

Xinkan Verb Categorization: Morphosyntactic Marking on Intransitive Verbs

Abstract: In this paper lexical categorization of Xinkan verbs is explored. Based on data gathered from the author's original fieldwork and past documentation of the Xinkan languages it is argued that intransitive verbs are organized in a way that is similar to the organization of split-intransitive systems. This analysis is supported by the morphological distribution of two intransitive verb classifiers *-laʔ* and *-ʔ*, coupled with the semantic interpretations of the roots to which they attach. In previous research on Xinkan languages the existence of these suffixes has either been ignored, or has been insufficiently described. Consequently, the analysis presented here contributes to the ongoing discussion about verb categorization and semantic alignment in general and the typological characteristics of this language family in specific.

Keywords: Xinkan languages, verb categories, morphosyntactic marking, intransitive verbs

Contents

1. Introduction to the language
2. Xinkan verb categories and intransitive verb suffixes
 - 2.1 Case marking in Xinkan
 - 2.2 Subject agreement and grammatical aspect
 - 2.3 Glottalization in relation to grammatical aspect
 - 2.4 Vowel length on some intransitive verbs
 - 2.5 Characteristics of verb categories
 - 2.5.1 Transitive verb
 - 2.5.2 Intransitive Category I verbs (*-laʔ*)
 - 2.5.3 Intransitive Category II verbs (*-ʔ*)
 - 2.5.4 Fluid category membership
 - 2.6 Predictability of verb category membership
3. Split-intransitivity and cross-linguistic comparisons
 - 3.1 Comparisons of intransitive verbs to transitive verbs
 - 3.2 Unaccusativity as a theoretical tool for analyzing split-intransitivity
 - 3.3 The source of the split in split-intransitivity
4. Conclusions and Implications

1. Introduction to the language

The purpose of this paper is to discuss and analyze verb subcategorization in the Xinkan languages. This discussion primarily focuses on the semantic and morphological behavior of the two intransitive verb suffixes *-laʔ* and *-ʔ* (Rogers 2010: 231). It is argued that these suffixes mark a semantic division in intransitive verbs which is similar to split-intransitivity (also known as semantic alignment). Cross-linguistically, split-intransitivity may have many different instantiations, but generally it occurs when a language shows a semantic or morphosyntactic division between two categories, or types, of intransitive verbs. Verbs may be lexically assigned to either of the two categories based on various linguistic variables, such as agency, control, or the relationships between the verb and its arguments (Donohue and Wichman 2008, Mithun 1991, Legendre and Rood 1992, Van Valin 1990, and Perlmutter 1978). The intransitive verb suffixes in Xinkan, categorize intransitive verbs based on control and the lexical aspect of the verb root.

Xinkan is a small language family of at least four languages once widely spoken in southeastern Guatemala (Terrence Kaufman and Lyle Campbell, p.c.; also Campbell 1972, 1979, 1997; and Kaufman 1977; and see Rogers 2010 for a complete and less impressionistic discussion of the relationships between these languages). These languages have been documented sporadically and only very briefly throughout the recorded history of this geographical area (Maldonado 1770; Calderón 1908; Lehmann 1920; Schumann 1967; COPXIG 2004, Sachse 2010; Rogers 2010); though there is a significant amount of unpublished information about the language family (Kaufman and Campbell 1970, unpublished field notes). Rogers (2010) organized this unpublished data, and reanalyzed it in collaboration with the last remaining speaker of the Xinkan variety spoken in the town of Guazacapán. Lastly, a handful of

linguistic and ethnographic articles have also been published regarding some surface aspects of Xinkan grammar and/or culture (Sapper 1904, Stoll 1886 and 1958, Rambo 1965, Kaufman 1977, Campbell 1972, 1979, and 1997, and Termer 1944).ⁱ

Each of the four languages exhibits the same general patterns of verb subcategorization, though each may have individual differences in the way a particular intransitive verb is categorized within the general system. The focus of this paper is on the general patterns of verb subcategorization for all Xinkan languages, though the data presented below are exclusively from Guazacapán Xinka. The marking of intransitive verb classes based on the suffixes *-laʔ* and *-ʔ* is valid in all four languages. Attention to specific differences between the languages is given only when it is essential in highlighting the general verb categorization system.ⁱⁱ

This paper is organized as follows: section two describes the verb categories in Xinkan by providing data about the use of the two intransitive verb suffixes, including details of the morphological and semantic properties of each of the verb categories. Section three discusses how this system of verb categorization cross-linguistically compares to other analyses of split-intransitive systems (including valid definitions of split-intransitivity, agency, case systems, and semantic and syntactic functions). Section four concludes with the implications of this paper for future research.

2. Xinkan verb categories and intransitive verb suffixes

The central argument of this paper is that Xinkan exhibits a head-marked verb categorization system distinguishing two types of intransitive verbs. The two verb types are characterized by the semantic relationship which exists between the intransitive verb and the nominal argument (i.e., the subject), reminiscent of semantic alignment. The value of this analysis is in the fact that rarely is a split-intransitive system marked via verbal classifiers as is

done in Xinkan (Donohue and Wichmann 2008). This section explores the morphosyntactic facts and semantic interpretations of this categorization. Table 5, in Section 2.6 below, is a visual representation and summary of this discussion.

Previous research has suggested a number of operational definitions and essential variables which define split-intransitive systems (Uhlenbeck 1917, Sapir 1917, Chafe 1970, Perlmutter 1978, Dixon 1979, Dahlstrom 1983, Merlin 1985, Van Valin 1990, Mithun 1991, Legendre and Rood 1992, Klaiman 1994, Payne 1997:144-162, Song 2001:150-153, Pustet 2002, and Donohue and Wichmann 2008).ⁱⁱⁱ For example, representative definitions include:

1. “grammatical systems in which the arguments of some intransitive verbs are categorized with transitive agents and the arguments of others with transitive patients” (Mithun 1991: 511)
2. “there are two types of intransitive verbs.... in one type the surface subject is also the underlying subject, and in the other the surface subject is the underlying direct object” (Van Valin 1990: 221)
3. “some languages express S [subject] arguments of intransitive verbs in two or more morphologically distinct ways” (Payne 1997:144)
4. “in this system the case marking of S depends basically on the semantic nature of the intransitive verb” (Song 2001:150)
5. “an agentive S is encoded, through case marking, verbal agreement, or both, in the same way as A and non-agentive S in the same way as P” (Wichmann 2008: 3 – this is called the “classic case” of semantic alignment throughout that volume)

Though not all identical, there are similarities across these definitions. They all describe a linguistic pattern where a language’s intransitive verbs are divided into two categories which are correlated to the semantic and/or morphological relationship between the verb and the subject.

Similarly, past research has suggested a number of interrelated linguistic features which are correlated with split-intransitive systems. These features are considered essential to cross-

linguistic comparisons and complete analyses of split-intransitivity. These include: case marking (especially active-inactive alignment) (Mithun 1991 and Payne 1997), aspect (Mithun 1991, Van Valin 1990, and Pustet 2002), morphosyntactic relationships such as subject and direct object (Perlmutter 1978 and Van Valin 1990), thematic roles such as agent and patient (Klaiman 1994 and Song 2001), and agency (including volition and control) (Mithun 1991, Legendre and Rood 1992, and Pustet 2002). Each of these grammatical features is used to descriptively explore the Xinkan verbal morphosyntax in this section.

The analysis of Xinkan following these variables naturally leads to questions about: (1) cross-linguistic similarities to and differences from other languages; and (2) about the usefulness of these variables in describing a Xinkan-style split intransitive system. Section 3 takes up these issues and is based on the descriptive facts summarized in Table 5.

2.1 Case marking in Xinkan

Grammatical relations are morphologically unmarked in Xinkan (i.e., there is no nominal case marking), though a somewhat rigid word order indicates which nominal functions as the subject or the direct object (Rogers 2010: 338-346). The basic word order in Xinkan is VSO for transitive verbs and VS for intransitive verbs (though variations are acceptable for pragmatic and other discourse functions, such as focusing or topic continuity). The absence of nominal case and the requirements on word order are shown in (1) and (2).

(1) *ima-y' nah Hwan*
 tell.PERF-3SG.SETA he Juan
 'Juan told him'

(2) *a-uupu-ʔ Hwan*
 3SG.SETD-stand-CATII Juan
 'Juan is standing'

Even though case is unmarked, the grammatical function of the subject nominal is indicated through subject agreement affixes. Other verbal inflectional affixes indicate other grammatical functions, including grammatical aspect and verb categorization.^{iv} In Xinkan these three inflectional features on verbs are independent of one another, though their functions often coincide. They are also relevant features of split-intransitive systems (as mentioned above), and are consequently discussed below.

2.2 Subject agreement and grammatical aspect

Grammatical aspect has been shown to be of central importance for split-intransitivity (Mithun 1991, Van Valin 1990, and Pustet 2002). In Xinkan grammatical aspect markers encode a difference between completed actions and uncompleted actions, termed the *completive* and *incompletive* aspects, respectively. This difference in grammatical aspect is indicated primarily through a choice of subject agreement strategies, and is reinforced through two morphophonemic processes: glottalization and vowel lengthening. Reinforcement of grammatical aspect results in some verb forms being doubly marked for aspect.

Marking of grammatical aspect on transitive verbs is done through the choice of pronominal subject agreement *suffixes* (completive aspect) or pronominal subject agreement *prefixes* (incompletive aspect). These affixes are referred to as Set A and Set B and are shown in Table 1 and Table 2, respectively.

Table 1. Set A – transitive verb completive aspect

1SG	-n'	1PL	-k
2SG	-kaʔ/-kan	2PL	-ka ay ^v
3SG	-y'	3PL	-y' ay

Table 2. Set B – transitive verb incompletive aspect

1SG	in-	1PL	muk-
2SG	kaʔ-	2PL	ka- ... ay
3SG	mu-	3PL	mu- ... ay (lik)

Functionally, these two agreement strategies mark changes in grammatical aspect and not a split in grammatical relations (i.e., not split-A marking).

Examples of transitive verb agreement are shown in (3) with the subject agreement affix in bold – there is no object agreement marking on verbs. All transitive verbs mark changes in grammatical aspect through subject agreement in this way. Some verbs roots in these examples show glottalization on the rightmost consonant of the root supporting the differences in grammatical aspect. This process is discussed in detail in Section 2.3.

(3) Subject agreement with transitive verbs

- a. *im'a-y nen'* ***mu-im'a*** *nen'*
 say-3SG.SETA I 3SG.SETB-say I
 'He told me' 'He tells me'
- b. *kiri-kaʔ nah* ***ka-kir'i*** *nah*
 pull-2SG.SETA it 2SG.SETB-pull it
 'You pulled it' 'You pull it'
- c. *niwa-k naka* ***muk-niw'a*** *naka*
 ask-1PL.SETA you 1PL.SETB-ask you
 'We asked you' 'We ask you'

Intransitive verb subject agreement strategies vary between two sets of *prefixes* which are distinct from the transitive verb subject agreement affixes. Set C intransitive subject prefixes are given in Table 3 and are used to mark the completive aspect. Set D intransitive subject prefixes are given in Table 4 and are used to mark the incompletive aspect.

Table 3. Set C – intransitive verb completive aspect

1SG	in-	1PL	muk-
2SG	kaʔ-	2PL	ka- ... ay
3SG	∅-	3PL	∅- ... ay (lik)

Table 4. Set D – intransitive verb incompletive aspect

1SG	in-	1PL	muk-
2SG	kaʔ-	2PL	ka- ... ay
3SG	a-	3PL	a- ... ay (hik)

The two intransitive verb agreement sets are necessary based on the differences in the third person marking: *a-* for the incompletive and zero (\emptyset -) for the completive aspects.

Examples of subject agreement with intransitive verbs are given in (4). Vowel lengthening and glottalization are also seen here, along with the two intransitive verb classifiers glossed as CAT I and CAT II, each of these are discussed in detail below.

(4) Subject agreement with intransitive verbs

- | | | |
|----|---|---|
| a. | <i>in-t'uhmi-laʔ</i>
1SG.SETC-spit-CATI
'I spat' | <i>in-t'uham'i</i>
1SG.SETD-spit
'I am spitting' |
| b. | \emptyset - <i>tik'i-laʔ</i>
3SG.SETC-sleep-CATI
'He slept' | <i>a-tik'i</i>
3SG.SETD-sleep
'He sleeps' |
| c. | <i>kaʔ-muuču-ʔ</i>
2SG.SETC-be.tired-CATII
'You were tired' | <i>kaʔ-muču-ʔ</i>
2SG.SETD-be.tired-CATII
'You are tired' |
| d. | \emptyset - <i>iwi-ʔ</i>
3SG.SETC-drown-CATII
'He drowned' | <i>a-iwi-ʔ</i>
3SG.SETD-drown-CATII
'He is drowning' |

2.3 Glottalization in relation to grammatical aspect

As mentioned above, glottalization is tangential to the system of verb categorization, but reflects an important aspect of verb use. This section includes a brief summary of this change as indicated in Rogers (2010: 96).

The majority of verb roots exist in two forms: glottalized and unglottalized. The glottalized verb form is used in the incompletive aspect and the unglottalized verb form is used

in the completive aspect. This distinction rotates around the realization of the rightmost consonant in the verb root - additional affixes are ignored.^{vi} Examples with transitive verbs are given in (5) with the relevant consonant in bold.

(5) Xinkan grammatical aspect reinforced by glottalization

Completive	Incompletive	
a. <i>piri-n'</i>	<i>in-pir'i</i>	'I see (it)'
b. <i>hiya-n'</i>	<i>in-hiy'a</i>	'I chop (it)'
c. <i>hini-n'</i>	<i>in-hin'i</i>	'I know (it)'
d. <i>k'ani-n'</i>	<i>in-k'an'i</i>	'I trap (it)'

Occasionally both verb forms are identical in terms of the glottalization of this consonant (i.e., in terms of processes glottalization applied vacuously). In these cases only subject agreement strategies can be used to indicate the intended grammatical aspect of the verb. Examples are given in (6).

(6) Grammatical aspect without changes in glottalization

Completive	Incompletive	
a. <i>hil'a-n'</i>	<i>in-hil'a</i>	'I empty (it)'
b. <i>šur'u-n'</i>	<i>in-šur'u</i>	'I choose (it)'

The glottalized forms of intransitive verbs are also used in the incompletive aspect, but are limited by general phonotactic constraints in Xinkan. Specifically, glottalized consonants are not permitted in a syllable immediately before a word-final glottal stop (Rogers 2010: 96-108). Examples of glottalization with intransitive verbs are given in (7) with the consonant under consideration in bold.

(7) Xinka grammatical aspect on intransitive verbs indicated through glottalization

Completive	Incompletive	
a. <i>in-mika-laʔ</i>	<i>in-mik'a</i>	'I work'
b. <i>in-ohome-laʔ</i>	<i>in-ohom'e</i>	'I cough'
c. <i>in-siiru-ʔ</i>	<i>in-siru-ʔ</i>	'I hurry'
d. <i>in-iiši-ʔ</i>	<i>in-iši-ʔ</i>	'I am awake'

Additionally, for all root types, glottalized consonants are not permitted in consonant clusters (i.e., *CC'). To avoid an illegal cluster, a vowel is epenthesized between the consonants, after which the second consonant, no longer in a cluster, undergoes glottalization. This is seen in (8a) and (8b).^{vii}

(8) Glottalization in consonant clusters in intransitive verbs

	Completive	Incompletive	
a.	<i>in-yirna-laʔ</i>	<i>in-yiran'a</i>	'I fall'
b.	<i>in-wašta-ʔ</i>	<i>in-wašata-ʔ</i>	'I enter' ^{viii}

While the glottalized form of only one type of intransitive verb is ever used (those marked with the classifier *-laʔ* in 7 and 8), the difference is phonologically predictable. Consequently, it is not related to the lexical and semantic categorization of verb roots in Xinkan.

2.4 Vowel length on some intransitive verbs

In addition to glottalization, intransitive verbs marked with the classifier *-ʔ* have two forms corresponding to changes in the length of the vowel in the first syllable: a long vowel is used in the completive aspectual form and a regular short vowel is used in the incompletive aspectual form. This is shown in (9).

(9) Stem changes with grammatical aspect in Category II intransitive verbs

	Completive	Incompletive	
a.	<i>-k'aata-ʔ</i>	<i>-k'ata-ʔ</i>	'lay down'
b.	<i>-meete-ʔ</i>	<i>-mete-ʔ</i>	'take heart, be encouraged'

Vowel length alternations correspond to, but do necessarily primarily mark, changes in grammatical aspect and intransitive verb classification. In fact, past participles derived from transitive verbs in Xinkan are also marked by vowel length. Examples of this derivation are given in (10) for reference (Maldonado 1770, Calderón 1908, and Kaufman and Campbell's unpublished field notes; and see Rogers 2010: 320-323 for a complete discussion of participle derivation).

(10) Past Participles derived from transitive verbs

a. *kixi* → *kiixi*
'to roast something' 'roasted'

b. *nima* → *niima*
'to eat something' 'eaten'

Morphologically past participles and intransitive verbs are different: subject agreement is marked by nominal possession affixes or verb agreement suffixes, respectively. However, they are similar in that both word classes require *non-agent subjects*. Vowel length, then, can be correlated to this fact. The vowel length on some intransitive verbs marks this non-agent relationship between the verb root and the subject. The same relationship does not hold between subjects and intransitive verbs marked with the classifier *-laʔ*.

2.5 Characteristics of verb categories

The linguistic properties of verbs discussed above are sufficient to show that verbal predicates in Xinka are divided linguistically into two broad types: *transitive verbs* (those that use subject agreement sets A and B to mark aspectual differences) and *intransitive verbs* (those that use subject agreement sets C and D to mark aspectual differences). Furthermore, intransitive verbs are further subcategorized based on the relationship existing between the root and the subject – and marked using the classifiers *-laʔ* and *-ʔ*. This results in three verb categories, which I call *transitive*, *intransitive Category I (-laʔ)* and *intransitive Category II (-ʔ)*. This section discusses lexical aspect of the verb root, agency and thematic roles of each verb type as suggested features of this type of verb categorization.

2.5.1 Transitive Verbs

While Xinkan does not have nominal case, verbal arguments are required to have specific thematic roles.^{ix} For example, the subjects of transitive verbs are always more agent-like and the objects of transitive verbs are always more patient like. Examples are given in (11).

(11) Transitive Verbs

- a. *moč'o-n' hiši nen'*
wet-1SG.SETA rock I
'I wet the rock'
- b. *yulmu-ka? naka?*
suck.candy-2SG.SETA you
'You sucked on the candy'
- c. *šir'i-y' nen' Hwan*
elbow-3SG.SETA I Juan
'Juan elbowed me'

2.5.2 Intransitive Category I Verbs (-*la?*)

Semantically, the verb roots in this category are largely events which require animate grammatical subjects which are relatively more agent-like. However, some verbs in this category are states, or similarly some subjects are inanimate (though the combination of state and inanimate subject is not attested with this verb type). In the following examples, each of these properties are indicated: event and animate (12a), state and animate (12b), and inanimate and event (12c).

(12) Examples of the -*la?* type of intransitive verb

- a. *in-mik'a-la? nen'*
1SG.SETC-work-CATI I
'I worked' or 'I did work'
- b. *ka?-eple-la? naka*
2SG.SETA-be.afraid-CATI you
'You are afraid' (i.e., not 'you are scared')

- c. \emptyset -*p'ihnayk'i-la?* *nah*
 3SG.SETA-thunder-CATI he,she,it
 'It thundered' or 'thundering occurred'

Together the alternative translations provided in these examples capture the full meaning of the verb roots: they are understood as 'perform' verbs. In terms of thematic roles, then, Category I verbs most commonly require agent-like subjects without an underlying patient.

However, Xinkan speakers have indicated that some verbs in this class do have an implied patient, as in (13b) or an omitted patient in the case of derivation from a transitive verb as in (13c).

(13) Examples of the objects of *-la?* intransitive verbs

- a. *in-lawru-la?* no patient
 1SG.SETC-dance-CATI
 'I danced' (This cannot mean 'I danced a dance')^x
- b. *in-iw'a-la?* implied patient
 1SG.SETC-toast-CATI
 'I toasted' (something), 'I did toasting'
- c. *in-ipla-la?* omitted patient < *ipla* 'to bathe'- tv
 1SG.SETC-bathe-CATI
 'I bathed (not self)', 'I did bathing'

As seen in these examples, Category I intransitive verbs have a single argument, the grammatical subject, which is required to have a semantic role similar to that of a transitive subject (i.e., agent-like). That is, the subject of Category I verbs is understood as 'agent-like' or as a 'doer' of some action. The agentivity of subjects is discussed below after all the verb characterizations have been given.

- | | | | |
|----|--|------------------|---|
| b. | <i>∅-m̄imi-ʔ</i>
3SG.SETC-sing.CMP-CATII
'It was sung' | <i>nah</i>
it | omitted agent, < <i>m̄imi</i> , transitive verb |
|----|--|------------------|---|

In contrast to Category I verbs, and based on the limited data in (14) and (15), the grammatical subjects of Category II verbs seem to have no control over the action or its outcome; they are affected by the action (i.e., with undergoer thematic role).^{xi} This generalization and hypothesis is expanded and explored below in Section 3.^{xii}

2.5.4 Fluid category membership

The majority of intransitive verbs are lexically specified as either belonging to Category I or Category II, and consequently are marked with the appropriate morphology and thematic roles. However, a few verb roots are fluid in their categorization, and can be marked with the morphology and thematic roles of either Category I verbs or Category II verbs (though not simultaneously). This type of fluidity in split-intransitive verb systems has been noted in previous research and falls into two types: (1) the entire intransitive split is “fluid” (Dixon 1979); or (2) only a small portion of intransitive verbs are “fluid” in their category membership (Mithun 1991, Hill 2005). Xinkan is of the latter type, only a few intransitive verbs permit fluid category marking. These are given in (16).

(16) Intransitive verbs that belong to both Category I and Category II

- | | | |
|----|----------------------------------|---------------------|
| a. | <i>purik'ilaʔ / purikiʔ</i> | ‘marry, be married’ |
| b. | <i>p'ihnaykilaʔ / p'ihnaykiʔ</i> | ‘thunder’ |
| c. | <i>tištaʔ / tištaʔ</i> | ‘pass gas’ |
| d. | <i>iyalaʔ / iyaʔ</i> | ‘laugh’ |
| e. | <i>kup'ahnilaʔ / kup'ahniʔ</i> | ‘trip’ |

Fluid categorization extends to a few cases of derived intransitive verbs. Most transitive verbs can derive *either* intransitive Category I *or* Category II forms, *but not both* – representative examples are in (17). The transitive verb in (17a), *poč'o* ‘to rot’, is a straightforward transitive

verb with overt subject and object. In (17b) this same root is derived as an intransitive verb and can only be derived as a Category II verb.^{xiii} This derivation is related to verb categorization and adds to the complete description of the semantic and morphological properties of the categories.

(17) Transitive verbs → Intransitive Category II derivation

- a. *poč'o-y' hutu uy*
 rot-3SG.SETA tree water
 'The water rotted the tree'
- b. *Ø-poočo-? hutu*
 3SG.SETC-rot.CMP-CATII tree
 'The tree rotted'

A similar, though opposite derivation, can be seen with the transitive verb *kaay'i* 'to sell'.

In (18a) this verb is used transitively with an overt subject and object. In (18b) this transitive verb is derived as an intransitive verb, only Category I is grammatical.

(18) Transitive verbs → Intransitive Category I derivation

- a. *in-kaay'i maatek nen'*
 1SG.SETB-sell.INCMP firewood I
 'I sell firewood', 'I am selling firewood'
- b. *in-kaayi-la? nen'*
 '1SG.SETC-sell-CATI I
 'I sell', 'I do selling'

Nevertheless, a very few transitive verbs can derive *both* intransitive forms. These are rare in the lexicon. In the examples in (19), the transitive verb *ipla* 'to wash, bathe' represents this small subset of transitive verbs. In (19a) this verb is used in an obvious transitive construction. In (19b) and (19c) this same verb is derived as a Category I and Category II verb, respectively. In each case the sentence is grammatical.

(19) Transitive verbs → Intransitive Category I or Category II derivation

- a. *ipla-y' peelo? Hwan*
 bathe-3SETA dog Juan
 'Juan washed the dog'

- b. \emptyset -*ipla-la?* *Hwan*
 3SETC-bathe-CATI Juan
 ‘Juan bathed’, ‘Juan did bathing’ (i.e., Juan is not being bathed, but is doing the bathing)
- c. \emptyset -*ipla-?* *peelo?*
 3SETC-bathe-CATII dog
 ‘The dog bathed’, ‘The dog has been bathed’ (i.e., the dog is not doing the bathing, but is being bathed).

2.6 Predictability of verb category membership

In characterizing the intransitive verb categories above it was noted that the subjects of Category I intransitive verbs are more agent-like, while the subject of Category II intransitive verbs are less agent-like. Similarly, in terms of the eventhood of the predicates, the majority of Category I intransitive verbs are events, while the majority of Category II intransitive verbs are states. In this section, these characterizations are explored in more detail and it is shown that the Xinkan intransitive split is based on the interrelationship of these two features.

Agency is a “multifactor concept” representing a continuum of characteristics such as control, volition, animacy, instigation, and performance, functioning independently or in concert (Pustet 2002:404, Mithun 1991, and Klaiman 1991). A number of thematic roles have been tied to agency for theoretical purposes, including: agent, instigator, controller, or doer. Since agency is viewed as a continuum rather than a discrete property of nominal arguments, subjects can be more or less agent-like when compared to each other. In Xinkan the subjects of Category I verbs are more agent-like while the subjects of Category II verbs are less agent-like.

However, as a general statement of the properties of verb categorization in Xinkan the agentivity of subjects does not seem to be the sole defining parameter. Both types of intransitive verbs can have clear agent-like and clear non-agent-like subjects. This is shown in the lists of

verbs in (21) - (24), which highlight the non-discrete nature of the agency of intransitive subjects in Xinkan.

(21) Category I verbs with agent-like subjects

<i>mik'ala?</i>	'work'
<i>lawrula?</i>	'dance'
<i>wištala?</i>	'whistle'
<i>kaay'ila?</i>	'sell', (i.e., 'do selling')

(22) Category I verbs without agent-like subjects

<i>ohoomela?</i>	'cough' ^{xiv}
<i>hat'išmala?</i>	'sneeze'
<i>eplela?</i>	'be afraid'
<i>yirnała?</i>	'fall'

(23) Category II verbs without agent-like subjects

<i>tahna?</i>	'sprout' ^{xv}
<i>muuču?</i>	'be tired'
<i>meete?</i>	'take heart, be encouraged'
<i>poočo?</i>	'rot'

(24) Category II verbs with agent-like subjects

<i>p'ihna?</i>	'leap, jump'
<i>iya?</i>	'laugh'
<i>siiru?</i>	'hurry'
<i>ixpa?</i>	'leave'

The eventhood of the predicate refers to the intrinsic, lexical semantics of the verb root.

This has been highlighted as being especially relevant to split-intransitivity (Mithun 1991). In terms of this variable, a majority of the Category I verbs in Xinka are events while a majority of Category II verbs are states. Lists of predicates belonging to the two types in Xinka are given in (25) and (26), as illustration.

(25) Category I intransitive verbs (events)

<i>mik'ala?</i>	'work'	<i>ohoomela?</i>	'cough'
<i>hiyik'üla?</i>	'nod from sleepiness'	<i>hat'išmala?</i>	'sneeze'
<i>ušk'ila?</i>	'smoke (a cigarette)'	<i>yirnała?</i>	'fall'
<i>pipr'ila?</i>	'burp'	<i>lawrula?</i>	'dance'
<i>tišk'ila?</i>	'retreat'	<i>iplala?</i>	'bathe'

(26) Category II intransitive verbs (states)

<i>iiši?</i>	‘be alive, awake’	<i>saaka?</i>	‘get up, be lifted’
<i>meete?</i>	‘take heart, be encouraged’	<i>muuču?</i>	‘be tired’
<i>paata?</i>	‘be able’	<i>k’aata?</i>	‘lay down’
<i>wereke?</i>	‘be angry’	<i>uułu?</i>	‘be fallen’
<i>iiwi’</i>	‘drown’ ^{xvi}		

While the characterization of verb roots in terms of eventhood is generally accurate, there are exceptions. Category I verbs can occasionally (rarely) be states and Category II verbs can occasionally (rarely) be events. This is seen in the lists in (27) and (28).

(27) Category I intransitive verbs (states)

<i>yanala?</i>	‘be ashamed’	<i>harnala?</i>	‘be sick’
<i>eplela?</i>	‘be afraid’	<i>šay’ay’ala?</i>	‘be nauseous’

(28) Category II intransitive verbs (events)

<i>p’ihna?</i>	‘leap, jump’	<i>p’arna?</i>	‘rip, tear’
<i>laara?</i>	‘ascend, climb’	<i>wašta?</i>	‘enter’

Because of the exceptions, in isolation the agency of the subject or eventhood of the predicate is insufficient for predicting which verb root will belong to which of the two categories. Either a combination of these variables is necessary or some other variable(s) must characterize the Xinkan intransitive split.

To help determine which of these options is best, Table 5 summarizes the morphological and semantic facts discussed in this section, as they relate to verb categorization. In this summary, each predicate type is characterized according to the agreement set that is used to mark subject agreement and aspectual changes, the general eventhood common to predicates in each category (i.e., events vs. states), the semantic relationship that exists between a given verb category and its nominal arguments, and morphological markings of category membership.

Table 5. Characteristics of Xinkan verb categories

Verb Category	Compleitive	Incompleitive	Predicate Semantics	Thematic Roles	Marker
Transitive	Set A	Set B + glottalization	Events	A, P	-
Intransitive Category I	Set C + marker	Set D + glottalization	Events, some States	mostly S = A	- <i>laʔ</i>
Intransitive Category II	Set C + vowel length + marker	Set D + glottalization + marker	States, some Events	mostly S = P	- <i>ʔ</i>

There are two aspects of the Xinkan verb system which are, independently, not uncommon. First, it is not uncommon for the intransitive verbs of a specific language to be categorized into two complimentary sets. This is the main premise of many analyses from many different scientific perspectives. For example, the Unaccusativity Hypothesis syntactically divides intransitive verbs into an *unaccusative class* and an *unergative class* (Perlmutter 1978, Klaiman 1991). In this hypothesis, the individual members of each set are categorized based on the syntactic relationship between the predicate and the underlying semantic interpretation of the dependent nominal. This has been shown to be one valid way of analyzing and describing the Xinkan verb system (Rogers 2010:231-240). Second, it is not uncommon cross-linguistically for lexical verb types to be morphologically marked for relevant characteristics of their dependent nominal arguments. This is similar to what has been described as a system of verbal classifiers. “Verbal classifiers appear on the verb, categorizing the reference of its argument in terms of shape, consistency, size, structure, position, and animacy” (Aikhenvald 2000: 149). The resulting system is unlike others described as verbal classifier systems, since it focuses solely on the semantic characterization of the subject and its semantic relationship to the verb, whereas systems of verbal classifiers usually have to do with the physical characteristics of the nominal argument (Aikhenvald 2000: 295-300)

Combined into a single grammatical system, however, these two characteristics of Xinkan verbs do appear to be typologically significant. As the resulting system (as presented in the analysis here) is neither about *unaccusativity* or *verbal classifiers* in isolation, this paper explores Xinkan intransitive verb organization by comparing it to the cross-linguistic patterns of split-intransitivity. This analytical perspective highlights the importance of the semantic characterization of the subject and its semantic relationship to the verb as an interrelated system of lexical verb categorization.^{xvii}

3. Cross-linguistic comparisons of split-intransitivity

From the information presented above, it is clear that Xinkan has some properties which follow patterns of split-intransitivity and semantic alignment, as operationalized in the definitions above. For example, in Table 5: the fifth column shows that the subjects of intransitive verbs are categorized with transitive agents or transitive patients (Mithun 1991: 511, Van Valin 1990: 221; Payne 1997:144 and given above); the fourth column shows that the semantics of the verb root coincides with the intransitive split (Song 2001:150, and above); columns four, five and six show that the intransitive verb suffixes encode the agentivity of the subject and the eventhood of the predicate (Wichmann 2008: 3, and above). The goal of this section is to explore and discuss the ways the Xinkan intransitive verb system compares cross-linguistically.

Split-intransitive systems have been modeled from three (often overlapping) perspectives: morphologically (see Mithun 1991 as an example), syntactically (see Perlmutter 1987 and Van Valin 1990 as examples), and semantically (see Donohue and Wichmann 2008 as an example). As a result of these perspectives, three cross-linguistic parameters can be suggested as being essential in modeling split-intransitivity in any language: (1) the procedures

for determining the linguistic characterization of the split; (2) theoretical perspectives on the location of the split in a language's grammar; and (3) the linguistic factors contributing to the source of the split.

This section explores these parameters as they relate to Xinkan. It is concluded that: (1) a comparison of marking strategies between transitive and intransitive verbs is not always relevant; (2) suggestions about the split being located in the lexicon overlook relevant and important factors; and (3) that more than one linguistic dimension might ultimately be the source of a split-intransitive system.

3.1 Comparison of intransitive verbs to transitive verbs

In most accounts of split-intransitivity the characterization of the two intransitive verb categories is made in terms of a comparison between transitive verbs and intransitive verbs (see Perlmutter 1978, Dixon 1979, De Lancey 1985, Van Valin 1990, Klaiman 1991a, Mithun 1991, Payne 1997, Song 2001, and Pustet 2002 for examples and case studies). This comparison is the ultimate source for the labels used to characterize the intransitive verb types - such as: *active*, *agentive*, *stative*, *unaccusative*, *unergative*, *inactive* and many others. This comparison between intransitive verbs and transitive verbs highlights the fact that some morphosyntactic feature of intransitive verbs is said to be identical to some morphosyntactic feature of transitive verbs. This type of comparison is especially noticeable in accounts of active-inactive case marking.

Chocho (Otomanguean) is an example of a language with a split-intransitive system which is marked by overt morphological case and easily characterized by a comparison between intransitive verb and transitive verb morphosyntactic patterns. The Chocho data are cited from Klaiman (1991a:125-129) and are originally from Mock (1982).

(29) Chocho active case marking

- a. *t-ìng-á* *rí*
ASP-anoint-1SG.ACT 3SG.INACT
'I anoint him'
- b. *bí-kū-ā* *ma*
ASP-see-2SG.ACT 1SG.INACT
'You saw me'
- c. *děč-á*
sleep-1SG.ACT
'I sleep'
- d. *dé* *ma*
cough 1SG.INACT
'I cough'

In this data the suffix *-á* '1SG.ACT' is used to mark agreement with the subject (and agent) of the transitive verb (29a) and the subject of one of the transitive verbs (29c). However, the lack of agreement morphology is seen for the object (and patient) of the transitive verb and the subject of a different intransitive verb (29d). This comparison between the morphosyntax of transitive verbs and that of intransitive verbs in Chocho offers a useful, linguistic characterization of the intransitive verb types. The subject of one type of intransitive verb (like the one in 29c) is overtly treated the same as the agent of a transitive verb – suggesting the label 'agentive', or 'active' in some analyses. On the other hand, another type of intransitive verb (like the one in 29d) overtly treats its subject like the patient of a transitive verb – suggesting the label 'inactive', or 'stative' in some analyses. While not a universal trait, most active-inactive case marking, such as in the examples in (29) is marked on the head (i.e., the verb) rather than on the dependent nominals (see Nichols 1992, Siewierska 1996, and, Comrie 2011 for cross-linguistic evidence).

Xinkan is both similar to and different from this type of characterization of split-intransitivity. It is different because there is no means of morphosyntactic comparison between

the arguments of a transitive verb and the arguments of an intransitive verb. So, while there is clear evidence for the split, characterizing them in this way misses the important generalizations in the system. This seems to echo a statement by Pustet (2002:393) “a paradigm that does not occur with transitive predicates, of course, cannot be assigned to any of the two general coding patterns A and P”. This statement was originally made in order to motivate the constraints on data necessary for an appropriate linguistic sample; however, it is relevant here and can be paraphrased as: ‘a coding strategy that does not occur with transitive predicates cannot be the basis for the label or analysis of either subclass of intransitive verbs’. Split-intransitivity is often depicted as following the pattern S = A for active intransitive verbs and S = P for inactive intransitive verbs. The depiction of nominal arguments in Xinkan is simply not that straightforward. In fact, the only similarity between arguments of transitive verbs and those of intransitive verbs in Xinkan is that there is consistent subject-verb concord for all verb types, though from different sets of agreement markers for each one.

The correlation between transitive verb arguments and the subjects of intransitive verbs in Xinkan is not marked morphosyntactically, but is dependent on an analysis of thematic roles. The subjects of some intransitive predicates seem to be semantically equivalent to the agents of transitive verbs, and the subjects of other intransitive predicates seem to be semantically equivalent to the patients of transitive verbs. This creates a potential problem: forcing a semantic comparison might lead to circular argumentation. The coding of some intransitive subjects as semantically similar to transitive agents is based on the presence of the *-laʔ* suffix; the only evidence for this semantic congruence is, in turn, the presence of *-laʔ*. That is, the only *raison d'être* for the *-laʔ* suffix is to encode the semantic equivalence between some intransitive subjects and transitive agents and this semantic equivalence is only necessary because of this

suffix. This problem highlights the fact that the semantic equivalence between transitive verb arguments and intransitive verb subjects may not be the best way to characterize the Xinkan-type split. This means that the labels used for split-intransitivity, cross-linguistically, may not be appropriate for Xinkan.

3.2 Unaccusativity as theoretical tool for analyzing split-intransitivity

For some researchers the most pressing issue in studying split-intransitivity is the location of the split within the grammatical system. Some argue that the split is a property of the lexical organization of predicates (Perlmutter 1978) while others suggest it is the consequence of the relationship between a verb root and its subject (and so is not necessarily part of the lexicon). One example of locating the split within a language's lexical organization is the unaccusativity hypothesis. In this type of analysis the focus is on the syntactic relationship between the predicate and the underlying semantic interpretation of the dependent nominal, rather than focusing on the morphological marking of the subject. Predicates are divided into two types: unergatives and unaccusatives. This has the benefit of focusing on the underlying syntactic roles of the nominal arguments, instead of the lexical semantics of the verb (Perlmutter 1978, Klaiman 1991). This seems to be a very useful characterization cross-linguistically, and is discussed in more detail below.

The description of the Xinkan split-intransitive system in Rogers (2010) was largely influenced by the Unaccusativity Hypothesis. Describing the Xinkan system from this theoretical perspective is especially interesting as unaccusativity focuses on the syntactic relationship between the predicate and the underlying semantic interpretation of the dependent nominal rather than on the overt morphological coding of the arguments of the predicate. Since Xinkan does not overtly mark the thematic role, or grammatical relationship, of the nominal arguments an

emphasis on the abstract relationships between the various types of predicate and their dependent nominal is ideal. In this hypothesis, intransitive verbs which have a subject that is semantically similar to a transitive agent are labeled ‘unergatives’ while intransitive verbs which have a subject which is semantically similar to a transitive patient are labeled ‘unaccusatives’.

This seems to match some of the facts of Xinkan. Grammatical function is unmarked in Xinkan, but the subjects of some intransitive verbs serve the function of agent while the subjects of others serve the function of patient/undergoer. The intransitive verb classifiers, *-laʔ* and *-ʔ*, would then be best labeled as an unergative or an unaccusative marker, respectively (see Rogers 2010). Xinkan verbs could then be categorized into three verb types, based on overt morphological marking and semantic interpretation: *transitive verbs*, *unaccusative verbs* (called Category II here), and *unergatives* (called Category I here). This theoretical analysis places the location of the split (and the entire system of verb categorization) in the underlying relationship between the verb and its (logical) arguments.

However, an analysis of the Xinkan system based on unaccusativity is not without problems. First, each intransitive verb type does not create only one underlying link to its nominal arguments (see column 5 in Table 5). The two intransitive verb subcategories are not either unaccusative or unergative, they are mostly unaccusative (mostly S = P) and mostly unergative (mostly S = A). An adequate analysis should provide a clear reason for this fluidity in the two intransitive verb subtypes. The second problem with analyzing the Xinkan system from the perspective of unaccusativity is the information contained in column four of Table 5. The semantic interpretation of the verbs themselves is an important part of the categorization, not just the underlying semantic function of the nominal arguments. Labeling these verb categories in terms of unaccusativity ignores the prominence of the semantic differences in the verb roots in

each category. I do not wish to argue against the Unaccusativity Hypothesis, but against the use of this hypothesis as an analytical and descriptive tool for Xinkan, as was done in Rogers (2010). The Xinkan split-intransitive system is not only about syntax but also about semantics as suggested by Van Valin (1990: 221) and Donohue and Wichmann (2008).

3.3 The source of the split in split-intransitivity

In discussing split-intransitivity recent scholarship suggests that uncovering the linguistic elements acting as the ultimate source of the split is the most pressing issue. In this regard the findings seem to oscillate between a semantic interpretation of the predicate (see Mithun 1991, Comrie 1981, and Dixon 1979), the thematic roles of the nominal arguments (Chafe 1970, Dahlstrom 1983, Donohue and Wichmann 2008), the grammatical aspect of verbs (DeLancey 1985), and the syntactic relationships between nominal arguments and verbs (see Perlmutter 1978, Burzio 1981 and 1986, and Klaiman 1991a and 1991b) as an adequate explanation for the split. While each of these perspectives adds to our understanding of split-intransitivity, three broad linguistic dimensions emerge as likely sources (or causes) of split-intransitivity, cross-linguistically: *intrinsic lexical semantics* (such as event vs. state predicates), *grammatical aspect* (such as perfective vs. imperfective predicates), and *specific nominal semantic functions* (such as control or agency - see Pustet 2002:381).^{xviii}

Mithun (1991:512-514) indicates that for some split-intransitive languages the division between intransitive verb categories coincides with the lexical aspect (Aktionsart) of the predicates themselves. In Guaraní, for example, intransitive verb categorization is based on the eventhood of the predicate, and not the semantic interpretation of the nominal arguments. Predicates seen as “events” are in one subcategory and predicates seen as “states” are in the other subcategory. Subject pronouns are different for each verb type and are identical to either the

subject of a transitive verb or an object of a transitive verb. The example words in (30) follow Mithun's classification of intransitive verbs in Guaraní, and show a clear distinction between intransitive verbs which are events (a term meant to subsume Vendler's (1967) and Van Valin's (1990) activities, accomplishments and achievements) and intransitive verbs which are states (a term meant to subsume everything that is not an event). The Guaraní data comes from Mithun and is checked against the original source, Gregores and Suárez (1967).

(30) Guaraní intransitive verb types

- a. Event intransitive verbs
 - gwatá* 'walk'
 - gweyi'* 'descend, get off'
 - ú* 'come'
 - ngwahē* 'arrive'

- b. State intransitive verbs
 - yemíahii* 'be hungry'
 - aṅekói* 'be worried'
 - aimé* 'be sharp'
 - karapé* 'be short'

Mithun (1991: 514-523) also shows that for other languages the split does coincide with the semantic interpretation of the nominal arguments. Nominal arguments, in these languages, are best understood in terms of the control, affectedness, and agentivity they have in relation to the intransitive predicate. A subject that is a controller, less effected, or more agentive will be used in conjunction with one subcategory of intransitive verb and a subject that is not a controller of the action, is more effected, and less agentive will be used in conjunction with the other subcategory. This seems to be what happens in languages such as Lakota and Central Pomo (see Pustet 2002 for the analysis of Lakota).

There are both similarities and differences between both of these analyses and Xinkan. It is clear that eventhood and the semantic interpretation of the nominal argument are important

elements in the Xinkan split-intransitive system (see column three and four in Table 5).

However, neither one is sufficient independently as an explanation for the source of the split. It is only when these two factors are combined that the Xinkan-type split can be explained. For example, Category II verbs are mostly states while Category I verbs are mostly events (i.e., eventhood is important), but it is the ability of the subject of the intransitive verb to affect the permanence of this state that is also relevant (i.e., the semantic role of the subject is also important).

The combination of these two factors indicates that one way of understanding the Xinkan split is by what can or cannot be ‘undone’, ‘cancelled’ or ‘stopped’ by the single nominal argument. These informal characterizations capture both the thematic role of the subject and the eventhood of the predicate. Intransitive verbs are lexically categorized and morphologically marked as being able to be affected in this way: Category I verbs are those actions or states which can be ‘undone’, ‘canceled’, or ‘stopped’ by the single nominal argument; Category II verbs are those actions or states which cannot be ‘undone’, ‘canceled’, or ‘stopped’ by the intervention of the nominal argument. Thus, the subject of the Category I verbs have the semantic role of ‘agent’ or ‘controller’, following Klaiman (1991) and Mithun (1991), while the subject of the Category II verbs do not have this semantic role. Consider the sentences in (31) and (32).

(31) Category I verbs

- a. *Ø-at'ixma-la?* *Hwan*
3SG.SETC-sneeze-CATI John
‘John sneezed’ (lit. John sneezed but could stop the action of sneezing)
- b. *in-nüma-la?* *nin'*
1SG.SETC-eat-CATI I
‘I ate’ (lit. I ate but could stop the action of eating, i.e., already chewed something)

This depiction of the verb categorization also helps to make sense of the intransitive verbs which exhibit fluid membership (see section 2.5 above). The difference is available to language speakers on the basis of the presumed control, or ability to affect a change, that the subject has over the result of the predicate. When these fluid intransitive predicates exhibit the marking of a Category I verb the single nominal argument is performing an action (an event or change of state) over which they have more control. When used as a Category II predicate the single nominal argument can affect no change or control on the outcome of the implied action.

a. <i>iplala?</i>	'bathe (event with outcome-control)'
b. <i>ipla?</i>	'be bathed (state or event without outcome-control)'
c. <i>purik'ila?</i>	'marry (event with outcome-control)'
d. <i>puriki?</i>	'be married (state without outcome-control)'
e. <i>p'ihnaykila?</i>	'thunder (event with outcome-control) ^{xix}
f. <i>p'ihnayki?</i>	'to thunder' (event without outcome-control)'
g. <i>tištała?</i>	'pass gas (event with outcome-control)'
h. <i>tišta?</i>	'pass gas' (event without outcome-control)'
i. <i>iyala?</i>	'laugh (event with outcome-control)'
j. <i>ïya?</i>	'laugh (event without outcome-control)'
k. <i>kup'ahniła?</i>	'trip (event with outcome control)'
l. <i>kup'ahni?</i>	'to be tripped (state or event without outcome-control)'

Contextual information for the differences in these forms is not attested for many of these verbs (other than the clear indication of changes in meaning as indicated in this list of verbs). However, the verb *purik'ila?* and *puriki?*, 'to marry' and 'to be married' have been used in a few contrasting example sentences (Kaufman and Campbell, unpublished).

(33) Comparison of fluid intransitive verbs

a. *anik* ϕ -*purik'i-la?* *Hwan*
 today 3SG.SETC-marry.COMP-CATI *juan*
 'Juan got married today', 'Juan married today'

b. *na?al* ϕ -*puuriki-?* *Migel*
 long.time 3SG.SETC-be.married-CATII *Miguel*
 'Miguel has been married a long time', 'Miguel (was) married long ago'.
 (i.e., Miguel cannot choose to be unmarried).

While admittedly example sentences for each verb pair would be ideal, the fact is that verb lists exist without example sentences in the available documentation. However, these lists clearly indicate the difference in meaning of the two verb forms (as indicated above). For example, many of these verbs are given with the gloss ‘do verb’ when in the Category I form and ‘be verbed’ when in the Category II form.

4. Conclusions and Implications

The main purpose of this paper has been to show, and describe, the system of verb categorization in Xinkan. This has been done, showing that Xinkan verbs are classified into three types: *transitive*, *intransitive Category I*, and *intransitive Category II*. The category of transitive verbs are unmarked morphologically, while Category I verbs are marked with the classifier *-laʔ*, and Category II verbs are marked with the classifier *-ʔ*. The characteristics of each verb type have been provided showing that the assignment of intransitive verbs as either Category I or Category II is based on a combination of the eventhood of the predicate and on the agency (or control) of the subject.

Based on this analysis the Xinkan verb system clearly splits intransitive verbs into two types, similar to split-intransitive systems in other languages. In Xinkan the split is understood to be about the characterization of the subject in relation to the eventhood of the predicate and is not about the marking of grammatical relations such as subject or direct object. This makes the Xinkan split-intransitive system different than most other languages with split-intransitive patterns (and perhaps similar to systems of verbal classifiers). The comparison between the Xinkan-type system and those described for other languages has underscored the problems in forcing a split-intransitive language to fit an analytic framework or perspective.

A number of lines of research have been opened in this paper, but remain unexplored. For example, the historical development of this system of verb categorization is a fruitful area which might add to our understanding of the system in general. Similarly, the relationship of the verb categorization to the numerous “splits” in grammatical aspect marking would be important. These relationships have not been explored here because the focus would necessarily be on the characterization of the core nominal arguments, through case marking and relevant grammatical relations. This paper has only been about the verbs. An account dealing with both nominal arguments and verbal categories would require more space than is available in a single journal article. Consequently, the characterizations of the nominal arguments and their agreement strategies have been left for future research.

The results in this paper allow Xinkan languages to be considered in a new light. No linguistic research has ever suggested that these languages categorize verbs based on a system of split-intransitivity. In fact, no literature exists treating Xinkan verbs in general. Since there are ongoing discoveries of how these languages behave, the analysis presented here can provide a clearer picture overall.

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Endnotes

ⁱ There has been considerable confusion about the linguistic relationship between the Xinkan languages throughout its recorded history, ranging from simple dialectal differences to distinct languages. However, it is now clear that each of the Xinkan languages are mutually unintelligible from the other varieties (Maldonado 1770; Calderón 1908; and Sachse 2010; see Rogers 2010 for a more thorough discussion of the evidence of linguistic relationships among the Xinkan languages). Adding to this confusion, until recently the only autonym used among

community members was ‘Xinka’ for all linguistic varieties. Fortunately, however, current practice is to formally refer to each of the four languages after the towns where they were principally spoken: Guazacapán Xinka, Chiquimulilla Xinka, Jumaytepeque Xinka, and Yupiltepeque Xinka. This paper is about linguistic patterns observable in all of the Xinkan languages, and so refers to them collectively as *Xinkan*.

ⁱⁱ Guazacapán Xinka is the Xinkan language once spoken in the town of Guazacapán, Santa Rosa, in Guatemala. There is a single (semi-)speaker of the language still remaining who has grammatical competence in the language (see Dorian 1977 and Grinevald and Bert 2011 for characterization of semi-speakers). The data used here are forms recorded from native Xinkan speakers living in the 1970s (Kaufman and Campbell, unpublished field notes) and tested with and confirmed by the last speaker of Guazacapán Xinka.

ⁱⁱⁱ As an important terminological note, I follow Donohue (2008) in making a fundamental distinction between split-intransitivity, as defined above, and other split-systems, such as split case marking (e.g., Split-S or Split-ergativity). Split-intransitivity is a categorization of lexical verb roots, while split case marking implies variable marking of grammatical relations (such as subject and direct object). The two may be closely related but they are distinct grammatical behaviors (see Donohue 2008 for more on the difference between the intentions of these labels).

^{iv} There are also derivational properties that apply to verb roots, for example nominalization (for example, agent noun derivation, similar to *-er* of English in *hunter*, *runner*) and causativization. These derivations do not affect verb categorization and are not discussed here, though see Rogers (2010: 276-320) for a descriptive account of verbal derivation in all of the Xinkan languages.

^v The additional particles *ay* and *hik* in the second and third person plural forms in these and other tables is listed in some of the past documentation on Xinkan, but is rarely used in attested examples of any of the Xinkan languages.

^{vi} Xinkan languages have a large number of glottalized consonants, including obstruents, sonorants and nasals. Rogers (2010) provides a complete phonological description of the Xinkan languages including restrictions on glottalization: /h/ has never been found in this context, /ʎ/ is allophonically realized as [lʰ], and /s/ and /š/ are both allophonically realized as [tsʰ]. These phonological alternations do not affect verb categorization and are consequently tangential to the discussion here.

^{vii} The value of the epenthetic vowel depends on the other vowels in the verb root and is unimportant to discussions of grammatical aspect or verb categorization (see Rogers 2010).

^{viii} The restrictions on glottalization in this word perhaps make it unclear why an epenthetic vowel is necessary. But other processes show that epenthesis, glottalization, and deglottalization occur at different times in the derivation of this word. A full account of glottalization is found in Rogers (2010:96).

^{ix} As in other languages, it should be noted that the logical object of a transitive verb is sometimes an inherent part of the verbal semantics in Xinkan. For example, in (11b), *yulmu* ‘suck candy’ is a single verbal stem though the object *candy* is understood as a part of the verb; this verb cannot mean to suck on other things - only candy. The language’s grammar treats this verb (and other similar ones) like transitive verbs based on the morphology and verb meanings: (1) the use Set B suffixes (a property of only transitive verbs); and (2) the action refers to an entity in addition to the subject, which is not possible for intransitive verbs.

^x The English sentence ‘to dance a dance’ would require a transitive verb phrase in Xinkan, *pul’a lawar’u*, do dance, ‘to do a dance’. Intransitive verbs do not have direct objects, and only refer to the action of the verb and its relationship to a single nominal argument. The details of the semantics of intransitive verbs are discussed in section 2.6.

^{xi} Occasionally, Category II intransitive verb can have an impersonal passive or middle voice interpretation (Rogers 2010: 257 for examples). These should not be confused with transitive verbs, because they are treated intransitively morphologically and semantically.

^{xii} It might be suggested that the *-laʔ* suffix can be further split up morphologically into *-la+ -ʔ*. This might be the historical source of this verb category marker, as suggested in Rogers (2010), but there is no definitive evidence in any of the recorded descriptions of any of the Xinkan languages to support this suggestion.

^{xiii} Data on ungrammaticality judgments is sparse in the documentation of Xinkan languages, so an example sentence showing the ungrammaticality of deriving a Category I is not attested. However, the unpublished field notes of Campbell and Kaufman include comments for many transitive verbs, including which type of intransitive verb can be derived from each root. A handful of these were tested and confirmed by the last speaker of Guazacapán Xinka. The verb forms included here occur in the unpublished field notes and have been verified by the last speaker of the language in my own fieldwork.

^{xiv} The verb ‘cough’ and the verb ‘sneeze’ are events, but as discussed above agency is about the semantic roles of nominals not about the semantic interpretations of the verbs. On the continuum of agency discussed in the literature (Mithun 1991 and Klaiman 1991), these verbs would take subjects that are less agent-like. These actions are involuntary, and over which the experiencer

has little (if any) control – therefore they are not considered to have agent-like subjects in this analysis.

^{xv} This verb does not have an agent-like subject because it is a description of a non-human event (though probably not an inanimate one), it is something that plants ‘do’.

^{xvi} These verbs, as with most other Category II verbs, refer to the resulting state of the verbal action. Thus *iiwi?* can mean ‘to be in a state of having been drowned’, as discussed in section 2.4.3.

^{xvii} As mentioned in Section 1, each of the known Xinkan languages has an identical system of verb categorization. However, they differ in the specifics of the system. For example, Guazacapán Xinka categorizes the verb *tik’ila?* ‘to sleep’ as a Category I verb, while Chiquimulilla Xinka categorizes this verb as a Category II verb, *tiik’i?*. Similarly, in Jumaytepeque Xinka the verb *xiina?* ‘to defecate’ is a Category II verb while in Guazacapán Xinka and Chiquimulilla Xinka it is a Category I verb, *xinata?*. This paper has not focused on these differences but has described the general pattern of verb categorization for all Xinkan languages.

^{xviii} To be sure such a general statement ignores the many sub-variations of each possibility, as suggested by Mithun (1991), however the three options are relevant and useful in a cross-linguistic comparison.

^{xix} Part of the traditional ritual complex of the Xinkans is thought to include weather control, specifically hurricanes and thunder (Campbell and Kaufmann, unpublished field notes; Espectacion Garcia Pérez (Chonito), Xinkan community leader (p.c)).