure as transitive whereas the light verb ‘give’ renders the event bounded.

(i) nadya-ne makan bana di-ya
Nadya=M.ERG house.M.NOM make give-PERF.M.SG
‘Nadya built a house (completely).’ (Urdu) (Butt 2003:2)
Alsina 1997; Alsina, Bresnan, and Sells 1997; Baker 1997; Ackerman and LeSourd 1997; Shibatani 2007; Harris 2000, to name a few). The mismatch is made apparent in complex predicates. A complex predicate may form a single word at one level of representation but comprises a phrase at another. For instance, Alsina (1992; 1997) claims that complex predicates may occur as two separate words morphologically but together constitute a tightly-knit syntactic unit with only one argument structure. A complex predicate, by Alsina's definition, is characterized by a unified argument structure but not necessarily by morphological integrity.7 T. Mohanan (1997) takes a similar stance in her study of Hindi complex predicates, where she argues that the components of a complex predicate do not necessarily form a morphological word even when they constitute a single word syntactically (defined by a unified set of argument structure that corresponds to a single set of grammatical relations). Figure 6-1 provides an illustration: the Hindi complex predicate yaad kar 'memory-do' is formed by combining the host noun yaad 'memory' and the light verb kar 'do'. Although syntactically 'memory' and 'do' form a single word/predicate at the level of argument structure (ARG STR), morphologically they correspond to two different words at the level of grammatical category structure (GC STR).8,9

---

7 Alsina (1997) argues that the causative construction in both Chichewa and Catalan constitutes a syntactic unit which controls a unified set of argument structure. But the causatives in the two languages differ in morphological integrity. The causative construction combines into a morphological word in Chichewa but two words in Catalan.

8 Not every linguist agrees with Alsina's and T. Mohanan's analyses. For instance, Baker (1997:286) and Ackerman and Lesourd (1997) claim that complex predicates necessarily constitute morphological words; morphological integrity is thus crucial to the definition of complex predicates.

9 T. Mohanan (1997:448) states that the light verb kar 'do' is a V' unit, not a v or V. The light verb and its auxiliary, if it is ever present, form a phrasal unit which can undergo topicalization as a whole. Within this phrasal unit, the light verb and the auxiliary each carry its own inflectional morphology, indicating
In the following section I summarize the diagnostics that have been proposed for examining the wordhood of complex predicates at different levels of linguistic representation.

6.2 Testing Wordhood

This section summarizes the diagnostics that have been proposed for examining the notion of word at three different levels of linguistic representation: phonological, morphological, and syntactic (Di Sciullo and Williams 1987; Alsina 1997; Mohanan 1997; Ackerman and LeSourd 1997; Harris 2000; Dixon and Aikhenvald 2002; Shibatani 2007). In Section 6.4 these diagnostics are utilized for examining the nature of poa-causatives, illustrating in what sense or in which aspect a poa-causative constitutes a single predicate, if at all. For a justification for utilizing non-language-specific criteria for identifying language-specific categories, see Section 2.5.3 for relevant discussions.

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that both are independent words.
6.2.1 Phonological Word

A phonological word is a phonological unit no smaller than a syllable, which is often characterized by specific segmental features (e.g., there are often different phonotactic possibilities within a phonological word and across word boundaries), prosodic properties (e.g., stress assignment in many languages falls on a fixed syllable of a phonological word), or phonological rules (e.g., some rules apply only within a phonological word while others apply across word boundaries) (Dixon and Aikhenvald 2002). Any of the three types of properties should then be possible to provide useful criteria for a phonological word.

6.2.2 Morphological Word

In the spirit of the lexical integrity principle, two perspectives have been proposed regarding how the notion of a morphological word can be defined. On the one hand, Shibatani (2007) argues that a morphological word exhibits the property of lexical integrity such that internal parts of a word are not susceptible to morphological and syntactic processes—the internal parts of a word do not undergo further derivational processes or cannot be analyzed by syntactic rules such as coordination, gapping, and negation. On the other hand, Alsina (1997) and Ackerman and LeSourd (1997) argue

---

10 Dixon and Aikhenvald (2002:13) point out that there is likely to be a close interaction between the three types of properties. On the one hand, many phonological rules are stress-dependent. On the other, the appearance of certain phonemes at certain positions within a phonological word may be a consequence of the operation of certain phonological rules.

11 Even though the lexical integrity principle is held to pertain to all syntactic rules, exceptions do occur, indicating that syntactic processes may have unequal access to the internal structure of a word. Harris' (2000) study on the Udi pronoun enclitics illustrates that the syntactic rule responsible for positioning
that morphological wordhood can be assessed by observing whether or not the target structure as a whole is input to further derivational processes. Only morphologically-derived structures can undergo further morphological processes; a syntactically-derived structure cannot. If a target structure as a whole can undergo derivational processes, it follows that the whole structure is a morphological word. In what follows, I introduce three tests for morphological wordhood: the ability to undergo derivational processes, coordination, and insertion of extraneous materials.

Input to derivational processes (Alsina 1997; Ackerman and LeSourd 1997; Harris 2000)

In theories that subscribe to the lexical integrity principle and assume a clear-cut division between lexicon and syntax, the lexicon is the dimension in which morphology takes place. Words are the output of morphology and the input to syntax, but syntactically-derived structures can never be the input to morphology and arguably do not form morphological words. Therefore, if a complex predicate forms a morphological word, it should be able to undergo derivational processes. A complex predicate that forms a phrase is unable to undergo further morphological processes.

Coordination (Alsina 1997; Harris 2000; Shibatani 2007)

It is generally assumed that only two morphologically independent words can be coordinated; parts of words cannot be conjoined. Harris (2000) illustrates that these enclitics has access to the internal structure of a verb. However, in the same paper she demonstrates that syntactic phenomena such as coordination, gapping, and negation do not have access to the internal parts of a word; she utilizes these phenomena for assessing wordhood (Harris 2000:599-603).
conjoining is possible in (1a) but impossible in (1b).

(1) (Harris 2000:603)
a Elise outran and outwitted Russell.
b *Elise out-ran and -witted Russell.

**Insertion of extraneous materials (Alsina 1997; T. Mohanan 1997; Harris 2000; Shibatani 2007)**

The definition of ‘word’ as a syntactic atom, as proposed by Di Sciullo and Williams (1987), entails that a word is a coherent whole that cannot be separated from each component unit by any extraneous material. This is true of morphologically derived structures but not of syntactically derived structures. If a particular type of complex predicate can be broken up by extraneous materials such as adverbs, negation particles, or pause (as proposed by Alsina (1997) on comparing Chichewa and Catalan causatives) and is still considered grammatical, this type of complex predicate is assumed to be formed in the syntax rather than in the lexicon. For instance, Harris (2000:601-602) utilizes the insertion of negation particles to illustrate that complex verbs in Udi, a language of the North East Caucasian family, are morphological words. In Udi, complex verbs such as _buya-b-e_ ‘find-do-AORII’ in (2) cannot be broken up by the negation marker _te_. The negative marker must precede the complex verb:

(2) _nana-nte-ne buya-b-e p’a ačik’alsšey_  
mother-ERG NEG-3SG find-do-AORII two toy.ABSL  
‘Mother did not find two toys.’ (Harris 2000:601)

(3) *_nana-nte-ne buya b-e p’a ačik’alsšey_  
mother-ERG find NEG-3SG do-AORII two toy.ABSL
On the basis of this behavioral characteristic, Harris argues that the complex verb buya-b-e comprises a single (morphological) word.

6.2.3 Syntactic Word

Shibatani (2007) argues that the defining criteria of syntactic wordhood should be based on (i) whether the predicative elements together comprise a semantically unitary event, and (ii) whether the predicative elements together constitute a fused argument structure. He proposes that the former can be assessed by tests such as the scope of adverbial modification, while the latter can be tested by observing both the semantics and the clausal structure (monoclausal\textsuperscript{12} or biclausal) of the construction under question. T. Mohanan (1997) and Butt (1995:108; 1997:2; 2003:3) share with Shibatani the idea of utilizing monoclausality as the criterion for diagnosing wordhood, but neither Mohanan nor Butt propose criteria for examining event integration.

Having reviewed the conventional diagnostics for wordhood, in Section 6.3 below I introduce the morphosyntax of the poa-causative construction before examining its wordhood in Section 6.4.

6.3 Morphosyntax of the Poa-Causative Construction

Causatives describe semantically complex situations in which one event, the causing

\textsuperscript{12} As will be specified in Section 6.4.4, monoclausality is established in the present study by a single specification of auxiliary and pronominal markings and by a single topic relation.
event, causes another, the caused event. These two events combine together to give a single complex macro-situation, the causative situation. In describing a causative construction, the convention is to identify three major event participants and to observe how a language expresses the three participants in grammatical encoding: the causer, the causee, and the caused-event patient. The causer is the actor in the causing event; the causee is the actor in the caused event; and the caused-event patient ('c-patient' henceforth) is the patient in the caused event. According to Comrie (1976; 1981; 1985), the typologically most common pattern is for the causer and the c-patient to occupy the more salient syntactic positions as subject and object. The grammatical encoding of the causee is comparatively less fixed in that it shifts to different syntactic positions: if the morphological causative is formed from an intransitive verb, the causee (the subject in the basic clause) has the properties of a direct object (DO) in the causative construction. If the causative is built on a transitive verb (Comrie's monotransitive), the causee becomes an indirect object (IO). If the causative is built on a ditransitive verb, the causee is marked as an oblique relation (OBL). Comrie's causative paradigm is schematized in Figure 6-2 below.

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13 In languages with actor-based subjects, the causee is understood as the subject of the basic clause and the c-patient is the object of the basic clause.

14 Comrie's original figure plots the valency relations between basic and causative verbs using terms of syntactic positions, although he did associate these syntactic positions with participant roles in his text. To highlight how syntactic positions may be adjusted in the causative frame, the present study includes participant roles into Comrie's original figure and suggests the modified version as in Figure 6-2. Such modification is motivated on the belief that syntactic positions/grammatical relations do not exist in a vacuum; they are syntactic generalizations imposed upon participant roles. Participants may be linked to various grammatical relations in different syntactic constructions, but their identities as to the discourse world remain the same. Participant roles are therefore necessary to compare the adjustment of grammatical relations before and after causativization. The above claim is made in the spirit of emergent
To conclude, the grammatical encoding of the causee assumes the syntactic position on the Accessibility Hierarchy (Keenan and Comrie 1977) that is not yet taken by other participants.

Now let us turn to Tsou. The Tsou poa-causative is formed by attaching the causative morpheme poa- onto a stem predicate (H. Chang and Tsai 2001; S. Huang and H. Huang 2005; Lin 2002; 2004; 2005; Zeitoun 2005). Examples (4a) and (4b) below illustrate a stem predicate and its causative form using the AF predicate yusuhngu 'sit'.

grammar (Du Bois 1987; Hopper 1987, among others), which suggests that grammatical structures are not autonomous. I understand that not all syntactic theories agree with this claim.

In fast speech, poa- may be further reduced to pa-.

The poa- prefixation is not the only morphological change which causativization induces. Causativization also triggers the occurrence of a second set of focus marking, such as the optional PF suffix -a of poa-yusuhngu-(a) in (4b). I will elaborate on the function of this second focus marking on page 304.
Before I proceed to the causative form of each valency type, a few words are necessary regarding the use of the term ‘derivation’ here. For the present study, the term ‘derivation’ is to be understood as the combination of a stem with a meaning-changing morpheme, as is widely adopted by morphologists in derivational morphology. In Construction Grammar, as per Lakoff (1987), Goldberg (1995), and Michaelis and Lambrecht (1996), the correspondence of a stem and its derived form is represented by an inheritance link between a dominated construction and a dominating construction (see Section 4.5). A dominated construction, such as the poa-causative construction, inherits syntactic, semantic, morphological, or pragmatic features from a dominating construction, such as a simplex predicate construction, unless the dominated construction prevents such inheritance by having a conflicting specification (Goldberg 1995:108). The present study adopts the notion of inheritance for modeling the correspondence of a stem predicate and its causative counterpart (see

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17 A reader questioned the use of ‘derivation’ in the Construction Grammar framework, wanting to know how the concept of derivation is reconciled in this framework. However, Construction Grammar does not need to reconcile the concept of derivation, as the theory-internal concept of inheritance is capable of handling the correspondence between constructions.
also Section 4.5 for the various types of inheritance relations between constructions).

In Sections 6.3.1-6.3.4, I present the causative form of each valency type. The description first addresses the verbal affixes incurred by the causativization process and moves onto the nominal morphology that is involved. The occurrence of focus affixes when different nominals hold the TOPIC relation is of particular interest.

6.3.1 Causatives of V=0, V=1, and V=2 Predicates: Verbal and Nominal Markings

The poa-causativization applies to predicates of all valency types in Tsou. Let us start from V=0 predicates. Example (5a) below is the basic V=0 predicate mUchU ‘rain’. Example (5b) illustrates its causativized form poa-mUchU-(a) ‘make rain’, which is formed by attaching the causative prefix poa- onto the stem predicate mUchU ‘rain’ (I refrain from discussing the occurrence of the second focus marker -(a) for the time being).

(5)

\[ \text{a} \quad \text{mo mUchU} \]
\[ \text{AUX.AF.R rain.AF} \]
\[ \text{‘(It) rained.’ (Basic, Construction(0); FND.DTXB005)} \]

\[ \text{b} \quad \text{i’si poa-mUchU-(a) to yoifo} \]
\[ \text{AUX.NAF.R=3SG CAUS-rain_AF=PF NTOP wizard} \]
\[ \text{‘The wizard made (it) rain.’ (Causative, Construction(0) stem; FNE.XGAU601)} \]

The poa-prefixation also applies to V=1 predicates. Examples in (4) illustrate the causativization of the V=1 predicate yusuUngu ‘sit’. In (4a), the V=1 predicate ‘sit’ occurs in its AF form yusuUngu. Causativization attaches the prefix poa- to this AF form and
derives poa-yusuñgu-(a) in (4b). Example (6b) below is another example of a causativized V=1 predicate, poa-oengUtU-(a) ‘make sleep’. In (6a), the V=1 predicate ‘sleep’ occurs in its AF form oengUtU. Causativization attaches the prefix poa- to this AF form and derives poa-oengUtU-(a) in (6b). Example (6c) is an instance extracted from Tung’s (1964) narratives. In this example, the AF predicate pepe ‘high’ is associated with poa- and the PF suffix -a, forming poa-pepe-a ‘heighten’.

(6)

a. mi=tta oengUtU 'e oko
   AUX.AF.R=3SG sleep.AF TOP child
   ‘The child slept.’ (Basic, Construction(1.AF);FNB.XTRC0433a)

b. i=si poa-oengUtU-(a) to yoifo 'e oko
   AUX.NAF.R=3SG CAUS-sleepAF-PF NTOP wizard TOP child
   ‘The wizard made the child sleep.’ (Causative, Construction(1.AF) stem, FNB.XTRC0433b)

c. ko?ko la=he eno aacni-a poa-pepe-a i?o taico to hiufia
   therefore AUX.HAB=3PL then always-PF CAUS-highAF-PF TOP middle NTOP TOP
   ‘Therefore they always heighten the middle of the tomb.’ (Tung1-6:022)

Causativization applies to V=2 predicates as well. In (7a), the V=2 predicate ‘eat’ is in the AF form b-onU. In (7b), causativization derives poa-b.onU-(a). In (8a), the V=2 predicate ‘eat’ is in its PF form an-a. Causativization attaches the prefix poa- to this PF form, deriving poa-an.a-neni in (8b).

(7) (FNA.XSSE221a~b)

a. mi=ta b-onU to tacUmU 'e amo
   AUX.AF.R=3SG AF-eat NTOP banana TOP father
   ‘Father ate bananas.’ (Basic, Construction(2.AF))
Causativization also triggers the occurrence of a second set of focus marking. AF-marked stem predicates, such as mUchU 'rain' (V=0) and oengUtU 'sleep' (V=1), are attached with an optional PF marker -a in causativization, deriving causative forms such as poa-mUchU-(a) in (5b) and poa-oengUtU-(a) in (6b). To differentiate between the focus marking of stem predicates and the second focus marking—the one triggered by causativization—the former is glossed in subscripts but the latter is in regular capitals.

Suffixation of -a as the second focus marking also occurs with AF-marked V=2 predicates. In (7a), the V=2 predicate b-onU 'eat' is AF-marked, indexing the TOPIC nominal as the ACTOR. In (7b), causativization brings in the prefix poa- and an optional PF suffix -a, deriving poa-b.onU-(a) 'make eat'. The AF prefix b- of the stem predicate remains intact in the causative form. There are thus two sets of focus markers in a causative predicate. The first set comes from the stem predicate while the second set occurs via causativization.18

18 In simplex predicates, no two focus markings co-occur. For instance, the putative form *b-onU-a is
The affixation of a second focus marker also occurs with PF-marked \( V=2 \) predicates in causativization, but with a slight difference. With the stem predicate in the PF form, the second focus marker is no longer an optional PF suffix -a, but a compulsory RF suffix -neni. In (8a), the predicate 'eat' is in its PF form an-a. In (8b), this PF form is attached with poa- and the RF marker -neni, deriving poa-an.a-neni. Examples (9) and (10) below illustrate that the suffixification of -neni as the second focus marking also occurs with RF and LF predicates. A comparison of (8), (9), and (10) indicates that the suffixification of -neni as the second focus marking applies to all the NAF-marked \( V=2 \) predicates (PF, RF, and LF).

(9) (FNA.XSSE227a~b)

a  \( i=he \quad yon-i \text{ to 'o'oko, 'o coca} \)
AUX.NAF.R=3PL stay-LF NTOP children TOP yard
'The children stayed in the yard.' (Construction(2.LF))

b  \( i=sj \quad poa-yon.i-neni \text{ to 'o'oko to yoifo, 'o coca} \)
AUX.NAF.R=3SG CAUS-stay-LF-RF NTOP children NTOP wizard TOP yard
'The wizard made the children stay in the yard.' (Causative, Construction(2.LF) stem)

(10)

a  \( i=he \quad yupteilU-neni \text{ to 'o'oko, 'o icangaya} \)
AUX.NAF.R=3PL meet-RF NTOP children TOP leader
'The children met the (tribe) leader.' (Construction(2.RF); FND.XPRO403)

b  \( i=sj \quad poa-yupteilU.neni-neni \text{ to 'o'oko to yoifo, 'o icangaya} \)
AUX.NAF.R=3SG CAUS-meet-RF-RF NTOP children NTOP wizard TOP leader
'The wizard made the children meet the (tribe) leader.' (Causative,

ungrammatical in both AF and PF constructions. This co-occurrence restriction supports the claim that \( b- \) and \(- (a) \) in poa-b.onU-(a) 'make eat' (see (7b)) come from different layers of morphological processes.
The morphological change that causativization induces may seem unsystematic and confusing regarding which focus affix should apply, the PF suffix -a or the RF suffix -neni. Nevertheless, the change is predictable if we attend to the focus of the stem predicate. If the stem, i.e., the simplex predicate, is AF-marked, causativization calls for an optional PF suffix. This process occurs for V=0, V=1, and V=2 predicates, as shown in the second column of Table 6-1. If the stem predicate occurs in any of the three non-actor-focus (NAF) forms, this NAF-marked stem is attached with the RF suffix -neni in the causative frame.

<table>
<thead>
<tr>
<th>Stem</th>
<th>Focus</th>
<th>AF</th>
<th>NAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Form</td>
<td>mUchU</td>
<td>oengUtU</td>
<td>b-onU</td>
</tr>
<tr>
<td>Examples</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>

Table 6-1 Stem predicates and causative forms: V=0, V=1, and V=2

In concurrence with the change in verbal marking, the poa-causative construction also incurs an encoding difference in nominal marking. To be more precise, causativization leads to a difference among nominals as to whether they can be selected as the TOPIC relation. In the poa-causative construction, arguments that are inherited from the stem predicate (e.g., the causee and the c-patient) retain their ability to assume the TOPIC relation, but this is not the case with the causer nominal. Let
us start with the encoding patterns of the causee and the c-patient. Recall that in the basic, non-causative clauses (7a) and (8a),\(^9\) the actor and the patient of the predicate 'eat' can be selected as the topic, respectively. When these two arguments occur in the causative frame and become the causee and the c-patient, they both retain the ability to be selected as the topic of the clause. In (7b), the causee 'Father' appears as the topic nominal, just as its basic clause counterpart does in (7a). Likewise, the c-patient also retains the ability to be selected as the topic, just as the basic patient. In (8a), the patient naveu 'rice' is the topic of the basic clause. In (8b), naveu 'rice' is now the c-patient and still takes the topic marking. Examples (9) and (10) show that the basic location and the basic reference also retain their ability to be selected as the topic in causative clauses. To conclude, arguments that are inherited from the basic clause do not show any difference from their basic clause counterparts in terms of nominal marking. (As will be made clear later, topic marking helps identify how different clausal nominals are aligned with argument roles in causative constructions.)

In contrast to the arguments inherited from the basic clause, the causer is severely restricted in nominal marking. In the poa-causative construction, the causer is never selected as the topic of the clause. In (5b), (6b), (7b), and (8b), the causer nominal yoifo 'wizard' always appears as the non-topic. Example (11) shows that a causer-topic is ungrammatical.

(11) *mo poa-b.onU-(a) to tacUmU to naau 'o yoifo
AUX.AF.R CAUS-eat\_af-(PF) NTOP banana NTOP Naau TOP wizard
intended 'The wizard made Naau eat bananas.' (V=2, Causative, causer-topic;

---

\(^9\) Hereafter, I use the term 'basic clause' for referring to the simplex predicate construction headed by the stem predicate corresponding to the causative form under discussion.
A consequence that follows from the limitation on the causer's nominal marking is that the focus marking on causative predicates becomes irrelevant for identifying the grammatical role of the causer, since only the topic nominal can have its grammatical role indexed on the predicate. In this regard, the causer's morphosyntactic behavior is drastically different from arguments inherited from the corresponding basic clause/simplex predicate construction (see below for the discussion on the causer's argument status).

Despite the limitation on nominal marking and therefore the inability to index its grammatical role on the verb, the causer displays a particular feature that helps identify its grammatical role relative to the causative predicate. Recall that in simplex predicate constructions only the actor nominal is referenced on the auxiliary via pronominal clitics (Section 3.4). The causer also possesses this characteristic. In basic clauses like (8a), the plural nominal 'o'oko 'children' is aligned with the actor and referenced on the auxiliary with the third person plural clitic =he. In the causative clause (8b), however, the pronominal clitic no longer indexes the basic actor/causee. The clitic =si now indexes the third person singular causer 'wizard'. Examples (5b), (6b), and (9b) illustrate similar references to the causer. The choice of pronominal clitics suggests that the causer assumes the actor role in causative constructions. Additionally, recall that both actor and topic markings are indicative of argument status in simplex predicate constructions (see Sections 4.2 and 5.4). A nominal that can be selected for either actor or topic marking displays grammatical prominence over various syntactic processes and is an argument recognized in this study. The fact that
the causer bears \textit{actor} marking is therefore indicative of its argument status in causative constructions, regardless of its \textit{non-topic} status.

\textbf{6.3.2 Causative Constructions Based on V=0, V=1, and V=2 Constructions}

Having introduced the morphosyntax of three types of \textit{poa}-causative constructions, in what follows I employ \textit{actor} marking, \textit{topic} marking, and the second focus marking to illustrate the internal structures of these \textit{poa}-causative constructions. Attention is given to (i) the correspondence/inheritance between the causative construction and its basic counterpart, (ii) the alignment of causative participants and argument roles, and (iii) the construction-specific features regarding the manifestations of inherited arguments (e.g., the causee and the c-patient).

\textit{Poa-Causatives based on the V=0 construction (MC.V=0)}

Figure 6-3 below illustrates the \textit{poa}-causative construction derived from the V=0 focus construction, using the causative form \textit{poa-}\textit{mUchU-(a)} ‘make-rain’ and its basic counterpart \textit{mUchU} ‘rain’ (see example (5) on page 302) as examples. For ease of reference, this type of \textit{poa}-construction is referred to as the MC.V=0 construction henceforth. In the figure, the box to the upper right represents the V=0 focus construction, which does not license any argument. The MC.V=0 construction is represented as an enclosed box to the lower left. Within the causative construction is a dotted box that indicates the features inherited from the simplex V=0 construction. In correspondence to the nature of the V=0 construction, the inheritance box in Figure 6-3
does not contain any argument.

Outside the inheritance box, the MC.V=0 construction introduces a causer participant. Semantically, the causer initiates the force transmission leading to the caused result, as expressed by the stem predicate \textit{mUchU} 'rain'. The causer’s existence thus must precede the caused event because the caused event would not happen without the causer’s existence (Shibatani 1976). The causer’s existence prior to the caused event meets the characterization of the Tsou \textit{actor} as the role of primary relevance, whose existence typically precedes the predicated event (see Section 5.3.1 for details). This semantic commonality between the causer and the \textit{actor} motivates the causer’s ability to control the choice of pronominal clitics on the auxiliary, just like the \textit{actor} nominal in simplex predicate constructions. The MC.V=0 construction therefore provides an affirming example to the adequacy of the notion of relevance (see Section 5.3.1) in predicting the association of event-specific participants with
grammatical roles, illustrating that the notion of relevance applies to both simplex and complex predicate constructions.

However, the MC.V=0 construction carries a specific feature not seen in simplex predicate constructions, making it a distinct construction that needs to be dealt with separately. Unlike simplex predicate constructions, which allow the ACTOR-TOPIC alignment in appropriate context, the MC.V=0 construction requires that the causer-actor be aligned with the NON-TOPIC relation, and the auxiliary is accordingly marked in NON-ACTOR-FOCUS. (see Figure 6-3).

Po'a-Causatives based on the V=1 construction (MC.V=1)
The restriction on the causer's nominal marking is not unique to the MC.V=0 construction but is also seen in po'a-causatives derived from the V=1 construction (abbreviated as MC.V=1 henceforth). Figure 6-4 below illustrates the MC.V=1 construction using the causative form po'a-oengUtU-(a) 'make-sleep' and its V=1 counterpart oengUtU 'sleep' (see example (6) on page 303). In the figure, the MC.V=1 construction ('make-sleep') inherits the sleeper-actor argument from the simplex V=1 construction. The inherited ACTOR is enclosed in a dotted box. Outside the inheritance box, the causative construction introduces a causer-actor and requires the causer-actor to be linked to the NON-TOPIC relation.
As readers may notice, the MC.V=1 construction is slightly more complicated than the MC.V=0 construction with regard to the structure of the inheritance box. In Figure 6-4, the MC.V=1 construction inherits an actor role from the V=1 construction to the upper right, i.e., the causee. In the MC.V=1 construction, however, semantically the causee is no longer the entity that initiates the action chain. The initiator is now the causer-actor, as discussed above. The causee instead is the entity under the influence of the causer-actor. The change in semantics is accompanied by syntactic adjustment. The causee assumes the patient role in the causative construction, as made evident from the (optional) occurrence of the PF suffix -a (as the second focus marker) when the causee is linked to the topic relation.

Another point to be noted regarding the MC.V=1 construction concerns the pattern of topic marking. The MC.V=1 construction follows the general requirement that there is a topic relation in every Tsou clause (except for existential and weather
expressions). Due to the constraint that the causer-ACTOR be NON-TOPIC, the TOPIC relation in the MC.V=1 construction is obligatorily linked to the causee-PATIENT, with the auxiliary accordingly marked in the NAF form.

Poa-Causatives based on V=2 constructions (MC.V=2)

A poa-causative construction derived from a V=2 construction (abbreviated MC.V=2) shares many properties with the MC.V=1 construction, except that this MC.V=2 construction inherits one more argument, i.e., the PATIENT, from the corresponding V=2 construction. Figure 6-5 below illustrates the MC.V=2 construction using the causative form poa-b.onU-(a) ‘make-eat’ and its V=2.AF counterpart b-onU ‘eat’ in (7). Like the MC.V=1 construction, the MC.V=2 construction also introduces a causer participant on top of the arguments inherited from the simplex predicate construction. This causer assumes the ACTOR role and is linked to the NON-TOPIC relation outside the inheritance box in Figure 6-5. With regard to the structure of the inheritance box, the poa-b.onU-(a) construction (‘make-eat’) inherits both the ACTOR (i.e., causee) and PATIENT (c-patient) of the b-onU construction (‘eat’). The causee assumes the PATIENT role of the causative construction, just like in the MC.V=1 construction. It is the syntactic realization of the c-patient that is of main interest below.
Figure 6-5 MC.V=2 Construction (AF stem): poa-b.onU-(a) ‘make-eat’

Like the causee, the c-patient is also allowed to be linked to the TOPIC relation. The alignment with the TOPIC relation triggers the occurrence of the RF suffix -neni as the second focus marker, as in poa-an.a-neni ‘make-eat’, indicating that the c-patient assumes the REFERENCE role in the causative construction. The c-patient, i.e., the PATIENT of the basic clause, thus displays a PATIENT-TO-REFERENCE adjustment in the causativization process. In fact, the adjustment to the REFERENCE role happens to all the NON- ACTOR arguments inherited from the simplex predicate construction, as indicated by the occurrence of the second focus marker -neni in the pair of yUptellU-neni ‘meet, RF’ and poa-yUptellUneni-neni ‘make-meet’ and the pair of yon-i ‘stay, LF’ and poa-yon.i-neni ‘make-stay’ in Table 6-1. For brevity’s sake, however, I only list the poa-an.a-neni construction for illustration in Figure 6-6.
To summarize, the poa-causative construction introduces a causer participant on top of the arguments inherited from the corresponding simplex predicate construction. In correspondence with the incorporation of the causer, the poa-construction makes adjustments to the grammatical role of the inherited argument(s), if there is any. The \textsc{actor} of the simplex predicate construction is represented as the \textsc{patient} argument in the causative construction; all the \textsc{non-actor} arguments inherited from the simplex construction, including the \textsc{patient}, the \textsc{reference}, and the \textsc{location}, are represented as the \textsc{reference} argument in the causative construction.

6.3.3 Causatives of V=3 Predicates: Verbal and Nominal Morphology

Tsou also allows causativization of V=3 predicates. The pattern is similar to that of V=0,
V=1 and V=2 predicates. In what follows I illustrate the formal changes in verbal and nominal markings.

Causativization of V=3 predicates also employs the prefix poa- and incurs the occurrence of a second focus marker. The AF/NAF distinction observed in Table 6-1 still applies and governs the choice of the second focus marker for a causative form. An AF-marked stem predicate is associated with an optional PF suffix -a for the causative form, as in the pair of mo-fi ‘give, AF’ and poa-mo-fi-(a) in (12) below.

(12) (FNA.XSSE231a~b)
a mo=∅i mo-fi to tposU ta lema'cohio 'o 'o'oko, AUX.AF.R=3PL AF-give NTOP book NTOP teacher TOP children ‘The children gave a book to the teacher.’ (Construction(3.AF))
b i=∅i poa-mo-fi-(a) to tposU ta lema'cohio 'o 'o'oko AUX.NAF.R=1SG CAUS-giveAF−PF NTOP book NTOP teacher TOP children ‘I made the children give books to the teacher.’ (Causative, Construction(3.AF) stem)

A NAF-marked stem predicate is coupled with a compulsory RF suffix -neni for the causative form. In (13a) below, the RF form fa-eni ‘give’ indexes a REFERENCE-TOPIC, the given entity ‘book’. When causativized, as in (13b), the stem predicate is attached with the prefix poa- and a second focus marker -neni, deriving poa-fa.eni-neni.

(13) (FNA.XSSE231c~d)
a i=he, fa-eni to lema'cohio to 'o'o'oko, 'o tposU AUX.NAF.R=3PL give-RF NTOP teacher NTOP children TOP book ‘The children gave the book to a teacher.’ (Construction(3.RF))
b $i^o$ poa-fa.eni-neni to lema'cohio to 'o'oko 'o tposU
AUX.NAF.R=1SG CAUS-give$_{RF}$ NTOP teacher NTOP children TOP book
'I made the children give the book to a teacher.' (Causative, Construction(3.RF) stem)

The V=3 predicate 'give' can also appear in the LF form $fi$-$i$ and index the LOCATION-TOPIC relation of a recipient, as in (14a). Like its AF and RF counterparts, this LF form can also be causativized. Example (14b) demonstrates that the LF predicate $fi$-$i$ is attached with poa- and the RF suffix -neni. Together they constitute poa-$fi$-$i$-neni.  

(14) (FNA.XSSE231ef)

a $i^he$, $fi$-$i$ to tposU to 'o'oko, 'o lema'cohio
AUX.NAF.R=3PL give-LF NTOP book NTOP children TOP teacher
'The children gave books to the teacher.' (Construction(3.LF))

b $i^o$ poa-$fi$-$i$-neni to tposU to 'o'oko 'o lema'cohio
AUX.NAF.R=1SG CAUS-give$_{RF}$ NTOP book NTOP children TOP teacher
'I made those children give books to the teacher.' (Causative, Construction(3.LF) stem)

The ACTOR-REFERENCE-LOCATION relation as illustrated in 'give' is but one of the three types of relations encoded by the V=3 constructions. It was mentioned in Section 4.9 that the V=3 constructions also encompass the ACTOR-PATIENT-LOCATION relation and the ACTOR-PATIENT-REFERENCE relation. Despite the difference in the array of arguments

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Starosta (1974) had a different interpretation of how arguments are represented in Tsou causative clauses (see Section 3.9). He took the second focus affix -neni, such as the one in poa-$fi$-$i$-neni 'make give', to be a dummy morpheme that does not contribute to the interpretation of argument roles. In his representation, the causative form poa-$fi$-$i$-neni is marked in LF (his 'RF'), as indicated by the LF suffix -$i$ from the stem predicate $fi$-$i$ 'give, LF'. The present study does not agree with Starosta's analysis due to the apparent inconsistency in his interpretation of focus morphology—that -neni is a focus affix in basic clauses but a dummy morpheme in causative clauses. See Section 3.9 and Lin (2007) for more details.
involved, both types of relations display the same pattern of causativization as illustrated above: an AF stem predicate requires a poa- prefix and an optional PF suffix as the second focus marker. A NAF stem predicate requires a poa- prefix and a compulsory RF suffix as the second focus marker, as shown in (15)-(17).

(15) (FNA.XSSE232a~b)
  a) \( mo=\emptyset, \) \( mo-si \) to \( tposU \) to \( pangka 'o oko, \)
  AUX.AF.R=3SG AF-put NTOP book NTOP table TOP child
  ‘The child put a book on a table.’ (Construction(3.AF))

  b) \( i='o \) poa-mo.si-(a) to \( tposU \) to \( pangka 'o oko \)
  AUX.NAF.R=1SG CAUS-give\( _AF \)-PF NTOP book NTOP table TOP child
  ‘I made the child put a book on a table.’ (Causative, Construction(3.AF) stem)

(16) (FNA.XSSE232c~d)
  a) \( i=si, \) \( si-a \) to \( pangka to oko, 'o tposU \)
  AUX.NAF.R=3SG give-PF NTOP table NTOP child TOP book
  ‘The child put the book on a table.’ (Construction(3.PF))

  b) \( i='o \) poa-si.a-neni to \( pangka to oko 'o tposU \)
  AUX.NAF.R=1SG CAUS-put\( _PF \)-RF NTOP table NTOP child TOP book
  ‘I made the child put the book on a table.’ (Causative, Construction(3.PF) stem)

(17) (FNA.XSSE232e~f)
  a) \( i=si, \) \( si-i \) to \( tposU to oko, 'o pangka \)
  AUX.NAF.R=3SG put-LF NTOP book NTOP child TOP table
  ‘The child put a book on the table.’ (Construction(3.LF))

  b) \( i='o \) poa-si.i-neni to \( tposU to oko 'o pangka \)
  AUX.NAF.R=1SG CAUS-give\( _LF \)-RF NTOP book NTOP child TOP table
  ‘I made the child put a book on the table.’ (Causative, Construction(3.LF) stem)

Table 6-2 organizes the causative examples discussed thus far and illustrates the
derivational relationship of stem predicates and causative forms in the four valency types.

<table>
<thead>
<tr>
<th>Stem Focus</th>
<th>AF</th>
<th>NAF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V=0</td>
<td>V=1</td>
</tr>
<tr>
<td>Basic Form</td>
<td>mUchU</td>
<td>oengUtU</td>
</tr>
<tr>
<td>Causative Form</td>
<td>poa-mUchU-(a)</td>
<td>poa-oengUtU-(a)</td>
</tr>
<tr>
<td>Examples</td>
<td>(5)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

Table 6-2 Stem predicates and causative forms: V=0, V=1, V=2, and V=3

In terms of nominal marking, causativization of V=3 predicates also shows characteristics similar to causative predicates derived from the other three valency types. Of all the nominals in a causative clause, arguments inherited from the stem predicate can be selected as the **TOPIC**, but this is not the case with the causer, i.e., the **new ACTOR**. Example (12b) illustrates that the causee 'children', the **ACTOR** of the basic clause, assumes the **TOPIC** relation in the causative clause. Example (13b) illustrates that the **REFERENCE** of the basic clause, the given 'book', assumes the **TOPIC** relation in the causative clause. Example (14b) demonstrates that the **LOCATION** of the basic clause, the entity that received the book, is equally capable of assuming the **TOPIC** relation in the
causative clause.

In contrast, the causer is excluded from topic selection. Example (18) illustrates that the causer-topic alignment is not allowed.

(18) *mi-ta poa-mo.fi-(a) ta tposU ta lema'cohio
AUX.AF.R=3SG CAUS-give.AF-PF NTOP book NTOP teacher

ta 'o'oko 'e ino
NTOP children TOP mother
intended 'Mother made the children give books to the teacher.' (Causative, Construction(3.AF) stem, causer-topic; FNA.XSSE233)

In spite of this encoding restriction, the causer in the MC.V=3 construction is still referenced on the auxiliary, just like the actor in simplex predicate constructions. Take (19a) and (19b) as examples. In the basic clause (19a), the third person plural clitic =he refers to the actor nominal, 'o'oko 'children'. But in the causative clause (19b), the clitic no longer indexes 'children'. Instead, the clitic is changed to the third person singular =si and references the causer ino 'mother', the new actor of the causative clause. In the causative clause, the ability to trigger pronominal marking is limited to the causer only; none of the other clausal nominals can do this.

(19) (FNC.DJUD063a-b)

a i=he, fi-i to peisu to 'o'oko, 'o mameoi
AUX.NAF.R=3PL give-LF NTOP money NTOP children TOP old.man
'The children gave the old man money.' (Construction(3.LF))

b i=si, poa-fi.i-neni to peisu to 'o'oko to ino,
AUX.NAF.R=3SG CAUS-giveRF.NN-LF NTOP money NTOP children NTOP mother
The poa-causative constructions derived from the various types of V=3 constructions (MC.V=3 henceforth) share many properties with the causative constructions introduced earlier, except that there are now three inherited arguments from the corresponding simplex predicate construction. Figure 6-7 and Figure 6-8 below illustrate three MC.V=3 constructions using the verb mo-fi 'give, AF' together with its RF and LF forms. All three MC.V=3 constructions introduce a new causer-ACTOR into the causative frame, and this causer-ACTOR is obligatorily aligned with the NON-TOPIC relation. Of the arguments inherited from the basic clause, the basic ACTOR assumes the PATIENT role in the causative construction, as evinced by the occurrence of the optional PF suffix -a as the second focus marker in (14b). All the basic NON-ACTOR arguments, including the PATIENT, the REFERENCE, and the LOCATION, are represented as the REFERENCE argument in the causative clause, as made evident by the occurrence of the RF suffix -neni in (15b) and (16b).
Figure 6-7 MC.V=3 Construction (AF stem): poa-mo.fi-(a)

Figure 6-8 MC.V=3 Construction (RF stem): poa-fa.eni-neni
Figure 6-9 MC.V=3 Construction (LF stem): poa-fi-i-neni

Figure 6-7, Figure 6-8, and Figure 6-9 also draw attention to the peculiar feature of *poa*-constructions in multiplying the *reference* role for accommodating *non-actor* arguments inherited from the basic clause. In the three figures listed above, the basic *reference* and the basic *location* of 'give' are both linked to the *reference* role in the causative construction, as made evident by the occurrence of -neni as the second focus marker in Table 6-2. The multiplication of the *reference* role, together with the constraint on the nominal marking of the causer-actor, demonstrates the aspects where *poa*-constructions 'deviate' from simplex predicate constructions, an issue I will return to in Section 6.5.1. Before that, I first illustrate the wordhood of *poa*-causatives in Section 6.4. The discussion below lays the foundation for contrasting *poa*-causatives with simplex predicates and with serial verbs in Chapter 7.
6.4 Poa-Causatives: Wordhood

In this section, I apply diagnostics of wordhood to poa-causatives and examine in what sense they function as words: phonological, morphological, or syntactic. The diagnostic results reveal that poa-causatives form phonological words, but they do not meet all the defining criteria for morphological or syntactic words. The mismatching results correspond to the claims made by T. Mohanan (1994; 1997) and Shibatani (2007) that a complex predicate may constitute a single word at one level of linguistic representation but forms a phrasal structure at another level (see Section 6.1).

Before detailing the diagnostic results, I first present in Section 6.4.1 the diagnostic results of simplex predicates with regard to wordhood tests. These results provide a basis for evaluating the wordhood of poa-causatives relative to simplex predicates formed by verb stems and focus morphology.

6.4.1 Simplex Predicates and Wordhood Tests

Phonologically, a Tsou simplex predicate is a single domain for stress assignment, which falls on the penultimate syllable of a phonological word (see Section 3.3). A simplex predicate bearing two primary stresses, as *mainé'e 'go home' in (20), is considered ill-formed by consultants.

(20) /mainé'e/ 'go home'; */mainé'e /(FNE.XGAI642b)

Morphologically, a Tsou simplex predicate is a unit that can undergo further
derivational processes such as the na-prefixation in (21). A simplex predicate is also an integrated whole whose internal parts can neither be conjoined nor be broken up by external materials. Examples (22a)-(22b) illustrate that parts of a simplex predicate, such as papas, cannot be a conjunct in a coordinate structure. Examples (23a) and (23b) indicate that papas-a cannot be broken up by the negation particle 'ote, nor can it be broken up by the hearsay marker nana.

(21) kuzo ‘bad’; na-kuzo ‘rotten’ (na- ‘become’) (Tung 1964:208)

(22)

a i=sic cu papas-a ho an-a to naau, 'o fou
AUX.NAF.R=3SG=PERF chop-PF and eat-PF NTOP Naau TOP meat
‘Naau chopped and ate the meat.’ (FNE.XGAU643d)

b *i=sic cu [papas ho an]-a to naau, 'o fou
AUX.NAF.R=3SG=PERF chop and eat-PF NTOP Naau TOP meat
intended ‘Naau chopped and eat the meat.’ (FNE.XGAU643e)

(23)

a *i=si_i papas-ote-a to naau, 'o fou
AUX.NAF.R=3SG chop-NEG-PF NTOP Naau TOP meat
intended ‘Naau did not chop the meat.’ (FNE.XGAU643e)

b *i=si_i papas-nana-a to naau, 'o fou
AUX.NAF.R=3SG chop-HEARSAY-PF NTOP Naau TOP meat
intended ‘Naau reportedly chopped the meat.’ (FNE.XGAU643f)

Syntactically, a Tsou simplex predicate requires a monoclausal structure, which is indicative of a single event and a single argument structure. The monoclauasality is established by a single specification for modality and pronominal markings on the
auxiliary. Example (24c) illustrates that it is impossible for a simplex predicate to be given both a perfective and a progressive marking at the same time. The single event interpretation is evident in the fact that a simplex predicate can only be given a single temporal reference. The event expressed by a simplex predicate cannot be given conflicting temporal references, as seen in the contrast between (24a) and (24b). The claim of a single argument structure is established by the fact that argument roles associated with a simplex predicate are not to be duplicated. For instance, a simplex predicate cannot be associated with two actors, as is evident from Chapters 4 and 5. Table 6-3 summarizes the diagnostic results based on Tsou simplex predicates.

(24)

a  ine noanao moso nana la mav?ov?o na moso la
   NTOP past AUX.AF.R HEARSAY HAB various TOP AUX.AF.R HAB

   tmucou
   transform.to.human.AF
   'In the past, there were various kinds of shape shifters.' (Tung 1-26:001)

b  *ine noanao moso nana la mav?ov?o na moso la
   NTOP past AUX.AF.R HEARSAY HAB various TOP AUX.AF.R HAB

   maitan'e
   transform.to.human.AF today
   intended 'In the past, there were various kinds of shape shifters today.' (FNE.XGAU643i)

c  *i=si=cu=n' a an-a to naau 'o fou
   AUX.NAF.R=3SG=PERF=PROG eat-PF NTOP Naau TOP meat
   intended 'Naau ate and was going to eat the meat.' (FNE.XGAU643g)
6.4.2 Poa-Causatives and Phonological Wordhood

In Tsou, stress falls on the penultimate syllable of a phonological word, such as mainé’e ‘go home’ and ianan’óu mainé’e ‘go home separately’ in (25). In the case of poa-causatives, stress falls on the penultimate syllable of the entire causative structure, as in poa-mainé’e and poa-mainé’e-a in (26). The poa- prefix does not bear stress. It is considered phonologically ill-formed to have a word stress on poa-, as in *póa-mainé’e. The fact that a poa-causative constitutes a single domain for stress assignment reveals the commonality between a poa-causative and a simplex predicate, indicating that a poa-causative forms a phonological word, not a sequence of two independent words.

(25) /ianan’óu mainé’e/ ‘go home separately’ (FNE.XGAU641)
(26) /poa-mainé’e/ ‘make go home’; /poa-mainé’e-a/; */póa-mainé’e/ (FNE.XGAU642a)
6.4.3 Poa-Causatives and Morphological Wordhood

Input to Morphological Processes

Poa-causatives can undergo derivational processes. Tung (1964:167) points out that the causative form poa-mimo ‘let drink’ and its reduced form pem0 can combine with the word s’o’s’o ‘drug’, forming a compound pemos’os’o ‘let take medicine’. This compound can further combine with the prefix le- ‘accustomed to’, deriving the noun lepemos’os’o ‘herb doctor’, as illustrated in (27). The result indicates that poa-causatives constitute morphological words, just like simplex predicates.

(27) (Tung 1964:167)
/poa-mimo/→/pemo/ ‘let drink’
/pemos’os’o/: ‘let take medicine’
/lepemos’os’o/: herb doctor (one who gives medicine)

Coordination

It was mentioned in Section 5.4.3 that words, phrases, and clauses in Tsou are conjoined by the conjunction ho. Example (28) below illustrates the conjoining of two words ‘chop’ and ‘eat’ in a coordinate construction. Parts of a causative form, however, cannot be conjoined, as shown in the comparison of (29), (30), and (31). The impossibility of conjoining papas.a and an.a inside a poa-causative supports the view that these are parts of words and that a poa-causative is a morphological word.

(28) i=si, papas-a ho an-a to naau, ‘o fou
AUX.NAF.R=3SG chop-PF and eat-PF NTOP Naau TOP meat
‘Naau chopped and ate the meat.’ (FNE.XGAU643a)
(29) *os='o poa-[papas.a ho an.a]-neni to naau 'o fou
   AUX.NAF.R=1SG CAUS-chop$_{pf}$ and eat$_{pf}$-RF NTOP Naau TOP meat
   intended 'I made Naau chop and eat the meat.' (FNE.XGAU643b)

(30) os='o poa-papas.a-neni ho poa-an.a-neni to naau 'o fou
   AUX.NAF.R=1SG CAUS-chop$_{pf}$-RF and CAUS-eat$_{pf}$-RF NTOP Naau TOP meat
   'I made Naau chop and eat the meat.' (FNE.XGAU643c)

(31) moh=cu s<m>uhnu no eu?fafoinana ina mamameoi ho poa-uh
   AUX.AF.R=PERF <AF>send NTOP youngsters TOP elders TOP CAUS-go.AF
   ta fuegu ho poa-eaafiteu
   NTOP hill NTOP CAUS-have.fiteu.grass.AF
   'The elders dispatched the youngsters and sent (them) to the hills and
   let-(them)-fetch Fiteu grass.' (Tung1-36:025)

Insertion of Extraneous Materials

In Tsou, the combination of the causative prefix poa- and a stem predicate can be
broken up by the negation particles 'ote 'not' and 'otena (meaning 'no longer'), both of
which are independent words in the sense that they can stand alone without attaching
to a stem. In (32b) below, the stem predicate po'pot-i 'kick, LF' is separated from its
causative prefix poa- by the negation particle 'ote. (33) is an example where the
negation particle 'otena is inserted in the causative predicate poa-etUpU 'make flood'.

---

21 In the context of a mother stopping a child from picking up chewing gum on the ground and tasting it,
the mother may utter 'ote 'ote 'ote as a warning. Occurrences like this indicate the morphological status of
'ote as a free morpheme, not a derivational affix. Additionally, for the purpose of this study, I treat 'ote as
a whole as a negation particle. I will not discuss if 'ote should be broken up as a composition of the
negation particle 'o plus an irrealis auxiliary te (the idea of breaking up 'ote was first proposed by Sung
(1999)).
(32) (FNE.XGAU644a~b)

a  te='o poa-po'pot.i-neni to naau 'o ngiau
   AUX.IRR=1SG CAUS-kickRF NTOP Naau TOP cat
   'I will make Naau kick the cat.'

b  te='o poa-ote-pot.i-neni to naau 'o ngiau
   AUX.IRR=1SG CAUS-NEG-kickRF NTOP Naau TOP cat
   'I will stop Naau from kicking the cat.'

(33) ho la=si nana poa-otena-etUpU
   when AUX.HAB=3SG HERESAY CAUS-NEG-flood
   'when (the water spirit) reportedly made (Eaiku) flood no more' (Tung1-26:010; Eaiku is a place name)

If we simply look at the negation pattern, the examples above may establish that a poa-causative does not form a morphological word but instead constitutes a phrasal structure composed of two words. However, not all kinds of extraneous materials can appear inside a poa-causative. Example (34a) below shows that the hearsay marker nana cannot occur inside the causative predicate poa-po'pot.i-neni 'make kick'. Instead, the hearsay marker must precede the entire causative form, in a way similar to when it occurs before a simplex predicate, as in (34c). If we choose the insertion of nana as the diagnostic for morphological wordhood, the result argues for poa-causatives as morphological words, just like simplex predicates.

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22 The use of nana indicates that the information expressed is not personally observed by the speaker but is reported to the speaker by another person (Yang 2001). Yang considers nana to be a marker of speaker’s diminished commitment to the truth of the proposition expressed.
As an interim summary, the diagnoses of morphological wordhood return mixed results regarding the wordhood of poa-causatives. A poa-causative comprises a single morphological word in terms of the ability to undergo further morphological processes, coordination, and the insertion of the hearsay marker nana. However, if we choose the negation test as the defining criterion, a poa-causative is more like a phrasal structure made of two independent words, which allows an intervening negation particle. In the common practice of syntactic argumentation, the clash among the negation test and the other three tests is often adjudicated by counting the negation test as weighing less than the other tests due to relative minority. However, this mismatch does not pose a problem for categorization if we recognize that categories, as clusters of features, rarely have sharp boundaries (see Section 2.5). Instead of choosing one test over the other, the present study accepts that morphological wordhood may not be an all-or-nothing issue; a poa-causative manifests a structure whose morphological

23 In standard syntactic argumentation, it is often held that the more diagnostics that appear to define the occurrence of a presumed category, the stronger the evidence for that category.
integrity cannot be easily identified without some arbitrary boundary.

6.4.4 Poa-Causatives and Syntactic Wordhood

Poa-Causatives and the Conceptualization of a Single Event?

In the poa-causative construction, the causative morpheme expresses the act of causation whereas the stem predicate expresses the effect of such causation. In certain cases, there is a strong tendency for the two events to be conceptualized as a single macro event, as can be seen from the scope of adverbial modification. In (35) below, for example, the entire sharpening event comes under the scope of the temporal adverbial ‘yesterday’. Both the event of causation and the event whereby the knife becomes sharp are understood to occur concurrently at some point in time yesterday.

(35) i=s\i\ pa-maeno-(a) to pasuya ‘o poyave nehucma
AUX.NAF.R=3SG CAUS-sharpAR-PF NTOP pasuya TOP knife yesterday
‘Pasuya sharpened the knife yesterday.’ (FNE.XGAU217)

In other cases, however, the single event interpretation is not adequate. In (36), the speaker’s efforts to send for a wizard took place yesterday morning, with the wizard’s arrival taking place later in the evening. The causing event is removed.

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24 By claiming that the poa-causative construction encodes a single event, the present study does not deny that its event structure is multifaceted and can be notionally understood as a composition of causation and effect. The main proposal here is that the two facets (i.e., causation and effect) are closely integrated such that they are conceptualized as a single macro event; in fact, they are so closely integrated that they cannot be easily isolated, at least in terms of the scope of temporal adverbial modification and the use of the cohesive marker maezo. See below.

25 This judgment was provided by my consultants in response to an inquiry whether the sentence can be used for a scenario where Pasuya sent his knife to a repair shop yesterday but only had it sharpened today due to a heavy work load in the shop.
physically and temporally from the caused event; the two events arguably do not form a single event.

(36) mo na'no amamio 'o ino='u. os='o eoho-a
   AUX.AF.R very sick.AF TOP mother AUX.NAF.R=1SG call-PF
   na yoifo ho poa-uh to emoo='u ne taseona.
   TOP wizard and CAUS-go.AF NTOP house=1SG NTOP morning
   at'inghi mo esmi ne mo yofna
   but AUX.AF.R arrive.AF NTOP AUX.AF.R evening
   'My mother was very sick. I called the wizard and asked (him) to go to my house yesterday morning. But he (only) arrived in the evening.' (FNE.XGAU646)

Another piece of evidence that the causing act and the caused result do not necessarily form a single event is that the caused result can be isolated from the causing action for polarity modification. For instance, the clause headed by the causative predicate 'make-eat' in (37) can be followed by the proposition but he did not drink such that the result of the toasting action is negated. Given that the causing action and the caused result can have different polarity values, it follows that the two actions do not necessarily constitute a single event and arguably do not form a syntactic word.

(37) os='o poa-mimo 'o sensei (at'inghi o'a mio=s'a
   AUX.NAF.R=1SG CAUS-drink.AF TOP teacher but NEG AUX.AF.R=still
   tiou to emi
   accept.AF NTOP wine
‘I proposed a toast to the teacher (but he did not drink).’ (FNE.XGAU647b)
Lit. ‘I made the teacher drink (but he did not accept the wine).’

Poa-Causatives, Monoclauasality and a Unified Argument Structure?

The poa-causative construction manifests syntactic properties of a single clause in terms of a single specification for modality. In (38a), the poa-causative construction has only one modality marker, the realis auxiliary i. Both the causation facet (i.e., the mother’s administering of the vitamins) and the effect facet (i.e., the children’s taking the vitamins) are understood to share the same modality value, realis. If the causal scenario is expressed by a bi-clausal structure,26 as in (38b), the control predicate and the lower predicate each have their own modality specification. The comparison of (38a) and (38b) makes evident that the poa-causative construction is monoclausal.

(38) (FNE.XGAU648a~b)
a i=si, pa-b.onU-(a) to vitamin to ino, ’e ’o’oko
AUX.NAF.R=3SG CAUS-eat,PF NTOP vitamins NTOP mother TOP children
‘The mother made the children take vitamins.’
b i=si, cucufn-i to ino, ’e ’o’oko, ho
AUX.NAF.R=3SG urge-LF NTOP mother TOP children COMP
te=hin’i, b-onU to vitamin Ø
AUX.IRR=3PL AF-eat NTOP vitamins GAP
‘The mother urged the children to take vitamins. (Ø=the children)’

---

26 The bi-clausal structure of example (38b) is made evident by the occurrence of the complementizer ho, which marks the clausal boundary between the matrix clause headed by the control predicate cucufn-i ‘urge, LF’ and the lower clause headed by the predicate b-onU ‘eat, AF’.
Aside from the use of auxiliaries, the monoclasality of the poa-causative construction is also revealed by the use of pronominal clitics. It was mentioned in Section 3.4 that every Tsou clause contains a pronominal clitic that makes reference to the ACTOR in the clause. A bi-clausal construction therefore allows two pronominal clitics. For instance, the matrix clause in the bi-clausal control construction (38b) contains a third person singular invisible NON-TOPIC =sì, whereas the lower clause contains a third person plural visible TOPIC =hin'i. In contrast to the bi-clause control construction, the poa-causative construction allows a single pronominal clitic only, as shown in the occurrence of the third person invisible NON-TOPIC =sì in (38a). The restriction on pronominal marking supports the view that the poa-causative construction is monoclausal.

The monoclasality of the poa-causative construction appears to be the reflection of a unified argument structure. As discussed in Sections 6.3.2 and 6.3.3, the causative prefix brings in a new causer-ACTOR on top of the arguments inherited from a stem predicate. To make room for this new ACTOR argument, all the arguments inherited from the stem predicate are assigned to a new argument slot in the causative construction. The adjustment in grammatical roles is made evident by the occurrence of the second focus marker. Figure 6-10 below schematizes the alignment of event participants and argument roles in the causative argument structure. For convenience of illustration, I use the ACTOR-PATIENT relation as the representation of a V=2 stem (as the examples of 'eat' in (7) on page 303) and the ACTOR-REFERENCE-LOCATION relation as the representation of a V=3 stem (as the examples of 'give' in (12)-(14) on page 316). In the figure, each pair of brackets encloses the arguments associated with a stem predicate. The causer is not included in the brackets since it is introduced by the causativization
process. On top of each causative participant is its argument role in the corresponding
simplex predicate construction. Underneath each causative participant is its argument
role in the causative construction. The marker '-' indicates that the causer's argument
role is not marked on the predicate, because the causer always holds the NON-TOPIC
relation. We only learn from the use of pronominal marking that the causer assumes
the ACTOR role in the causative construction.
As illustrated in Figure 6-10, the **actor** of the stem predicate, i.e., the causee, is pushed to the **patient** slot to make way for the new **causer-actor**. The **patient** of the stem predicate is consequently pushed to the **reference** slot. The change of grammatical
positions makes sense only when the causative construction forms a single unified argument structure which contains at most one ACTOR and one PATIENT—the pattern allowed by simplex predicate constructions. Were the causative construction to occur as two sets of argument structures (as in a bi-clausal construction), we would expect twice as many argument slots as in a single argument structure—e.g., two ACTORS and two PATIENTS. The fact that the poa-causative construction contains at most one ACTOR and one PATIENT thus provides an indication of a single argument structure.

Despite the fact that the poa-causative construction forms a single unified argument structure, our earlier discussion indicates that the components inside a causative complex do not necessarily form a semantically unitary event. The poa-causative construction thus illustrates an unusual case where a fused argument structure (and syntactic monoclausality) does not go hand in hand with the interpretation of a single event. The mismatch between event interpretation, monoclausality, and argument structure demonstrates that the integrity of a poa-causative predicate as a syntactic word cannot be easily identified.

To summarize, a poa-causative meets the criteria of a phonological word, but it does not necessarily constitute a morphological or syntactic word, as shown in Table 6-4. In terms of morphological wordhood, the coordination test, the derivation test, and the insertion of the hearsay marker nana all indicate the integrity of a poa-causative as a word, but the insertion of negation particles instead indicates that a poa-causative forms a sequence of two words. In terms of syntactic wordhood, the poa-causative construction is monoclausal and has a single unified argument structure. However, the polarity test and the modification scope of adverbial elements display diverging results. The fact that the internal parts of a poa-causative can be individually negated or
modified indicates that this causative structure does not necessarily encode a single event and therefore does not form a single syntactic word.

<table>
<thead>
<tr>
<th></th>
<th>simplex predicates</th>
<th>poa-predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stress</td>
<td>single primary stress</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td><strong>Morphological</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>input to derivational processes</td>
<td>as simplex pred.</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>coordination</td>
<td>internal parts unable to be conjoined</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>negation</td>
<td>internal parts unable to be individually negated</td>
<td>internal parts able to be individually negated</td>
</tr>
<tr>
<td><strong>Syntactic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>monoclausality</td>
<td>single specification for modality and person</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>event interpretation</td>
<td>single temporal reference</td>
<td>separate temporal references; separate polarity values</td>
</tr>
<tr>
<td>argument structure</td>
<td>single argument structure</td>
<td>as simplex pred.</td>
</tr>
</tbody>
</table>

Table 6-4 Diagnoses of wordhood: Poa-causatives and simplex predicates

6.5 Significance of the Poa-Causative Construction

6.5.1 Deviations from Simplex Predicate Constructions (Construction-Specific Features)

In Section 6.1, it was mentioned that there is a strong tendency for the clause structure of a causative construction to conform to the structure of a simple clause (Aissen 1979; Kemmer and Verhagen 1994). If we examine the poa-causative construction regarding the properties of auxiliary marking, topic relation, and the number of actors and patients, the poa-causative construction manifests properties and characteristics
similar to the argument structure of simple predicate constructions—the causative construction contains a single **topic** relation, a single auxiliary, a single **actor**, and a single **patient**. Apart from these, however, the poa-causative construction carries three unique properties not observed in simplex predicate constructions. These construction-specific properties confirm the claim made in Chapters 4 and 5 that many generalizations need to be specified relative to particular constructions. We should not assume that within a language a particular alignment pattern applies across all constructions.

The first unique property lies in the limitations on the nominal marking of the causer-actor. It was mentioned earlier in Section 6.3.1 and Section 6.3.3 that the causer is never selected as the **topic** relation in the poa-causative construction. As a consequence, the grammatical role of the causer is never indexed on the predicate via focus marking. In this regard, the causer's morphosyntactic behavior is drastically different from the **actor** in simplex predicate constructions, which in general is not restricted in nominal marking.

The second property that keeps the poa-causative construction behaviorally distinct from simplex predicate constructions is the manifestation of the **location** role. It was mentioned in Section 6.3 that all the **non-actors** of the stem predicate are manifested as the **reference** role in the causative construction. The basic **patient**, the basic **reference**, and the basic **location** are all manifested as the **reference** role in the causative construction, as indicated by the occurrence of the RF suffix *-neni* (see examples (39b) and (40b) below and also Sections 6.3.2-6.3.4). In the earlier section it was argued that the basic **patient** is pushed to the **reference** role in the causative construction to make way for the causee, which now assumes the **patient** slot. While
the patient-to-reference change may conform to the general assumption of why causativization induces syntactic adjustments, the change of location-to-reference, as shown in (40b), does not. The change of location-to-reference here seems unmotivated since no other participant is ever observed to take or compete for the location role in the causative clause, as made evident by the absence of the LF suffix -i as the second focus marker. Theoretically the basic location should have been able to retain its grammatical role. Nevertheless, the observed pattern in Tsou is to align the basic location to the reference role in the causative construction, even when the location role is not taken.

(39) (FNE.XGAU650c~d)

a \(i=ta\) \(fa{-}eni\) to \(kensacu\) ta \(oko\) 'o \(fue\)
AUX.NAF.R=3SG give-RF NTOP police NTOP child TOP sweet.potato
'The child gave the sweet potatoes to a policeman.' ((Construction(3.RF), basic)

b \(i=s_i\) \(poe{-}fa{-}eni{-}neni\) to \(kensacu\) ta \(oko\)
AUX.NAF.R=3SG CAUS-give\(_{RF}\)-RF NTOP police NTOP child

to \(naau\), 'o \(fue\)
NTOP Naau TOP yam
'Naau made the child give the sweet potatoes to a policeman.' ((Construction(3.RF) stem, Causative)

(40)(FNE.XGAU650e~f)

a \(i=ta\) \(fi-i\) to \(fue\) ta \(oko\), 'o \(kensacu\)
AUX.NAF.R=3SG give-LF NTOP sweet.potato NTOP child TOP police
'The child gave the policeman sweet potatoes.' (Construction(3.LF), basic)
b  i=siᵢ  poa-fiᵢ-reni  to  fœu  ta  oko
  AUX.NAF.R=3SG  CAUS-giveᵢ-RF  NTOP  sweet.potato  NTOP  child

to  naau,  'o  kensacu
  NTOP  Naau  TOP  police

'Naau made the child give the policeman sweet potatoes.' (Construction(3.LF)stem, Causative)

An immediate consequence to the location-to-reference change is that multiple reference roles may exist in a causative clause, the third unique property of the poa-causative construction. In the causative clauses (39b) and (40b) above, for instance, both the theme 'sweet potatoes' and the recipient 'policeman' are manifested as the reference argument. While the existence of multiple reference arguments in causative clauses may appear mysterious at first glance, the pattern is not completely unmotivated. Some speech verbs in Tsou also allow multiple reference arguments in simplex predicate constructions, as shown in (41). If Aissen's (1979) prediction that causative constructions often mirror the structure of a simple clause is correct, the multiplication of the reference argument in the poa-causative construction can be explained as modeled upon the structure of simplex predicate constructions. Examples in (41) below illustrate that the speech verb eUsvUtU 'tell, AF' (RF: eUsvUt-reni) allows two reference arguments to co-exist in a monoclausal structure. The two reference arguments are associated with the beneficiary and the speech content, as shown in

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27 But note that only one argument per clause can have its grammatical role indexed on the predicate.
28 The strategy of doubling or multiplying a particular grammatical position to accommodate the causative frame is not unique to Tsou. Comrie (1976; 1981) reports that both Arabic and Mongolian double the object position for accommodating the valency increase in the causative frame. In these two languages, the causer assumes the SUBJ relation whereas both the causee and the c-patient assume the OBJ relation.
(41a) and (41b), respectively.\footnote{According to Dowty (1991:556), it is not uncommon for two arguments to appear to share the same thematic role. In sentences like \textit{Pat resembles Lee} and \textit{Lee resembles Pat}, the two arguments of \textit{resemble} are said to bear the same role because the two sentences are paraphrases. Although it is possible to distinguish the two arguments by notions such as ‘the standard of comparison’, such an analysis involves introducing a new thematic role (such as ‘standard’) that is not otherwise posited (Levin and Rappaport Hovav 2005:43).}

(41) (FNE.XNGO931a–b)
\begin{itemize}
\item[a] \(i=si\), \(eUSvUt-neni\) to \(h'oehangva\) to \(ak'i\), 'o \(kensacu\)
AUX.NAF.R=3SG tell-RF NTOP story NTOP grandfather TOP police
'Grandfather told a story for the \textit{policeman}.' (beneficiary=REFERENCE)
\item[b] \(i=si\), \(eUSvUt-neni\) to \(kensacu\) to \(ak'i\), 'o \(h'oehangva\)
AUX.NAF.R=3SG tell-RF NTOP police NTOP grandfather TOP story
'Grandfather told the \textit{story} for the \textit{policeman}.' (speech content=REFERENCE)
\end{itemize}

Although the multi-reference pattern is attested at the level of simplex predicates, its distribution appears limited. According to the data at hand, only two speech verbs \textit{eUSvUtU} ‘tell, AF’ and \textit{yut’inghi} ‘answer, AF’ (RF: \textit{yut’ingh-neni}) are observed to reliably manifest the multi-reference pattern. Predicates denoting high affectedness, such as the predicate \textit{sme'ftUngU} ‘fell, AF’ (PF: \textit{s'eftUng-a}; RF: \textit{s'eftUng-neni}), typically do not manifest the multi-reference pattern. Examples in (42) below show that ‘fell’ has the felled tree encoded as a patient and the instrument ‘saw’ encoded as a reference, as shown in (42a) and (42b), respectively. Attempts to encode both the felled tree and the saw as the reference argument are considered ungrammatical, as shown in the comparison of (42b) and (42c).
The details and constraints of the multi-REFERENCE pattern in simplex predicate constructions certainly are of critical importance to the understanding of Tsou argument structure, but the investigation of this pattern contains inherent difficulties, which may explain the limited amount of data available at the current stage. To begin with, an instance of the multi-REFERENCE pattern is only ascertained when the same RF marking of a simplex predicate can be used for two event participants that are typically associated with different grammatical roles. Due to the fact that in every Tsou clause, at most one event participant gets indexed via focus marking, identifying the multi-REFERENCE pattern thus requires evidence from two clauses with identical verbs, identical RF-markings, but different event participants in TOPIC status. The difficulty in identification makes the investigation more complicated than the investigation of other syntactic patterns, whose instances are directly observable from either natural texts or elicited sentences. With the limited data at hand, generalization becomes difficult. Currently, it remains unclear how and why the multiplication of the REFERENCE
role is motivated in certain simplex predicate constructions and in the poa-causative construction. For the time being, I treat the multi-reference pattern as a highly distinguished exception because no other argument roles can be multiplied in a monoclausal structure. I will not venture into this topic any further but leave it to future research.30

6.5.2 Typological Unusualness of the Poa-Causative Construction: The Syntactic Realization of Causer and Causee and the Restriction of the Actor-Topic Alignment

In the Tsou poa-causative construction, the causer-actor is not allowed to be aligned with the topic, but the causee-patient can. This encoding restriction not only separates the poa-causative construction from the various types of simplex predicate constructions but also highlights the typological unusualness of the poa-construction, which deviates from Comrie’s (1985) prediction regarding the syntactic realization of the causer and the causee (see Figure 6-2 for Comrie’s predication). According to Comrie, the causer (actor) acquires the subject position in the causative clause. The causee’s syntactic realization is comparatively less fixed in that it shifts to the syntactic

30 The pattern of role multiplication does not seem to be a unique feature of Tsou. Shibatani (2007) points out that the recipient and the theme in the Balinese ‘give’ construction can be made a topic and be indexed by the patient-focus form baang ‘give’.

(i) anak=e cenik baang tiang buku
    child=DEF male PF.give I book
    ‘I gave the boy a book.’ (boy=patient-focus)

(ii) buku=ne baang tiang anak cenik
    book=DEF PF.give I child male
    ‘I gave the book to the boy.’ (book=patient-focus, Shibatani 2007, no. (32))
position available on the Accessibility Hierarchy (Keenan and Comrie 1977): if the causative is formed from an intransitive verb, the causee has the properties of a direct object (DO) in the causative clause. If the causative is formed from a transitive verb, the causee becomes an indirect object (IO). If the causative is built on a ditransitive verb, the causee is marked as an oblique relation (OBL). The poa-causative construction, however, does not conform to Comrie's prediction. In the poa-causative construction, the causee does not occupy the slot available down the Accessibility Hierarchy. Instead, the causee is fixedly aligned with the Patient role, as made evident by the occurrence of the PF suffix –a when the causee bears the Topic relation.

The syntactic realization of the causer does not conform to Comrie's (1985) predication, either. Comrie predicts that the causer (Actor) acquires the subject position in the causative clause and is typically encoded in the nominative case, if the nominative case is the prototypical marking for the subject of the language. However, the causer-Actor of the poa-causative construction never bears the Topic marker, which is identified by many Formosan scholars as the nominative case of the Tsou language (see Section 3.5). In what follows, I show that this encoding restriction is typologically unusual even among Formosan and Western Malayo-Polynesian languages. As will be shown below, none of the other Formosan or Western Malayo-Polynesian languages surveyed in the present study shares the same encoding restriction, although there appears to be a general aversion for the causer-Actor to occur as the Topic (or what many Austronesianists call 'nominative argument', see Chapter 2 for details).

Let us first compare Tsou with other Formosan languages. Unlike Tsou, none of the other Formosan languages surveyed below demonstrates a similar constraint on the nominal marking of the causer. In the following data from Amis, Rukai, and Saisiyat,
the causer nominals all appear as the topic ('nominative argument') of the clause.

(43) paa-pinanoang ci panay i takoan to kilang
CAUS-shake NOM Panay LOC me ACC tree
'Panay made me shake the tree.' (Starosta 1974:310)(Amis)

(44) ku maLinga ?a-tuaba-baas ki dulay inia kinsas sa guung
NOM Malinga CAUS-cook-soup ACC Dulay ACC police ACC beef
'Malinga made Dulay cook some beef soup for the police.' (Starosta 1974:324)(Rukai)

(45) ø vaki pak-hayza ka rayhil ka korkoring
NOM old.man CAUS-have ACC money ACC child
'The old man wants the child to have money.' (Starosta 1974:329)(Saisiyat)

Due to the limited amount of data available for these languages, I will not proceed to analyze their verbal morphology and manifestations of grammatical relations; neither can I investigate whether the causer-actor-topic in these languages is grammatically possible but disfavored on other grounds, such as pragmatically. I leave this for future research. However, one thing is certain: Tsou is the only Formosan language surveyed in the present study that prevents the causer-actor from appearing as the topic (or 'nominative argument').

When compared with the Austronesian languages outside Taiwan, the restriction on the nominal marking of the causer is still unique to Tsou. Languages such as Tagalog and Cebuano do not have a similar restriction. In the following Tagalog examples (courtesy of Naonori Nagaya), the causer-actor can appear in either the 'nominative case', as in (46a), or the 'oblique (genitive) case', as in (46b) and (46c), just like the causee and the c-patient. In terms of nominal marking, the causer does not behave any
more differently from the causee and the c-patient. However, although all three participants are allowed to be selected as the TOPIC, the usages are not equally felicitous. Native speakers prefer either a causee-TOPIC or a c-patient-TOPIC, as in (46b) and (46c). A causer-actor-TOPIC, as in (46a), is considered a somewhat 'forced' result that is not often used.

(46)

a nag-pa-basa si Juan kay Maria ng libro sa kusina
AF.PST-CAUS-read NOM Juan DAT Maria GEN Book DAT kitchen
'Juan made Maria read a book in the kitchen.' (causer-actor-TOPIC, Tagalog)

b p-in-a-basa ni Juan si Maria ng libro sa kusina
CAUS-read GEN Juan NOM Maria GEN book DAT kitchen
'Juan made Maria read a book in the kitchen.' (causee-TOPIC, Tagalog)

c p-in-a-basa ni Juan kay Maria ang libro sa kusina
CAUS-read GEN Juan DAT Maria NOM book DAT kitchen
'Juan made Maria read the book in the kitchen.' (c-patient-TOPIC, Tagalog)

A similar dislike for a causer-actor-TOPIC is also attested in Cebuano (examples courtesy of Michael Tanagkingsing). Examples (47a)-(47c) show that the causer, the causee, and the c-patient can each appear as the TOPIC. Among the three causative constructions, the causer-actor-TOPIC in (47a) is grammatically allowed but not preferred. Native speakers (Michael Tanagkingsing, p.c.) consider (47a) somewhat problematic, although grammatically possible. The dislike for a causer-actor-TOPIC is therefore common to both Tagalog and Cebuano, but neither of them syntactically rejects this alignment, unlike the pattern observed in Tsou. The Tagalog and Cebuano examples therefore render the Tsou pattern as the extreme (and possibly the only case)
among the general trend of avoiding a causer-actor-topic in the Philippine-type languages (In Chapter 7, I will show that the restriction on the actor-topic alignment is also observed in non-harmonizing serial verbs in Tsou).

(47)

a nag-pa-basa si Juan kang Maria ug libro sa kusina
AF.PST-CAUS-read NOM Juan OBL Maria OBL book LOC kitchen
'Juan made Maria read a book in the kitchen.' (causer-topic, Cebuano)

b gi-pa-basa ni Juan si Maria ug libro sa kusina
PST-CAUS-read GEN Juan NOM Maria OBL book LOC kitchen
'Juan made Maria read a book in the kitchen.' (causee-topic, Cebuano)

c gi-pa-basa ni Juan kang Maria ang libro sa kusina
PST-CAUS-read GEN Juan OBL Maria NOM book LOC kitchen
'Juan made Maria read the book in the kitchen.' (c-patient-topic, Cebuano)

In summary, the Tsou poa-causative construction manifests properties similar to the argument structure of simplex predicate constructions. In every poa-construction there is only a single topic, a single auxiliary, a single pronominal clitic, a single actor, and a single patient. Apart from these shared commonalities, the poa-causative construction exhibits three unique features not seen in simplex predicate constructions: that the causer-actor must not be aligned with the topic, that the basic location argument, if it ever occurs, is changed to the reference role in the causative clause, and that the poa-causative construction allows multiple reference arguments in a monoclausal structure. Of the three unique properties, the restriction on the actor-topic alignment highlights the typological unusualness of the poa-causative construction. None of the other Formosan languages or Western Malayo-Polynesian
languages surveyed above illustrates a similar restriction, although native speaker intuition, at least as observed from Tagalog and Cebuano, reveals a general dislike for such alignment.

These unique properties of the poa-causative construction indicate the need for a descriptive framework that can accommodate construction-specific constraints, a goal that Construction Grammar sets out to attain. It is true that certain generalizations, such as the notion of relevance, are applicable to simplex predicate constructions and the poa-causative construction as well. For instance, the notion of primary relevance picks up the agent and the causer and associates both to the \textit{actor} role (see Section 6.3.2 at page 310). However, there are also generalizations that need to be specified relative to particular constructions. For example, the causer-\textit{actor} is not linked to the \textit{topic} relation, and this pattern is restricted to the poa-construction and not applicable to simplex predicate constructions. Only when construction-specific features are also accommodated can Tsou argument structure be understood in proper context.
Chapter 7 Complex Predicates: Serial Verb Constructions

7.1 Overview

This chapter describes serial verb constructions (henceforth SVCs) in Tsou and examines how event integration, one of the defining features of SVCs, may affect Tsou argument structure in terms of valency values and alignment patterns. In Section 7.2 I present a brief review of the criteria that have been proposed for defining SVCs, noting that different linguists may choose different criteria and thus use the label ‘SVC’ in a different way. Due to the different defining criteria, it is not entirely clear whether or not SVCs constitute a uniform construction type. In Section 7.3 I explore the formal properties of constructions that have been given the label ‘SVC’ in Tsou, noting that at least two types of structures display features characteristic of SVCs: harmonizing SVCs and non-harmonizing SVCs. Of the two types, the present study concentrates on non-harmonizing SVCs because they present a clear case for us to observe how event integration may correlate with a change in argument structure, be it argument sharing or argument unification. Section 7.4 examines the wordhood of non-harmonizing SVCs and discusses whether and in what sense serial verbs form a single predicate. Section 7.5 discusses the argument structure of non-harmonizing SVCs, with special focus on patterns of argument realization and whether or not individual verbs in the serial context combine into a unified argument structure. In Section 7.6 I compare Tsou non-harmonizing SVCs with SVCs observed in other Formosan languages. The comparison focuses on the restriction on the ACTOR-TOPIC alignment, a property not identified in Formosan languages other than Tsou.
7.2 Serial Verbs as a Uniform Construction?

A serial verb construction is often described as a construction in which two or more verbs, due to event integration, co-occur in a monoclausal structure without any marker of non-finiteness (cf. Foley and Olson 1985; Bisang 1995; Durie 1997; Crowley 2002; Bril 2004, to name a few). Aside from this basic formulation (two verbs, one clause, one event), Durie (1997:291) proposes eight defining properties for SVCs, as listed in (1) below. Aikhenvald (2006:1) claims that SVCs can be more precisely defined by the characterization listed in (2).

(1) (Durie 1997:291)

a Serial verbs describe what is conceptualized as a single event.
b Serial verbs share tense, aspect, modality, and polarity.
c Serial verbs share at least one and possibly more arguments.
d One verb is not embedded within or as a complement of the other.
e Serial verbs have the intonational properties of a monoverbal clause.
f Serial verbs take only one subject/external argument.
g The argument structure of serial verbs resembles that of a non-serial structure.
h There is a strong tendency for serial verbs to be grammaticalized into lexicalization.

(2) (Aikhenvald 2006:1)\(^1\)

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\(^1\) I understand that Aikhenvald's conceptualization of SVCs is not the same as others (for instance, she includes light verb constructions as a type of SVC); as a consequence, the definitions in (1) and (2) are not exactly comparable. In fact, divergent definitions are not uncommon in the literature on SVCs. As will be
A serial verb construction is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort. Serial verbs describe what can be conceptualized as a single event. They are monoclausal; their intonational properties are those of a monoverbal clause, and they have just one tense, aspect, and polarity value. Serial verbs may also share arguments and obliques. Each component of an SVC must be able to occur on its own.

Apart from the basic formulation [two verbs, one clause, one event], none of the other properties listed above is accepted by all linguists to be the necessary and sufficient criterion for defining SVCs (cf. Foley and Olson 1985; Bisang 1995; Durie 1997; Crowley 2002; Bril 2004, to name a few). Depending on the criteria chosen, different authors may use the label ‘serial verb’ in a different way, such that SVCs often do not form a uniform phenomenon but instead display diverging morphosyntactic properties across languages and within a single language. For instance, Aikhenvald (2006) defines SVCs as a structure without any overt marker of coordination, subordination, or syntactic dependency. This criterion excludes converb constructions, which characteristically contain an intervening non-finite marker (cf. Bisang 1995 and Aikhenvald 2006:5). However, Shibatani (2007) argues that the two verbs connected by the converbal ending -te in Japanese form a single complex predicate phonologically and syntactically and therefore still count as a type of SVC.

In what follows, I summarize the literature on SVCs, focusing on the discussion of syntactic dependency and argument sharing, as these two issues will figure significantly later in the investigation of Tsou SVCs.

illustrated in footnote (3), linguists also disagree on the extent to which argument sharing matters in defining SVCs.
7.2.1 Serial Verbs and Syntactic Dependency

Common understanding of SVCs, as is assumed by Bisang (1995) and Bril (2004), holds that serial verbs involve the unmarked juxtaposition of two or more verbs, each of which would also be able to form a sentence. This definition implies that an SVC is composed of two or more finite, syntactically autonomous verbs. Disagreeing with this implication, Shibatani (2007) argues that serial verbs involve syntactic dependency. Only one verb in the verb complex is fully finite; the others are restricted in the degree of finiteness and are not functionally and formally fully autonomous. To justify his claim, Shibatani cites Crowley's (1987; 2002) research on Paamese and Morrison's (2007) study on Asante to show that SVCs are not composed wholly of finite verbs. Crowley's (1987; 2002) studies indicate that the second verb in a Paamese SVC cannot have its own subject, as shown in (3a) below. If the second verb is associated with an independent subject, as illustrated by the free-standing pronoun kai in (3b), the sentence is interpreted as a coordinate construction. Morrison (2007) notes that only the first verb in an Asante SVC is fully autonomous. The second verb does not have an independent choice on tense marking but depends on that of the first one, such that tense marking throughout serial verbs shows concord, as shown in (4a) and (4b). The two examples

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1 Bisang (1995) compares SVCs with converb constructions and points to syntactic autonomy as the substantive difference that keeps the two types of constructions distinct. According to Bisang (1995:139), verb serialization is the unmarked juxtaposition of two or more verbs, each of which would also be able to form a sentence on its own. Converbs, on the contrary, are verb forms that cannot occur as main predicates of independent sentences. Bril (2004:3) lists similar criteria, arguing that "lexical autonomy is a prerequisite for serialization, excluding non-autonomous coverbs and nonfinite forms, as well as co-lexicalized compounds".
together illustrate that only one verb per Asante SVC can function as an independent predicate.

(3) Paamese (Crowley 1987:43)

a  kail a-muas vuas emat
   3PL 3PL.REAL-hit pig 3SG.REAL-die
   ‘They killed the pig by hitting it.’

b  kail a-muas vuas kai emat
   3PL 3PL.REAL-hit pig 3SG 3SG.REAL-die
   ‘They hit the pig and it died.’

(4) Asante (Shibatani 2007; quoting Morrison 2007:14)

a  yaw fa-a eduane=no ma-a ne jire
   Yaw pick.up-PST food=the give-PST his wife
   ‘Yaw picked up the food and gave it to his wife.’

b  *yaw fa-a eduane=no bé-má ne jire okyina
   Yaw pick.up-PST food=the FUT-give his wife tomorrow
   intended ‘Yaw picked up the food and will give it to his wife tomorrow.’

The disagreement that separates Shibatani (2007) from Bisang (1995:139) and Bril (2004:3) lies in the different definitions given to syntactic autonomy and the lack of syntactic dependency. Bisang’s and Bril’s analyses treat the absence of non-finite markers in SVCs as evidence for syntactic autonomy. Shibatani instead argues that the lack of overt markers of syntactic dependency must be distinguished from the lack of syntactic dependency. According to him, a verb is syntactically dependent when it does not display the full-fledged choices of finiteness features, regardless of the occurrence
of an overt dependency marker. Thus, even though individual verbs in an SVC may still display a formal resemblance to finite verbs to a certain degree, only one verb in the verb complex displays the autonomous choice of finiteness features, be it the choice of subject marking, as in the Paamese examples, or tense marking, as in the Asante examples. The other verb is usually restricted in the degree of finiteness and is thus arguably not fully autonomous. The present study will adopt Shibatani’s definition for identifying SVCs in Tsou.

7.2.2 Argument Sharing, Event Integration, and Single Predicatehood

SVCs are often defined as syntactic structures involving argument sharing, as shown in (1c) and (2) above (Foley and Olson 1985; Baker 1989; Durie 1997; Bril 2004; Aikhenvald 2006, to name a few). A long line of research on SVCs defines such argument sharing as the result when a series of closely related actions are conceptualized as a single (macro) event (cf. Givón 1991; Durie 1997; Crowley 2002; Bril 2004; Næss 2004; 

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3 Such a definition excludes what Crowley (1987:40) refers to as ‘ambient serialization’, in which no identity relation holds between the participants subcategorized by serial verbs. In the following Paamese example (i), the second verb makes a general predication about counting instead of referring to either the person who counts or the chickens. However, a point to be noted is that argument sharing/identity relation may be given different interpretations by different linguists. If the clause headed by ‘count’ is analyzed as an argument of ‘correct’, as suggested by Bradshaw (1982:30), which Crowley also acknowledged, then there is an identity relation between the subject of ‘correct’ and the event described by ‘count’.

(i) kihulin  
"ki-hulii-nV atoo kaile he-mula"
"2SG-dis-count-comm/obj chicken PL 3SG-dis-be.correct"
"Count the chickens correctly." (Crowley 1987:40)
Thepkanjana 2006; Aikhenvald 2006). However, we must recognize that argument sharing does not necessarily entail a single event, nor does argument sharing entail an SVC. The case in point involves control constructions, which also involve argument sharing and which, in some languages, may be expressed in a form similar to serial verbs. The Cantonese example (5a) below illustrates argument sharing between two verb phrases, ‘arrange’ and ‘see a movie’, but Matthews (2006:72-74) told us that the structure can be analyzed either as complementation or verb serialization, depending on whether the two verbs are understood to form a single event. If the aspect marker gwo occurs on the first verb, as in (5c), the event denoted by the second verb may not have been realized. The verb series is understood to form two separate events and is arguably a control construction, not an SVC. However, if the aspect marker gwo instead occurs on the second verb, as in (5b), the participants are understood to have seen the movie as arranged. The verb series then is understood to form a single event and is arguably an SVC.

(5) Cantonese (Matthews 2006:73)

a ngo⁵ joek⁶ keoi⁶ tai² hei⁶
I invite 3SG watch show
‘I arranged with her [to] see a movie.’

b ngo⁵ joek⁶ keoi⁶ tai⁶-gwo¹ li¹ tou³ hei⁶
I invite 3SG watch-ASP this CL show
‘I’ve seen this movie with her (on a date).’ (SVC)
I invite-ASP 3SG watch this CL show
‘I’ve arranged with her to see this movie.’ (Control)

In the investigation of Tsou SVCs, the present study will not assume that structures displaying argument sharing or verb juxtaposition necessarily involve event integration and are legitimate SVCs, even if they were given the label in the Tsou literature.

Another issue with argument sharing in SVCs is that linguists may not distinguish argument sharing from argument unification properly in the first place. To start with, argument sharing in SVCs is taken by some linguists such as Durie (1997:340-348) as the evidence that arguments associated with individual verbs are integrated into a unified argument structure. Utilizing the White Hmong ‘take-cut’ series as an example, as shown below in (6), Durie argues that the argument structures of ‘take’ and ‘cut’ are fully fused such that the entire verb series subcategorizes the two arguments of ‘take’ (SHE, KNIFE) and the two arguments of ‘cut’ (SHE, CHICKEN). Figure 7-1 is the representation of the unified argument structure of the ‘take-cut’ series.

Aikhenvald (2006, see (2) above) makes a similar statement, listing both argument sharing and single predicatehood, which implies a single argument structure, as the

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4 Durie (1997) argues that argument unification in SVCs is often not the simple addition of the theta-roles of individual verbs. He asserts that “in accounting for serial structures like [(6)], it is possible to calculate theta-roles and a theta-hierarchy at two levels: at one level to determine the separate objects of individual verbs, and again at the level of the fused argument structure” (1997:348).

5 Durie does not specify why ‘cut’ is spelled as txia in the example sentence but as nqiay in the figure.
defining properties of SVCs. Bril (2004:2) argues that “[SVCs] share at least one single argument or have a single array of arguments.” Foley and Olson (1985:22) state that SVCs are grammatically one word and involve argument sharing.

(6) nws muab riam txiav nqiaj qaib
3SG take knife cut meat chicken
‘She cut some chicken with a knife.’ (Durie 1997:341, quoting Jarkey 1991, White Hmong)

Figure 7-1 Argument structure of Maab-Nqiaj ‘take-cut’ (Durie 1997:347)

However, it is highly questionable if argument sharing necessarily implicates a unified argument structure, as there is a significant difference between sharing all the arguments (complete argument unification) and sharing one (or more) argument. In fact, not every linguist characterizes serial verbs as involving a unified argument structure. Crowley (1987; 2002) investigated patterns of argument sharing in SVCs, arguing that certain SVCs share the same subject whereas others involve a switch subject. He did not treat such argument sharing as evidence for a unified argument
structure and a single predicate, as far as I can tell. Shibatani (2007) suggests that some serial verbs may act together as a single verb at the morphological or phonological level but not at the syntactic level, therefore not constituting a fully unified argument structure. He illustrates this with the Balinese benefactive SVC, where the argument structures of individual verbs are not fully fused, at least in terms of the pattern made evident by focus marking. In examples (7a) and (7b) below, only the subject and the object of the first verb ‘buy’ can be the topic of the whole sentence (by occurring in the clause-initial position) and trigger focus marking. The object of the second verb ‘give’ cannot be focused and made the topic of the clause, as shown in (7c). Given this syntactic restriction, it appears that the argument structures of ‘buy’ and ‘give’ are not fused, at least in the syntax.

(7) Balinese (Shibatani 2007:21-22)

a tiang meli buku=ne baang anak=e cenik
I AF.buy book=DEF give child=DEF male
‘I bought the child the book.’

b buku=ne beli tiang baang anak=e cenik
book=DEF PF.buy I give child=DEF male
‘I bought the child the book.’

c *anak=e beli tiang buku=ne baang
child=DEF PF.buy I book=DEF give
intended ‘I bought the child the book.’
7.3 Morphosyntactic Characteristics of Tsou SVCs

7.3.1 Types of Tsou SVCs

As mentioned in Section 7.2, many authors use the label 'SVC' in different ways, with some authors simply treating any verb-verb sequence as serial verbs as long as there is no overt marker of non-finiteness. However, SVCs thus defined may not form a uniform phenomenon, nor are all of them equally critical to the investigation of how argument structure may be altered in verb serialization. Ideally, we should investigate whether the structure under question displays the properties of SVCs before calling it one. To be more precise, we should investigate whether the structure under question constitutes a single predicate before calling it an SVC. Nevertheless, this stance presumes a definite boundary between single predicatehood and multi-predicatehood, or between SVCs and other multi-verb constructions. As mentioned in Section 6.4 under the assessment of morphological wordhood, however, categories are rarely discrete. A sharp distinction is only evident if we examine only the prototypes of two categories without considering the boundary cases. Additionally, predicatehood may be defined at parallel levels of linguistic representation, and the results may not always converge (see Sections 6.1, 6.2, and 6.4 for relevant discussions). A structure that meets the criteria of a morphological word may not necessarily form a syntactic word. In cases like this, the best we can do to identify an SVC is to specify in which aspect the verb-verb sequence under question deviates from the definitions of serial verbs and thus does not fit into the scope of the present study.

In what follows, I first describe in Section 7.3.2 what H. Chang (2005; 2006) refers to as Tsou SVCs, focusing on their event interpretation and morphosyntactic properties. I
will then justify why they do not present a clear case for investigating how verb serialization may alter the argument structures of individual verbs. In Section 7.3.3 I describe the SVCs recognized in the present study and specify their theoretical relevance to the investigation in this dissertation.

7.3.2 Harmonizing SVCs

H. Chang (2005; 2006) argues that SVCs in Tsou are composed of a series of verbs not broken up by the conjunction marker ho, as shown in the ‘want-eat’ series in (8). However, SVCs so defined may be broken up by the negation marker 'ote (see Section 7.3.2.4). Individual verbs in this type of SVC maintain focus agreement along the AF/NAF contrast (see 7.3.2.5 for details). Given the focus agreement, these SVCs are named ‘harmonizing SVCs’ in the present study.

(8)

a. mi=o [m-ici b-onU] to tacUmu
   AUX.AF.R=1SG AF-want AF-eat NTOP banana
   ‘I want to eat bananas.’ (AF+AF; H. Chang 2005)

b. os=o [uci-a an-a] ‘o tacUmu
   AUX.NAF.R=1SG want-PF eat-PF TOP banana
   ‘I want to eat the bananas.’ (PF+PF; H. Chang 2005)

c. *os=o [uci-a ho an-a] ‘o tacUmu
   AUX.NAF.R=1SG want-PF CONJ eat-PF TOP banana
   intended ‘I want to eat the bananas.’ (PF-and-PF; H. Chang 2005)
As readers may notice, the 'want-eat' series has been analyzed as a control/complement construction by the present study in Section 5.3 (note that H. Chang and Tsai (2001) and M. Chang (2004) also treat the 'want-eat' series as a control construction). This analysis raises questions about how harmonizing SVCs should be categorized: Is the 'want-eat' series a control construction or an SVC? Does the verb series form a single predicate or two separate predicates? In Section 7.3.2.4 I will specify that the 'want-eat' series and its many other analogs display features of both a single predicate and multiple predicates and therefore present a boundary case to the discussion of SVCs. Among all the features characteristic of multiple predicates is the property of conceptual non-integration (see 7.3.2.6), i.e., events expressed by the individual verbs in the 'want-eat' series are not necessarily integrated into a single event. Given that the present study sets out to study how argument structure may be altered in SVCs due to event integration, harmonizing SVCs do not present a clear case for the investigation and are therefore excluded from the research scope of this dissertation.

### 7.3.2.1 Verb Types

Verbs enter harmonizing SVCs in an ordered sequence depending on their semantics. The last verb in the sequence specifies participants involved in the described event and their relation to the event (in terms of 'who does what to whom'); all the preceding verbs modify and elaborate the relation by providing evaluative attributes including participants' attitude, epistemic inference, deontic reasoning, manner, frequency,
degree, and aspectual phases, as shown in (10)-(15) below. For ease of reference, the modifying verb is labeled 'first verb/V1' and the relation-denoting verb is labeled 'second verb/V2' hereafter. Table 7-1 lists evaluative verbs commonly observed in Tsou.

(9) participants' attitude
a  $ mi='o $ [kaebU  b-onU] $ to $ fou
AUX.AF.R=1SG  like.AF  AF-eat  NTOP  meat
'I like to eat meat.' (AF+AF; FNA.XSSE301a)

b  $ os='o $ [kaeb-a  an-a]  'o $ fou
AUX.NAF.R=1SG  like-PF  eat-PF  TOP  meat
'I like to eat the meat.' (PF+PF; FNA.XSSE301b)

(10) epistemic inference
a  $ mi=cu $ [asonU  t<m>a?honU] $ na $ takupueanU
AUX.AF.R=PERF  probably.AF  <AF>understand  TOP  TakupueanU
'The TakupueanU people probably learnt (of this).' (AF+AF, Tung1-44:026)

(11) deontic reasoning
a  $ ho  ta=?u  la $ [ahUeU  m-ecunu] $ no $ emoo=su
CONJ  AUX.IRR=1SG  HAB  should.AF  AF-go.over  NTOP  house=2SG
'Oh, (I wish) I should go (with you) to your house.' (AF+AF, Tung1-43:010)

b  $ upena  hoci  coyo  te $ c?o $ [ahUe-a  tueoh-a]
but  if  hurt.AF  AUX.IRR  just  should-PF  remove-PF
'But if (the teeth) hurt, (they) must be removed.' (Tung1-34:006)
(12) manner
a tena=c?u boevoei to taico to eoeasva ho [toehunju
AUX.IRR=PERF retreat.AF NTOP middle NTOP yard CONJ together.AF
eipopsohU paehai]
twice.AF shout.AF
'They) retreat to the middle of the yard and together shout twice.' (AF+AF, Tung1-31:013)

b i=hin'i [toehung-a im-a] 'o emi
AUX.NAF.R=3PL together-PF drink-PF TOP wine
'They drank the wine together.' (PF+PF; FNA.XSSE302b)

(13) frequency
a la nana [aasbUtU supihi] no c?oeha na eatieou
HAB HEARSAY sometimes.AF walk.across.stream.AF NTOP stream TOP Eatieou
'Eatieou sometimes crossed the stream...' (AF+AF, Tung1-45:038)

b tena ahoz-a tutv-a o otofnana ho
AUX.IRR begin-PF beat-PF TOP poisonous.weed CONJ
[aasbUt-a tfu-i] to chumu
sometimes-PF soak-LF NTOP water
'(one) first pounds the poisoning-weed and sometimes soaks (it) in water.'
(Tung1-14:003)

(14) degree
a mo [akei mUchU]
AUX.AF.R a.little.AF rain.AF
'It rained a little' (AF+AF, Tung1-4:012)
b la=c?u aUlU sUc?UhU, la [ake(i)-a teoteoc-neni] to eono
HAB=PERF really.AF arrive.AF HAB a.little-PF cut-RF NTOP sacred.tree

o poyave
TOP knife
'When (they) actually reach (the tree), (they) cut the Sacred tree with the sword a little bit.' (Tung1-31:011)

(15) aspectual phases
a moh=cu nana [aePuU sueumo] na fuzu
AUX.AF=R=PERF HEARSAY finish.AF attack.AF TOP wild.boar
'The wild boars finished attacking.' (Tung1-27:013)

b ho tena=c?u [aePu-a si-a] to keUpU o fuesU
CONJ AUX.IRR=PERF finish-PF put-PF NTOP sack TOP rice
'When one finished putting the rice in the sack...' (Tung1-9:004)
In what follows, I characterize Tsou harmonizing SVCs according to the following five features: (i) absence of conjunction markers, (ii) a single specification of modality and pronominal markings, (iii) the ability to host an intervening negation particle, (iv) harmonized focus marking, and (v) the lack of obligatory event integration. Of the five characteristics, (i), (ii), and (iv) are indicative of a single predicate but (iii) and (v) are

Table 7-1 Types of V1's in Tsou harmonizing SVCs

<table>
<thead>
<tr>
<th>participants' attitude</th>
<th>gloss</th>
<th>degree</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kaebU/kaeb-a +X</td>
<td>like X</td>
<td>acUhU/acUh-a +X</td>
<td>X all</td>
</tr>
<tr>
<td>nac'o/nac'ov-a +X</td>
<td>dislike X</td>
<td>akei/ake-a +X</td>
<td>X a little</td>
</tr>
<tr>
<td>m-ici/uci-a +X</td>
<td>want X</td>
<td>frequency</td>
<td></td>
</tr>
<tr>
<td>mimho/mimh-a +X</td>
<td>willingly X</td>
<td>aacni/aacni-a +X</td>
<td>always X</td>
</tr>
<tr>
<td>epistemic inference</td>
<td>aasbUtU/aasbUt-a +X</td>
<td>sometimes X</td>
<td></td>
</tr>
<tr>
<td>asonU/ason-a +X</td>
<td>probably X</td>
<td>ahtU/aht-a +X</td>
<td>ever X</td>
</tr>
<tr>
<td>asasano/asasan-a +X</td>
<td>surely X</td>
<td>i'vaho/i'vah-a +X</td>
<td>again X</td>
</tr>
<tr>
<td>aUlU/aUl-a +X</td>
<td>really X</td>
<td>aspektual phases</td>
<td></td>
</tr>
<tr>
<td>deontic reasoning</td>
<td>ahoi/ahoz-a +X</td>
<td>begin X</td>
<td></td>
</tr>
<tr>
<td>m-eelU/peel-a +X</td>
<td>can X</td>
<td>aepUngU/aepUng-a +X</td>
<td>finish X</td>
</tr>
<tr>
<td>asvUtU/asvUt-a +X</td>
<td>try X</td>
<td>asngUcU/asngUc-a +X</td>
<td>continue X</td>
</tr>
<tr>
<td>ahUeU/ahUe-a +X</td>
<td>should X</td>
<td>tosvo/tosv-a +X</td>
<td>stop X</td>
</tr>
<tr>
<td>manner</td>
<td>aUnpUnpU/aUnpUnp-a+X</td>
<td>X at will</td>
<td></td>
</tr>
<tr>
<td>osni/osni-a+X</td>
<td>X immediately</td>
<td></td>
<td></td>
</tr>
<tr>
<td>atavei/atavei-a+X</td>
<td>X finally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>toehUngU/toehUng-a+X</td>
<td>X together</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aha'o/aha'v-a+X</td>
<td>X suddenly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eipopsohU/eipopsoh-a</td>
<td>X twice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

indicative of multiple predicates, and it is (v) that excludes harmonizing SVCs from the research scope of the present study.

7.3.2.2 Absence of Conjunction Markers

Verb sequences such as 'want-eat' in (8) and 'try-open' in (16) do not allow any intervening marker of conjunction. In this aspect, harmonizing SVCs display features of a single predicate given that the internal parts of a Tsou word cannot be conjoined (cf. Section 6.4.1).

(16) (FNC.DJUD031a~b)

a  \text{mi'=o} \quad [\text{aothomU} \ m-aavo] \text{ to } \text{phingi}
\begin{itemize}
\item AUX.AF.R=1SG AF.try AF-open NTOP door
\end{itemize}
'I tried to open a door.' (AF+AF)

b  *\text{mi'=o} \quad [\text{aothomU} \ ho \ m-aavo] \text{ to } \text{phingi}
\begin{itemize}
\item AUX.AF.R=1SG AF.try CONJ AF-open NTOP door
\end{itemize}
intended 'I tried to open a door.' (AF+and+AF)

7.3.2.3 A Single Specification of Modality and Pronominal Markings

Harmonizing SVCs contain only one specification of modality and pronominal markings, as shown in (16a) and (17a). It is impossible for the individual verbs in the series to each take an independent auxiliary and an independent pronominal clitic, as shown in (17b). The realis NAF auxiliary o in (17a) indicates that the two serial verbs both occur in realis mood; the third person plural invisible =he indicates the \textbf{actor}
shared by both verbs. The single specification of modality and pronominal markings separates harmonizing SVCs from bi-clausal structures such as example (18), which allows each conjoined clause to have its own auxiliary and pronominal clitic.

(17)
a  o=he  nana  [aUmt-a  opcoz-a]  na  nia  ngohoo  
AUX.NAF.R=3PL  HEARSAY  indeed-PF  kill-PF  TOP  late  Ngohoo  
'They indeed killed the late Ngohoo.' (Tung1-8:007)

b  *o=he  aUmt-a  o=he  opcoz-a  na  nia  ngohoo  
AUX.NAF.R=3PL  indeed-PF  AUX.NAF.R=3PL  kill-PF  TOP  late  Ngohoo  
intended 'They indeed killed the late Ngohoo.' (FNE.DDEC023)

(18)  te=’o  uh  ne  maibayu  hohucma,  at’inghi  te=’o  
AUX.IRR=1SG  go.AF  NTOP  Chiayi  tomorrow,  but  AUX.IRR=1SG  
neisu  ne  lalauya  
stop.over.AF  NTOP  Lalauya  
'I will go to Chiayi tomorrow, but I will stop over at Lalauya.' (FNE.XGAU732)

Pronominal and modality markings do not tell us which verb is more finite/non-finite in the verb series, because neither of them is indicated directly on verbs. Focus marking on the auxiliary is equally non-indicative of the finiteness of individual verbs, as the juxtaposed verbs always agree in focus (see below). However, given that a harmonizing SVC only allows a single specification of pronominal and modality markings, just like a simplex predicate (see Section 6.4.1), a harmonizing SVC
therefore behaves like a simplex predicate as far as modality and pronominal markings are concerned.

7.3.2.4 Ability to Host an Intervening Negation Particle

A harmonizing SVC may be broken up by negation particles such as 'ote, as shown in the 'start-eat' series in (19) below. It is possible to negate the second verb while asserting the truth of the first. It is also possible to negate only the first verb while asserting the truth of the second, as in (20). In this regard, the two verbs in a harmonizing SVC do not act like a single predicate whose internal parts cannot be individually negated (see Section 6.4.1).

(19) (H. Chang 2005, no. (6))

a  
mi='o=cu  [ahoi  'ote  b-onU]  ta  fou
AUX.AF.R=1SG=PERF  start.AF  NEG  AF-eat  NTOP  meat
'I have started not eating meat.'

b  
os='o=cu  [ahoz-a  'ote  an-a]  'o  fou
AUX.NAF.R=1SG=PERF  start-PF  NEG  eat-PF  TOP  meat
'I have started not eating the meat.'

(20)  
'ote  [nUthU  maine'e.]  [ianan'ou  maine'e]
NEG  together.AF  go.home.AF  separately.AF  go.home.AF
'Don't go home together. Go home separately.' (FNE.XGAU738)
7.3.2.5 Harmonized Focus Marking

In a harmonizing SVC, the juxtaposed verbs each bear a focus-marking affix, just like a syntactically autonomous verb in an independent clause. H. Chang (2005; 2006) brings to our attention that serial verbs in Tsou agree in focus marking, as shown in the AF-AF sequence in (21a) and the PF-PF sequence in (21b). The focus marking on serial verbs further harmonizes with the focus marking on the auxiliary (in realis mood).

(21)

a moh=cu [asonU eUmeUmU]
   AUX.AF.R=PERF probably.AF enter.AF
   'Probably (they) entered (the house).’ (Tung 1-24:040)

b o=he=cu [ason-a opcoz-a] homio
   AUX.NAF.R=3PL=PERF probably-PF kill-PF at.the.time
   'They probably killed (him) at that time.’ (Tung 1-44:030)

c *o=he=cu [asonU opcoz-a]
   AUX.NAF.R=3PL=PERF probably.AF kill-PF
   intended ‘They probably killed (him).’ (FNA.XSSE304c)

It is important to note that focus agreement in harmonizing SVCs follows the two-way AF/NAF contrast, not the four-way distinction (i.e., AF/PF/RF/LF). The two-way pattern is due to the restricted focus marking of the modifying verb (V1), which only has two focus possibilities: AF and PF. None of the V1 elements in Table 7-1 has RF or LF forms. In harmonizing SVCs, an AF-marked V1 is followed by an AF-marked V2, but a PF-marked V1 may be followed by a PF-marked V2, as in (22a), an
RF-marked V2, as in (22b), or an LF-marked V2, as in (22c). Agreement patterns such as the putative LF-LF sequence are not attested, as in (22d).

(22)

a  ho  tena=c?u  [aepUn-a  si-a]  to  keUpU  o  fuesU  
CONJ  AUX.IRR=PERF  finish-PF  put-PF  NTOP  sack  TOP  rice  
‘When one finished putting the rice in the sack...’(Tung1-9:004; PF+PF)

b  la=c?u  aUlU  sUc?]hU,  la  [ake(i)-a  teoteoc-neni]  to  eono  
AUX.HAB=PERF  really.AF  arrive.AF  HAB  a.little-PF  cut-RF  NTOP  sacred.tree

  o  poyave  
TOP  knife  
‘When (they) actually reach (the tree), (they) cut the Sacred Tree with the sword a little bit.’ (Tung1-31:011; PF+RF)

c  tena  ahoz-a  tutv-a  o  otofnana  ho  [aasbUt-a  tfu-i]  
AUX.IRR  begin-PF  beat-PF  TOP  poisonous.weed  CONJ  sometimes-PF  soak-LF

to  chumu  
NTOP  water  
‘(one) first pounds the poisoning-weed and sometimes soaks (it) in water.’ (Tung1-14:003; PF+LF)

d  tena  [*aasbUt-i  tfu-i]  
AUX.IRR  sometimes-LF  soak-LF
intended (LF+LF) (FNE.DDEC022)
Restrictions on focus marking raise two questions regarding the status of V1 as a verb and the status of a harmonizing SVC as a genuine SVC. To begin with, the AF/NAF distinction of V1 resembles the reduced AF/NAF marking on realis auxiliaries (see Section 3.4 for details). If the two-way focus contrast on V1 is an indication that the element under question is an auxiliary, the claim that verb sequences such as ‘finish-put’ in (22a) are SVCs is open to question. It is open to question because SVCs are typically characterized as the juxtaposition of two verbs, not an auxiliary and a verb. However, close inspection of the other properties of V1 indicates that V1 is behaviorally distinct from an auxiliary; the two-way focus marking therefore is not sufficient evidence for V1 to be identified as an auxiliary. First, an auxiliary attracts pronominal marking (such as the third person plural =he in (21b)) and aspectual markers (such as the perfective marker =cu in (21b)), but V1 does not. Second, the AF/NAF contrast on the auxiliary is further reduced/neutralized in irrealis mood, but such neutralization is not detected in V1. Examples (22a) and (12a) illustrate that the same irrealis auxiliary tena is used for both AF and PF-marked verbs, but the relevant V1 alternates between AF and PF forms even in irrealis mood (the AF/PF alternation on V1 agrees with the focus marking of V2). Judging by these two features, V1 still displays features of a verb and is less of an auxiliary; harmonizing SVCs therefore should not be treated as auxiliary-verb sequences.

6 A reader flagged this concern in the comments to an earlier draft of this dissertation.
7.3.2.6 Event Integration

Even though a harmonizing SVC contains only a single specification of modality and pronominal markings, the semantics of individual verbs is not necessarily integrated into a single event. The fact that we can negate the truth of one verb while asserting the truth of the other is an indication that the verb series does not express a single event. In example (23) below, the truth of the event represented by the second verb 'eat' can be negated by the subsequent sentence 'but he did not in the end'.

(23) mo=ø na’no [m-ici b-onU] to linko. at’inghi ne
   AUX.AF.R=3SG very AF-want AF-eat NTOP apple but NTOP
   atavei=si o’a i=si=s’a an-a
   end=3SG NEG AUX.NAF.R=3SG=still eat-PF
   ‘He wanted to eat apples very much, even though he did not (eat them) in the end.’ (FNE.DDEC025c)

The distribution of negation particles and adverbial elements such as in (24) below also indicates that the events expressed by V1 and V2 can be separated and put under different modification scopes. Example (24a) illustrates that the harmonizing SVC ‘eventually flood’ can host an intervening negation particle 'ote, which negates the verb to the right (V2) but not the verb to the left (V1). In a similar manner, the distribution of adverbial elements such as c’o ‘only’ also points to the non-integration of the V1 event and the V2 event. In example (24b), only the second verb ‘eat’ is modified by the adverbial particle c’o ‘only’; the first verb ‘want’ is excluded from the modification scope and arguably forms a different event. The conceptual non-integration of V1 and
V2 thus separates harmonizing SVCs from the prototypical SVCs considered by Durie, Aikhenvald, and Shibatani (see 7.2).

(24) event integration in harmonizing SVCs

a  $moh=cu$  $la$  $[petohUeU$  $o?te$  $etUpU]$  $e$  $hpUhpUngU$
   AUX.AF.R=PERF  HAB  eventually.AF  NEG  flood.AF  TOP  world
   'The world finally was not flooded.' (Tung 1-30:004)

b  $i='o$  $[uci-a$  $c'o$  $an-a]$  $'o$  $tacUmU$
   AUX.NAF.R=1SG  want-PF  only  eat-PF  TOP  banana
   'I only wanted to eat the bananas.' (FNE.XGAU733)

Given the conceptual non-integration, harmonizing SVCs do not present a clear case for us to examine how arguments of individual verbs are (re-)structured in event integration. Harmonizing SVCs are therefore excluded from the study of argument structure in this dissertation. In what follows I discuss non-harmonizing SVCs, which present a more clear case of event integration and are the target of the present study.

7.3.3 Non-Harmonizing SVCs

7.3.3.1 Verb Types

Three types of non-harmonizing SVCs can be reliably identified in Tsou. Depending on the nature of the first verb in the series, the three types of SVCs are labeled
'Instrumental SVC', 'Locational SVC', and 'Associative SVC'. Examples (25)-(27) below illustrate the three types of SVCs, respectively.

(25) \(i^o [\text{tith-eni} \ \text{m-apaso}] \to \text{fou} \ 'o \ \text{poyave} \)

AUX.NAF.R=1SG use-RF AF-chop NTOP meat TOP knife

'I used the knife to chop meat.' (Instrumental SVC, RF+AF; FNC.XFPT411)

(26) \(i^o [\text{yon-i} \ \text{m-apaso}] \to \text{fou} \ 'o \ \text{oyonapei'i} \)

AUX.NAF.R=1SG use-LF AF-chop NTOP meat TOP kitchen

'I stayed in the kitchen chopping meat.' (Locational SVC, LF+AF; FNC.XFPT421)

(27) \(i^o [\text{haf-a} \ \text{uh}] \to \text{taipahu} \ 'o \ \text{naau} \)

AUX.NAF.R=1SG take-PF AF.go NTOP Taipei TOP Naau

'I took Naau to Taipei.' (Associative SVC, PF+AF; FND.XPRO743a)

In non-harmonizing SVCs, the semantics of the second verb is relatively unrestricted. Most verbs that are discussed in Chapter 4 can enter the V2 slot without much difficulty, except for meteorological and seismological verbs such as \(m\text{UchU} \ '\text{rain}'\), as shown in Table 7-2. This restriction is related to the pattern of argument sharing in non-harmonizing SVCs, which requires individual verbs to share the same \textit{Actor}. For example, the participant who used the knife in (25) is understood to be coreferential with the one who chopped meat in the serial context. However, due to the inherent \textit{Actor}-less nature of meteorological and seismological verbs, the requirement of a shared \textit{Actor} therefore does not obtain in the putative verb sequence 'use-rain', motivating the...

---

7 The first verb in the Instrumental SVC may appear in the PF form \(\text{tith-a} \ '\text{use}'\). All three consultants report that the PF form and the RF form \(\text{tith-eni}\) can be used interchangeably.
non-occurrence of this verb sequence.

<table>
<thead>
<tr>
<th>Instrumental SVC</th>
<th>Locational SVC</th>
<th>Associative SVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>V=0 *tith-eni +mUchU</td>
<td>*yon-i +mUchU</td>
<td>*haf-a +mUchU</td>
</tr>
<tr>
<td>V=1 tith-eni +oengUtU</td>
<td>yon-i +oengUtU</td>
<td>haf-a +uh</td>
</tr>
<tr>
<td>V=2 tith-eni +b-onU</td>
<td>yon-i +b-onU</td>
<td>haf-a +b-onU</td>
</tr>
<tr>
<td>V=3 tith-eni +to'sU</td>
<td>yon-i +to'sU</td>
<td>haf-a +to'sU</td>
</tr>
</tbody>
</table>

**Table 7-2 Verb types in non-harmonizing SVCs**

Another issue regarding verb types is the absence of benefactive SVCs. Cross-linguistically, benefactives are among the types of expressions most commonly expressed in SVCs in serializing languages. However, example (28a) illustrates that benefactives in Tsou are not expressed using serial verbs; they are either encoded in a bi-clausal structure conjoined by ho, as in (28b), or in an RF construction if allowed, as in (28c). The two examples together suggest that SVCs differ across languages (and possibly also within a single language). We should not assume that SVCs in one language necessarily translate into SVCs in another language.

(28)(FNC.XFPT513c~d)

a ??i='o [tousn-a m-apaso] to fou 'o ba'i
AUX.NAF.R=1SG help-PF AF-chop NTOP meat TOP grandmother
intended 'I chopped meat for Grandmother.'
b $i\='o$  $\text{tousn}-\text{a}$  $'o$  $\text{ba'i}$  $\text{ho}$  $\text{m-} \text{apaso}$  $\text{to}$  $\text{fou}$  \\
AUX.NAF.R=1SG help-PF TOP grandmother CONJ AF-chop NTOP meat  \\
'I chopped meat for Grandmother.' (Lit. 'I helped Grandmother and I chopped meat.')

c $i\='o$  $\text{papas-neni}$  $\text{to}$  $\text{fou}$  $'o$  $\text{ba'i}$  \\
AUX.NAF.R=1SG chop-RF NTOP meat TOP TOP grandmother  \\
'I chopped meat for Grandmother.'

In what follows I characterize non-harmonizing SVCs according to four features: (i) absence of conjunction markers, (ii) a single specification of modality and pronominal markings, (iii) the inability to host an intervening negation particle, and (iv) non-agreeing focus marking. The discussion on event integration will be postponed until Section 7.5 under the discussion of syntactic wordhood and argument sharing.

### 7.3.3.2 Absence of Conjunction Markers

Non-harmonizing SVCs manifest a series of verbs that are merely juxtaposed, without any intervening conjunction or overt markers of syntactic dependency, as in (29).

(29) $i\='o$  $[\text{yon-i} \ *\text{ho} \ \text{m-} \text{apaso}]$  $\text{to}$  $\text{fou}$  $'o$  $\text{yonapei'i}$  \\
AUX.NAF.R=1SG use-LF CONJ AF-chop NTOP meat TOP TOP kitchen  \\
intended 'I stayed in the kitchen chopping meat.' (Locational SVC; FNE.XGAU734)
A Single Specification of Modality and Pronominal Markings

A non-harmonizing SVC contains only a single specification of modality and pronominal markings. It is impossible for individual verbs to each take an independent auxiliary and an independent pronominal clitic, as shown in (30a) and (30b). The occurrence of the realis NAF auxiliary \( i \) in (30a) indicates that the two serial verbs both occur in realis mood; the occurrence of the first person singular clitic \( =']o \) indicates the shared ACTOR between the two verbs. The participant who stayed in the kitchen is understood to be the same one who ate sweet potatoes. In (30c), the participant who took Naau also went to Kaohsiung.

(30) auxiliary and pronominal marking in non-harmonizing SVCs

\[
a \quad i'=]o \quad [\text{yon-i} \quad \text{b-onU}] \quad \text{to} \quad f=ue \quad ]o \quad \text{oyonape}'i
\]

\textit{AUX.NAF.R=1SG stay-LF AF-eat NTOP sweet.potato TOP kitchen}

'I stayed in the kitchen eating sweet potatoes.' (FNE.XGAU735a)

\[
b \quad i'=]o \quad \text{yon-i} \quad *[mi]=]o \quad \text{b-onU} \quad \text{to} \quad f=ue \quad ]o \quad \text{oyonape}'i
\]

\textit{AUX.NAF.R=1SG stay-LF AUX.AF.R=1SG AF-eat NTOP sweet.potato TOP kitchen}

intended 'I stayed in the kitchen eating sweet potatoes.' (FNE.XGAU735a)

\[
c \quad i'=]o \quad [\text{haf-a} \quad \text{uh}] \quad \text{to} \quad \text{takau} \quad ]o \quad \text{naau}
\]

\textit{AUX.NAF.R=1SG take-PF AF.go NTOP Kaohsiung TOP Naau}

'I took Naau to Kaohsiung.' (Associative SVC, PF+AF; FND.XPR0743b)

In a non-harmonizing SVC, the auxiliary remains invariably in NAF. Example (31) indicates that an AF-marked auxiliary is not allowed in non-harmonizing SVCs. A peculiar feature of the auxiliary in (31) is that it agrees with the LF-marked first verb
but not with the AF-marked second verb. In the next section, I argue that the auxiliary marking is controlled by the first verb, as made evident by the focus agreement between auxiliaries and verbs.

(31) *mi='o [yon-i b-onU] to fue 'o oyonapei'i
AUX.AF.R=1SG stay-LF AF-eat NTOP sweet.potato TOP kitchen
intended 'I stayed in the kitchen eating sweet potatoes.' (FNE.XGAU736)

7.3.3.4 Ability to Host an Intervening Negation Particle

Unlike harmonizing SVCs, verb sequences in non-harmonizing SVCs cannot be broken up by negation particles such as 'ote, as shown in (32a) below. If a negation particle is to occur in a non-harmonizing SVC, it has to occur before the entire verb series and to modify the entire series, as in (32b). It is impossible to negate the second verb while asserting the truth of the first. The negation pattern provides evidence that the two serial verbs together act like a single predicate whose internal parts cannot be negated individually (see Section 6.4.1 for the morphological integrity of a simplex predicate in Tsou).

(32) Negation particles in non-harmonizing SVCs
a te='o [yon-i *ote b-onU] to fue 'o oyonapei'i
AUX.IRR=1SG stay-LF NEG eat-PF NTOP sweet.potato TOP kitchen
intended 'I will not stay in the kitchen eating sweet potatoes.' (FND.XPRO722a)

* Tsou manifests a four-way focus distinction on the verb (AF-PF-LF-RF) but a two-way (AF-NAF) focus contrast on the auxiliary (if the auxiliary occurs in realis mood).
Non-Agreeing Focus Marking: NAF-marked V1 and AF-marked V2

A non-harmonizing SVC is composed of verbs of non-agreeing focus forms. The second verb in the verb series always occurs in the AF form, whereas the first verb always occurs in the appropriate NAF form depending on the semantics of the construction. An associative SVC requires the PF-marked first verb haf-a ‘take’ serialized to an AF-marked second verb, as shown in the ‘take-go’ series in (33a). A locational SVC requires the LF-marked first verb yon-i ‘stay’ serialized to an AF-marked second verb, as in (34a). An instrumental SVC requires the RF-marked first verb tith-eni ‘use’ serialized to an AF-marked second verb, as in (35a). Other logically possible combinations, such as PF-PF, are not allowed, as demonstrated in Table 7-3. Examples (b) and (c) below illustrate the use of individual verbs in independent clauses.

(33)

a o=si=cu nana [haf-a uh] tan'e na oko=si
AUX.NAF.R=3SG=PERF HEARSAY take-PF go.AF here TOP child=3SG
'It reportedly took its child to this place.' (Tung 1-36:004)

b ho la=c'u eohU, la haf-a 'o popsusa
when AUX.HAB=PERF go.hunting.AF AUX.HAB take-PF TOP sack
'When (the ancient Tsou people) went hunting, they took the Popsusa sack.' (Tung 1-36:004)
c hoci himeu, te=c'u uh ne c'oeha ho maaseu
if muddy.AF AUX.IRR=PERF go.AF NTOP stream and net.fish.AF
"If (the stream) is muddy, one will go to the stream and net fish." (Tung1-15:002)

(34)
a os='o [yon-i tufku] to yUsU 'o coca
AUX.NAF.R.=1SG stay-LF wash.AF NTOP clothes TOP yard
"I stayed in the yard washing clothes." (FNE.XGAU737a)

b os='o yon-i 'o moo to naau nehucma
AUX.NAF.R=1SG stay-LF TOP house NTOP Naau yesterday
"I stayed in Naau's house yesterday." (FNA.XSSE127c)

c mi=ko=cu tufku to yUsU?
AUX.AF.R=2SG=PERF wash NTOP clothes
"Did you wash clothes (already)?" (FNE.XGAU737c)

(35)
a os='o [tith-eni b-onU] to fou 'o poyave
AUX.NAF.R.=1SG use-RF AF-eat NTOP meat TOP knife
"I used the knife to eat meat." (FND.XPRO712a)

b os='o tith-eni 'o poyave ho b-onU
AUX.NAF.R=1SG use-RF TOP knife CONJ AF-eat
"I used the knife and eat." (FND.XPRO712b)

c mi=ko=cu b-onU?
AUX.AF.R=2SG=PERF AF-eat
"Did you eat?" (FNC.XNRC003)
Non-agreeing focus marking may appear to suggest that a non-harmonizing SVC is composed wholly of autonomous verbs; the first verb does not depend on the second verb for the choice of focus marking, and vice versa. I argue that this interpretation is in fact misguided. Rather, what non-agreeing focus marking tells us about the nature of non-harmonizing SVCs is the other way around: a non-harmonizing SVC is composed of a syntactically dependent V2 serialized to a syntactically independent V1. In all three types of non-harmonizing SVCs, a formal restriction is imposed on the second serial verb such that it occurs only in the AF form. This is in contrast to an autonomous verb, which can alternate between AF and NAF forms in different discourse environments (see Section 5.5). Therefore, while tufku ‘wash’ as an autonomous verb can occur either in the AF form or in the PF form (as shown in (36a) and (36b)), as the second serial verb it occurs only in the AF form, as in (36c). It is ungrammatical for a non-harmonizing SVC to have a second verb in any of the NAF forms, as shown in (36d).

(36)

a mi=ko=cu tufku to yUsU?
AUX.AF.R=2SG=PERF wash.AF NTOP clothes
‘Did you wash clothes (already)?’ (FNE.XGAU737c)
b  i=ko=cu          tufku-a   'o   yUsU?
   AUX.NAF.R=2SG=PERF    wash-PF    TOP    clothes
   'Did you wash the clothes (already)?' (FNE.XGAU737d)

c  i='o            [yon-i         tufku]   to    yUsU   'o   coca
   AUX.NAF.R=1SG   stay-LF    wash.AF NTOP clothes TOP yard
   'I stayed in the yard washing clothes.' (FNE.XGAU737a)

d  i='o            [yon-i        *tufku-a/-neni/-i]   to    yUsU   'o   coca
   AUX.NAF.R=1SG   stay-LF    wash-PF/RF/LF NTOP clothes TOP yard
   intended 'I stayed in the yard washing clothes.' (FNE.XGAU737b,f,g)

The non-autonomous nature of V2 is even more clearly presented in its failure to
maintain focus agreement with the auxiliary. It was mentioned earlier in Chapter 3 that
a realis auxiliary not only encodes the modality of a clause but also maintains focus
agreement with the corresponding verb. In an independent clause, an AF-marked verb
is accompanied by an AF auxiliary but a NAF-marked verb is accompanied by a NAF
auxiliary, as shown in (36a) and (36b), respectively. However, such focus agreement is
not seen between V2 and its corresponding auxiliary in non-harmonizing SVCs.
Throughout all the examples presented thus far, V2 always occurs in the AF form,
which is in conflict with the NAF marking of the auxiliary and therefore does not
display the finiteness features expected in an autonomous verb, as shown in (36c). An

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9 Tsou manifests a four-way focus distinction on the verb (AF-PF-LF-RF) but a two-way (AF-NAF)
distinction on the auxiliary (if the auxiliary occurs in realis mood).
AF auxiliary that agrees with the AF-marking of V2, as shown in (37), is considered ungrammatical.\(^10\)

(37) \*mi=’o [yon-i tufku] to yUsU ’o coca

AUX.AF.R=1SG stay-LF wash.AF NTOP clothes TOP yard

intended ‘I washed clothes in the yard.’ (FNE.XGAI737f)

Having examined the non-finiteness features of V2, let us turn to the focus marking of V1. Unlike the restricted V2, V1 maintains focus agreement with the auxiliary and arguably displays the finiteness features expected in an autonomous verb. In the locational SVC (36c), for instance, the LF-marked yon-i ‘stay’ maintains focus agreement with the NAF auxiliary i. In the instrumental SVC (35a), the RF-marked tith-eni ‘use’ maintains focus agreement with the NAF auxiliary os. An AF auxiliary that does not agree with the NAF-marked V1, as shown in (37), is not allowed.

Even though the first verb in non-harmonizing SVCs maintains focus agreement with the auxiliary, it has properties not seen in an autonomous verb, which can

\(^{10}\) To better illustrate the non-autonomous nature of the second verb, non-harmonizing SVCs such as the ‘stay-wash’ series in (36c) is translated as I stayed in the yard washing clothes instead of I washed clothes in the yard. Such a translation is intended to make clear that it is the first action (staying), not the second one (washing), that is associated with the finiteness features typically expected in an independent verb. The second verb, when occurring in the serial context, is devoid of finiteness features, as made evident by the inability to alternate between different focus forms and to control auxiliary marking. Another point to be noted is that the restriction on the focus marking of V2 is not unique to Tsou but is a common property among several other Formosan languages, as reported by Shibatani and Huang (2007). I will return to this issue in Section 7.6.
alternate between AF and NAF forms in different discourse environments. Non-harmonizing SVCs impose a requirement such that the first verb is restricted to the appropriate NAF form. In the locational SVC (38a) below, the first verb yon-i 'stay' is required to occur in the LF form and to select the participant 'yard' as the LOCATION-TOPIC. It is not allowed to occur in the AF form, as in (38b). Examples (39) and (40) illustrate a similar NAF-only constraint on the first verb in instrumental and associative SVCs, respectively.

(38) Locational SVC
a  \[i=to \] \[yon-i b-aito\] to c'ongeha 'o coca
AUX.NAF.R=1PL stay-LF AF-see NTOP star TOP yard
'We stayed in the yard gazing at stars.' (LF+AF, locational SVC; FNE.XGAU736a)

b  \[*mi=to \] \[yon b-aito\] to c'ongeha to coca
AUX.AF.R=1PL stay.AF AF-see NTOP star NTOP yard
intended 'We stayed in the yard gazing at stars.' (AF+AF, locational SVC; FNE.XGAU736b)

(39) Instrumental SVC
a  \[i='o \] \[tith-eni mo-eai\] to teova 'o kaapana
AUX.NAF.R=1SG use-RF AF-make NTOP hut TOP bamboo
'I used the bamboo to build a hut.' (RF+AF, instrumental SVC; FNE.XGAU412a)

b  \[*mi='o \] \[titho mo-eai\] to teova to kaapana
AUX.AF.R=1SG use.AF AF-make NTOP hut TOP bamboo
intended 'I used bamboo to build a hut.' (AF+AF, instrumental SVC; FNE.XGAU412b)
(40) Associative SVC
a  \textit{i=}'o \ [haf-a\ uh\] to \ oyonatmopsU \ 'o \ naau
AUX.NAF.R=1SG take-PF go.AF NTOP school TOP Naau
'I took Naau to school.' (PF+AF, associative SVC; FNC.XFPT433a)

b  \textit{mi=}'o \ [ma-hafo\ uh\] to \ oyonatmopsU to \ naau
AUX.AF.R=1SG AF-take go.AF NTOP school TOP Naau
intended 'I took Naau to school.' (AF+AF, associative SVC; FNC.XFPT433b)

Restriction on the focus marking of V1 is arguably a syntactic, rather than just morphological, requirement. The NAF-only restriction not only affects the encoding of the first verb but also has grammatical correlates on the choice of auxiliary and nominal markings. In conjunction with the NAF-only V1, the (realis) auxiliary is accordingly marked in NAF, as illustrated in the use of the NAF auxiliary \textit{i} in (38)-(40) above. An AF auxiliary, as in the (b) examples in (38)-(40), is considered ungrammatical. Aside from auxiliary marking, nominal marking is also accordingly affected such that non-harmonizing SVCs display a different pattern of \textit{topic} selection from simplex predicate constructions. I will refrain from providing all the details here, postponing the discussion until Section 7.5.1. Here I only direct readers’ attention to the constraint that in non-harmonizing SVCs, only the \textit{non-actor} argument of V1 can be selected as the \textit{topic} relation; the \textit{actor} of V1 is restricted to the \textit{non-topic} relation. Example (38b) indicates that the \textit{actor} of V1 is not allowed to be selected as the \textit{topic}. Examples (39) and (40) illustrate a similar constraint to select only the \textit{non-actor} of the first verb as the \textit{topic}. 
7.4 Notion of Word in Non-Harmonizing SVCs

As noted above, SVCs are defined by some linguists as a sequence of verbs acting together as a single predicate. In order to better understand whether and in what sense non-harmonizing serial verbs act together as a single predicate, following Di Sciullo and Williams (1987:22-45, 46-76, 106-109), Shibatani (2007:13-25), Ackerman and LeSourd (1997:78-97), Alsina (1997:220-232), and Harris (2000), I examine non-harmonizing SVCs employing three senses of 'word' (phonological, morphological, and syntactic). As will be illustrated below, a non-harmonizing SVC forms a phonological and morphological word but not necessarily a syntactic word, in the sense of having a single unified argument structure.

7.4.1 Non-Harmonizing SVCs and Phonological Wordhood

I mentioned in Sections 3.3 and 6.4.1 that in Tsou, stress falls on the penultimate syllable of a phonological word, such as aře 'change clothes'. In non-harmonizing verb sequences such as yon-i aře 'stay-change.clothes', stress always falls on the penultimate syllable of the whole verb series. It is considered phonologically ill-formed for the first verb to bear an independent word stress, as in *yon-i aře. The fact that the entire verb series constitutes a single domain for stress assignment indicates that the verb series resembles a simplex predicate and constitutes a single phonological word.

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7.4.2 Non-Harmonizing SVCs and Morphological Wordhood

7.4.2.1 Ability to Undergo Derivational Processes

A non-harmonizing verb series such as *tith-eni b-onU* ‘use-eat’ can undergo category changing processes and be used as a noun when preceded by a prenominal particle, as shown in (41). When the ‘use-eat’ series functions as a nominal, it can be reduplicated for plural marking, as shown in (41b). The reduplicated form can be further attached with the prefix *ma-* for expressing the collective notion of ‘all kinds of’, as shown in (41c). Reduplication and the *ma-* prefixation demonstrate that the entire verb series is susceptible to further derivational processes, arguing for the integrity of non-harmonizing serial verbs as a single morphological word.

(41) (FNE.XGAU741a~c)

a. 'o *[tith-eni b-onU]*
   TOP use-RF AF-eat
   ‘the dining-ware’

b. 'o *[ti-tith-eni b-onU]*
   TOP REDU-use-RF AF-eat
   ‘the dining-ware (PL)’

c. 'o *[ma-ti-tith-eni b-onU]*
   TOP MA-REDU-use-RF AF-eat
   ‘all kinds of dining-ware’
7.4.2.2 Coordination

Words, phrases, and clauses can be conjoined, but parts of words cannot. Example (42) below illustrates the conjoining of ‘dip’ and ‘drink’ in a coordinate structure using the conjunction ho. Parts of a non-harmonizing verb series, however, cannot be conjoined, as shown in the attempt to conjoin two second verbs inside the SVC in (43). The impossibility of conjoining yo'u ‘dip, AF’ and m-imo ‘drink’ inside an instrumental SVC indicates the integrity of non-harmonizing serial verbs as a morphological word, like a simplex predicate.

(42) \textit{te='o yo'u ho m-imo to chumu} \\
AUX.IRR=1SG dip.AF and AF-drink NTOP water \\
'I will dip water and drink it.' (FNE.XGAU742)

(43)(FNE.XGAU743a~b)

a \textit{*te='o [tith-eni yo'u ho m-imo] to chumu 'o hopi} \\
AUX.IRR=1SG use-RF dip.AF and AF-drink NTOP water TOP ladle \\
intended 'I will use the ladle to dip water and drink it.'

b \textit{te='o [tith-eni yo'u] ho [tith-eni m-imo] to chumu 'o hopi} \\
AUX.IRR=1SG use-RF dip.AF and use-RF AF-drink NTOP water TOP ladle \\
'I will use the ladle to dip water and drink it.'

7.4.2.3 Insertion of Extraneous Materials

In Section 7.3.3.4 I demonstrated that a non-harmonizing SVC cannot host an intervening negation particle such as 'ote, indicating that a non-harmonizing verb sequence constitutes an inseparable whole. The insertion of the hearsay marker \textit{nana}
returns a similar result. Example (45) illustrates that the 'stay-eat' verb series cannot be separated by the hearsay marker nana. If negation particles and the hearsay marker are to occur, they must precede the entire verb series, as shown in the use of 'ote in (44) and the use of nana in (45), respectively.

(44) (FNE.XPRO722a~b)

a  *te='o  [yon-i  'ote  b-onU]  to  kamcia  'o  hopo  
AUX.IRR=1SG  stay-LF  NEG  AF-eat  NTOP  candy  TOP  bed  
intended 'I will stay in bed not eating candy.'

b  te='o  'ote  [yon-i  b-onU]  to  kamcia  'o  hopo  
AUX.IRR=1SG  NEG  stay-LF  AF-eat  NTOP  candy  TOP  bed  
'I will not stay in bed eating candy.'

(45) (FNE.XGAU744a~b)

a  *i=si  [yon-i  nana  b-onU]  to  kamcia  to  naau  
AUX.NAF.R=3SG  stay-LF  HEARSAY  AF-eat  NTOP  candy  NTOP  naau  
'o  oyonatmopsU  
TOP  school  
intended 'Naau stayed at school reportedly eating (some) candy.'

b  i=si=cu  nana  [haf-a  maine'e]  ho  tuocos-i  na  nte  
AUX.NAF.R=3SG=PERF  HEARSAY  take-PF  AF.go.home  CONJ  ask-LF  TOP  AUX.IRR  

himooko  
caregiver  
'He reportedly took (the child) back and asked who might be the caregiver (of the child).' (Tung1-42:019)
In summary, a non-harmonizing verb series forms an inseparable unit as a morphological word. The entire verb series can undergo derivational processes; the internal parts of the verb series cannot be conjoined; and the verb series cannot be separated for hosting negation particles or the hearsay marker nana.

7.4.3 Non-Harmonizing SVCs and Syntactic Wordhood

In this section, I argue that the verb complex in a non-harmonizing SVC has two features indicative of a syntactic word. It forms a semantically unitary event and displays a monoclausal structure. However, event integration and monoclausality do not necessarily go hand-in-hand with a fully unified argument structure, an issue I will return to in Section 7.5.

7.4.3.1 Non-Harmonizing SVCs and Event Integration

In non-harmonizing SVCs such as the instrumental series 'use-kill', the first verb expresses the action of using an instrument, whereas the second verb expresses the action of killing. Although the first verb and the second verb appear to represent two actions, there is a strong tendency for them to be conceptualized as a single event.\textsuperscript{12}

\textsuperscript{12} By claiming that serial verbs constitute a single event, the present study does not deny that the event structure of SVCs is complex and multifaceted. The main proposal here is that the events represented by the individual verbs are closely integrated such that they are conceptualized as a single macro event; in fact, they are so closely integrated that they cannot be easily isolated judging by the scope of adverbial modification. See below.
One piece of supporting evidence for event integration comes from the scope of adverbial modification. For example, in (46) below, the entire verb serialization comes under the scope of the temporal adverbial element ‘today’. Both the administering of the drugs and the killing are understood to occur concurrently sometime today. It is semantically infelicitous that only the killing occurred today, with the administering of the drugs taking place prior to this time. Pasuya’s manipulation of the drugs cannot be removed physically and temporally from the killing. In other words, the act expressed by the first verb cannot be easily isolated from the act expressed by the second verb in this instrumental SVC. It is due to this modification scope that we recognize the ‘use-kill’ series as the expression of a single unitary event.13

\[(46) \, i=si \, [tith-eni \, opcoi] \, to \, hangU \, to \, pasuya \, 'o \, s'os'o \, maita'n'e \]
\[AUX.NAF.R=3SG \, use-RF \, kill.AF \, NTOP \, enemy \, NTOP \, Pasuya \, TOP \, drug \, today \]

‘Pasuya used the\ drugs to kill an enemy today.’ (FNE.XGAU745)

When the administering of the drugs took place prior to the killing event, the following example is used.

\[(i) \, os'\, o \, yomi-a \, 'o \, s'os'o \, ho \, petohUy-a \, opcoz-a \, 'o \, hangU \]
\[AUX.NAF.R=1SG \, use-PF \, TOP \, drug \, and \, eventually-PF \, kill-PF \, TOP \, enemy \]

‘I used the\ drugs and eventually killed the\ enemy.’ (FNE.XGAU749)

As a response to the inquiry of a reader, it is possible for a non-harmonizing SVC to be combined with a harmonizing SVC. In such a combination, harmonizing SVCs precede non-harmonizing SVCs, with the harmonizing V1 occurring in the PF form, the non-harmonizing V1 in the appropriate NAF form, and the non-harmonizing V2 in the AF form. Tung (1964) recorded sentences where non-harmonizing SVCs are preceded by the predicate ‘again’, as in (i) below. However, I did not elicit examples along this direction, nor can I discuss the conceptual integration involved in such a combination.

\[(i) \, hoci \, m-aica \, i\, yaho \, m-aeo \, te \, i\, yah-a \, haf-a \, uh \, to \, tevoa \]
\[if \, AF-like \, again.AF \, AF-catch \, AUX.IRR \, again-PF \, take-PF \, go.AF \, NTOP \, hut \]

‘If one once again caught animals, one would once again bring it to the hunting hut.’ (Tung 1-9:019)
Another piece of evidence that supports analyzing a non-harmonizing SVC as the expression of a single event comes from the use of the cohesive marker *m-aezo* 'do the same thing, also'. In (47) below, when the cohesive marker *m-aezo* 'also, AF' is used to express an anaphoric link to the proposition in the earlier part of discourse, the interpretation of *m-aezo* is only possible with the reading that 'Yangui also slept in your room'. The use of *m-aezo* in this example cannot be understood as 'Yangui also slept (but in a different place)', nor can it be interpreted as 'Yangui also stayed in your room (but was doing something other than sleeping)'. In other words, 'sleeping' and 'staying' cannot be isolated as two separate events and be individually referred to by the cohesive marker. The fact that 'staying' and 'sleeping' cannot isolated for the use of cohesive devices indicates that the verbs form an SVC and are viewed as a single unitary event.

(47) \[ {\begin{array}{l} \text{AUX.NAF.R=3SG \ stay-LF \ sleep.AF \ NTOP \ Pasuya \ TOP \ room=2SG} \\ \text{m₀=∅ \ m-aezo \ ‘o \ yangui} \\ \text{AUX.AF.R=3SG \ AF-do.the.same.thing \ TOP \ Yangui} \\ \text{‘Pasuya stayed in your room sleeping. Yangui also (slept in your room).} \end{array}} \]  

7.4.3.2 Monoclausality and a Single Predication?

In Sections 7.3.3.3 and 7.3.3.4 I mentioned that a non-harmonizing SVC contains a single set of modality, pronominal, and negation markings for indicating the speaker's
attitude regarding the likelihood of the proposition described, even though the component verbs each bear a focus-marking affix. Given that a single modality value and a single pronominal clitic are characteristics of a monoclausal structure headed by a simplex predicate (see Section 3.4), the fact that a non-harmonizing SVC contains only a single specification for these features therefore indicates that the construction is monoclausal. Additionally, the single specification for modality, person, and polarity also has syntactic consequences for the assessment of predication function and syntactic wordhood, because these features are long considered to be the finiteness features of a syntactically autonomous predicate. Shibatani (2007) argues that the notion of finiteness can be used for defining predication function. He argues that:

The function of a finite verb is to make a predication—anchoring of a proposition to a specific speech context such that the proposition is given a truth value. Tense marking, for example, situates the content of a proposition with regard to the time of speech event. The speaker asserts the proposition through a finite verb form or he may modulate his stance to the propositional content by changing verb form according to such categories as evidentiality and modality. (Shibatani 2007:11-12).

If we are allowed to define predication function by the notion of finiteness, following Shibatani, the fact that a non-harmonizing SVC only allows a single specification of finiteness features indicates that the verb series forms a single predication despite having more than one verb. In the single predication, the first verb is fully finite given that it still displays focus agreement with the auxiliary. The second verb does not maintain focus agreement with the auxiliary and is arguably non-finite, even though its AF marking may be deceptive in suggesting syntactic autonomy.
The claim that a non-harmonizing SVC forms a single predication raises questions about the nature of its argument structure: Does a single predication entail a fully unified argument structure, in the sense that every argument contributed by individual verbs is necessarily an argument of the entire verb series? How can we prove it? I will pursue these questions in the following section.

### 7.5 Argument Structure of Non-Harmonizing SVCs and Construction-Specific Constraints

This section investigates the argument structure of non-harmonizing SVCs. I first describe in Section 7.5.1 the constraints on TOPIC selection, a syntactic consequence following the limitations on focus marking (see Section 7.3.3.5). As will be specified later, these constraints are not seen in simplex predicate constructions and provide a means for exploring the argument structure of non-harmonizing SVCs. Before providing more details, however, let us review the criteria for argumenthood in Tsou.

As noted throughout Chapters 4 and 5, ACTOR and TOPIC markings are indicative of the grammatical prominence of a nominal in simplex predicate constructions. A TOPIC nominal is the indispensable element of the major clause types in Tsou; additionally, it is capable of controlling focus marking, raising, reflexivization, conjunction reduction, and relativization (see Sections 4.2 and 5.4 for details). Judging by these properties, a nominal that receives TOPIC marking is arguably an argument in a Tsou clause, as per common understanding that arguments are obligatory and syntactically prominent. Aside from TOPIC marking, ACTOR marking is also indicative of the argument status of a nominal because the ACTOR, as was shown in Section 5.4, is always capable of controlling
a set of syntactic processes and is a core element in a clause. A nominal that is selected for either TOPIC or ACTOR marking therefore is arguably an argument of a clause; a nominal that fails both criteria is arguably not an argument of a clause (such as non-critical location and temporal elements (see Section 4.2)).

Assuming that ACTOR and TOPIC markings are indicative of the argument status of a nominal even in non-harmonizing SVCs, in Sections 7.5.1-7.5.2 I argue that non-harmonizing SVCs involve argument sharing but does not display features of complete argument unification. This is the case especially when the TOPIC selection of the entire verb series is contrasted with that of individual verbs. In Section 7.5.3 I investigate the restriction on the ACTOR-TOPIC alignment in non-harmonizing SVCs and compare it with the similar restriction imposed on the poa-causative construction (see in Chapter 6).

7.5.1 Construction-Specific Constraints on Topic Selection

As noted in Section 7.3.3.5, non-harmonizing SVCs are characterized by restricted focus marking: the first verb occurs in one of the NAF forms but the second verb is marked AF. The pattern of focus agreement with the auxiliary indicates that only the NAF-marked V1 is syntactically finite and arguably determines the focus of the entire verb series. A locational SVC with the LF-AF marking on the verbs thus represents an LF-marked complex predicate. An instrumental SVC with the RF-AF marking on the verbs represents an RF-marked complex predicate. An associative SVC with the PF-AF marking on the verbs represents a PF-marked complex predicate.
The restricted focus marking reflects the constraints imposed on topic selection. In the locational SVC (48a) below, for instance, even though semantically the entire SVC involves three nominals (the catcher Mo'o, the caught pangolin,\(^{15}\) and the location), only the locational nominal 'mountains' of the first verb can appear as the topic.\(^{16}\) The other two nominals, the catcher Mo'o and the caught pangolin, always occur as the non-topic and therefore never encode their grammatical roles via focus morphology. Attempts to encode either participant in the topic nominal, as shown in (48b) and (48c), respectively, are considered ungrammatical.

(48) (FNE.XGAU748)

a \(i=si\) \[[yon-i \ tUtpUtU] \to \ hiaemoza \to \ mo'o, \ 'o \ fuengu\]
AUX.NAF.R=3SG stay-LF catch.AF NTOP pangolin NTOP Mo'o TOP mountain
'Mo'o caught a pangolin in the mountains.'

b \(*i=si\) \[[yon-i \ tUtpUtU] \to \ fuengu \to \ mo'o, \ 'o \ hiaemoza\]
AUX.NAF.R=3SG stay-LF catch.AF NTOP mountain NTOP Mo'o TOP pangolin
'Mo'o caught the pangolin in the mountains.'

c \(*mo=\theta\) \[[yon \ tUtpUtU] \to \ hiaemoza \to \ fuengu \ 'o \ mo'o,\]
AUX.AF.R=3SG stay.AF catch.AF NTOP pangolin NTOP mountain TOP Mo'o
'Mo'o caught a pangolin in the mountains.'

---

\(^{15}\) A pangolin is a type of mammal of the order Pholidota. It is scaly and feeds on ants.

\(^{16}\) The catcher Mo'o is understood to be the shared actor of the first verb yon-i 'stay, LF' and the second verb tUtpUtU 'catch, AF'.
The restriction on topic selection is common to all three types of non-harmonizing SVCs. Examples in (49) show that the instrumental SVC allows only the instrument of the first verb to occur as the topic and to trigger the RF marking (on the first verb). Examples in (50) demonstrate that the associative SVC allows only the patient of the first verb to assume the topic relation and to trigger the PF marking.

(49) (FNC.XFPT413a~c)

a \( i\=si, \quad [tith\text-eni \ opcoi] \ to \ buhci \ to \ mo'\=o, \ 'o \ s'o's'o \)
AUX.NAF.R=3SG use-RF kill.AF NTOP mouse NTOP Mo'o TOP drug
Mo'o used the drugs to kill a mouse.'

b \(*i=si, \quad [tith\text-eni \ opcoz-a] \ to \ s'o's'o \ to \ mo'\=o, \ 'o \ buhci \)
AUX.NAF.R=3SG use-RF kill-PF NTOP drug NTOP Mo'o TOP mouse
intended 'Mo'o used the drugs to kill the mouse.'

c \(*mo=\=o, \quad [titho \ opcoi] \ to \ buhci \ to \ s'o's'o \ 'o \ mo'\=o, \)
AUX.AF.R=3SG use.AF kill.AF NTOP mouse NTOP drug TOP Mo'o
intended 'Mo'o used the drugs to kill a mouse.'

(50) (FND.XPRO704a~c)

a \( i=si \quad [haf\text-a \ uh] \ to \ taipah\text-U} \ to \ mo'\=o \ 'o \ oko=si \)
AUX.NAF.R=3SG take-PF go.AF NTOP Taipei NTOP Mo'o TOP child=3SG
'Mo'o took his child to Taipei.'

b \(*i=si \quad [haf\text-a \ uh] \ to \ oko=si \ to \ mo'\=o \ 'o \ taipah\text-U} \)
AUX.NAF.R=3SG take-PF go.AF NTOP child=3SG NTOP Mo'o TOP Taipei
intended 'Mo'o took his child to Taipei.'
Three salient properties emerge when the TOPIC selection in non-harmonizing SVCs is contrasted with the TOPIC selection of the component verbs (when they function as independent, simplex predicates). Of the three properties, the second and the third ones are not observed in simplex predicate constructions and are therefore construction-specific. First, the ACTOR of the first verb 'stay' is understood to be coreferential with the ACTOR of the second verb 'catch'. That is, the participant who caught the pangolin must also be physically present in the mountains. Example (48a) cannot mean Mo'o caught [a pangolin in the mountains]. The shared ACTOR, i.e., Mo'o in (48a), is indicated on the auxiliary by the pronominal clitic, just like the ACTOR of a simplex predicate construction. Second, the NON-_ACTOR argument of the first verb is always aligned with the TOPIC relation, as instantiated by fuengu 'mountain' in (48a). The shared ACTOR between the two serial verbs is never selected as the TOPIC. Third, the NON-ACTOR of the second verb, if there is any, is not selected as the TOPIC, either. Examples in (51) indicate that the PATIENT of the second verb 'catch', i.e., the caught pangolin, is not allowed to be selected as the TOPIC. Neither the first verb 'stay' nor the second verb 'catch' is allowed to carry a PF suffix for indexing the PATIENT-TOPIC status of the caught pangolin.
Based on the examples and features discussed above, Figure 7-2 illustrates the internal structure of non-harmonizing SVCs using the ‘stay-catch’ series as an example. In the figure, the ‘stay-catch’ SVC inherits features from two simplex predicate constructions: the V=2 ‘stay’ construction and the V=2 ‘catch’ construction. The two downward pointing arrows mark the inheritance links connecting the two simplex constructions and the ‘stay-catch’ SVC (the notation ‘Is’ indicates a subpart link—that the ‘stay’ construction forms a subpart of the ‘stay-catch’ SVC). For ease of presentation, I abstract the details of alignment patterns (TOPIC/NON-TOPIC vs. grammatical roles) from the two simplex constructions, but they should be read as associated with multiple alignment patterns, such as the V=2 AF construction and the V=2 PF construction.
Even though the ‘stay-eat’ SVC inherits features from the ‘stay’ construction and the ‘catch’ construction, it also imposes its own constraints. In the figure, the ‘stay-catch’ SVC inherits features from the two simplex predicate constructions, but the two sets of inherited features are not of equal status, judging by the finiteness of V1 (‘stay’) and the non-finiteness of V2 (‘eat’). The features inherited from the first verb yon-i ‘stay’ are enclosed by bold lines, indicating that the first verb controls most of the finiteness features in the SVC. Inside the inheritance box are two arguments ACTOR and LOCATION. The features inherited from the second verb b-onU ‘eat’ are enclosed by dashed lines, indicating that this verb lacks the finiteness features normally expected in an independent verb. Inside the inheritance box (of V2) are two arguments ACTOR and PATIENT. The two sets of inherited features are connected by the obligatory coreference...
between the \textit{actor} of the first verb and that of the second verb, and the direction of
collection is for $V_2$ to be dependent on $V_1$. The dependency relation is also indicated
by marking the auxiliary inside the inheritance box of $V_1$, as it is $V_1$, not $V_2$, that
controls auxiliary marking.

In concurrence with the construction-specific constraints on finiteness marking are
the constraints on \textit{topic} selection, which are also construction-specific and are not
detected in simplex predicate constructions. In what follows, the constraints are
specified in the order of $V_1$ and then $V_2$. As indicated in Figure 7-2, the first verb 'stay'
inherits from its simplex counterpart two event-specific participants, the \textit{stayer-actor}
and the \textit{stay-at-location}. Of the two inherited arguments, only the \textit{location} argument is
allowed to be linked to the \textit{topic} in the SVC; the \textit{actor} is required to be linked to the
\textit{non-topic} relation. The restriction on the \textit{actor-topic} alignment is not seen when 'stay'
occur in simplex predicate constructions, in which it can alternate between different
alignment patterns in appropriate discourse environments (i.e., AF and LF; see the box
to the upper left in Figure 7-2). Similar constraints are also detected in the \textit{topic}
selection of $V_2$, both of whose event-specific participants (i.e., 'catcher' and 'caught')
are linked to the \textit{non-topic} relation. Given the \textit{non-topic} constraints, it is impossible to
observe from focus marking to which grammatical role the two event participants are
linked. We can only infer from their performance in independent clauses that 'catcher'
and 'caught' are associated with the argument roles of \textit{actor} and \textit{patient}. 
7.5.2 Argument Sharing or Argument Unification?

Having examined the construction-specific properties of non-harmonizing SVCs, we are ready to discuss their implications for argument structure by asking the following questions: Does a non-harmonizing SVC constitute a unified argument structure which subcategorizes all the arguments contributed by individual verbs? Or does the entire verb series subcategorize only certain arguments contributed by individual verbs? To answer these questions, we need to examine the argumenthood of the elements involved in an SVC. Doing this, then, requires consulting the criteria for argumenthood established in Chapters 4 and 5 (see also the brief review at the beginning of Section 7.5 on page 396).

Recall that in Chapters 4 and 5 we established the argument-adjunct distinction for Tsou based on Actor and Topic markings. A nominal that can be selected for either actor or topic marking is an argument in the particular construction; a nominal that fails to be selected for either marking is an adjunct. By this definition, the 'stay-eat' SVC in (52a) has a two-argument structure: the shared Actor of V1 and V2 and the location of V1 are both arguments subcategorized by the verb series. The problematic case is the Patient of V2, which is unable to be selected as the topic in the serial context, nor can it be made an Actor. By the definition of argumenthood adopted in the present study, the sweet potatoes in (52a) are arguably not an argument required by the 'stay-eat' series, even though the sweet potatoes are the legitimate Patient argument of 'eat' when the verb occurs outside the serial context. If the sweet potatoes were an argument in the SVC, they would be expected to be selected as the topic and to index the argument role, presumably a Patient, on either V1 or V2, as in (52b) and (52c). However, neither (52b)
nor (52c) is attested in Tsou; the present study therefore concludes that the sweet potatoes of V2 are an adjunct in the SVC. The ‘stay-eat’ series thus has two arguments and one adjunct.

(52) (FNC.XFPT426a–c)

a  \(i=si\), \[yon-i b-onU\] to \(fue\) to \(pasuya\), 'o hopo=su
AUX.NAF.R=3SG stay-LF AF-eat NTOP sweet.potato NTOP Pasuya TOP room=2SG
Pasuya stayed in your room eating sweet potatoes.'

b  \(i=si\), \[\*yon-i an-a\] to hopo=su to pasuya, 'o fue
AUX.NAF.R=3SG stay-LF eat-PF NTOP room=2SG NTOP Pasuya TOP sweet.potato
intended ‘Pasuya ate the sweet potatoes in your room.’

c  \(i=si\), \[\*yon-a b-onU\] to hopo=su to pasuya, 'o fue
AUX.NAF.R=3SG stay-PF AF-eat NTOP room=2SG NTOP Pasuya TOP sweet.potato
intended ‘Pasuya ate the sweet potatoes in your room.’

Some readers may object to the two-argument analysis, arguing instead for a three-argument analysis. In the three-argument analysis, the action of eating sweet potatoes in (52a) took place involving the location introduced by the first verb ‘stay’. In correspondence with the event integration, the argument structure of ‘stay’ fuses with that of ‘eat’; the entire ‘stay-eat’ SVC subcategorizes a set of three arguments [actor, patient, location] based on the two arguments of ‘stay’ ([actor, location]) and the two arguments of ‘eat’ ([actor, patient]). However, the three-argument analysis fails to justify (i) why the non-topic patient of V2 is more of an argument, like the actor and the topic of V1, despite the apparently disparity in the ability to be selected for either topic.
or ACTOR marking, and (ii) why the NON-TOPIC PATIENT of V2 is less of an adjunct, like the NON-TOPIC location in simplex predicate constructions, when both elements share the inability to be selected for either TOPIC or ACTOR marking. Justification of the above two concerns is required for supporting the three-argument analysis.

Other readers may question if the constraints on TOPIC selection are the consequences when the argument structure of V2 is embedded in the argument structure of V1, as illustrated in (53). In the embedding analysis, the 'stay-eat' SVC is a bi-clausal structure imposing constraints on the nominal marking of the embedded clause (i.e., the one headed by V2). However, for the embedding/bi-clausal analysis to work, justification is required to explain why non-harmonizing SVCs display many monoclausal properties (e.g., a single specification for modality, see Section 7.4.3.2) despite the claimed bi-clausal structure. Additional justifications are also required for specifying why V1, the main verb in the embedding analysis, is also subjected to constraints on TOPIC selection such that its ACTOR argument is not linked to the TOPIC relation (see Section 7.5.1).

(53) 'stay-eat' [ACTOR, LOCATION, [ACTOR, PATIENT]_{V2}]_{V1}

In the two-argument, non-embedding analysis, a non-harmonizing SVC does not constitute a unified argument structure subcategorizing all the arguments contributed by individual verbs. This incomplete argument unification challenges Durie's (1997:340-348) claim that event integration in SVCs goes hand-in-hand with a complete

17 A reader pointed out the possibility for an embedding analysis in the comments.
unification in argument structure, with arguments of individual verbs being fully incorporated into the argument structure of the entire verb series (see Figure 7-1 for Durie's formulation of the argument structure of the White Hmong 'take-cut' series). While complete unification of argument structures may occur in languages such as White Hmong, such unification is not attested in Tsou, as made evident by the constraints on TOPIC selection.

7.5.3 Restrictions on the ACTOR-TOPIC Alignment: Non-Harmonizing SVCs and the Poa-Causative Construction

A salient property of non-harmonizing SVCs is that the shared ACTOR in the verb series is not allowed to be selected as the TOPIC. The restriction on the ACTOR-TOPIC alignment may appear bizarre at first glance, but a similar restriction is detected in the poa-causative construction (see Chapter 6 for details). In non-harmonizing SVCs and the poa-causative construction, the ACTOR remains invariably as the NON-TOPIC of the sentence and is therefore irrelevant to the focus marking on the verb, as shown in (54) and (55) below. The restriction on the ACTOR-TOPIC alignment separates the two types of complex predicates from simplex predicates in terms of argument structure: while at the level of simplex predicates both ACTOR and NON-ACTOR arguments are allowed to be selected as the TOPIC in the appropriate discourse environments, at the level of complex predicates—as far as the poa-causative construction and non-harmonizing SVCs are concerned—the ACTOR always aligns with the NON-TOPIC relation.
(54) restrictions on ACTOR-TOPIC in associative SVCs (FND.XPRO705a-b)

a  *mo=0j [ma-hafo maíne'e] to 'o'oko=si 'o mo'o;
   AUX.AF.R=3SG AF-take go.home.AF NTOP children=3SG TOP Mo'o
   intended 'Mo'o took his children home.' (ACTOR-TOPIC)

b  i=si [haf-a maíne'e] to mo'o; 'o 'o'oko=si
   AUX.NAF.R=3SG take-PF go.home.AF NTOP Mo'o TOP children=3SG
   'Mo'o took his children to Taipei.' (NON-ACTOR-TOPIC)

(55) restrictions on ACTOR-TOPIC in the poa-causative construction (FNE.XGAU642a-b)

a  *mo=0j poa-maíne'e-(a) to 'o'oko=si 'o mo'o;
   AUX.AF.R=3SG CAUS-go.home AF-PF NTOP children=3SG TOP Mo'o
   intended 'Mo'o made his children go home.'

b  i=si poa-maíne'e-(a) to mo'o; 'o 'o'oko=si
   AUX.NAF.R=3SG CAUS-go.home AF-PF NTOP Mo'o TOP children=3SG
   'Mo'o made his children go to Taipei.'

The restriction on the ACTOR-TOPIC alignment may raise the question of why the restriction does not lead to difficulty in identifying the ACTOR of the clause. As has been illustrated repeatedly since Chapter 3, a NON-TOPIC nominal cannot index its grammatical role via focus marking. Presumably the restriction on the ACTOR-TOPIC alignment will lead to confusion in role identification, because the NON-TOPIC ACTOR is not distinguished from other NON-TOPIC nominals in terms of nominal marking, either. However, the confusion never arises, due to the Tsou-specific auxiliary marking, which allows the ACTOR to be marked on the auxiliary by pronominal clitics. This
actor-marking applies to both simplex and complex predicates. In non-harmonizing SVCs, the pronominal clitic references the (shared) actor of the entire verb series; in the poa-causative construction, the pronominal clitic references the causer-actor. The present study would like to take one step further associating the actor marking on the auxiliary with the speculation of why the constraint on the actor-topic alignment comes into existence: given that the actor role is already indexed on the auxiliary, there is thus less structural pressure for the actor to compete with other arguments for the topic status and the ability to index their grammatical roles via focus morphology. The actor relation is still registered, but not on the verb. As I will specify in Section 7.6, when other Formosan and Austronesian languages are considered, the actor indexation on the auxiliary appears to correlate with the restriction on the actor-topic alignment in complex predicates.

Let us conclude Section 7.5 with Table 7-4, which integrates the analysis of the argument structure of non-harmonizing SVCs with the diagnoses concerning phonological, morphological, and syntactic wordhood. In Sections 7.4.1-7.4.2 I argued that a non-harmonizing SVC constitutes a phonological word and a morphological word. However, the diagnoses of syntactic wordhood return mismatching results. In Section 7.4.3 it was mentioned that a non-harmonizing SVC displays features of event integration (see Section 7.4.3.1) and monoclausality (see 7.4.3.2), two critical criteria for a syntactic word. Ideally a non-harmonizing SVC should also have a single unified argument structure given the assumption that a syntactic word has a single argument structure. The constraints on topic selection instead indicate that a non-harmonizing SVC has a single but not-fully-unified argument structure. The mismatching diagnostic results not only display split wordhood (syntactically) but also indicate that there are
situations where event integration and monoclausality do not go hand-in-hand with argument unification. Additionally, the mismatch also indicates that a syntactic word in Tsou does not form a discrete category with definite boundaries, supporting the claim made earlier in Section 2.5 that adopting conventional diagnostics does not prevent linguists from identifying fuzzy categories and language-specific features.

<table>
<thead>
<tr>
<th></th>
<th>simplex predicates</th>
<th>non-harmonizing SVCs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stress</td>
<td>single primary stress</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td><strong>Morphological</strong></td>
<td></td>
<td></td>
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<tr>
<td>input to derivation</td>
<td>input to derivational processes</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>coordination</td>
<td>internal parts unable to be conjoined</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>negation</td>
<td>internal parts unable to be individually negated</td>
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</tr>
<tr>
<td><strong>Syntactic</strong></td>
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<tr>
<td>event interpretation</td>
<td>single modification scope</td>
<td>as simplex pred.</td>
</tr>
<tr>
<td>clausal structure</td>
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</tr>
<tr>
<td>argument structure</td>
<td>single and unified</td>
<td>not-fully-unified</td>
</tr>
</tbody>
</table>

Table 7-4 Wordhood tests: Simplex predicates and non-harmonizing SVCs

7.6 Comparing Tsou with Other Formosan Languages: Focus Marking and Argument Unification in SVCs

In this section I compare non-harmonizing SVCs with SVCs attested in other Formosan languages. The comparison focuses on the three construction-specific features of non-harmonizing SVCs (i.e., (a) AF-marked V2, (b) NAF-marked V1, and (c) a not-fully-unified argument structure). As will be specified later, the comparison
indicates that features (b) and (c) are unique to non-harmonizing SVCs, whereas feature (a) is common to most, if not all, SVCs in Formosan languages, according to Shibatani (2007) and Shibatani and Huang (2007).

Let us start with feature (a), that the second serial verb is syntactically dependent and occurs in default AF. Shibatani (2007) and Shibatani and Huang (2007) demonstrate that most SVCs in Formosan languages impose a similar restriction which makes the second serial verb syntactically dependent on the first verb. Unlike the first verb which has the freedom to choose different focus forms,\(^ {18}\) the second serial verb is restricted in focus marking such that it either occurs in default AF or harmonizes with the focus marking of the first verb. In other words, only three types of verb sequences are predicted to occur in Formosan languages: AF-AF, PF-AF, PF-PF. Of the three types, Wulai Atayal and Puyuma allow the sequences of AF-AF and PF-AF, as shown in (56) and (57), respectively. Saisiyat and Amis allow AF-AF and PF-PF, as in (58) and (59), respectively.

(56) Wulai Atayal (default AF) (Shibatani 2007)

\[
\begin{align*}
\text{a } & \text{ m-wah=ku? m-ita? yaya?=su?} \\
\text{AF-come=1SG.TOP AF-see mother=2SG.GEN} \\
\text{‘I come to see your mother.’ (AF+AF, no. (27a))}
\end{align*}
\]

\(^ {18}\) Shibatani (2007:3) lists the following four features for the syntactic dependency of the second serial verb in Formosan languages (see Shibatani and Huang (2007) for more details):

(a) Focus marking in the second verb is either default AF or harmonizing to that of the first verb.
(b) The second verb does not host a clitic.
(c) The second verb cannot be negated.
(d) The second verb cannot be marked for mood.
b  wah-un=mu  m-ita?  yaya?=su?
come-PF=1SG.GEN  AF-see  mother=2SG.GEN
'I come to see your mother.' (PF+AF, no. (27b))

c  m-wah=ku?  *it-an  yaya?=su?
AF-come=1SG.NOM  see-PF  mother=2SG.GEN
intended 'I come to see your mother.' (AF+PF, Shibatani and Huang 2007, no. (6c))

(57) Puyuma (default AF)(L. Huang 2000)

a  Duwa=ku  me-nawu-a  kan  pilay
come.AF=1SG.NOM  AF-see-A  OBL  Pilay
'I came to see Pilay.' (AF+AF, L. Huang 2000:164)

b  tu-patalu-ay=ku  t<em>iliL  Da  tiliL  kan pilay
3SG.GEN-help-PF=1SG.NOM  <AF>write  OBL  letter  OBL  Pilay
'Pilay wrote a letter for me.' (PF+AF, L. Huang 2000:162)

(58) Saisiyat SVCs (harmonizing) (Yeh 2000:132-135)

a  'obay  rima'  h<im>iwa:  ka  baboy
Obay  go.AF  <AF>kill  ACC  pig
'Obay went to kill a pig.' (AF+AF, Yeh 2000, no. (1a))

b  hiza'  'aehae'  baboy  ni  baki'  'alas-en  hiwa:-en  ila
that  one  pig  GEN  grandfather  catch-PF  kill-PF  PERF
'That pig was caught to be killed by Grandfather.' (PF+PF, Yeh 2000, no. (4b))
Amis SVCs (harmonizing) (Wu 2000)

a mi-ala tu alapit k<um>-aen kaku tu futing
   AF-take ACC chopsticks \(<AF>\)eat 1SG.NOM ACC fish
   'I took chopsticks eating fish.' (AF+AF, Wu 2000:131)

b kakter-en palu'-en cingra
   scold-PF beat-PF 3SG.NOM
   'Scold-beat him!' (PF+PF, Wu 2000:133)

In languages such as Budai Rukai, as shown in (60), the second verb is syntactically so restricted that it occurs in its bare root form, unable to bear focus and pronominal markings.  

(60) madalan-aku alupu
   like.ACT-lSG.NOM hunt
   'I like hunting.' (AF+bare root, Shibatani 2007, Budai Rukai, no. (14))

Even though the restriction on the focus marking of the second verb is common to

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19 However, Zeitoun (2006) reports that in Mantauran Rukai (another dialect of Rukai), serial verbs may come in the sequence of AF-PF, as in (i) below. The AF-PF pattern is not predicted by Shibatani and Huang's (2007) analysis that the second verb occurs in default AF or is dependent on the first verb for focus marking.

(i) om-oa-lrao 'i-ra'opo 'i-vorovoro
   'I went to be given an injection and be operated.' (Zeitoun 2006:514; AF (go) +PF (make injection), Mantauran Rukai)
most Formosan languages, the restriction on the first verb is unique to Tsou (i.e., feature (b) on page 410). Examples (56)-(59) indicate that the first serial verb is allowed to alternate between AF and PF in Wulai Atayal, Puyuma, Saisiyat, and Amis, respectively; however, the freedom to alternate between different focus forms is not detected in Tsou non-harmonizing SVCs, which prohibit the first verb to occur in AF and consequentially also disallow the (shared) ACTOR to be aligned with the TOPIC relation (see Section 7.3.3.5). Judging by the restriction on the ACTOR-TOPIC alignment, Tsou appears aberrant among Formosan languages.

The restriction on the ACTOR-TOPIC alignment is not a single isolated feature but has grammatical correlates in other aspects of Tsou grammar. In Section 7.5.3 it was mentioned that the restriction on the ACTOR-TOPIC alignment is a shared feature between non-harmonizing SVCs and the poa-causative construction. Both types of complex predicate constructions index the ACTOR role on the auxiliary. A correlation therefore emerges among the occurrence/non-occurrence of the ACTOR-TOPIC alignment, the two types of complex predicates, and the ability to index the ACTOR role aside from the focus marking on the verb (e.g., the ACTOR marking on the auxiliary). In fact, the correlation is also seen in other Formosan languages, albeit negatively. Judging by the data available in the present study, a correlation arises in Formosan languages such that a language that allows the ACTOR-TOPIC alignment in its SVCs also allows the same alignment in morphological causative constructions. In addition, this type of language typically is unable to index the ACTOR role aside from the focus marking on the verb. Examples (61)-(63) illustrate that Amis, Rukai, and Saisiyat, the three Formosan languages shown to allow the ACTOR-TOPIC alignment in their SVCs, also allow the ACTOR-TOPIC alignment in their morphological causative constructions. However, none
of these three languages has an auxiliary system for indexing the *actor* of the sentence. In contrast, a language that has an auxiliary system for indexing the *actor* role (aside from focus marking) may constrain the *actor-topic* alignment in both SVCs and causative constructions, as illustrated in Tsou by non-harmonizing SVCs and the *poa-* causative construction (see Sections 7.5.3 and 6.4.4).

(61) *paa-pinanoang ci panay i takoan to kilang*
    CAUS-shake NOM Panay LOC me ACC tree
    ‘Panay made me shake the tree.’ (Starosta 1974:310) (Amis)

(62) *ku maLinga ?a-ntuba-baas ki dulay inia kinsas sa guung*
    NOM Malinga CAUS-cook-soup ACC Dulay ACC police ACC beef
    ‘Malinga made Dulay cook some beef soup for the police.’ (Starosta 1974:324) (Rukai)

(63) *Ø vaki pak-hayza ka rayhil ka korkoring*
    NOM old.man CAUS-have ACC money ACC child
    ‘The old man wants the child to have money.’ (Starosta 1974:329) (Saisiyat)

A final issue to be addressed is whether the *non-actor* role contributed by the second verb can be selected as the *topic* in SVCs, a feature indicative of whether or not arguments of individual verbs are fully unified into a single argument structure. In Section 7.5.2 it was mentioned that non-harmonizing SVCs do not manifest complete argument unification, because the *non-actor* of the second verb is never selected as the *topic* and is arguably not the argument subcategorized by the entire verb series. However, the Tsou pattern should not be taken as a feature common to all Formosan
languages. Shibatani (2007) and Shibatani and Huang (2007) report that the 'come-see' series in Wulai Atayal, as shown in (64a)-(64b) below, displays complete argument unification\(^{20}\), because the single argument of 'come' ('I') and the two arguments of 'see' ('I' and 'mother') can each be selected as the TOPIC in the serial context. According to Shibatani (2007:18-19), this pattern of TOPIC selection indicates that arguments of 'come' and 'see' form a unified argument structure subcategorized by the 'come-see' series.\(^{21}\)

(64) Shibatani (2007, no. (27), Atayal)

\(a\) \(m\)-wah=ku? \(m\)-ita? yaya?=su?
AF-come=1SG.NOM AF-see mother=2SG.GEN
'I come to see your mother.' (AF+AF, 'I'=TOPIC)

\(b\) *m-wah=ku? yaya?=su?
AF-come=1SG.NOM mother=2SG.GEN
intended 'I will come to your mother.' (agent=TOPIC, animate goal=NON-TOPIC)

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\(^{20}\) Tsou does not allow the serialization of 'come' and 'see', as attested by the ungrammatical verb complex *uh b-aito 'come AF see AF' and *us-a b-aito 'comePF seeAF'.

\(^{21}\) The argument unification of the 'come-see' series in fact involves more complexity when the TOPIC selection of individual verbs is contrasted with that of the entire verb series. When the verb wah 'come' stands alone, it does not take a human as a goal, as in (a), nor is it capable of occurring in the PF form, as in (b). However, when the verb 'come' occurs in a serial context, it is capable of occurring in PF and taking the human patient of the second verb 'see' as its TOPIC, as in (64b) above.

(Shibatani 2007, Wulai Atayal, no. (27))

\(a\) *wah-un=mu yaya?=su?
come-PF=1SG.GEN mother=2SG.GEN
intended 'I will come to your mother.' (agent=NON-TOPIC, animate goal=TOPIC)
The Atayal examples may again make the incomplete argument unification of Tsou non-harmonizing SVCs seem aberrant, but this conclusion is dismissed when the Tsou pattern is compared with the pattern(s) in other Austronesian languages such as Balinese. As mentioned in Section 7.2.2, Shibatani (2007) reports that the Balinese benefactive SVC also manifests incomplete argument unification. In the Balinese 'buy-give' series, only the subject and the object of the first verb 'buy' can be the topic of the whole sentence (by occurring in the clause-initial position) and trigger focus marking, as in (65a) and (65b). The object of the second verb 'give' cannot be focused and be made the topic of the sentence, as in (65c). Given this syntactic restriction, it appears that the 'buy-give' series does not constitute a unified argument structure subcategorizing all the arguments of the component verbs, thus sharing commonalities with the Tsou non-harmonizing SVCs.

(65) (same as (7), reproduced for reading convenience)

a tiang meli buku=ne baang anak=e cenik
I AF.buy book=DEF give child=DEF male
'I bought the child the book.'

b buku=ne beli tiang baang anak=e cenik
book=DEF PF.buy I give child=DEF male
'I bought the child the book.'
As a summary of Chapter 7, non-harmonizing SVCs provide critical implications for the understanding of Tsou argument structure. Like the poa-causative construction, non-harmonizing SVCs display construction-specific properties not seen in simplex predicate constructions: the second serial verb occurs in default AF, the first serial verb occurs in the appropriate NAF, and the entire verb series manifests incomplete argument unification. These construction-specific properties confirm the claim made in Chapters 4 and 5 that many generalizations need to be stated at the level of constructions instead of across/beyond constructions. Aside from enriching the understanding of Tsou argument structure, non-harmonizing SVCs also bring to our attention the necessity of distinguishing between argument unification and argument sharing within Formosan languages or even across Austronesian languages. In non-harmonizing SVCs, serial verbs involve a shared ACTOR but do not constitute a unified argument structure subcategorizing all the arguments contributed by the individual verbs. While a cross-linguistic study concerning the distinction between argument sharing and argument unification will undeniably contribute to our understanding of SVCs, such a study demands clearly specified criteria for argumenthood for all the languages surveyed. However, the data available at the current stage are in no way sufficient for any comprehensive description at a cross-linguistic level. I therefore leave a cross-linguistic comparison to future research.
Chapter 8 Conclusions

The analysis presented in this dissertation concerns the representation of valency groupings and alignment patterns in Tsou argument structure. I examined both simplex predicates and two types of complex predicates. In addition, I have proposed a model for accommodating the detected valency groupings and alignment patterns. This model does not assume conventional categories but endeavors to reflect the categorization supported by empirical and coherent grammatical correlates. Acknowledging that conventional categories facilitate cross-linguistic comparison, the review in Chapter 2 has shown that assuming conventional categories has the potential drawbacks of fitting observed data into existing patterns and introducing unintended implications. In order to choose the descriptive tool adequate for Tsou, this dissertation emphasizes that categories need to be justified by empirical evidence and that category labels need to be carefully decided such that language-specific and construction-specific features are not discarded in the quest of inter-category commonalities.

Starting from Chapter 3 the dissertation evaluated the use of conventional categories in Tsou, targeting first the nominal marking system and then the inventory of thematic roles. The two-way nominal marking is conventionally referred to as 'nominative case' and 'oblique case', but this terminology introduces unwanted implications that the contrast is role-based and follows the active-passive pattern. Both discourse and syntactic studies, however, reveal that such implications are unwarranted. Instead, Tsou nominal marking reflects differences in referential prominence. Additionally, grammatical correlates that follow from the two-way contrast, including but not limited to the argument-adjunct distinction and the core-oblique contrast, are sharply distinct from what is expected for a
grammatical system with the nominative and the oblique cases. This dissertation argues that the labels TOPIC vs. NON-TOPIC are more adequate for indicating the discourse-oriented function of Tsou nominal marking.

The use of conventional thematic roles involves a similar problem in imposing categories not justified by empirical data. Chapters 3 and 4 demonstrated that conventional thematic roles are not effective for characterizing patterns of argument realization in Tsou. In some cases, event participants typically assumed to be members of the same thematic role are associated with distinct morphosyntactic properties (e.g., locational entities being separated into focusable and non-focusable); in other cases, event participants typically assumed to be members of distinct thematic roles are conflated into the same encoding category (e.g., beneficiary and instrument-like entities being conflated into the RF category). In order to depict Tsou argument structure adequately, the present study establishes four grammatical roles (i.e., ACTOR, PATIENT, REFERENCE, and LOCATION) and two grammatical relations (i.e., TOPIC and NON-TOPIC) based on focus and nominal markings. Using the four grammatical roles and the two grammatical relations, this dissertation formulates Tsou argument structure as a three-layer correspondence: verb-specific event participants, the ACTOR-PATIENT-REFERENCE-LOCATION distinction, and the TOPIC/NON-TOPIC contrast. Depending on the alignment of the TOPIC/NON-TOPIC contrast with the ACTOR-PATIENT-REFERENCE-LOCATION distinction, Tsou argument structure instantiates various types of focus constructions.

After establishing the four grammatical roles and the two grammatical relations, I characterized these language-specific categories relative to the common understanding of 'argument', 'adjunct', 'core', 'oblique', and 'valency'. In Chapter 4 I demonstrated that Tsou displays features of extended argumenthood. Clausal constituents accessible for TOPIC marking all share the commonalities of having
restricted distribution and maintaining a close morphosyntactic dependency with
the verb (i.e., focus marking). As a consequence, all of them are arguably the
arguments required in the particular constructions. By this characterization, Tsou
argumenthood is not limited to agentive and patientive participants but extends to
beneficiary-like, instrument-like, and certain locational entities. In other words,
ACTOR, PATIENT, REFERENCE, and LOCATION, if allowed by the particular constructions in
which they occur, are all arguments. Of all the clausal constituents discussed in the
present study, only NON-TOpic location has unrestricted and non-obligatory
occurrences and is justifiably the adjunct in a Tsou clause.

Closely related to the extended argumenthood is the phenomenon of multiple
valency values. A fair number of Tsou verbs display alternating valency across
different constructions, creating difficulty for characterizing valency patterns using
the traditional predicate-based approach (i.e., a predicate alone determines the
projection of its arguments). The difficulty is made even more acute when there is
no reliable morphosyntactic evidence to justify the derivational relation between
alternating valency, a common solution adopted by the predicate-based approach.
In response to the difficulty, in Chapter 4 I characterized Tsou valency patterns
using the Construction Grammar framework. By acknowledging that each
construction carries certain distinct properties not shared with others, of which is
the information of valency values, alternating valency is modeled by allowing the
same verb to interact with different constructions. In doing so, this dissertation
depicts alternating valency without necessarily assuming that one of the
constructions involved is more basic than the other(s). The semantics of a
construction determines not only the number and type of arguments but also the
mapping of these arguments onto syntactic expressions. Based on valency values,
four major types of simplex predicate constructions are delineated in Tsou:
Construction (V=0), Construction (V=1), Construction (V=2), and Construction (V=3). Depending on the alignment of the ACTOR-PATIENT-REFERENCE-LOCATION distinction with the TOPIC/NON-TOPIC contrast, the four valency constructions instantiate different types of focus constructions, such as Construction (V=2.AF) and Construction (V=2.PF).

In presenting the configuration of Tsou argument structure, this dissertation does more than simply stating that there are four focus/voice types in Tsou. I investigated the alignment patterns between the three layers of representation and explored the factors motivating particular alignment patterns. With regard to the association of verb-specific participants with the four grammatical roles, I proposed that the association should be characterized by the notion of (constitutive) relevance. The more relevant an entity is to the successful attainment of a predicated event, the more likely it will be introduced into the construction encoding that event. The notion of relevance helps clarify why certain event participants can be associated with a particular grammatical role but others cannot.

With regard to the alignment of the four grammatical roles with the TOPIC/NON-TOPIC relations, I argued that the mapping of the four grammatical roles onto the TOPIC/NON-TOPIC contrast is not role-based but is oriented toward referential prominence: a topical NON-ACTOR, the PATIENT in particular, is preferably aligned with the TOPIC relation, but such preference does not hold true for NON-ACTORS that are of low topicality.

The proposed three-layer representation raises the question of how grammatical prominence, i.e., coreness, is distributed. In Chapter 5 I illustrated that Tsou grammatical prominence is distributed along both the ACTOR/NON-ACTOR contrast and the TOPIC/NON-TOPIC contrast based on the diagnoses of eight morphological and syntactic processes. Regarding the two types of contrasts, I
proposed to dissociate the TOPIC/NON-TOPIC contrast from the investigation of the core-oblique distinction, because the contrast is discourse-oriented and is not inherently associated with any grammatical role. Under this proposal, the ACTOR is arguably the only (inherent) core argument in a Tsou clause considering its inherent grammatical prominence over pronominal cliticization, auxiliary marking, reflexivization, control, raising, and conjunction reduction. All the NON-ACTORS allowed in a monoclausal structure are arguably non-core, for their grammatical prominence is contingent upon being selected as the TOPIC.

In the first five chapters, this dissertation investigated the argument structure of simplex predicates. Starting from Chapter 6, I investigated two types of complex predicates and explored how they and their simplex counterparts pattern with regard to argument structure. The findings from the poa-causative construction, in Chapter 6, and from non-harmonizing SVCs, in Chapter 7, indicated that these two types of constructions impose constraints not seen in simplex predicate constructions. The poa-causative construction introduces a new causer-ACTOR but restricts this causer-ACTOR from being linked to the TOPIC relation. A similar restriction on the ACTOR-TOPIC alignment is seen in non-harmonizing SVCs, in which the shared ACTOR of the entire verb series is not allowed to be aligned with the TOPIC relation. Additionally, non-harmonizing SVCs also impose limitations on the second serial verb such that it must occur in default AF. As a result of these specific constraints, non-harmonizing SVCs come in the format of a NAF-only first verb and an AF-only second verb. Using ACTOR and TOPIC markings as diagnostics for argumenthood, I argued that individual verbs in non-harmonizing SVCs share the same ACTOR but do not involve argument unification. To summarize, the poa-causative construction and non-harmonizing SVCs manifest construction-specific constraints, affirming the claims made in the earlier part of
the dissertation that each construction carries certain distinct properties that cannot be generalized to others.

In conclusion, I have presented an examination of Tsou argument structure for simplex predicates and two types of complex predicates, using the Construction Grammar framework. I addressed the issues concerned with the argument-adjunct distinction, the core-oblique distinction, alternating valency, constitutive relevance, and topic selection. Finally, I showed that the theory presented in this work is capable of capturing both construction-specific properties and cross-construction generalizations, allowing a more comprehensive understanding of the Tsou language.
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