Argument structure of Puma[1]

Narayan Sharma
narayan.sharma57@gmail.com

1. Introduction

This paper is about the argument structure of Puma, an endangered language spoken in the eastern part of Nepal (ISO-639 code "pum"). The paper focuses on examining argument structure from different typological perspective.

2. Basic argument structure

Puma verbs can be classified according to their argument structures. It is assumed that each predicate in every language is correlated with a set of arguments, the number and type of which are not systematically predictable from the meaning of the verb. Different predicates can require different numbers of arguments. Puma employs zero place, one place, two place and three place predicates. Zero-argument verbs may require no arguments at all; as in many languages, weather predicates are expressed by a bare predicate with no arguments as in (1) from Puma.

(1)   *namchoyaŋ <0>*   *nam-cho-yaŋ$_0$*

         sun-be.surplus-IPFV

         'It is hot.'

The arguments of a predicate are realized syntactically as the subject, direct object, and indirect object and semantically as the agent, patient, experiencer and so on. The relationships entered into by different predicates with their of arguments are varied. The arguments are classified into semantic categories according to the kind of role they play in the sentence in combination with their predicates.

Fillmore's (1968) Case Grammar was originally designed to address argument realization patterns in English. The grammatical unit that expresses a single predicate containing TAM (tense, aspect and mood) and its argument(s), is called a simple sentence, or clause. Not all conceptions of argument structure are the same. Some scholars (Bresnan and Zaenen 1990, Bresnan 2001) claim that argument structure is a syntactic representation while Alsina (1993:85) suggests that a-structure is a purely

---

semantic representation. Several different notions of a-structure are presented in different linguistic theories. Babby (2011) proposes that the argument structure of the verb is subject to a universal hierarchy that determines the case and grammatical relations of NPs within its clause. Argument structure is said to be uniform across language families. There are works on argument structure in Role and Reference Grammar, such as Pavey 2010, Van Valin 2005, Van Valin and LaPolla 1997, Levin and Rappaport Hovav 2005, in Lexical Functional Grammar (Mohanan 1994, Alsina 1993, Butt 1995, Bresnan 2001) and in Government-Binding theory (Grimshaw 1990).

3. Predicate types

Basic clauses consist of a predicate and one or more arguments. Following Dryer (2007), clause types can be distinguished on the basis of a distinction between verbal and non-verbal predicates. Among clauses with verbal predicates, we can make further distinctions based on the argument structure of the verb, including the distinction between one-argument verbs, two-argument verbs and three-argument verbs. Puma distinguishes between verbal predicates, existential predicates, and other non-verbal predicates such as nominal predicates and location predicates.

3.1. Non-verbal predicates

All clause types must contain an overt verb, except for non-verbal predicate clauses. Non-verbal predicates can be classified into three types: adjectival predicates, nominal predicates, and locative predicates.

Puma distinguishes adjectival predicates and locative predicates from nominal predicates (cf. Dryer 2007). Adjectival predicates and locative predicates occur with the copula *yuŋ* (see (2a) and (2c)), while nominal predicates occur without a copula, as in (2b):

(2) (a) *ʌkku* *marchacha* *bukkhundima* *yuŋ-yaŋ=ku*

     DEM   girl.ABS   pregnant   be-IPFV=NMLZ

     'This girl is pregnant.'

  (b) *tʌkku* *luŋwa*

     DEM   stone.ABS

     'That is a stone.'

  (c) *uŋ-bo*   *uŋ-khipa* *khim-di* *yuŋ-yaŋ*

     1sg.POSS-GEN 1sg.POSS-dog.ABS house-UP.LOC be-IPFV

     'My dog is in the house.'

Example (2a) illustrates a clause containing an adjectival predicate where the single argument is *ʌkku marchacha* 'this girl', the predicate *bukkhundima* 'pregnant' and the copula is *yuŋ-yaŋ* 'be-IPFV', while (2b) illustrates a clause containing a nominal predicate where the single argument *tʌkku* is a demonstrative and the predicate *luŋwa* 'stone' is a noun. Example (2c) illustrates a clause containing a locative predicate where the argument is *uŋ-bo uŋ-khipa* 'my dog', predicate is *khim-di* 'house-in' and the copula is *yuŋ-yaŋ*, 'stay-IPFV'. Note that (2a) and (2c) involve non-verbal predicates, but they are not non-verbal clauses as they contain the copula verb *yuŋ-yaŋ*, while (2b) not only has a non-verbal predicate but is also a non-verbal clause, since no copula is used.

3.1.1. Adjectival predicates

Adjectival predicates in Puma are non-verbal, as in English (Dryer 2007) because Puma treats adjectives as a distinct word class from verbs. In English, adjectival predicates occur with the copula verb *be,* and they occur in Puma with copula verb *yuŋ* as in (3) and (4).

(3) *luŋwa-ci   ompʌcima   mʌ-yuŋ*

     stone-ns.ABS   white   3pl-stay

     'The stones are white.'

(4) *tʌkku   hikha   luŋkʌkwa   yuŋ-yaŋ*

     DEM   bag.ABS   heavy   sit-IPFV

     'That bag is heavy.'

3.1.2. Nominal predicates

In Puma, clauses with nominal predicates lack a copula verb. Puma is dissimilar to English in this respect as it employs the copula verb *be* for nominal predicates (Dryer 2007). The copula verb does not appear with nominal predicates referring to the non-past, as in (2b) and (5).

(5) *ŋa   daktʌrʌ*

     1sg.ABS   doctor

     'I am a doctor.'

However, clauses with nominal predicates that are used to describe the past or future in Puma normally occur with a different copula verb, *lima* meaning 'become', as in Lango (Noonan 1992), a Nilotic language spoken in Uganda. The copula verb *yuŋma* is not inflected for person, but *lima* is. Example (6) illustrates that the perfective form of this verb, *lis* 'become' is followed by the first person singular past tense marker *-oŋ* for past time reference, while for future time reference, the root, *li* is used followed by the first person non-past marker *-ŋa,* as in (7).

(6) *ŋa   daktʌrʌ   lis-oŋ*

     1sg.ABS   doctor   become-1sg.S/P.PST

     'I became a doctor.'

(7) *ŋa   daktʌrʌ   li-ŋa*

     1sg.ABS   doctor   become-1sg.S/P.NPST

     'I will become a doctor.'

3.1.3. Locative predicates/existential clauses

Locative clauses consist of an argument and a predicate containing a post-positional phrase. Puma employs a different copula for locative predicates compared to nominal predicates. It is very common, according to Dryer (2007), for a different copula to be used with locative predicates with a meaning like 'sit', 'stay' or 'be at'. Puma uses the verb *yuŋ,* originally meaning 'stay' or 'sit', as a copula with locative predicates, as illustrated in (8).

(8) *khokku*   *mela-i*   *yuŋ-yaŋ*

    3sg.ABS   market-DOWN.LOC   be-IPFV

    'S/he is in the market.'

Note that there are some languages such as Diyari (Austin 1981), a Pama-Nyungan language spoken in Australia in which locative phrases can occur with one of four stance verbs, meaning 'sit', 'stand' and 'lie' depending in the context (with a further contrast between 'lie (of animates)' and 'lie (of inanimates)'). Consider the Diyari example in (9):

(9) *ngapa*   *pirna*   *pantu-nhi*   *parra-yi*

    water   big.ABS   lake-LOC   lie-PRES

    'There is a lot of water in the lake.' (Diyari: Austin 1981:104)

Dryer (2007) argues that example (9) does not involve a non-verbal predicate, though this is how Diyari expresses locative meaning that other languages express by means of non-verbal locative predicates. Clauses with existential locative predicates also occur in Puma. Consider the three examples in (10).

(10) (a) *tonppʌŋ=na*   *kʌ-khim-di*   *ʌk*   *chup*

        then.after=PTCL   3sg.POSS-house-UP.LOC   one   fistful

        kʌ-camcam   *yuŋ-a-ŋa=ni=ku*

        3sg.POSS-ration   sit-PST-IPFV=REP =NMLZ

        'There was one fistful of uncooked rice in the house.' (folk_tale_01)

    (b) *atlakui*   *ʌrʌyui=ku*   *toŋwama*   *khiwama-ci=ni=ku*

        ago   ago=NMLZ   Tongwama Khiwama-dl=REP=NMLZ

        pʌkka   *nicha*   *ʌsʌ-poŋ*   *pʌ-yuŋ-aŋ-ci=ni=ku*

        elder   younger   two-CLF   3S/A-sit-IPFV-dl=REP=NMLZ

        'Once upon a time there were two sisters called Tongwama and Khiwama.' (folk_tale_01).

    (c) *uŋ-bo*   *uŋ-ma*   *kʌ-khim-di*   *yuŋ-yaŋ*

        1sg.POSS-GEN 1sg.POSS-mother 3sg.POSS-house-UP.LOC sit-IPFV

        'My mother is in the house.'

All three examples in (10) involve the verb *yuŋ* 'sit, stay, be at'. The clause in (10a) involves a locative copula, linking a theme expression *ʌk chup kʌcamcam* 'one fistful of uncooked rice' to an expression denoting a location *khim-di* 'in the house'. Such a clause describing the existence of something (one fistful of uncooked rice) can be equally described as existential. The example in (10b) does not involve an explicit location, however it can be understood as something like 'in the world'. The third example, in (10c) involves an overt locative expression *khim-di* 'in the house' and the verb *yuŋ* can be considered a locative copula, linking an expression denoting something to which a location is attributed to a non-verbal predicate consisting of a locative expression. We can say that these examples are both predicate locative clauses and

existential clauses. Puma, like Ma'anyam (Gudai 1998, cf. Dryer 2007), an Austronesian language spoken in Kalimantan in Indonesia, is a language that uses the same word for a range of functions that include locative copula and existential word.

3.1.4. Predicative possession

Languages differ considerably in the ways they express predicate possession. In some languages, such as English, the possessive relationship between possessor and possessed item is expressed with a transitive construction (Dryer 2007) as a Have-possessive (Stassen 2001). We can also consider predicate possessives to be a subtype of existential clauses, where the possessor can be understood as an experiencer. Possession can be indicated in a number of different ways, but the only one that is considered here is the existential one. Consider an example from English, as presented in (11).

(11)   *Mary has a car.*

The English construction exemplified in (11) is an instance of the Have-possessive, in which the possessor NP occurs as the subject and possessed NP occurs as the complement of a 'have'-verb. Opposed to the Have-possessive, many languages employ predicate locative or existential clauses to express such meaning. Cross-linguistically, an existential possessive construction has the basic form of an existential clause, employing a one-place predicate with a locational or existential meaning. They have frequently grammaticalized from verbs with more specific meanings, like 'to be at', 'to be there', and 'to exist'. The difference between these types lies in the encoding of the possessor NP and the possessed NP. Dryer (2007) notes that in many languages, predicate possession clauses are similar to existential clauses to some extent but the possessor expression is treated somewhat differently. Consider the example in (12) from Puma, where we have a comitative construction (predicate) to express the meaning of possession.

(12)   *ŋa-oŋ*   *uŋ-khimhoŋma*   *yuŋ-yaŋ*

1sg-COM   1sg.POSS-wife.ABS   be-IPFV

'I have a wife.' (lit. ' Wife is with me.')

Example (12) illustrates a predicate possession clause, with the possessed item in the absolutive case and the possessor in the comitative case.

In the oblique possessive construction, the possessed NP occurs as the grammatical subject of the 'exist'-predicate, while the possessor NP occurs in some oblique form (Stassen 2001). The oblique marking on the possessor NP has its basic meaning of specification of a locational relation. Depending on the particular type of locational relation expressed in various languages, it would be possible to further subcategorize this type into, as in the following:

(13)   (a)   Locative Possessive (with the possessor NP being marked by
                some elements meaning 'at', 'on' or 'in'), as in Mongolic (Poppe
                1954:147), a language group spoken in China, Russia,
                Afghanistan and Kyrgyzstan.
        (b)   Dative Possessive (with a marker 'to' or 'for' on the possessor
                NP), as in Kannada (Sridhar 1990), a Dravidian language spoken
                in southern India.

(c)   Comitative Possessive (with a marker 'with'), as illustrated in (12) from Puma like in Finnish (Sulkala and Karjalainen 1992).

The oblique possessive can have further subtypes, such as locational possessive (cf. Mongolic, Poppe 1954), dative possessive (cf. Kannada, Sridhar 1990), and comitative possessive (cf. 12). However, these differences are ignored here, and all instances of locational marking have been analysed together under locational possessive.

Puma also employs the genitive possessive subtype in which the possessor NP is marked by an element that typically does not have a locational or comitative interpretation. The possessor NP is commonly constructed as an adnominal modifier to the possessed NP, as in Avar (Kalinina 1993), a language spoken in Azerbaijan and Russia. Consider example (14) which also is a counterpart of (12). Puma presents a somewhat more complicated case, as two ways of expressing possession are possible. (14a) is a full version of the genitive possessive, while (14b) is a contracted version of the genitive possessive. Note that (14c) is ungrammatical.

(14)   (a)   *uŋ-bo*   *uŋ-khimhoŋma*   *yuŋ-yaŋ*

               1sg.POSS-GEN   1sg.POSS-wife.ABS   be-IPFV

               'I have a wife.' (Lit. 'My wife exists.')

      (b)   *uŋ-khimhoŋma*   *yuŋ-yaŋ*

               1sg.POSS-wife.ABS   be-IPFV

               'I have a wife.' (Lit. 'My wife exists')

      (c)   **uŋ-bo*   *khimhoŋma*   *yuŋ-yaŋ*

               1sg.POSS-GEN   wife.ABS   be-IPFV

               'I have a wife.'

Languages like Ma'anyan (Gudai 1998), distinguish between two NPs preceding the verb as the theme and the possessor respectively in existential clauses and predicative possession. However, in Puma, the possessor, possessed NP and existential theme (cf. 10c) are preverbal nominals. In (10c) it is the preverbal nominal that is the theme, while in (14a) it is the first preverbal nominal that is the possessor and the second preverbal nominal is the theme, e.g. possessed item. In general, Puma is a free word order language, however, in the instance of predicative possession, the word order of possessor and possessed item is strict. Both possessor and possessed item are preverbal but the possessor always precedes the possessed item, as illustrated in (10) and (14).

3.2. Verbal predicates

While clauses with non-verbal predicates tend to be exceptional and less frequent in most languages, clauses with verbal predicates can be found with high frequency in all languages (Dryer 2007). There are different types of clauses with verbal predicates whose properties vary considerably across language.

3.2.1. Transitive versus intransitive clauses

An intransitive predicate takes a single argument, while a transitive predicate takes two arguments. The distinction can be further described in terms of objects in many languages. Intransitive clauses do not have objects, while transitive clauses do. The

grammatical criteria for distinguishing transitive and intransitive clauses may vary considerably from language to language (Dryer 2007). Transitive clauses with objects can be distinguished from intransitive clauses with adjuncts. This kind of distinction between object and adjunct is clearer in English than in some other languages (Dryer 2007), as adjuncts are usually marked with prepositions in English while objects are not. Consider the examples in (15) and (16) from Puma. Example (15) is an intransitive clause which has the adjunct *kʌnamdhʌŋ*, while example (16) is a transitive clause which has the object *roŋ*.

(15) *khokku-bo   kʌ-makacʌk=pa   cha   kʌnamdhʌŋ   ta-a*

    3sg-GEN   3sg.POSS-black=MASC son.ABS   evening   come-PST

    'His black son came in the evening.'

(16) *ŋa-a   roŋ   co-oŋ*

    1sg-ERG   rice.ABS   eat-1sg.S/P.PST

    'I ate rice.'

3.2.2. Ergative versus accusative patterns

In Puma, as in other so-called ergative-absolutive languages, ergative case plays an important role in distinguishing between transitive and intransitive clauses, as transitive subjects and intransitive subjects are marked differently. When languages are classified on the basis of their case-marking system, the grammatical functions borne by arguments are normally categorized into three types: the subject of a transitive clause, the object of a transitive clause, and the subject of an intransitive clause. Subjects occurring in the transitive clauses employ a ergative case, while subjects occurring in the intransitive clauses are treated like objects of transitive clauses and are not overtly marked, being in the absolutive case, as illustrated in (17) from Puma.

(17) (a) *khim-do-ŋkʌŋ   lond-a-puks-a=ni*

      house-GEN.LOC-ABLT   appear-PST-TEL-PST=REP

      tʌkku   kʌ-cha   kancha

      DEM   3sg.POSS-child youngest.ABS

      'That youngest son was out from the house.' (ELDP: myth_boka:015)

  (b) *khon nalo   hen   uŋ-bo   uŋ-khimhoŋma-a*

      DEM COND   CONN   1sg.POSS-GEN   1sg.POSS-wife-ERG

      marcha   tok-i   nalo…

      daughter.ABS   bear-3P   COND

      'If my wife bears a daughter…' (ELDP: myth_hongma: 014)

In these examples, we see that *tʌkku kʌ-cha kancha* 'that youngest son' is the subject of intransitive clause in (17a) and *uŋ-bo uŋ-khimhoŋma* 'my wife' is the subject of transitive clause in (17b). Note that the absolutive case, used for the subject in (17a) and

for the object *marcha* 'daughter' in (17b) is unmarked, while the ergative case, used for the subject in (17b), is marked by the suffix *-a.* A property of the case-marking system in Puma, which is also cross-linguistically common, is that the ergative case is overtly marked, while the absolutive case is unmarked.

Not all languages with ergative-absolutive case marking are uniform across all their transitive constructions, and indeed Dixon (1979, 1994) argues that no language is fully morphologically ergative-absolutive. Dryer (2007) presents cross-linguistic examples of languages which demonstrate quite interesting characteristics in their case-marking. In Roviana (Croston 1996), an Austronian language spoken in the Solomons, both ergative and absolutive are marked by prepositions (cf. Dryer 2007), while in Nias (Brown 2001), an Austronesian language spoken on Sumatra island in Indonesia, the transitive subject (ergative) morphologically unmarked while the absolutive case is overtly marked.

The ways of labeling subjects of intransitive clauses and transitive clauses, and objects of transitive clauses (often called 'core arguments' (Tallerman 2005)) vary from scholar to scholar. Thus, Dixon (1979, 1994) uses 'S' for intransitive subject, 'A' for transitive subject and 'O' for transitive object. Dryer (2007), following Comrie, uses the scheme in (18), a practice I follow here in reference to Puma.

> (18) S – the single argument of an intransitive verb
>
> A – the more agent-like argument of a transitive clause
>
> P – the more patient-like argument of a transitive clause

Most languages have some way of distinguishing A, prototypically an agent, from P, prototypically a patient, although it should be noted that the A need not be an agent, nor need the P be a patient; they can bear other thematic roles, such as experiencer for A and stimulus for P, as in the Puma example:

> (19) (a) *ŋa-a*   *radio*   *enn-u-ŋ*
>
> 1sg-ERG   radio.ABS   listen-3P-1sg.A
>
> 'I listen to the radio.'
>
> (b) *jyoti-a*   *wasa*   *khaŋŋ-i*
>
> Jyoti-ERG   bird.ABS   see-3P
>
> 'Jyoti saw the bird.'

Ergative-absolutive case-marking patterns occur widely in Tibeto-Burman (e.g., the Kiranti sub-group to which Puma belongs), Indo-Aryan (in some tenses and aspects, e.g., Nepali, Hindi, Urdu, Kashmiri, Marwari). Australian (e.g., Dyirbal, Yidin^y, Warlpiri, Kalkatungu), Mayan (Central America), Papuan (New Guinea), Inuit (e.g., Inuit, Inuktitut) and Caucasian (e.g., Avar, Georgian), languages, among others Tallerman (2005) notes that ergativity does not occur in European language families like Romance, Germanic, Celtic, and Greek. It is also very rare in the African languages.

3.2.3. Ditransitive clauses
Ditransitive clauses have three core arguments: an agent, a recipient and a theme. I use the terminology in (20) to describe their grammatical relations with the predicate:

(20) A – the agent-like argument of a ditransitive clause

R – the recipient-like argument of a ditransitive clause

T – the theme-like argument of a ditransitive clause

Languages employ a number of different ways to represent the non-subject T and R arguments in ditransitive clauses (Comrie 2007, Haspelmath 2005a, 2005b). Consider an example from English, (Dryer 2007).

(21) (a)   *Nancy gave Jeff some flowers*.

(b)   *Bob bought Sally a present*.

The noun phrases *Jeff* and *Sally* are recipients (R), while the noun phrases *some flowers* and *a story* are themes (T). Here both R and T follow the verb (in that order) and are not morphologically marked. English has a second construction, where T immediately follows the predicate and R follows and is marked by a preposition, typically *to* or *for*, as in (22), (Dryer 2007).

(22) (a)   *Nancy gave some flowers to Jeff.*

(b)   *Bob bought a present for Sally.*

Other languages may employ constructions which are similar to one or other of these two English constructions (or, occasionally have both). These constructions are common among languages without case affixes and among languages in which the object normally follows the transitive predicate (Dryer 2007). It is less common to have both constructions, as in English.

Puma shows a third construction type, namely one in which R is in the dative case and T is unmarked absolutive case (hence in the same form as P of a transitive clause):

(23) *ŋa-a*   *uŋ-ma-lai*   *kʌphekwa*   *itd-u-ŋ*

1sg-ERG   1sg.POSS-mother-DAT   money.ABS   give-3P-1sg.A

'I give money to my mother.'

Dryer (2007) notes that not all languages group P and T together in terms of their formal or behavioural properties as 'direct objects' DO (with R as 'indirect object' IO marked with a dative or some kind of locative case, as in Puma and Latin). Some, such as Kunama, a Nilo-Saharan language spoken in Ethiopia, and Yoruba, a Niger-Congo language spoken in Nigeria, group P and R together as 'primary objects' PO, versus T which is a 'secondary object' SO:

(24) PRIMARY VS. SECONDARY OBJECT   DIRECT VS. INDIRECT OBJECT

SECONDARY OBJ	ABS	T	ABS		
	DAT	P	ABS		
	DAT	R	DAT	INDIRECT OBJECT	

There are also languages in which P, R and T all behave or are marked differently, while in a few, such as Mising (Prasad 1991), a Tibeto-Burman language spoken in India,

there is no distinction and P, T and R all occur with the same marking (here accusative case, see Dryer 2007: 256).

Dryer (2007) shows that there are three possible alignments of P, T and R in languages with ergative-absolutive case marking, as set out in (25):
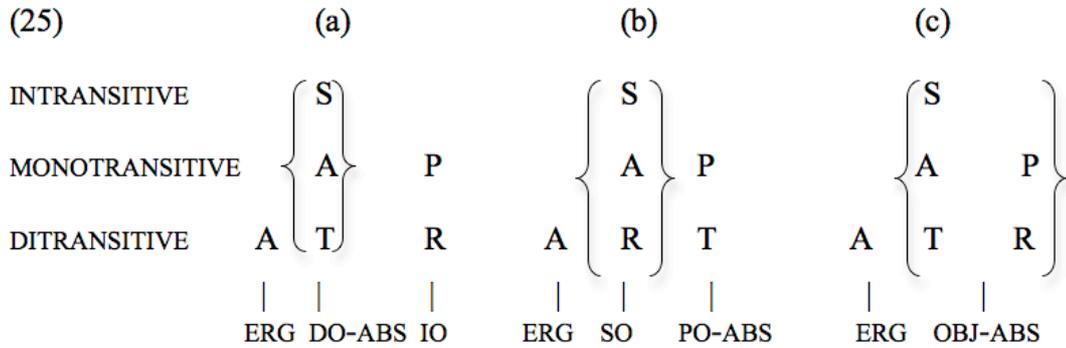
The three patterns illustrated in (25) imply three different types of absolutives. The first can be called 'direct object absolutives', a category which covers S and direct objects (P and T), as in (25a). The second are 'primary object absolutives' which covers S and primary objects (P and R), as in (25b). The last can be termed 'two-object absolutives' which covers S, mono-transitive objects (P) and both ditransitive objects (T and R) in (25c).

Dryer (2007) gives the examples of these different types of absolutives: Basque (Saltarelli 1988), a language isolate spoken in northern Spain and southern France, employs the direct object absolutive pattern while Québec Inuktitut (Dorais 1978), an Eskimo-Aleut language spoken in Canada, employs the primary object absolutive pattern. Ngiyambaa (Donaldson 1980), a Pama-Nyungan language spoken in south-eastern Australia, is an instance of the two-object absolutive pattern.

In contrast with Dryer's classification for ditransitive constructions, Puma neither employs fully direct object absolutives nor fully primary object absolutives, rather it shows characteristics of both patterns. It is a partially direct object language in which P and T are marked in the same way, and R is treated differently, as in (26); and it is also a partially primary object language in which the P and the R are treated in the same way, and the T is marked differently, as in (27).

(26) (a) *ŋa-a*   *khim*   *hud-u-ŋ*

      1sg-ERG   house.ABS   buy-3P-1sg.A

      'I buy the house.'

   (b) *ŋa-a*   *uŋ-marchacha-lai*   *khim*   *itd-u-ŋ*

      1sg-ERG   1sg.POSS-daughter-DAT   house.ABS give-3P-1sg.A

      'I give the house to (my) daughter.'

(27) (a) *ŋa-a*   *khokku-lai*   *copp-u-ŋ*

          1sg-ERG   3sg-DAT   see-3P-1sg.A

          'I see her/him.'

    (b) *ŋa-a*   *uŋ-khimhoŋma-lai*   *tit-ci*   *hud-u-ŋ*

          1sg-ERG   1sg.POSS-wife-DAT   clothes-ns   buy-3P-1sg.A

          'I buy clothes for (my) wife.'

4. Clause types

In standard intransitive or transitive basic clauses, there is a predictable relationship between grammatical marking and semantic roles, as discussed above for the coding of argument NPs and summarised in Figure 1.

Figure1: Clauses
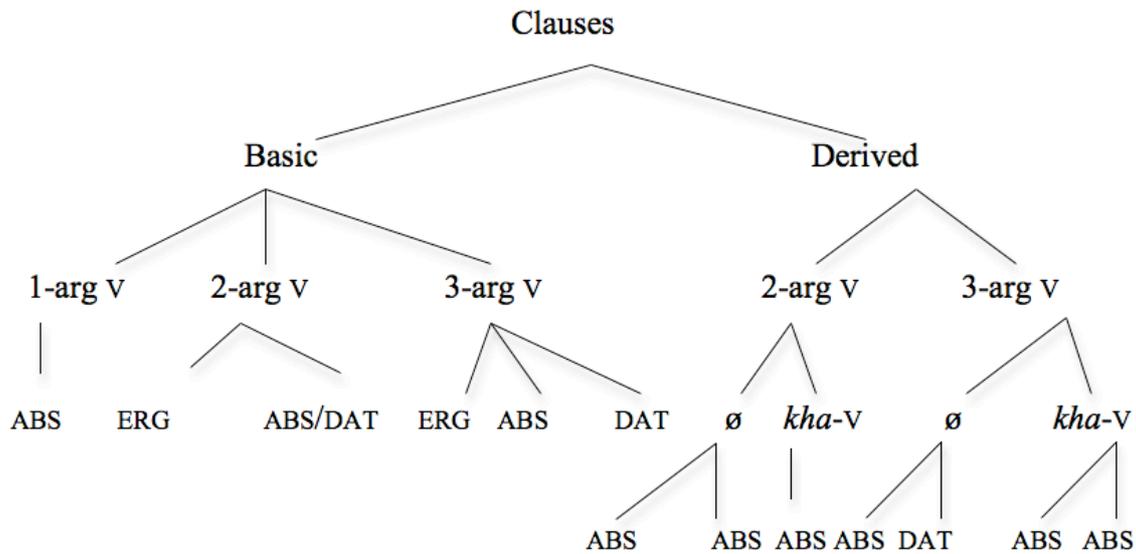
Puma also has agreement markers on its verbs which can be co-indexed with specific-reference NPs, as well as with indefinite pronouns and generic expressions. The pronominal system of Puma is described in Sharma et al. (2005). The basic agreement system in Puma compared to argument case marking can be summarized, as in Table 1.

Table 1: Basic agreement system in Puma

Clause types	Verb types	Cases+v				Agreement
BASIC	1-place v	ABS			V	Yes
	2-place v	ERG	ABS/DAT		V	Yes
	3-place v	ERG	ABS	DAT	V	Yes
DERIVED	2-place v	ABS			V	Yes
		ABS$_1$	ABS		V	Yes with ABS$_1$
		ABS			*kha*-V	Yes
	3-place v	ABS$_1$	ABS		*kha*-V	Yes with ABS$_1$
		ABS$_1$	DAT		V	Yes with ABS$_1$
		ABS$_1$	DAT		*kha*-V	Never

Intransitive verbs have only a grammatical subject, which can be represented in the clause as an absolutive-case NP as well as marked on the verb as agreement. Comparing the intransitive examples in (28) and transitive examples in (29), the first person and second person are marked while the third person is unmarked with intransitive clauses in non-past tense. With transitive clauses, both agent and patient are represented in the verb agreement, however note that free pronouns are frequently dropped, as in (29).

(28) (*ŋa*)   *puŋ-ŋa*

1sg.ABS   go-1sg.S/P.NPST

'I go.'

(29) (*ŋa-a*   *khokku-lai*)   *pʌpd-u-ŋ*

1sg-ERG   3sg-DAT   kiss-3P-1sg.A

'I kiss her.'

4.1. Derived clauses

In Puma, the derivation of clauses is interesting because almost all transitive verbs and ditransitive verbs can be used intransitively, with the direct objects of monotransitives and R of ditransitives (primary objects) being regularly demoted to non-argument status, and the agent-like NP being expressed in the same way as the single argument (S) and an intransitive verb (i.e., in absolutive case). Demoted objects are not referenced in verbal agreement, however this does not necessarily imply that the object cannot be mentioned. Pragmatically it must be understood as a generic rather than a specific referent. In addition, all transitive and ditransitive verbs can be detransitivised with the prefix *kha-* which also bans overt objects. Without *kha-* the detransitivised verb stem entails an overt object regardless of whether it is understood as a human or non-human P-argument.

We refer to suspended object agreement without the prefix *kha-* as the '*ø*-detransitive' and suspended object agreement with prefix *kha-* as '*kha*-detransitive' (Bickel et al. 2007). The forms with suspended object agreement are identical to regular intransitive forms, however the interpretation of the P argument is different for *ø*-detransitives and *kha*-detransitives.

4.1.1. The *ϕ*-detransitive

With detransitive forms, case assignment and agreement normally follow the syntax of intransitive clauses by marking a single argument (where the Agent is obligatorily assigned the (zero-marked) absolutive case and the verbs agrees with it alone). It is quite interesting that the object is demoted in detransitivisation but the *ø*-detransitive still requires a patient/stimulus. The two examples in (30) (Bickel et al. 2007) involve an object *khim* 'house'; in fully transitive (31a) the stimulus can be optionally marked with dative case, while with the corresponding *ø*-detransitive construction the theme is obligatorily unmarked and appears in absolutive case. In example (30b) addition of the dative case is ungrammatical because the demoted object cannot be overtly marked.

(30) (a) *ŋa-a*   *khim(-lai)*   *copp-u-ŋ.*

1sg-ERG   house-DAT   look-3P-1sg.A

'I look at the/a house.'

(b) *ŋa*   *khim(*-lai)*   *cop-ŋa.*

1sg.ABS   house (-DAT)   look-1sg.S/P.NPST

'I see houses.' or 'I do house-seeing.' (in general, it is assumed that the speaker does not have any specific house in his mind at the time of speaking).

In *ø*-detransitives, an object is obligatory, as shown in (31), and it cannot be dropped under any pragmatic conditions. This is in contrast with regular transitive clauses where all free NP arguments are syntactically optional (Bickel et al. 2007).

(31) (a) *ŋa*   *tivi*   *cop-ŋa*

1sg.ABS   TV.ABS   watch-1sg.S/P.NPST

'I do TV-watching.' (in general, does not entail the existence of a specific TV that the speaker has in mind)

(b) **ŋa*   *cop-ŋa*

1sg.ABS   watch-1sg.S/P.NPST

Intended: 'I watch something.'

Examples like (31) and (32) suggest an analysis whereby the object is incorporated into the verb since the object cannot be marked and must be adjacent to the verb (recall that otherwise Puma word order is relatively free).

(32) *ŋa*   [*khim*   *cop-ŋa*]

1sg.ABS   house.ABS   look-1sg.S/P.NPST

'I look at a house.'

It is possible to relativize on the object argument in a detransitivised clause, as shown in (33a). But this type of relativisation, as discussed in Bickel et al. (2007), is unexpected under classical accounts of incorporation (see also Hermelink 1992 for detailed description of a very unusual case of relativisation on incorporated objects). All three examples in (33) involve relativisation of incorporated arguments. Example (33a) shows relativisation of a detransitivised object while (33b) illustrates relativisation on a

transitive object, and (33c) demonstrates relativisation of the agent argument of a detransitivised clause.

(33) (a) ((*uŋ-hoŋma*   *hu=ku*)   *tit*)   (*sari*)

1sg.POSS-wife(3sg.S-) buy=NMLZ   cloth   sari

'The kind of cloth my wife buys is sari.'

(b) ((*uŋ-hoŋma -a*   *hud-i=ku*)   *tit*)   (*sari*)

1sg.POSS-wife-ERG (3sg.A-) buy-3P=NMLZ   cloth   sari

'The (specific) cloth my wife buys is a sari.'

(c) ((*sari*   *hu=ku*)   *uŋ-hoŋma*)   (*tʌkku*)

sari (3SS)   buy=NMLZ   1sg.POSS-wife   DEM

'This is my wife who buys sari.' (Bickel et al. 2007)

The relative clause construction in (33a) specifies a 'kind of' notion, with generic reference of the relativised NP, while (33b) is the counterpart active transitive construction where the relativized NP is understood as an individual existing referent. Example (33c) illustrates that with detransitivisation, an agent, now realised as an S argument, can still be relativised. In contrast to patients, the referential status of this argument does not differ from (33b) as no 'kind of' relation is required. With 3-argument verbs, only the theme can be detransitivised, as shown in (34b).

(34) (a) *ŋa-a*   *khipa-lai*   *ca*   *itd-u-ŋ*

1sg-ERG   dog-DAT   food.ABS   give-3P-1sg.A

'I gave the dog food.'

(b) *ŋa*   *khipa-lai*   *ca*   *itd-oŋ*

1sg.ABS   dog-DAT   food.ABS   give-1sg.S/P.PST

'I gave food to the dog.'

(c) **ŋa*   *ca*   *khipa*   *itd-oŋ*

1sg.ABS   food.ABS   dog.ABS   give-1sg.S/P.PST

Intended: 'I gave dogs food.'

All three examples in (34) involve *itd* 'give'. In (34a) there is a standard ditransitive construction while in (34b) the clause is detransitivised and the theme argument *ca* appears in the incorporated position. It is striking that the theme is obligatory here, but has to be understood as having generic reference. In (34c) we have an ungrammatical construction because the primary object *khipa* 'dog' is incorporated.

4.1.2. The *kha-* detransitive

With the *kha*-detransitive, in contrast to the unmarked detransitive, an overt theme NP is prohibited. These clauses in which the verb is marked for antipassivisation by the prefix *kha=* always entail a human P-argument. The *kha*-form requires that the object referent be understood as human and that it cannot be expressed as a separate NP Consider the following example from Bickel et al. (2007).

(35) (a) *ŋa-a*   *khokku-lai*   *copp-u-ŋ*

            1sg-ERG   3sg-DAT   see-3P-1sg.A

            'I see him/her.'

      (b) *ŋa*   *(*khokku(lai)/*   **munima(lai))*   *kha-cop-ŋa*

            1sg.ABS   3sg(DAT)   cat(DAT)   ANTIP-see.1sg.S/P.NPST

            'I see someone/people.', not: *'I see something.'

While the *kha*-detransitive is confined to human themes, the unmarked detransitive can take a non-human theme, or a theme, as noted by Bickel et al. (2007) and illustrated in (36). All examples in (36) involve a verb *tatma* 'bring'; (36a) illustrates that the speaker wants to be more specific about the types of human themes while (36b) is essentially equivalent to (36c) with the generic theme *mʌnna* 'human being, person'. However, (36b) is preferred by speakers though (36c) also conveys the same meaning as (36b).

(36) (a) *ŋa*   *thoroŋ-cha*   *tat-oŋ*

            1sg.ABS   male-offspring.ABS   bring-1sg.S/P.PST

            'I brought some young man/men.' (e.g. to help me in work)

      (b) *ŋa*   *kha-tat-oŋ*

            1sg.ABS   ANTIP-bring-1sg.S/P.PST

            'I brought someone/people.'

      (c) *ŋa*   *mʌnna*   *tat-oŋ*

            1sg.ABS   person.ABS   bring-1sg.S/P.PST

            'I brought someone/people'. (Lit: I bought human for work).

The opposite restriction on overt detransitivised themes can be found in Puma. While unmarked detransitives allow relativisation on the detransitivised object argument (cf. 33), this is impossible with *kha*-detransitives, as shown in (37) from Bickel et al. (2007).

(37) (a) *((*uŋ-marchacha*   *kha-sin=ku*)   *mʌnna*) (*tʌkku*)

            1sg.POSS-daughter.ABS ANTIP-know=NMLZ   person DEM

            Intended: 'These are the kind of people that my daughter knows.'

      (b) ((*uŋ-marchacha-a*   *sind-i=ku*)   *mʌnna*) (*tʌkku*)

            1sg.POSS-daugheter-ERG   know-3P=NMLZ   person DEM

            'This is the person that my daughter knows.'

      (c) ((*kha-sin=ku*)   *uŋ-marchacha*)   (*tʌkku*)

            ANTIP-know=NMLZ   1sg.POSS-daughter   DEM

            'This is my daughter who knows people.'

With *kha*-detransitivisation relativizstion on the theme is only possible in the basic transitive construction, as in (37b). Example (37c) illustrates relativisation on the agent

of a detransitive clause. The unmarked detransitives can only affect theme arguments of ditransitive constructions (cf. 34) whereas *kha*-detransitives, by contrast, can only be employed to demote goal arguments (primary-object) as in (38b).

(38) (a) *ŋa-a   yoŋni-lai   chetkuma   itd-u-ŋ*

        1sg-ERG   friend-DAT   clan.sister.ABS   give-3P-1sg.A

        'I gave my sister to a friend (in marriage).'

    (b) *ŋa   chetkuma   kha-itd-oŋ*

        1sg.ABS   clan.sister.ABS   ANTIP-give-1sg.S/P.PST

        'I gave away my sister (to someone/people).'

    (c) **ŋa   yoŋni(-lai)   kha-itd-oŋ*

        1sg.ABS   friend(-DAT)   ANTIP-give-1sg.S/P.PST

        Intended: 'I gave someone/people/sister to a friend.'

In (38b), the theme argument is retained while the goal NP is not expressed and understood as generic human reference as 'to someone, to people' not any specific individual person. Example (38c) is ungrammatical because with detransitivised clauses the theme argument cannot be omitted instead of the goal argument. Based on these kinds of syntactic and semantic properties of the two types of detransitive constructions, the basic properties of derived clauses as summarized and slightly modified from Bickel et al. (2007) are presented in Table 2.

Table 2: The basic properties of derived clauses

Argument constructions	ø-detransitive	*kha*-detransitive
Object agreement	none	
Case on A-argument	absolutive	
Overt object NP	obligatory	banned
Relativisation of patients	possible	impossible
Roles that can be expressed in ABS case	direct objects	primary objects
Semantics of patients	no constraint	human

Puma ø-detransitives share most properties with comparable structures known to exist in other Kiranti languages, except that unlike in Limbu and Belhare (Bickel et al. 2007), they allow expansion of object NPs by adjectival modification. Bickel et al. (2007) note that the *kha*-detransitive in Puma is unique both in having a mophological marker *kha-* and in banning the appearance of themes. Though the Puma derived clauses do not share the whole set of properties of antipassivisation, incorporation or optional agreement, they are not totally different from any one of these either. The basic agreement pattern of derived clauses is summarized in Table 3.

Table 3. Basic agreement pattern of derived clauses

Argument constructions	ø-detransitive		kha-detransitive	
	2-place V	3-place V	2-place V	3-place V
Object agreement	none			
Case on A-argument	absolutive			
Number of NPs expressed	2	2	1	2
Arguments	Ag Pt	Ag Th	Ag only	Ag and Th only
Semantic restrictions on non-agent	none			human

5. Selectional restrictions

Verbs an have selectional restrictions on their arguments, while adjuncts are never selected. For example, as pointed out by Kroeger (2004), the patient of *drink* must be a liquid whether it appears as object (in a plain transitive construction) or subject (in a passive), and the patient of *assassinate* must be an important political figure. Similarly, the verbs *love*, and *teach* require an animate experiencer (as simple transitive subject in the case of *love* and object in the case of *teach*).

Puma has two predicates to express caused motion that can be translated into English as 'send': *chid*, which requires a human theme, and *haŋd*, which requires a non-human theme. Note that selectional restrictions like this should be analysed in terms of semantic roles rather than grammatical relations (the themes are both P in unmarked transitive constructions).

(39)   *ŋa-a*   *khokku-lai*   *chid-u-ŋ*

      1sg-ERG   3sg-DAT   send-3P-1sg.A

      'I send him/her.'

(40)   **ŋa-a*   *khokku-lai*   *haŋd-u-ŋ*

      1sg-ERG   3sg-DAT   send-3P-1sg.A

      'I send him/her.'

(41)   *parbati-a*   *sima-lai*   *chaplawa*   *haŋd-i*

      Parbati-ERG   sima-DAT   letter.ABS   send-3P

      'Parbati sent Sima the letter.'

(42)   **parbati-a*   *sima-lai*   *chaplawa*   *chid-i*

      Parbati-ERG   sima-DAT   letter.ABS   send-3P

      'Parbati sent Sima the letter.'

In (39) the predicate *chid* obligatorily takes a human theme, i.e s/he, while in (40) the predicate *haŋd* is not allowed to take a human theme as an object argument and the sentence becomes ungrammatical. Example (41) shows that the predicate *haŋd*

obligatorily takes a non-human theme, so (42) is ungrammatical because the predicate *chid* requires a human theme as an object argument and the sentence cannot be well-formed unless there is a human theme.

6. Experiencer arguments

In Puma, as in other Kiranti languages (Bickel 1997), the expression of experiential states of affairs is formed in parallel to all other bodily feeling or experiential expressions, using a possessive of experience construction. In Indo-European languages such as Nepali, this kind of notion is expressed with a dative construction where the experiencer argument is a subject that takes dative case. In Puma, the experiencer requires genitive marking.

The Dative case affix *-lai* marks so-called 'dative subjects'; its use is generally considered to be a defining characteristic of the South Asian language area (cf. Masica 1976). Dative constructions are used with a class of verbs expressing certain physical, mental and emotional states in Nepali, however, in Puma genitive constructions are used to express the experiencers of these same concepts. Dative subjects in Nepali are required to be sentient beings. In examples (43-45), (43a), (44a), and (45a) show dative subject constructions from Nepali, while (43b), (44b), and (45b) are the Puma counterparts, respectively:

(43) (a) *mʌ-lai*   *tauko*   *dukhe-ko*   *chʌ*

          1sg-DAT   head   pain-PERF   be.NPST.3MASC

          'I have a headache.' (Nepali)

      (b) *uŋ-bo*   *uŋ-toŋ*   *tuk-yaŋ*

          1sg-GEN   1sg.POSS-head   hurt-IPFV

          'I have a headache.'

(44) (a) *maria-lai*   *dʌr*   *lage-ko*   *chʌ*

          Maria-DAT   fear   feel-PERF   be.NPST.3MASC

          'Maria is frightened.' (Nepali)

      (b) *maria-bo*   *kʌ-kima*   *ket-a*

          Maria-GEN   3sg.POSS-fear   feel-NPST

          'Maria is frightened.' (lit. 'Maria feels fear.')

(45) (a) *mʌ-lai*   *soas*   *mʌn*   *pʌrchʌ*

          1sg-DAT   SOAS   like   be.NPST

          'I like SOAS.' (Nepali)

      (b) *soas*   *uŋ-sukhalid-i*

          SOAS   1sg.POSS-like-3P

          'I like SOAS.'

The *lai*-marked experiencer in Nepali and its Puma genitive counterpart do not control verb agreement, as in (45a-45b) where the verb 'like' does not agree with the first

person dative or genitive argument in either Nepali or Puma.

7. Conclusion

In this paper, I have argued that Puma case marking, in contrast with Dryer's (1986) classification for distinguishing ditransitive constructions, does not show either fully direct object absolutives or fully primary object absolutives. The Puma construction shares characteristics of both patterns. It is a partially direct object language in which the P and the T are marked in the same way, and R is treated differently. And it is also a partially primary object language in which the P and the R are treated in the same way, and the T is marked differently.

Derived clauses with a verbal predicate employ two versions of agreement in which one follows the typical Kiranti pattern with incorporation and optional agreement (verbs marked with *kha-*), and the other is antipassivisation (without *kha-*). The latter type is typologically closer to detransitivisation constructions in other languages around the world.

The analysis reveals that one-place predicate take a single argument in absolutive case, two-place predicates takes two arguments marked as ergative and absolutive, or ergative and dative on the basis of animacy and definiteness, and three-place predicates take three arguments marked for ergative, absolutive and dative cases. Recipients (Goals) are always marked with dative case, but, themes, even if human, are never overtly marked.

It is assumed that the dative case suffix '*-lai*' may have been borrowed from Nepali, however, in Puma, as in other Kiranti languages (Bickel 1997), experiencer arguments are expressed with genitive case, unlike Nepali where experiencer arguments take dative case. Puma distinguishes between verbal predicates, existential predicates, and other non-verbal predicates such as nominal predicates and location predicates.

References

Alsina, Alex. (1993) *Predicate Composition. A theory of syntactic function alternations.* Doctoral dissertation, Stanford: CSLI Publications.

Austin, Peter K. (1981) *A grammar of Diyari, South Australia*. Cambridge: Cambridge University Press.

Babby, Leonard H. (2011) *The Syntax of Argument Structure*. Cambridge University Press.

Bickel, Balthasar, Narayan Sharma, Martin Gaenszle, Arjun Rai, Vishnu S. Rai. (2007) Two ways of suspending object agreement in Puma: between incorporation, antipassivization, and optional agreement, *Himalayan Linguistics Journal*.

Bickel, Balthasar, (1997) The possessive of experience in Belhare. In David Bradley (ed.), *Tibeto-Burman languages of the Himalayas*: Canberra, 135-155.

Bresnan, Joan. (2001) *Lexical-functional syntax.* Oxford: Blackwell.

Bresnan, Joan and Annie Zaenen. (1990) Deep unaccusativity in LFG. In *Proceedings of the Fifth Biennial Conference on Grammatical Relations*. San Diego: University of California.

Brown, Lea. (2001) A grammar of Nias Selatan. Ph.D dissertation. University of

Sydney.

Butt, Miriam. (2006) *Theories of case: Cambridge textbooks in Linguistics*. Cambridge University Press: Cambridge.

Butt, Miriam (1995) *The structure of complex predicates in Urdu*. Dissertation in Linguistics, Standford: CSLI Publications.

Comrie, Bernard. (2007) 'Quelques remarques sur les verbes bitransitifs'('Some remarks on ditransitive verbs'). In M.M. Jocelyne Fernandez-Vest (ed.), *Combat pour les langues du monde/Fighting for the World's Languages: Hommage à Claude Hagège*, 115-125. (Grammaire et Cognition 4 -5.) Paris: L'Harmattan.

Corston, Simon H. (1996) *Ergativity in Roviana, Solomon Islands*. Pacific Linguistics, Series B 113. Canberra: The Australian National University.

Dixon, Robert Malcolm W. (1979) Ergativity, *Language 55*, 59-138.

Dixon, Robert Malcolm W. (1994) *Ergativity*. Cambridge University Press, Cambridge.

Donaldson, Tamsin. (1980) *Ngiyambaa: The Language of the Wangaaybuwan*. Cambridge: Cambridge University Press.

Dorais, Louis J. (1978) Lexique Analytique du Vocabulaire \nuit Moderne au Quebec-Labrador. Québec: Presses de l'Universite Laval.

Dryer, Matthew S. (2007) 'Clause types', in Timothy Shopen (ed.), *Language Typology and syntactic description*. Cambridge: Cambridge University Press.

Dryer, Matthew S. (1986) 'Primary objects, secondary objects, and antidative'. *Language* 62: 808-845.

Fillmore, Charles J. (1968) 'The Case for Case,'. In E. Bach and R. Harms (eds.), *Universals in Linguistic Theory*, Holt, Rinehart and Winston, New York, 1-88.

Grimshaw, Jane. (1990) *Argument Structure*. Cambridge, Massachusetts: The MIT Press.

Gudai, Darmansyah. (1998) A grammar of Maanyan, a language of Central Kalimantan. Phd thesis. Australian National University.

Haspelmath, Martin. (2005a) Ditransitive constructions: The verb 'Give'. In Martin Haspelmath, M. Dryer, D. Gil and B. Comrie (eds.), *The World Atlas of Language Structures,* 426- 429. Oxford: Oxford University Press.

Haspelmath, Martin. (2005b) Argument marking in ditransitive alignment types. *Linguistic Discovery* 3.1: 1-21.

Hermelink, Bryan. L. (1992) 'La incorporatión en el Mapudungun.' *Lenguages Modernas* 19, 129-138.

Kalinina, Ekaterina. (1993) Sentences with non-verbal predicates in the Sogratl dialect of Avar. *The World Atlas of Language Structure* (WALS).

Kroeger, Paul R. (2004) *Analysing Syntax: A lexical-Functional Approach*. Cambridge: Cambridge University Press.

Levin, Beth and Malka R. Hovav. (2005) *Argument Realization*. Cambridge: Cambridge University Press.

Masica, Colin P. (1976) *Defining a Linguisic Area: South Area*. Chicago: The University of Chicago Press.

Mohanan, Tara. (1994) *Argument Structure in Hindi.* Dissertation in Linguistics, Standford: CSLI Publications.

Noonan, Michael P. (1992) *A Grammar of Lango*. Mouton Grammar Library 7. Berlin: Mouton de Gruyter.

Pavey, Emma L. (2010) *The Structure of Language: An Introduction to Grammatical Analysis*. Cambridge: Cambridge University Press.

Poppe, Nicholas. (1954) *Grammar of Written Mongolian*, Vol 1: Harrassowitz.

Prasad, Bal Ram. (1991) Mising Grammar. Mysore, India: *Central Institute of Indian Languages*.

Sells, Peter. (2001) Form and function in the typology of grammatical voice systems. In G. Legendre, J. Grimshaw, and S. Vikner (eds.) *Optimality theoretic Syntax*. Cambridge (MA): MIT Press, 355-391.

Sharma, Narayan, Balthasar Bickel, Martin Gaenszle, Arjun Rai, and Vishnu S. Rai. (2005) Personal and possessive pronouns in Puma (Southern Kiranti). In Yogendra P. Yadava et al. (eds.), *Contemporary issues in Nepalese linguistics.* Kathmandu: Linguistic Society of Nepal, 225 - 33.

Sridhar, S. N. (1990) *Kannada*. *Descriptive Grammars*. London: Routledge.

Stassen, Leon. (2001) Predicate Possession. *The World Atlas Language Structures Online*. (http://wals.info/chapter/117) accessed on May 17, 2012, 11:39 am.

Sulkala, Helena and Merja Karjalainen. (1992) Finnish. *The World Atlas of Language Structure* (WALS).

Tallerman, Maggie. (2005) *Understanding Syntax*. Durham: Hodde Arnold.

Van Valin, Robert D. (2005) *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press.

Van Valin, Robert D. and Randy J. Lapolla. (1997) *Syntax*. Cambridge: Cambridge University Press.