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Susumu Kuno

Date June 25, 1997

Topics in Zuni Syntax

A thesis presented

by

Lynn Nichols

to

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TOPICS IN ZUNI SYNTAX

by

Lynn Nichols

This thesis investigates in detail three syntactic phenomena in Zuni (isolate, Southwestern US) of particular relevance to current linguistic theory: the syntax of pronominal elements, the structure of unaccusatives and passives, and the interaction of agreement and sublexical syntactic structure. The discussion of each of the three topics introduces extensive new data based on extensive fieldwork which has not previously received treatment in descriptive accounts of Zuni.

Drawing on evidence from the syntactic behavior of Zuni pronouns, an account of pronominal syntax is proposed based on the notion that pronouns consist of inflectional features that must be licensed by being situated in the minimal domain of some head containing functional features. Independent evidence for the presence of these licensing features is presented from constraints on the operation of person hierarchies in Kashmiri and Southern Paiute. The theory proposed is able to account for certain data from O'odham and Belfast English problematic for a derivational theory of pronominal licensing. The proposals are extended to account for multiple WH movement in Zuni, and in addition, the phenomenon of default accusative case in English.

The properties of unaccusatives and passives in Zuni are next discussed in detail. It is argued that these Zuni constructions are quite different from their counterparts in Icelandic. Zuni unaccusatives and passives arguments are assigned structural accusative case, behave like structural objects, and in addition lack any sort of structural subject, overt or null. It is argued that Zuni unaccusatives and passives have 'hidden' causative event structure, and furthermore that while a hidden causative analysis of St'át'imcets Salish proposed a complex lexical event structure for a monomorphemic verb root, Zuni morphology reveals a fairly direct mapping between lexical event structure and

morphosyntax. It is suggested that languages range from more to less opaque in the mapping from semantics to syntax and that Zuni sits at the transparent end of this cross-linguistic scale. Based on how event structure is realized in Zuni morphosyntax, it is argued that all of the structural properties of Zuni unaccusatives and passives are predicable.

The final chapter argues that while agreement is generally assumed to be a surface syntactic phenomenon, certain non-canonical patterns of agreement in Zuni provide evidence for the representation of lexical structure according to syntactic principles and that syntactic constraints apply to such structures. A locality constraint is argued to restrict the domain of certain Zuni agreement. Operations involved in deriving the complex lexical structures proposed earlier are responsible for destroying the local domain of agreement of some lexical head L, resulting in the absence of agreement on L. The locality constraint on Zuni agreement may be overridden under certain circumstances, providing further evidence to support the proposals that the absence of verbal agreement in certain contexts in Zuni is not an indication of lexical irregularity but rather reflects deeper syntactic regularities.

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This thesis is dedicated to Shailen Tuli, the love of my life. I only hope he may find it worthy of the sacrifices he had to make.

Chapter 1

Introduction

1.0 Preliminaries

This study investigates in detail several syntactic phenomena of Zuni in terms of current generative theory. The main aim of the dissertation is not so much to bring Zuni into the realm of linguistic theory as much as to present analyses of phenomena that have particular relevance to current theory. Since the topics of the chapters were chosen for their theoretical interest, the analyses of Zuni presented here are argued to have important cross-linguistic implications.

Zuni is a linguistic isolate spoken in Zuni Pueblo located in northwestern New Mexico. Published sources on Zuni consist of a few descriptive grammatical sketches (Bunzel 1934, Newman 1965, Cook 1974), at least two dissertations (Walker 1964, Granberry 1976) and several published articles (e.g. Walker 1966, 1983, Stout 1973, Cook & Frantz 1978, Maddieson & Emmorey 1985, Miner 1986)[1]. One of the grammatical sketches (Bunzel 1934) is unreliable in its transcription of Zuni, and all three are somewhat brief and primarily describe Zuni phonology and morphology, barely if at all touching on syntax. This is truly an ironic state of affairs, since Zuni has a relatively simple phonology and fairly transparent morphological structure; it is in the syntax where the real meat of its grammatical structure lies. This thesis is intended as a partial remedy to the situation. In all three analysis chapters I introduce syntactic phenomena that have not been discussed in the descriptive accounts of Zuni.[2] The empirical coverage of Zuni grammar is therefore greatly expanded by the treatment of Zuni syntax presented here.

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[1] Also Nichols (1990, 1993, 1995a, 1995, 1996a,b, 1997a,b, to appear)
[2] Except for the description of Zuni passives in Cook & Frantz (1978).

In Section 1.1 of this introduction I provide an overview of the analyses presented in Chapters 2, 3, and 4. Section 1.2 discusses the nature of the Zuni data presented in this thesis. Section 1.3 presents an outline sketch of Zuni morphosyntax since Zuni is probably unfamiliar to most readers. The reader is invited to refer to this section throughout the following chapters for details of morphosyntax assumed there.

In an appendix to the dissertation I list all the published and unpublished materials on Zuni currently known to me,[3] providing a context in which the contributions of this thesis may be viewed.

1.1 The Topics of Investigation

Chapters 2-4 each treat a different aspect of Zuni Syntax. I briefly outline here the analyses and summarize their conclusions. While later chapters make reference to analyses developed earlier, the chapters need not be read in sequence and readers are encouraged to skip around among the chapters as their fancies take them.

Chapter 2 describes in detail the syntax of Zuni pronouns and postulates the existence of two syntactic classes of pronouns in Zuni, strong and weak. Most notable is the obligatory movement that Zuni weak pronouns undergo as well as their exclusion from certain syntactic contexts. I discuss the theory of pronominal deficiency and licensing proposed by Cardinaletti & Starke (1994) to account for strong vs. weak pronoun syntax and point out some empirical problems for their theory posed by data from O'odham and Belfast English. Supported by the Zuni evidence developed thus far, I propose a modified account of pronominal syntax based on the notion that pronouns consist of inflectional features that must be licensed (similar notions are developed in Everett 1996). I present independent evidence from person hierarchies for the

[3] All reference citations of Zuni materials in the text refer to items listed in addition in the References proper.

mechanism responsible for licensing pronouns. I then return to the Zuni data to explain pronoun behavior with the proposals developed thus far, and in addition account for the O'odham and Belfast English data that was problematic for the Cardinaletti & Starke (1994) account. Finally, I suggest that the account developed to explain the syntactic properties of pronouns may be extended to account for multiple WH movement in Zuni. I also suggest that the phenomenon of default accusative case in English can be understood in terms of the licensing requirements of pronouns.

Chapter 3 turns to a very different phenomenon, the structure of Zuni unaccusatives and passives. It is generally assumed that unaccusative and passive verbs cannot assign accusative case, but I argue that structural accusative case is in fact assigned in Zuni unaccusative and passive constructions. After setting out initial details of Zuni unaccusative and passive constructions, I review the extensive discussion of the nature of unaccusatives and passives in Icelandic in order to provide a context for understanding the nature of the Zuni structures. I then discuss syntactic evidence from Zuni that suggests that Zuni unaccusative and passive arguments behave like structural objects, that these constructions contain no type of structural subject either overt or null, and that structural, not inherent accusative case is assigned to the arguments of Zuni unaccusatives and passives. The Zuni structures turn out to be different from all of the Icelandic structures discussed. I argue for an analysis of these constructions based on proposals by Pustejovsky (1995), Chierchia (1989) and further developed by Demirdache (1996) and Davis (1996) in their work on St'át'imcets Salish, namely that Zuni unaccusatives and passives have 'hidden' causative event structure. The hidden causative analysis of Salish proposed by Demirdache and Davis proposes a complex lexical event structure for a monomorphemic verb root, whereas Zuni morphology reveals a fairly direct mapping between lexical event structure and syntax. It is suggested that languages range from more to less opaque in the mapping from semantics to syntax and that Zuni sits at the transparent end of this cross-linguistic scale. I argue, based on how event

structure is realized in Zuni morphosyntax, that the assignment of accusative case in Zuni unaccusatives and passives is predictable.

Chapter 4 discusses three types of agreement in Zuni that are argued to have different syntactic properties. The first half focuses on patterns of Zuni verbal agreement that are indicative of sublexical syntactic structure, while the second half treats agreement that provides evidence for object expletives in Zuni. In the earlier part of the chapter, I describe regular and non-canonical patterns of agreement in Zuni and argue, based on several types of syntactic evidence, that apparent monomorphemic verbs displaying non-canonical agreement have complex sublexical syntactic structure. I therefore argue that agreement in Zuni provides evidence for the representation of lexical structure according to syntactic principles, following Hale & Keyser (1993, 1996a). I propose a locality constraint in Zuni on agreement spellout on a lexical head (as opposed to a functional head). I then argue that the operations involved in deriving the complex lexical structures proposed earlier are responsible for destroying the local domain of agreement of some lexical head L. The locality constraint on Zuni agreement may be overridden under certain circumstances, providing further evidence to support the proposals made in this section that the absence of verbal agreement in certain contexts in Zuni is not an indication of lexical irregularity but rather reflects deeper syntactic regularities. In the latter part of this chapter I describe another type of Zuni agreement that occurs only in contexts where a non-thematic element occurs in argument position. This agreement indicates that non-thematic elements can occur in both subject as well as object position in Zuni. Similar evidence is brought forth from Tiwa, another Pueblo language. Postal & Pullum (1988), Authier (1991) and Rothstein (1992, 1995) have debated whether true object expletives do in fact exist. It is argued that both the Zuni and Tiwa evidence indicate that expletives may occur in object position and that the distribution of object expletives is determined by the case-marking properties of the verb.

These three chapters cover a wide range of topics, but it is hoped that they serve to give an idea of the variety of theoretical issues on which a study of Zuni syntax may bear.

1.2 Data in this Thesis

The Zuni data that appears in this thesis comes from two sources. The bulk of the Zuni in this thesis comes from my own field notes made during fieldwork conducted at Zuni Pueblo during the summers of 1992 - 1996. In addition, where relevant, data is made use of from texts collected by Ruth Bunzel and published as Bunzel (1933). The Bunzel texts, while quite a rich linguistic source in some ways, are phonologically unreliable. The reader should therefore be aware that all of the data in this thesis from Bunzel (1933) has been retranscribed and is identified each time it appears.

I feel a great deal of responsibility in introducing the Zuni data contained herein to theoretical discussion, particularly because there are so few other primary source materials on Zuni. As is always the case, despite having checked and rechecked the data and judgments many times, one wishes one could have checked everything with native speakers still one more time. I hope this dissertation may serve to generate further interest in Zuni and add many more hands to the task of investigating the grammar of a language that has much to offer current generative theory and the study of cross-linguistic phenomena, much more beyond the topics illustrated by the chapters of this dissertation.

1.3 Morphosyntactic Sketch of Zuni

Because Zuni is largely unknown in the generative linguistic tradition, I will give in this section a brief descriptive outline of the more basic features of Zuni morphosyntax before going on to particular aspects of the syntax of Zuni in successive chapters. The reader should note, however, that this sketch is not intended to provide a complete grammatical description of Zuni but merely intended as an introduction to basic structural features of the language, particularly elements that will appear in examples throughout the dissertation as well structural properties that will be relevant to the theoretical discussion in Chapters 2-4.[4]

1.3.1 Basics of Morphology and Syntax

1.3.1.1 Word Order

In Zuni the verb occurs finally and strictly so; only an adverbial particle used to convey perfect aspect (see example (40a) below) and parenthetical type adjuncts appear to be able to follow the verb. Arguments occur in the order Subject - Indirect Object - Direct Object, as illustrated in (1).[5]

(1)a. 'a:w-okyaccik' 'a:-šiwi 'a:w-an ha'i te-we' wo-k'ošo-nap -kya
pl.-woman pl.-Zuni pl.-P three pot-pl. pl.obj.-wash-pl.subj.-past
'The women washed three pots for the Zunis.'

---

[4] With a few exceptions, the material in this sketch is new and does not overlap with Newman (1965). Abbreviations that appear in the glosses for the Zuni examples:
acc. = accusative, caus. = causative, cont. = continuative, desid. = desiderative, DS = different subject, fut. = future, indef. = indefinite, intens. = intensive particle, neg. = negative, nom. = nominative, non.fin. = non-finite, opt. = optative, P = postposition, pass. = passive, pl.= plural, pl.obj. = plural object, pl.subj. = plural subject, poss. = possessive, pres. = present, Q = question reflex. = reflexive, sg. = singular, SS = same subject, stat. = stative, sub. = subordinate.
In citing data from languages other than Zuni, I have retained glosses and abbreviations used in the source from which the data is cited.

[5] Modifications of this order involving pronouns are discussed in detail in Chapter 2.

b. * 'a:wokyaccik' wo-k'ošo-nap-kya tewe'
women washed pots

c. * wo-k'ošo-nap -kya 'a:wokyaccik' tewe'
washed women pots

d. ??? tewe' 'a:wokyaccik' wo-k'ošo-nap -kya
pots women washed

1.3.1.2 Verbal Inflection

The Zuni verb bears both prefixal and suffixal inflection, including number agreement, negation and tense inflection. Each of these will be illustrated below.

The only type of agreement on the Zuni verb is plural number agreement, indicated for both subject and object arguments. (2a) illustrates the non-plural form of the verb. Agreement for plural transitive object, (2b), and most intransitive arguments, (2c), are both indicated by a prefix to the verb stem, while plural transitive subject, (2d), (and unergative intransitive subjects, (2e)) are indicated by a stem suffix, *-(na)p* .[6] (3) illustrates both types of agreement can occur with a single verb stem.

(2)a. ho' c'ana 'awa-kya
1sg.nom. child find-past
'I found the child.'

[6] -(nap) has different phonological shape, *-(na:)we* , when not followed by a consonant.

b. ho' 'a:-c'ana 'a:w-awa-kya

1sg.nom. pl.-child pl.obj.-find-past

'I found the children.'

c. 'a:-c'ana 'a:-k'ewowok'e-kkya

pl.-child pl.subj.-chatter-past

'The children chattered.'

d. hon pimc'ana k'ošo-nap-kya

1pl.nom. piglet wash-pl.subj.-past

'We washed the piglet.'

e. 'a:w-akcek' yak'o-nap-kya

pl.-boy vomit-pl.subj.-past

'The boys vomited.'

(3) hon pic'ana: 'a:w-ampeye:-nap-kya

1pl.nom. piglets pl.obj.-scold-pl.subj.-past

'We scolded the piglets.'

Generally any plural argument, animate or inanimate, triggers verbal agreement as indicated in (4), whether or not the noun phrase itself is overtly inflected for number (see next section).

(4)a. 'a:-c'ana te-taša

children pl.-tall

'The children are tall.'

b. k'yakwe-: 'a:-šilowa

house-pl. pl.-red

'The houses are red.'

c. mansan 'a:-šilowa

apples(pl.) pl.-red

'The apples are red.'

Because Zuni agreement groups transitive object and certain intransitive subjects and treats transitive subjects differently, at first glance Zuni verbal agreement appears to follow an ergative-like pattern.

(5) Agreement on the Zuni Verb

Plural.Agreement.$_1$ - Stem - Plural.Agreement$_2$	
Direct Object	Transitive Subject
Indirect Object	Unergative Subject
Intransitive Argument[7]	

[7] As discussed in Chapter 3, these include both nominative and accusative case marked arguments.

While it may seem convenient to refer to prefixal agreement as 'absolutive' and suffixal as 'ergative', this pattern is only epiphenomenal. Zuni prefixal and suffixal agreement can be shown to have different sources[8] and therefore do not reflect a single coherent structural case-marking strategy. I will gloss these agreement affixes throughout the dissertation according to their function e.g. Plural Agreement $_1$ = *pl.object* or *pl.subject* and Plural.Agreement$_2$ = *pl.subject*.

Negation and tense inflection both occur as suffixes to the Zuni verb. (6a) illustrates the non-negative stem and (6b) the stem bearing the negative suffix.

(6)a. 'okyaccik' te'le' k'ošo-kya
woman pot wash-past
'The woman washed a pot.'

b. k^{w}a' 'okyaccik' te'le' k'ošo-nam-kya
neg. woman pot wash-neg.-past
'The woman didn't wash the pot.'

(7a) contains an example of a stem inflected for present tense, while (7b) contains a stem inflected for past tense.

(7)a. 'okyaccik' te'le' k'ošo-:-'a
woman pot wash-cont.-pres.
'The woman is washing a pot.'

b. 'okyaccik' te'le' k'ošo-kya
woman pot wash-cont.-pres.
'The woman washed a pot.'

[8] This will be discussed extensively in Chapter 4.

(8) below shows a Zuni verb stem bearing all of the suffixes discussed above.

(8) k^{w}a' 'a:w-okyaccik' te'le' k'ošo-na:w-amme-'kya
neg. pl.-woman pot wash-pl.subj.-neg.-past
'The women didn't wash a pot.'

Prefixes to the Zuni verb stem include the reflexive, illustrated in (9b), and transitive object/intransitive subject number agreement, discussed above and illustrated again in (10a-b).[9]

(9)a. ho' te'le' k'ošo-kya
1sg.nom. pot wash-past
'I washed a pot.'

b. ho' 'i-k'ošo-kya
1sg.nom. reflex.-wash-past
'I washed myself.'

(10)a. ho' te-we' wo-k'ošo-kya
1sg.nom. pot-pl. pl.obj.-wash-past
'I washed pots.'

b. hon 'a:w-a:-kya
1pl.nom. pl.obj.-go-past
'We went.'

[9] There are few derivational prefixes that will be ignored here since they do not play a role in the discussion of the dissertation.

1.3.1.3 Nominal Inflection

Many nouns in Zuni bear an inflectional class suffix that distinguishes singular and non-singular (dual, plural) number. (I will provide only basic illustrations here; for a more extensive survey of Zuni noun class inflectional morphology, see Newman (1965, 1996), Walker (1966)). The majority of monosyllabic stems are inflected with *-'le'* in the singular and *-we'* in the plural, (11). The most common inflection for polysyllabic noun stems is *-nne* in the singular and *-:we* in the plural.

(11) **Some Zuni Nominal Inflection**

	Singular	**Plural**
Monosyllabic stem	-'le'	-we'
Polysyllabic stem	-nne	-:we

An interesting property of these inflectional suffixes is that their form changes, apparently depending on the syntactic context of the noun. This data is very complex, and the details of the phenomenon remain to be worked out; however, I will describe some tentative distributional conclusions. The polysyllabic noun endings *-nne* and *-:we* appear to only show up in their full form in three syntactic contexts: when the noun is used as a bare response form, (12a), as a predicate nominal, (12b), or as the first conjunct in coordination, (12c).[10] I illustrate only the singular forms below, but plural forms can be found throughout the text.

---

[10] The full ending apparently also occurs when the noun is quantified, as in (i), although this data is far from clear. Note that a noun takes singular inflection with a number greater than one.

(i) ho' ha'i 'e'ni-nne 'illi
1sg.nom. three belt-sg. have
'I have three belts.'

(12)a. k^{w}a-p 'ussi šok'o-nne

what -Q that spoon-sg.

'What's that?' 'A spoon.'

b. 'ussi šok'o-nne

that spoon-sg.

'That's a spoon'

c. šok'o-nne tap 'ačiya-n 'awa-kya

spoon-sg. and knife-sg. find-past

'He found the spoon and the knife.'

These inflectional endings appear to occur *obligatorily* as reduced forms *-n* and *-:* (vowel length), when the noun occurs as an (uncoordinated) argument of the verb, (13).

(13) šok'o-n 'awa-kya

spoon-sg. find-past

'He found the spoon.'

Monosyllabic noun inflection is altered according to the *opposite* syntactic distribution.[11] The full form *-'le'* and *-we'* is found when the noun occurs as an (uncoordinated) argument of the clause, (14), whereas the reduced forms *-'le* and *-we* ,

---

(ii) ?* ho' ha'i 'e'ni-n__ 'illi

1sg.nom. three belt-sg. have

[11] The proper name Nemme(') behaves like the words in this class (alternations in the form of this noun can been seen throughout the dissertation).

i.e. minus the final glottal stop, are found on bare responses, (15a), and predicate nominals, (15b). The one departure from this pattern is the final glottal stop is preserved on the first conjunct in coordination, (15c).

(14) te-'le' k'ošo-kya
pot-sg. wash-past
'He washed the pot.'

(15)a. k^{w}a-p 'ussi te-'le
what-Q that pot-sg.
'What's that?' 'A pot.'

b. 'ussi te-'le
that pot-sg.
'That's a pot.'

c. te-'le' tap sa-'le' k'ošo-kya
pot-sg. and dish-sg. wash-past
'He washed the pot and the dish.'

These alternations do not appear simply to be the result of phonologically triggered reduction in certain contexts, since the occurrence of the reduced or full form of inflection in a particular context is obligatory, not optional. The single exception is that the polysyllabic endings -nne and -:we can be either full or reduced as the first conjunct of coordination. Some examples of this are illustrated in (16).

(16)a. * 'ussi šok'o-n__

that spoon-sg.

'That's a spoon.'

b. * te-'le__ k'ošo-kya

pot-sg. wash-past

'He washed the pot.'

c. 'ussi te-'le(* ')

that pot-sg.

'That's a pot.'

Finally, there are two other classes of nouns in Zuni, those that inflect only for number and do so by means of a prefix, (17), and those that do not inflect at all. Nouns that lack number inflection nonetheless trigger verbal agreement, (18).

(17) 'okya' 'a:w-okya'

girl pl.-girl

(18)a. nicikya

ring (sg./pl.)

b. nicikya 'a:w-awa-kya

ring(pl.) pl.obj.-find-past

'He found the rings.'

1.3.1.4 Incorporation

Nouns can be incorporated into the verb stem[12]; (19a-b) show both the incorporated as well as the unincorporated version. The postposition *'an* can also be incorporated, (20a).

(19)a. ho' pi[w]-itok'e-kkya
1sg.nom. pig-feed-past
'I fed the pigs.'

b. ho' picu:ti 'a:w-itok'ye-kkya
1sg.nom. pig pl.obj.-feed-past
'I fed the pigs.'

(20)a. ho' 'okyaccik' 'e'ni-n 'an-ilopčo-kya
1sg.nom. woman belt-sg. P-borrow-past
'I borrowed a belt from the woman.'

b. ho' 'okyaccik' 'an 'e'ni-n 'ilopčo-kya
1sg.nom. women P belt-sg. borrow-past
'I borrowed a belt from the women.'

[12] Zuni noun incorporation involves reducing a noun to the initial CV of the root and inserted an epenthetic [w] if the verb begins with a vowel. Noun incorporation is productive but idiomatic, in the sense that affected nouns are found both incorporated and unincorporated but that not all nouns are subject to incorporation (Nichols 1997).

1.3.2 Arguments

1.3.2.1 Pronouns

Zuni has 1st and 2nd person pronouns, as illustrated in (21)[13], but no 3rd person pronouns. Therefore a clause containing simply an inflected verb is interpreted as having 3rd person arguments, (22).

(21) tom ho' 'ansattu-nna
2sg.acc. 1sg.nom. help-future
'I will help you.'

(22)a. k^{w}ato-kya 'uk^{w}-k^{w}ato-kya
enter-past pl.subj.-enter-past
'He went in.' 'They went in.'

b. yaktoh-kya 'a:-yaktoh-nap-kya
hit-past pl.obj-hit-pl.subj.-past
'He hit him.' 'They hit them.'

1.3.2.2 Case

Case is marked on arguments in Zuni as a suffix in a nominative/accusative pattern, as illustrated in (23): transitive subjects and intransitive subjects bear nominative case, while transitive objects bear accusative case.

[13] Note the OSV order of this sentence. The ordering constraints on Zuni pronouns will be discussed in Chapter 2.

(23)a. ho' Nemme-ya' 'ansattu-kya
1sg.nom. N.-acc. help-past
'I helped Nemme.'

b. ho' 'ał-kya
1sg.nom. sleep-past
'I slept.'

c. hom Nemme' 'ansattu-kya
1sg.acc. N. help-past
'Nemme helped me.'

Zuni accusative case is likely an instance of a more general *dependent case* (Marantz 1991; Bittner & Hale 1996a,b) since this is the form of the argument that also appears as an indirect object, (24a), object of a postposition, (24b), or possessor of NP, (24c).

(24)a. hom Nemme' nicikya 'uk-kya
1sg.acc. N. ring give-past
'Nemme gave me a ring.'

b. hom 'an Nemme' nicikya hanłi-kya
1sg.acc. P N. ring steal-past
'Nemme stole a ring from me.'

c. hom ča'le' muw-aš-anna
1sg.acc.(poss.) child bread-make-future
'My child will make bread.'

Bearing this distribution in mind, I will continue to refer to this dependent case as accusative case throughout the dissertation, but to avoid confusion I will gloss case-marked possessive pronouns as 'acc.(poss.)'.

Examples (23)-(24) above illustrate the case morphology of pronouns. Case is manifested somewhat differently with lexical nouns. Nouns bear no overt morphology for nominative case and take the suffix *-ya'* in the accusative, that is, on the object of transitive verbs, (25a), object of postpositions, (25b), and possessives, (25c).

(25)a. Nemme-ya' 'ampeye-kkya
N.-acc. scold-past
'He scolded Nemme.'

b. Nemme-ya' 'an Gilbert 'e'nin 'ilopčo-kya
N.-acc. P G. belt borrow-past
'Gilbert borrowed a belt from Nemme.'

c. Nemme-ya' tačču 'anše 'an-towowo-kya
N.-acc.(poss) father bear P-shoot-past
'Nemme's father shot a bear.'

In addition, *-ya'* is restricted in its distribution . *-ya'* appears to be obligatory with proper names but cannot occur with non-human and inanimate nouns. Accusative *-ya'* also occurs optionally[14] with certain nouns referring to humans and when it does its usage conveys definiteness, specificity and/or contrastive focus, (26b). Therefore, while *-ya'* patterns like accusative case, it also has the semantic properties of a determiner.[15]

[14] 'Optional' in its role as a case marker. Its use may be required in certain contexts for semantic reasons.
[15] Note that the noun root *'okya'* coincidentally ends in a phonological sequence similar to that of the case marker *-ya'*. Case suffix *-ya'* is always glossed when present, so that these can be easily distinguished.

(26)a. ho' 'okya' 'ansattu-kya

1sg.nom. girl help-past

'I helped a girl.'

b. ho' 'okya'-ya' 'ansatto-kya

1sg.nom. girl-acc. help-past

'I helped the girl [not the boy].'

1.3.2.3 Determiners

In fact, the suffix *-ya'* is in complementary distribution with determiners, such as *lukkya* 'this' and *'ussi* 'that', (27).[16] This suggests that *-ya'* belongs to the syntactic category D (Determiner), and that nouns suffixed with *-ya'* have undergone raising to this D° head, (28).[17]

(27)a. łaššik-ya'

man-acc.

b. 'ussi łaššik'i

that man

c. * 'ussi łaššik-ya'

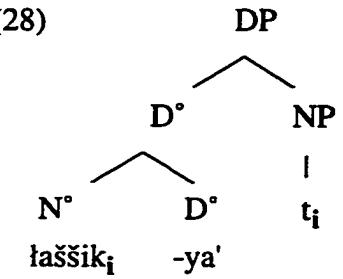
that man-acc.

---

[16] cf. *'uhsi* 'that' (Newman 1965). The reader familiar with Zuni will note several differences between the Zuni described in this dissertation and that described by Newman (1965). I have tried to point these out throughout. These differences are generally the result of phonological assimilation or morphological analogy.

[17] The combination of case and determiner properties in the suffix *-ya'* indicates that *-ya'* probably consists of the fusion of a K° case head and D° determiner head into a single morpheme.

(28)



The suffix *-ya'* also affects the movement possibilities of arguments. If an argument bears *-ya'*, it can undergo movement to the front of the clause. This movement usually carries with it focus interpretation, (29b). Bare arguments normally cannot undergo such movement, (30).[18]

(29)a. ho' 'okya'-ya' 'ansattu-kya
1sg.nom. girl-acc. help-past
'I helped the girl.'

b. 'okya'-ya'$_i$ ho' t$_i$ 'ansattu-kya
girl-acc. 1sg.nom. help-past
'I helped the *girl* [not the boy].'

(30)a. Nemme' 'okya' 'ansattu-kya
N. girl help-past
'Nemme helped a girl.'

[18] That is, bare animate arguments cannot undergo such movement, but inanimate arguments sometimes can.

b. 'okya' Nemme' 'ansattu-kya

girl N. help-past

* with the meaning 'Nemme helped a girl.'

There is no corresponding indefinite suffix with the distribution of a case marker. There is instead a particle *hoł* that indicates indefinite or non-specific reference. *hoł* occurs with both subjects and objects, as illustrated in (31a-b).[19] Because *hoł* is a particle, it can appear either before or after the NP and can even be dislocated to clause initial position, (32), a position frequented by evidential, negation and other particles (see below). While *hoł* itself can move, unlike *-ya'* , *hoł* does not have the ability to license A-bar movement of arguments. As (33) illustrates, an NP cannot move along with *hoł* to the front of the clause.[20]

(31)a. k^{w}a' hoł suski hoł k^{w}a' hoł wema: hoł ...

neg. indef. coyote indef. neg. indef. beast indef.

'No coyote or other wild beast [is dragging around the body of your child.]'

[Bunzel 1933]

b. Pilpo k^{w}a' hoł ky'ak^{w}en łana 'aš-nam-kya

Filbert neg. indef. house large make-neg.-past

'Filbert did not build a large house.'

(32)a. Pilpo k^{w}a' hoł picu:ti 'itok'ya-nam-kya

Filbert neg. indef. pig feed-neg.-past

'Filbert did not feed any pigs.'

---

[19] *hoł* most frequently occurs with negation. *k^{w}a' k^{w}a'ał* 'not any' is sometimes used instead of *k^{w}a' hoł*.

[20] *hoł* can also occur non-modificationally in a clause, and in this adverbial function *hoł* has locative interpretation, (i). It is perhaps not surprising to find the origin of an existential particle in a locatival element.

(i) k^{w}a' hoł 'akš-amme-kya
neg. indef. join-neg.-past
'He wasn't even there.'

b. kʷa' hoł Pilpo picu:ti 'itok'ya-nam-kya
neg. indef. Filbert pig feed-neg.-past
'Filbert did not feed any pigs.'

(33) ??? kʷa' hoł picu:ti $_i$ Pilpo t_i 'itok'ya-nam-kya
neg. indef. pig Filbert feed-neg.-past
'Filbert did not feed any pigs.'

1.3.2.4 The Structure of Noun Phrases

Elements of the noun phrase occur in the order determiner/possessor - quantifier - N - adjective. This is illustrated in (34a-c).

(34)a. lukkya temła 'a:-c'ana
these all pl.-small(ones)
'All these children'

b. hom temła čawe
1sg.acc.(poss.) all children
'All my children'

b. hoł ko:wi tešokya c'ana
indef. little.bit hollow small
'in some little hollow' [Bunzel 1933]

In addition, it seems that no more than one adjective can occur with a noun - compare (35a) and (35b) - nor can adjectives be conjoined as nominal modifiers with the coordinating conjunction *tap* 'and', (36). Since adjectives are stative predicates in Zuni and can take verbal morphology, cf. *šilowa-'kya* red-past 'it was red', the only method of combining them involves the formative a separate clause headed by one of the stative predicates, to which the other stative predicated is subordinated with the subordinate suffix -n. This is illustrated in (37). This stative predicate clause then is used to refer anaphorically to the noun in question by means of the anaphoric particle *le'* .

(35)a. Pilpo k'yak^{w}en k'ohana 'aš-kya
Filbert house white make-past
'Filbert built a white house.'

b. * k'yak^{w}en łana k'ohana
house big white

(36) * k'yak^{w}en łana tap k'ohana
house big and white

(37) Pilpo k'yak^{w}en 'aš-kya hiš le' łana-n k'ohana
Filbert house make-past intens. the.preceding big-sub. white
'Filbert built a house. It's big and white.'

1.3.3 The Clause

1.3.3.1 Negation

Two elements are required to mark negation in the Zuni clause, a negative particle and a negative verb stem suffix, (38). The negative particle occurs at the head of the clause in a position to which evidential and quantifier-like particles also tend to gravitate (see below). The negative suffix occurs after transitive subject agreement but before tense inflection.

(38) **k^{w}a'** hon waccita 'itok'ya-na:w-**amme**-'kya
neg. 1pl.nom. dog feed-neg.-past
'We didn't feed the dog.'

Use of one of these negative elements without the other results in an ungrammatical sentence, as both (39a) and (39b) illustrate.

(39)a. * hon waccita 'itok'ya-na:w-**amme**-'kya
1pl.nom. dog feed-neg.-past
'We didn't feed the dog.'

b. * **k^{w}a'** hon waccita 'itok'ya-na:w-'kya
neg. 1pl.nom. dog feed-neg.-past
'We didn't feed the dog.'

1.3.3.2 Clause-Linkage & Switch-Reference

Clauses are linked in Zuni by the switch-reference[21] markers *-p* (Different Subject) and *-nan* (Same Subject) suffixed to the verb of the first clause, indicating whether the subject of the following clause is distinct, (40a), or coreferential, (40b).[22] Zuni has a 'sloppy' switch-reference system rather than one strictly based on argument reference, since DS marker *-p* is used to connect two clauses under certain aspectual conditions whose subjects have identical reference, as illustrated in (41).

.

(40)a. Nemme te'či-p Pilpo kʷayi-kya ke:si
Nemme arrive-DS Filbert exit-past already
'When Nemme arrived, Filbert had already left.'

b. Pilpo kʷayi-nan yak'o-kya
Filbert exit-SS vomit-past
'Filbert went outside and threw up.'

(41)a. 'imašthoł ho' 'ito:w 'aša-**p** kʷa' ho' kʷa'ał k'uhmok'e:-na'm-a
always 1sg.nom. food make-**DS** neg. 1sg.nom. anything break-neg.-pres.
'When(ever) I cook, I never break things (dishes).'

b. te'či-**p** 'antewa-kya
arrive-**DS** spend.the.night.-past
'He arrived and camped [there] for the night.' [Bunzel 1933]

---

[21] See Finer (1985).
[22] Hale (1992) refers to switch-reference marking as obviation marking.

Contrast (41b) with (c) below.

c. hon 'a:-te'či-**nan** ho'na' 'a:-pokłi-k'ya-na-k'yanna
1pl.nom. pl.-arrive-**SS** 1pl.acc. pl.-smoke-caus.-pass.-fut.
'When we get there, we will be made to smoke.' [Bunzel 1933]

The 'sloppy' use of the Different Subject marker illustrated in (41a) is obligatory; use of Same Subject *-nan* here would change the temporal relationship between the two clauses to that in (42).

(42) ho' 'ito:w 'aš-**nan** kʷa' ho' kʷa'ał k'uhmok'e:-nam-kya
1sg.nom. food make-**SS** neg. 1sg.nom. anything break-neg.-past
'When I was cooking [yesterday], I didn't breaking anything.'

I have suggested elsewhere (Nichols 1995a,b) that the 'sloppy' switch reference effects in Zuni are due to the fact that the suffix *-nan* is used to construct a tighter clause linkage, perhaps at the IP level, whereas the usage of suffix *-p* implies a looser clause linkage, perhaps at the CP level. The 'sloppy' effects are the result of the requirement that subjects be coreferent across the tighter degree of clause-linkage, while subjects need not be coreferent across the looser degree of clause linkage.

1.3.4 Other Phenomena

1.3.4.1 WH Movement

Question words in Zuni are marked with the suffix -p (for more on the form of question words, see Chapter 2 Section 2.5). Question words undergo movement to the front of the Zuni clause, (43).

(43)a. kʷa-p $_k$ to' t $_k$ 'aše-:-'a

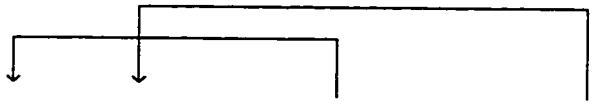
what-Q 2sg.nom. make-cont.-pres.

'What are you making?'

b. * to' kʷa-p 'aše-:-'a

2sg.nom. what-Q make-cont.-pres.

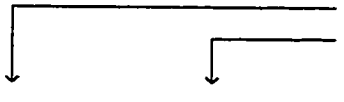
In fact, Zuni has multiple WH movement, since all question words present undergo movement, (44a). As (44b) indicates, the moved question words appear in the same relative order as their argument structure positions, namely subject - indirect object - direct object.



(44)a. čo-p kʷa'tikya-p t Gilbert-ya' t 'e'ni-n 'uk-kya

who-Q which-Q G.-acc. belt-sg. give-past

'Who gave which belt to Gilbert?'



b. * kʷa'tikya-p čo-p .....

which-Q who-Q

An adjunct WH word, however, must appear outside an argument WH word, compare (45a-b).

(45)a. kya:yi-p čo-p Gilbert-ya' 'e'ni-n 'uk-kya
when-Q who-Q G.-acc. belt-sg. give-past
'Who gave the belt to Gilbert when?'

b. * čo-p kya:yi-p .....
who-Q when-Q

1.3.4.2 Particles

With the exception of a few verbs like *hakk'ya* 'request' and *'ank'oha(ti)* 'discover'[23], Zuni verbs generally do not take clausal complements. Instead, Zuni makes use of a number of evidential particles to express the propositional content of 'think' + CP and 'believe' + CP etc. type constructions. A few examples are given in (46). These particles are morphologically invariant (and therefore are different from verb forms) and usually occur at or near the beginning of the clause (i.e. preceding any arguments).

(46)a. **'imat** ho' 'ok'e-kkya
seems 1sg.nom. win-past
'It seems I won.'

[23] This last verb is discussed in Chapter 4.

b. **hinik** hiš čo'oł tom ča'l-ona' 'ill a:-kya
think intens. someone 2sg.poss. child-topic have go-past
'I think someone has taken away your child.'

c. **honk'^{w}at** tens hoł hom ča'le' yała-k^{w}ayi-kya
perhaps then indef. 1sg.acc.(poss.) child-sg. cross-exit-past
Perhaps somewhere my child has perished.' [Bunzel 1933]

In addition, quantifying particles also occur in this sentence initial position. As (47) illustrates, quantificational adverbials can quantify into objects from this position.

(47) 'emma teššuk'^{w}a' 'a:w-okyaccik' mu-lo:-nap-kya
many yesterday pl.-woman bread-bake-pl.subj.-past
'The women baked a lot of bread yesterday.' (* 'many women')

1.3.4.3 Stative vs. Non-Stative Stems

An important morphological note on Zuni verbs is that Zuni verb stems are classified according to whether they are stative or not. Stative and non-stative verb stems take different allomorphs of the inflectional endings for tense, negation and subordination. (48) -(50) illustrate these morphological distinctions. This distinction will be used in Chapter 3 as a diagnostic for the morphosyntactic structure of certain stems.

(48)a. ho' la'hi-**kya**

1sg.nom. jump-past

'I jumped.'

b. ho' 'imo-**'kya**

1sg.nom. sit-past

'I was there; I was sitting.'

(49)a. k^{w}a' hiš to' 'ošok^{w}k^{w}-**'amme**

neg. intens. 2sg.nom. have.a.head-neg.stat.

'You are very foolish.' [Newman 1965]

b. k^{w}a' ho' 'a:-**na'm**-a

neg. 1sg.nom. go-neg.-pres.

'I'm not going.'

(50)a. hiš łana-**n** k'ohana

intens. big-SS.stat. white

'It was big and white.'

b. Pilpo k^{w}ayi-**nan** yak'o-kya

Filbert exit-SS vomit-past

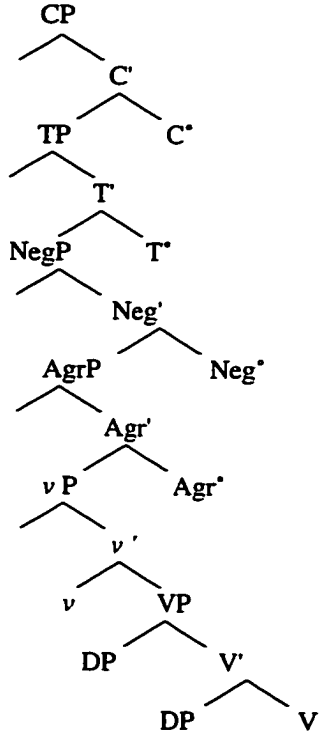
'Filbert went outside and threw up.'

1.3.5 Architecture of the Clause

Finally, I should note that I assume for Zuni the (transitive) clause architecture in (51) which is specified here for concreteness and justified in the following chapters.

I assume several functional projections above the VP since the specifiers of these projections turn out to serve as landing sites for the pronominal movement discussed in Chapter 2. In addition, I assume along with Chomsky (1995b) that small *v* heads the articulated VP of the transitive clause, based on arguments by Hale & Keyser (1993, 1996a) that transitives are lexically derived from causative structures. Chapter 3 will discuss this VP structure in detail for Zuni

(51)



In addition, in this dissertation I generally assume the theoretical framework in Chomsky (1993) and further developed in Chomsky (1995a,b). Departures from these assumptions, for example with regard to case assignment, will be noted in the text.

I now turn in the following chapters to specific analyses of the syntax of Zuni.

Chapter 2

Pronominal Syntax and Pronominal Structure

2.0 Introduction

One of the most striking aspects of Zuni syntax is the behavior of pronouns. I will argue here that there are two types of pronouns in Zuni, strong and weak, and will propose an analysis to explain the complex constraints on their distribution, including obligatory movement and exclusion from certain contexts. This chapter attempts to provide a formal definition of the notions 'strong' and 'weak' pronoun and an account of their distribution in terms of the notion of licensing based on the Zuni evidence as well as evidence from Papago and the Belfast dialect of English studied by Henry (1995). The analysis is ultimately inspired by the proposals of Cardinaletti & Starke (1994, 1996) but departs from their account in several significant details.

Section 2.1 sets out the nature of pronoun form and distribution in Zuni. I discuss an early analysis of the data suggested by Newman (1965) and describe why this account is problematic. Extensive new evidence of the syntactic distribution of Zuni pronouns is presented to serve as the basis of the analysis to follow. Section 2.2 begins by presenting the proposals of Cardinaletti & Starke (1994) for a theory of pronominal deficiency and licensing and goes on to discuss some empirical problems for this account brought up by evidence for the licensing of weak pronouns in situ in O'odham (Papago) and Belfast English. In Section 2.3 I present a proposal for a theory of the complex internal structure of pronouns and the constraints on their distribution that takes into account the role that case seems to play in the licensing of pronouns in O'odham and Belfast English. I present independent evidence for the existence of an extra set of functional features contained in strong pronouns and involved in licensing. In Section 2.4 I return to the Zuni data to explain pronoun behavior there with this new account, and in addition

account for the O'odham and Belfast English data that was problematic for Cardinaletti & Starke (1994). Finally in Section 2.5 I suggest the account may be extended to account for Zuni multiple WH movement and what appear to be strong/weak forms of WH words. I also point out the remarkable similarities in the distribution of Zuni strong pronouns and English default accusative case and subsequently suggest that the phenomenon of default accusative case in English can be reanalyzed in terms of the licensing requirements of pronouns.

2.1 The Syntax of Zuni Pronouns

A description of the Zuni pronouns appears in Newman (1965), where it is noted that each of the pronouns listed has two forms. It is stated there that the distribution of the two forms of the Zuni pronouns is determined by phonological factors. I will present a range of new evidence in this section to argue that the distribution of the allomorphs of the Zuni pronouns is syntactically determined. In the final subsection (2.1.3) I present an account of these facts that suggests that functional categories may be implicated in the constraints on the distribution of the Zuni pronouns.

Zuni pronouns distinguish person, number, and case, and occur in two forms each, a short form and a long form, shown in (1).[24] Newman (1965: 60) lists these pronominal forms[25] and states that the long forms (first row of each person) are only used utterance-finally while the short forms ('utterance medial forms') occur everywhere else. He goes so far as to say (p.61) that there are no corresponding 'utterance-final' forms for the object (accusative) pronouns since " object pronouns do not occur in utterance final position."

[24] The two forms are identical for the accusative plural.

[25] Except for columns 3 and 4; see text following. The forms in (1) were collected during fieldwork at Zuni Pueblo 1992-1996 and differ from Newman (1965) in the presence of data for columns 3 and 4 as well as in the form of the nominative plural long (Newman: *ho'no* , Nichols: *ho'no'*) and accusative plural long (Newman: *ho'na'* , Nichols: *ho'no'*). Some leveling of pronominal forms appears to have taken place in the speech of younger speakers.

Finally, Newman assumes that the 'medial' (short) forms are derived from the 'final' (long) forms by phonological reduction.

(1) **Zuni Pronominal Forms**[26]

	Nominative		Accusative		Indirect Object/Possessive	
	Sg.	Du./Pl.	Sg.	Du./Pl.	Sg.	Du./Pl.
1st	ho:'o	ho'no'	homma	ho'no'	homma	ho'na:wa:ni
	ho'	hon	hom	ho'no'	hom	ho'na:wan
2nd	to:'o	to'no'	tomma	to'no'	tomma	to'na:wa:ni
	to'	ton	tom	to'no'	tom	to'na:wan

All three of these statements or assumptions concerning the nature of Zuni pronouns can be challenged. In doing so we reveal a rich morphosyntactic system whose analysis will have implications beyond Zuni itself. I focus here on the first two statements; the third is more innocuous.[27]

First of all, as indicated in the table and contrary to Newman's statement, object or accusative forms do have long forms. These can be found when the accusative pronoun is used as a bare response to a question, as in (2).[28] I will return to this evidence shortly.

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[26] Only 1st and 2nd person in Zuni have corresponding pronominal forms (See Chapter 1 Section 1.3.2.1).
[27] At first glance it appears, as Newman assumed, that the Zuni weak pronouns are derived from the strong via final vowel truncation followed by heavy syllable reduction. Note, however, that not all forms differ in prosodic weight, cf. the accusative plural forms, and that upon closer examination the second syllable of certain strong forms is filled with a copy of the number features of the base or a morphological dummy element added to the weak base. For specifics, see Section 2.3.2 note 42.
[28] As described in Section 2.1.2, accusative case is found on a bare response pronoun that would receive accusative case in the full clause, and nominative case is found on a bare response pronoun that would receive nominative case in a full clause.

(2) čo-p waccita 'utte-kya homma
who-Q dog bite-past 1sg.acc.
'Who did the dog bite?' 'me.'

This merely fills out the paradigm, however. A more important point is that the notion that the long forms in (1) are utterance-final forms can be dispelled with evidence like that in (3), in which a long form occurs as the first conjunct of a coordinate structure.

(3) ho:'o tap Nemme hon 'a:-kya
1sg.nom. and N. 1du.nom. go-past
'Nemme and I went.'

Thus there is more to the distribution of these pronominal forms than was originally assumed. The task of rest of this section will be to describe in detail the distribution of the two forms of the Zuni pronouns, in order to form a more accurate picture of the constraints on their respective distributions. I will first describe the distribution of the Zuni short pronoun forms and follow this with a description of the distribution of the long forms. In the final subsection I will argue that rather than being determined by ± utterance-final, the distribution of the Zuni short and long pronouns can be characterized syntactically. The most important aspects of Zuni pronoun distribution will turn out to be (i) the obligatory movement that short pronouns undergo, (ii) the fact that the long pronouns only occur in impoverished syntactic contexts (the notion 'impoverished syntactic context' will be clarified below), and (iii) the fact that short and long forms are entirely in syntactic complementary distribution.

It will become apparent that there are similarities between the distribution of Zuni short and long pronouns on the one hand and the distribution of weak and strong pronouns in other languages, certain Germanic languages for example. Later on in

Sections 2.2 and 2.3 I develop an analysis to account for the Zuni data described below as well as to apply to weak and strong pronouns cross-linguistically. With this in mind, beginning with the discussion to follow I will refer to the Zuni short and long pronouns as weak and strong, respectively.

2.1.1 Weak Pronouns and Obligatory Movement

One of the key syntactic differences between weak and strong pronouns in Zuni is the fact that only weak pronouns can occur as arguments of the verb.[29] Strong pronouns are excluded from argument positions. This contrast is illustrated in (4) and (5).

(4)a. ho' waccita 'ito-k'e-kkya
1sg.nom.[w] dog eat-caus.-past
'I fed the dog'

b. hom waccita 'utte-kya
1sg.acc.[w] dog bite-past
'The dog bit me.'

(5)a. * ho:'o waccita 'ito-k'e-kkya
1sg.nom.[s] ...
'I fed the dog'

b. * homma waccita 'utte-kya
1sg.acc.[s] ...
'The dog bit me.'

[29] With one important exception, to be discussed below.

Although weak pronouns may occur as arguments of the verb, their syntax is constrained by the requirement that weak pronouns undergo obligatory movement out of the VP. Basic word order in Zuni is SOV, as (6) illustrates with NP arguments that undergo no special movement.[30]

(6) waccita wihac'ana 'utte-kya
dog baby bite-past
'The dog bit a baby.' [* 'The baby bit a dog.']

(7a) illustrates the normal position of a weak pronominal object with respect to a lexical NP subject, while (7b) illustrates the unacceptability of a sentence containing a weak pronoun to the right of the NP subject and presumably inside the VP.

(7)a. hom waccita 'utte-kya
1sg.acc.[w] dog bite-past
'The dog bit me'

b * waccita hom 'utte-kya
dog 1sg.acc.[w] bite-past
'The dog bit me.'

The position of negative elements in the Zuni clause can be used to demonstrate that the weak pronoun in (7a) has moved out of the VP. Negation in Zuni involves the

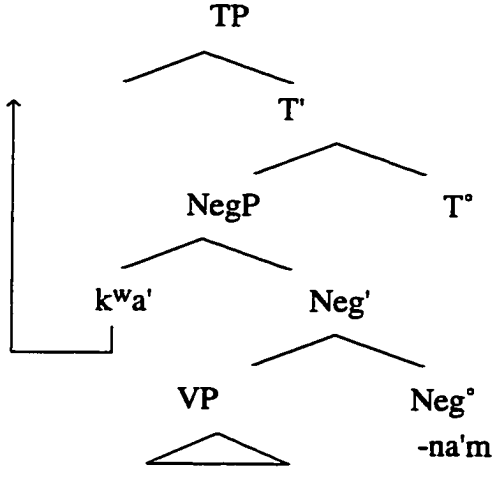
[30] Zuni word order (see Chapter 1 Section 1.3.1) is strict SOV in the sense that the verb must appear finally in its clause (finite or non-finite) and arguments do not undergo scrambling movement (though they do undergo focus movement, to be described below).

use of a negative particle somewhere to the left of the verb.[31] This particle can occur in one of two positions, either close to the verb stem as in (8a) or farther to the left as in (8b) in a position where a number of other particles (evidential and adverbial) also occur (see Section 1.3.4.2). I assume that the negation particle originates closer to the verb in the specifier position of a NegP projection, (9), and moves to the left edge of the clause as a result of a rule that affects particle placement in general.

(8)a. teššuk'^{w}a' ho' k^{w}a' waccita yaktoh-nam-kya
yesterday 1sg.nom.[w] neg. dog hit-neg.-past
'I didn't hit the dog yesterday.'

b. k^{w}a' teššuk'^{w}a' ho' waccita yaktoh-nam-kya
neg. yesterday 1sg.nom.[w] dog hit-neg.-past
'I didn't hit the dog yesterday.'

(9)



[31] Cf. Chapter 1 Section 1.3.3.1.

I assume therefore that the negation particle, here *k^{w}a'* , marks the edge of the VP in the position illustrated in (8a). Since the weak subject pronoun *ho'* in (8a) occurs to the left of negative *k^{w}a'* , I assume that *ho'* is outside the VP. I further assume that *ho'* does not originate VP externally but rather moves to this position from inside the VP based on arguments for the origin of subject arguments inside the VP (cf. Sportiche 1988, Fukui 1986).

The position of the negation particle in example (10) illustrates that in contrast, lexical NP arguments do not undergo movement out of VP.

(10) teššuk'^{w}a' k^{w}a' waccita wihac'ana 'utte-nam-kya
yesterday neg. dog baby bite-neg.-past
'The dog did not bite the baby yesterday.'

Note that as a result of the movement of pronouns out of the VP, the word order of Zuni clauses containing at least a pronominal object argument is OSV, (11a-b), in contrast to the SOV order found with only lexical NP arguments, (12). (The factors responsible for pronouns moving out of the VP into OSV order as well as specifics of where they move to will be discussed in Section 2.1.3.)

(11)a. tom$_{k}$ ho'$_{j}$ t$_{j}$ t$_{k}$ šema-kya
2sg.acc.[w] 1sg.nom.[w] call-past
'I called you'

b. tom$_{k}$ Nemme' t$_{k}$ šema-kya
2sg.acc. N. call-past

(12) waccita wihac'ana 'utte-kya

dog baby bite-past

'The dog bit the baby.'

This OSV order in (11a-b) is the unmarked order of arguments in such cases; that is, neither argument has focus interpretation. In fact, focus movement restores SOV order in such clauses, (13a). The same focus movement results in OSV word order in all other (i.e. basic SOV) clauses, for example (13b).

(13)a. k^{w}a' to' ho'na' 'awa-na'ma-p

neg. 2sg.nom. 1pl.acc. find-neg.-DS

'If <u>you</u> do not find us 2 [we will cut your head off; if <u>we</u> do not find you..]'

[Bunzel 1933]

b. c'ana to' yate-p 'ele-k'yanna

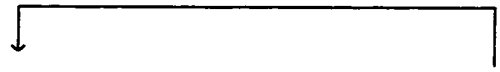
small 2sg.nom catch-DS well-future

'You had better catch a small one' [Bunzel 1933]

All Zuni weak pronoun arguments move out of VP, regardless of case marking or grammatical role, so that in addition to nominative subject pronouns and accusative object pronouns as in (8a) and (11a) above, indirect object pronouns, (14a), subject possessor pronouns, (15a), and object possessor pronouns, (16a), also undergo this movement. Note that in (15a) and (16a) movement of the weak possessive pronoun out of VP results in a discontinuous possessive constituent, where the possessive pronoun has moved to the left but the possessed noun has remained in situ.[32]

[32] In (16a) the particle *hiš* occurs to the left of the fronted possessive pronoun *to'na:wan* in the usual clause initial position for particles (see Section 1.3.4.2).

(14b), (15b), and (16b) each illustrate the word order in the respective constructions with lexical NPs.



(14)a. ho'na:wan$_k$ ton$_j$ t_j t_k tešu-nap-tu-n'on akkya

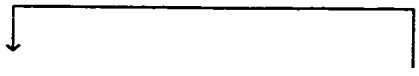
1pl.indir.obj.pl.[w] 2pl.nom.[w] seek-pl.subj.-opt.-nom. in.order

'So that you [honorific] may be the one to look for her for us ...' [Bunzel 1933]

b. Pilpo 'akcek 'an waccita tešu-kya

Filbert boy P dog look-past

'Filbert looked for the dog for the boy.'



(15)a. hom$_j$ lak^{w}k^w t_j 'e'le' palo-ye

1sg.acc.(poss.)[w] over.there daughter be.buried-pres.stat.

'My daughter is buried over there'

b. lak^{w}k^w waccita palo-ye

over.there dog be.buried-pres.stat.

'The dog is buried over there.'

(16)a. hiš to'na:wan$_k$ ho'$_j$ t_j t_k lena-: tuna-p

intens. 2pl.acc.(poss.)pl.[w] 1sg.nom.[w] domest.plant-pl. see-DS

'As soon as I saw your crops' [Bunzel 1933]

b. Pilpo 'akcek 'an hewe' tuna-kya
Filbert boy P money see-past
'Filbert saw the boy's money.'

To summarize the details of this section, Zuni weak pronouns occur as arguments of the clause but do not occur inside the VP. All weak pronominal arguments - subjects, objects, indirect objects and possessors - appear to move obligatorily out of the VP (cf. (7)).

2.1.2 Strong Pronouns: Bare responses, Predication, Coordination

Unlike Zuni weak pronouns, the strong pronouns are prohibited from occurring as arguments of the verb, as illustrated in (17).

(17)a. * ho:'o waccita 'ito-k'e-kkya
1sg.nom.[s] dog eat-caus.-past
'I fed the dog'

b. * homma waccita 'utte-kya
1sg.acc.[s] dog eat-past
'The dog bit me.'

c. * tomma waccita 'ito-:-'a
2sg.acc.(poss).[s] dog eat-cont.-pres.
'Your dog is eating.'

But while strong pronouns are excluded from certain contexts, they turn out to be obligatory in others. In particular, Zuni strong pronouns occur

(i) as bare responses,

(ii) as predicate nominals, and

(iii) in coordinate structures.

Examples (18a-c) below illustrate the use of Zuni strong subject, object, and possessive pronouns as single word (bare) responses to questions. No other clausal material accompanies the pronoun in this usage.[33] Weak pronouns are excluded from this context.

Note that the bare pronoun in Zuni is assigned the same case the pronoun would receive in that grammatical role in a full clause.[34]

(18)a.	čo-p k'yawe' tutu-kya	ho:'o.	(* ho')
	who-Q water drink-past	1sg.nom.[s]	(1sg.nom.[w])
	'Who drank the water?'	'Me.'	
b.	čo-p waccita 'utte-kya	homma	(*hom)
	who-Q dog bite-past	1sg.acc.[s]	(1sg.acc.[w])
	'Who did the dog bite?'	'Me.'	
c.	čo-p 'an 'ussi nicikya	homma	(*hom)
	who-Q P that ring	1sg.acc.(poss.).[s]	(1sg.acc.(poss.).[w])
	'Whose ring is that?'	'Mine.'	

[33] Ignoring the question of whether this is some type of ellipsis, i.e. where the response would contain a complete clausal representation all of which except for the pronoun is deleted.

[34] Unlike English, which would have accusative case in examples corresponding to (18a-b), as the glosses indicate.

The strong form of the pronoun also occurs when the pronoun is used predicatively, as in (19a-b). Note that there is no overt verbal copula in this construction. Again, weak pronouns are excluded from this context.

(19)a. 'ussi ho:'o (* 'ussi ho')
that 1sg.nom.[s] (1sg.nom.[w])
'That's me.'

b. 'ussi homma (* 'ussi hom)
that 1sg.acc.(poss.).[w] (1sg.acc.(poss.).[w])
'That's mine.'

Finally, when a pronominal argument is coordinated with another argument, the strong form of the pronoun must be used, (20a).[35] This is the sole context in which strong pronouns occur as arguments of the verb.

(20)a. ho:'o tap Nemme hon 'a:n-uwa
1sg.nom.[s] and N. 1du.nom.[w] go-future
'Me and Nemme'll go'

b. * ho' tap Nemme ...
1sg.nom.[w] and N.

[35] The order in (20a) is preferred to that in (i) below.

(i) ??? Nemme' tap ho:'o
N. and 1sg.nom.[s]

This section has illustrated that strong pronouns are restricted to three contexts in Zuni: bare responses, predication and coordination. Zuni strong pronouns are generally excluded from argument positions in the clause. The single exception to this generalization occurs when strong pronouns are part of a coordinated argument. Finally, the examples presented in Sections 2.1.1 and 2.1.2 have illustrated the fact that Zuni weak pronouns are excluded from contexts in which strong pronouns occur and vice versa.

2.1.3 Pronouns and Deficient Contexts

In this section I will begin to develop an account of the syntactic distribution of the Zuni strong and weak pronouns, providing the foundation for the theoretical account of pronominal syntax proposed in Section 2.2. In particular, I will suggest that Zuni strong pronouns only occur in syntactically deficient contexts, in a sense to be made precise below, while Zuni weak pronouns cannot occur in syntactically deficient contexts. To conclude this section I will present some initial speculation on why this might be the case. Section 2.2 will develop further the ideas presented here.

I begin by examining the syntax of the Zuni strong pronouns. As detailed in Section 2.1.2, the strong forms of the pronouns occur in three contexts: as bare response forms, as predicate nominals and in coordination.

The bare response forms of pronouns occur in a context in which no other clausal material is present. This context can be characterized as syntactically deficient since it contains none of the functional material[36] considered necessary for the licensing of

[36] By 'functional material' I refer to I°, T°, Agr° and C° and their projections. I will sometimes use I° and IP as an abbreviation for the functional categories (except C°) in general.

arguments: no finite functional head licensing the specifier, which is an argument position, nor any functional head to assign (check) the case of the argument.

(21) homma
1sg.acc.[w]
'Me.'

The pronoun occurring in predicate nominal position is in a similarly syntactically deficient context. The predicate nominal is contained inside the VP headed by the zero copula, as in (22). The functional projections involved in argument licensing are outside the VP maximal projection, and in this sense are inaccessible to the predicate nominal. I assume that for a functional head to be involved in licensing an argument, the argument must be in the minimal domain (in the sense of Chomsky 1993) of the functional head. This means that the argument must be in the specifier position of the functional head. The predicate nominal in (22) is inside the VP, and therefore is outside the minimal domain of any functional head.

(22)a. $[_{IP}\ [_{VP}$ 'ussi $[_{DP}$ho:'o] Ø]] (* 'ussi ho')
that 1sg.nom.[s] (1sg.nom.[w])
'That's me.'

b. 'ussi homma (* 'ussi hom)
that 1sg.acc.(poss.)[w] (1sg.acc.(poss.).[w])
'That's mine.'

A coordinated conjunct position can also be characterized as syntactically deficient. I assume that coordination of DPs involves an extra DP node dominating the coordinated constituents, as in (23).[37]

(23) [$_{DP}$ [$_{DP}$ho:'o] tap [$_{DP}$Nemme]]
1sg.nom. and N.

Again I follow the assumption described above that a functional projection must have an argument in its minimal domain in order to act as a licenser (or case assigner (checker)) of that argument. I suggest that this DP maximal category dominating the coordinated conjuncts prevents the DP containing the pronoun from occurring in the minimal domain of a functional head in IP. Evidence that this extra DP node blocks any relationship between the pronoun and the features of some head of IP comes from the requirement that the coordinated constituent in (24a) be repeated by (coindexed with) the dual pronominal argument *hon* that presumably does occur in argument position (i.e. in the domain of some functional head). Coordinated arguments behave differently in this respect from non-coordinated arguments, (24c).[38]

(24)a. [$_{IP}$ [$_{DP}$ [$_{DP}$ho:'o] tap [$_{DP}$Nemme]] hon 'a:n-uwa]
1sg.nom.[s] and N. 1du.nom.[w] go-future
'Me and Nemme'll go'

b. * ho:'o tap Nemme 'a:n-uwa
1sg.nom.[s] and N. go-future

[37] I have represented Zuni DP coordination as a flat structure in (23) simply for lack of evidence for the internal structure of Zuni coordination.
[38] A similar point is addressed in the discussion of English coordination in Section 2.5.

c. hon 'a:n-uwa

1du.nom.[w] go-future

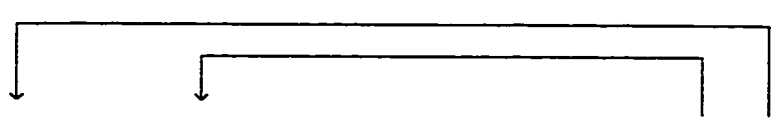
'We 2 will go.'

The coordinated pronoun is thus in a syntactically deficient context since it occurs outside the licensing domain of some functional head.

The contexts in which the Zuni strong pronouns are obligatory can therefore all be characterized as syntactically deficient contexts for arguments, in the sense that in these contexts - bare responses, predication, coordination - functional categories necessary for licensing arguments are either absent or inaccessible to the pronoun (the pronoun is forced to occur outside the minimal domain of the functional category).

In contrast, the Zuni weak pronouns are not permitted to occur in these three syntactically deficient contexts, as examples (18)-(20) in Section 2.1.2 illustrated. In addition, while Zuni weak pronouns occur as arguments of the clause, they undergo obligatory movement out of the VP. I will suggest that the Zuni weak pronouns are excluded from VP internal positions because these are syntactically deficient positions as well, in the sense described above. The generalization can be made that the Zuni weak pronouns only occur in positions that are not syntactically deficient.

The question therefore remains as to where the Zuni weak pronouns are moving to. It appears that when Zuni weak pronouns move out of the VP, they are moving to a position somewhere in IP, since as (25a) illustrates, they appear to the right of an object question word *k^{w}ap* that has undergone WH movement to SpecCP (cf. the clause structure assumed in Section 1.3.5). (25b) shows the unacceptability of the pronoun moving to the left of the WH word.



(25)a. [$_{CP}$ k^{w}a-p$_{k}$ [$_{IP}$ tom$_{j}$ teššuk'^{w}a' [$_{VP}$ Nemme' t$_{j}$ t$_{k}$ 'uk]-kya]]

what-Q 2sg.acc.[w] yesterday N. give-past

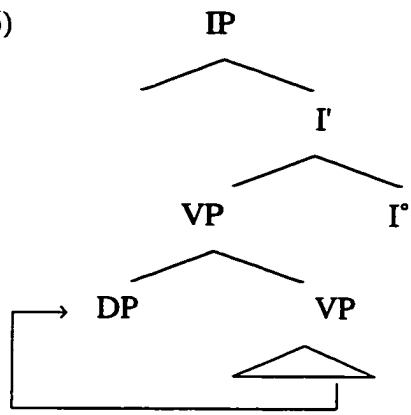
'What did Nemme give you yesterday?'

b. ??? tom kʷa-p teššuk'ʷa' Nemme' 'uk-kya

2sg.acc. what-Q yesterday N. give-past

Further evidence that the weak pronouns are moving to somewhere in IP, rather than for example simply moving and adjoining to VP as in (26), comes from the behavior of pronouns in Zuni infinitival clauses.

(26)



It can be shown that Zuni infinitival clauses lack the functional projections of full clauses. If we assume that the presence of functional projections in a clause is indicated by the presence of affixes on the verbs that correspond to the heads of these projections, we can note that the Zuni verb contains only the stem plus the infinitival suffix *-nakya* , (27a), and cannot appear with plural subject agreement (27b), tense inflection (27c), or even a negation suffix (28a-b).[39]

[39] The impossibility of negation with the infinitive is illustrated with both the non-stative and the stative form of the negative suffix in (28a-b). The parenthesized example in (27c) and the parenthesis (28c) refer to the possibility that the *-na* part of the infinitive suffix may be related to the stative morpheme *-na* (which would precede any inflection).

(27)a. 'ik'oti lewu-nakya teni
mistake do-infin. hard
'It's hard to make a mistake.'

b. * 'ik'oti lewu-nakya-kya teni
mistake do-infin.-past hard
'It's hard to have made a mistake.'

c. * 'ik'oti lewu-nap-nakya teni (* lewu-na-p-kya)
mistake do-pl.subj.-infin. hard (do-stat.-pl.subj.-infin.)
'It's hard for them to make a mistake.'

(28)a. * k^{w}a' 'ik'oti lewu-na'ma-nakya teni
neg. mistake do-neg.-infin. hard
'It's hard to not make a mistake.'

b. * k^{w}a' 'ik'oti lewu-na-mme-(na)kya teni
neg. mistake do-stat.-neg.-infin. hard.

I conclude therefore that Zuni infinitival clauses lack TP, AgrP and NegP projections. It is therefore important to note that weak pronouns in Zuni infinitival clauses do not have the movement properties that they do in finite clauses.

In the infinitival clause, only one argument of the verb is permitted, either subject of an intransitive or object of a transitive as in (29a-b), and this argument bears accusative case.

(29)a. hom 'ał-nakya teni
1sg.acc. sleep-infin. hard.
'It's hard for me to sleep.'

b. tom 'itok'ya-nakya teni
2sg.acc. feed-infin. past
'It's hard to feed you.'

Subjects of transitive verbs can appear only as a sort of adjunct headed by *tap* 'and' as in (30a). Compare this adjunctive use of pronouns in the finite clause in (30b).

(30)a. hom tap, tom 'itok'ya-nakya teni
1sg.acc. and, 2sg.acc. feed-infin. hard
'It's hard for me to feed you.'

b. hom tap, 'iš 'uss 'ali-ye
1sg.acc. and, very that nice-pres.stat.
'To me, that [the rock] is beautiful.'

The weak pronoun argument of the infinitive cannot undergo the movement that it does in the finite clause, as indicated by the fact that it cannot appear to the left of this adjunct headed by *tap* . (31) illustrates this impossibility.

(31) ?* tom hom tap 'itok'ya-nakya teni
2sg.acc. 1sg.acc. and feed-infin. hard
'It's hard for me to feed you.'

In the finite clause, however, (32), pronouns can appear to the left of adverbs, which I assume are adjuncts to the maximal projections.

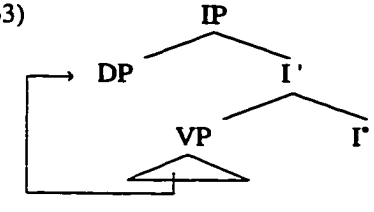
(32) tom teššuk'ʷa' ho' 'itok'ye-kkya
2sg.acc. yesterday 1sg.nom. feed-past
'I fed you yesterday.'

In sum, in Zuni infinitival clauses pronouns are not permitted the movement possibilities that they show in finite clauses. Since the infinitival clauses lack IP projections[40], it can be assumed that weak pronouns in finite clauses are moving to positions among these IP projections.

In particular, I assume that weak pronouns are moving to the specifiers of functional projections in IP. There are two types of evidence on which such an assumption can be based. First, the Zuni pronouns are moving as DPs and not D° heads. An element moving as an X° constituent adjoins to some Y° head. Zuni weak pronouns cannot be X°-adjoining to the functional heads of the clause since these latter are instantiated as suffixes to the Zuni (for example tense inflection), while weak pronoun movement clearly takes place away from the verb in for example (32) above. Since the weak pronouns must be moving as XP (DP) categories, they must be moving to some position that licenses the presence of DP arguments. The specifier positions of the functional projections in IP are precisely such positions.

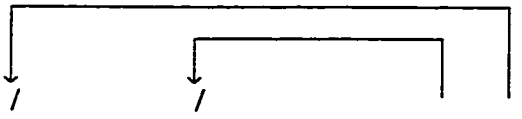
The movement I assume for the Zuni weak pronouns is illustrated in (33).

(33)



[40] Because infinitives lack TP and AgrP, it is unclear how the case of the accusative pronoun in the infinitive clause in (29a-b) is assigned/checked or how the pronoun itself is licensed.

I therefore attribute weak pronoun behavior in Zuni to syntactic movement, rather than to movement that is phonologically driven. While the weak pronouns are prosodically lighter than the strong pronouns, there is evidence that weak pronouns do not move to IP in search of a prosodic host. Zuni weak pronouns are not prosodically dependent on any adjacent element or on each other, as attested by the fact that they are able to bear main word stress and in addition can be separated from each other and the verb by other material like adverbs, for example the adverbs *li:ła* 'here' and *teššuk^{w}a* ' yesterday' in (34) separating the pronouns *to'na'* and *ho'* from each other and the rest of the clause. Note that under the analysis suggested here, adverbs can intervene between pronouns since as mentioned above, I assume adverbs are adjoined to maximal projections while the pronouns occur in the specifiers of these projections.



(34) [$_{CP}$**to'na'$_{k}$** li:ł(a) **ho'$_{j}$** teššuk'^{w}a' [$_{VP}$ t_{j} t_{k} yatine]-tu-n'ona] hom 'anhaytoš-nan
2du.acc.[w] here 1sg.nom.[w] yesterday tell-opt.-comp. 1sg.acc.[w] direct-SS
'He told me [to come] here to tell you 2 ...'

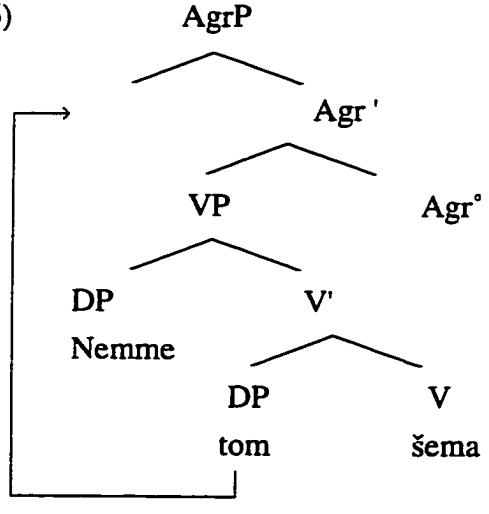
Assuming that Zuni weak pronouns move out of the VP into the specifier of functional projections of IP, we are now in a position to account for the OSV word order described earlier that is found in Zuni finite clauses with at least a weak pronoun object, illustrated again in (35a-b).

(35)a. tom ho' šema-kya
2sg.acc.[w] 1sg.nom.[w] call-past
'I called you'

b. tom Nemme' šema-kya
2sg.acc.[w] N. call-past
'Nemme called you.'

In the case of (35b), OSV order is simply the result of movement of the object out of the VP past the lexical DP subject in SpecVP to the specifier position of the first functional projection available. This is probably SpecAgrP, as in (36).

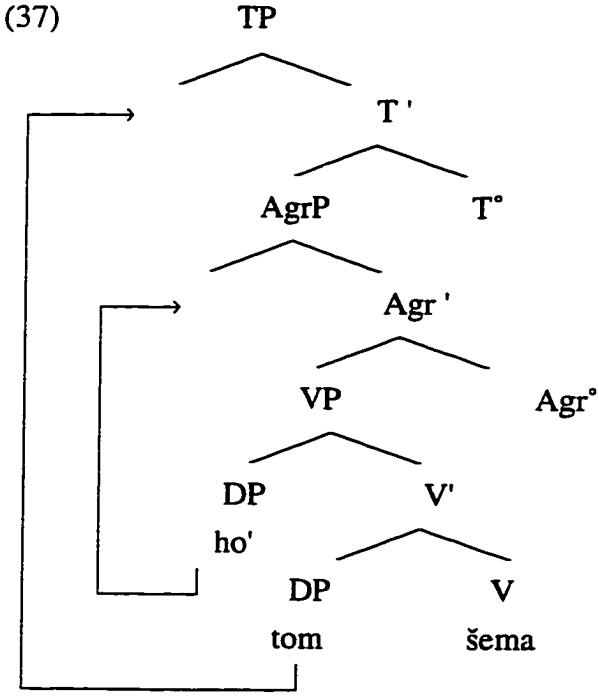
(36)



In the case where both arguments are pronominal, as in (35a), I assume that this OSV order is a Superiority effect, in conjunction with a "shortest move" requirement (Chomsky 1993), proposed by Chomsky (1995a) as the Minimal Link Condition. This means that of the two pronouns that undergo movement in (37) below, the highest one (in

SpecVP) must move first and in addition, that it must make the simplest and shortest movement to satisfy whatever requirement is driving its movement. The nominative subject pronoun *ho'* will therefore move first and into the first available specifier position, presumably SpecAgrP. Movement of the object pronoun *tom* will follow, to the next available specifier position, presumably SpecTP.

(37)



Thus the movement of the Zuni weak pronouns is governed by the same constraints responsible for the well-known contrast in (38) below (cf. Hornstein 1995: 123, Chomsky 1973).

(38)a. I wonder who bought what.

b. * I wonder what who bought.

To summarize the discussion of weak pronouns in this section, I have argued that weak pronoun movement can be characterized syntactically as DP movement out of the

VP into the specifiers of functional projections of IP, and that the order of the pronouns is determined by a "shortest move" constraint on pronoun movement.[41]

In the beginning of this section I argued that Zuni strong pronouns occur in syntactically deficient contexts (bare response, predication, coordination) and showed that the weak pronouns are excluded from these contexts. We can add to this the fact that weak pronouns move obligatorily out of the VP into some specifier of IP. This observation can be broken down into two parts to ask why the weak pronouns must move out of VP, and why they must move to a functional specifier position. I will attempt to address the first part of this question first.

Since weak pronouns in Zuni are restricted from occurring in syntactically deficient contexts, I suggest that weak pronouns must move out of the VP because these VP internal positions are syntactically deficient somehow. This proposal itself has two parts: how are VP-internal positions deficient, and why should weak pronouns be required to move out of them?

As a first attempt to answer this question, I note that the behavior of weak pronouns in Zuni is reminiscent of weak pronoun movement in Swedish as described by Holmberg (1991)[42]. Swedish weak pronoun movement appears to be correlated with verb movement. As (39a) illustrates, when V has moved to I, weak pronouns obligatorily move out of the VP. Swedish strong pronouns, however, remain inside the VP despite V movement in (40b).[43]

(39)a. Anna såg den kaske inte
Anna saw it maybe not

[41] Nichols (1996) suggested a different account, which this dissertation supersedes.
[42] While this phenomenon is referred to by Holmberg (1991) as object shift, others (e.g. Josefsson 1992, Bobaljik & Jonas 1996, Thráinsson 1997) have argued that weak pronoun movement in Swedish does not involve movement to a specifier position.
[43] Note the contrast with Zuni: strong pronouns in Zuni never occur as arguments of the clause. This point will be discussed below in Section 2.4).

b. (*) Anna såg kaske inte den
Anna saw maybe not it

(40)a. * Anna såg DEN kaske inte
Anna saw it maybe not

b. Anna såg kaske inte DEN
Anna saw maybe not it

As in Zuni, movement of the weak pronoun in Swedish does not appear to be phonologically driven, e.g. by phonological dependence on the verb, since as Holmberg points out by example (41a) material may intervene between a verb that has moved further than I and a shifted weak pronoun object.

(41)a. Såg Anna den inte
saw Anna it not

b.. * Såg den Anna inte?

Weak pronoun movement is obligatory in Swedish when the verb has moved out of VP, suggesting that in Zuni perhaps weak pronoun movement has something to do with verb movement. Since Zuni is a rigorously V-final language, verb movement is difficult to argue for conclusively. Whitman (1989) proposes V-(to-I-)to-C movement for Korean, another V-final language, on the basis of evidence that modal inflectional affixes that can occur in C° license topics in SpecCP.[44] This analysis is based on the proposal for the analysis of topic sentences (Den Besten 1983, Platzack 1983) in which the finite verb moves to C° and thus lexically projects CP, licensing a topic in SpecCP.

[44] I thank Höskuldur Thráinsson for directing me to this analysis.

While the evidence regarding the syntactic distribution of Zuni inflectional affixes is less than clear, I can present some speculative evidence for similar licensing of focused constituents in SpecCP that may suggest that movement of V-to-I (to-C) has taken place.

As mentioned earlier with respect to example (13) repeated below, Zuni has focus movement that can move either subjects or objects to a position near the front of the clause. In (42a-b) the focused constituents are *to'* and *c'ana* respectively.

(42)a. k^{w}a' to' ho'na' 'awa-na'ma-p
neg. 2sg.nom. 1pl.acc. find-neg.-DS
'If <u>you</u> do not find us 2 [we will cut your head off; if <u>we</u> do not find you..]'
[Bunzel 1933]

b. c'ana to' yate-p 'ele-k'yanna
small 2sg.nom catch-DS well-future
'You had better catch a <u>small</u> one' [Bunzel 1933]

Focused constituents such as that in (42) above and (43) below appear to move to SpecCP rather than SpecIP in Zuni, as indicated by the fact that focus movement is excluded in cases where WH movement to SpecCP has taken place. This is illustrated in (44) where the focused indirect object constituent bearing the *-ya'* suffix can occur neither in front of (44b) or between (44c) the fronted WH words *čop* and *k^{w}ap* .

(43) Gilbert-ya' ho' 'ik'ošna-n 'uk-kya
G.-acc. 1sg.acc. toy-sg. give-past
'I gave the toy to <u>Gilbert</u>.'

(44)a. čo-p k^{w}a-p Gilbert-ya' 'uk-kya
who-Q what-Q G.-acc. give-past

'Who gave what to Gilbert.'

b. * Gilbert-ya' čo-p k^{w}a-p 'uk-kya
G.-acc. who-Q what-Q give-past
'Who gave what to Gilbert.'

c. * čo-p Gilbert-ya' k^{w}a-p 'uk-kya
who-Q what-Q G.-acc. give-past
'Who gave what to Gilbert.'

This is admittedly shaky evidence for verb movement, but I will nonetheless assume that V always moves out of the VP (at least to I) in Zuni since it will become crucial for the analysis. Thus perhaps while there may be little directly observable evidence for V-movement in Zuni, we can perhaps ultimately be able to assume V-movement on the basis of the indirect evidence the analysis itself will suggest, if compelling enough.

Returning to the questions posed above, I conclude that VP-internal positions in Zuni are deficient somehow because of the movement of V out of VP[45]; since Zuni weak pronouns are excluded from syntactically deficient contexts, V movement triggers obligatory weak pronoun movement out of VP. The second part of that question, which asked why Zuni weak pronouns should be required to move out of syntactically deficient positions, can be addressed at the same time as the question of why weak pronouns must move into functional specifier positions. Earlier I characterized contexts as 'syntactically deficient' if functional categories involved were either absent or inaccessible in some sense to the pronoun. This suggests that functional categories are somehow essential to

[45] Section 2.4 will reconcile how functional categories and the lexical category V can play similar roles in this respect.

the licensing of weak pronouns and that Zuni weak pronouns move out of deficient contexts and into functional specifier positions in order to occur in the minimal domain of some functional head.

The rest of this chapter will explore this relationship between pronouns, licensing and licensing domains. I begin with a look at Cardinaletti & Starke (1994) who suggested an analysis of Romance pronouns that recognized this relationship between pronouns and licensing and proposed that pronouns must be licensed, either by features either contained in their own internal structure, or lacking such features must move to the minimal domain of some functional head containing such features. In effect, they propose that the licensing requirements of weak pronouns drive their movement. In Section 2.2 I first summarize their proposal and point out some problems. I make proposals of my own in Sections 2.3 and 2.4 for the structure and licensing of pronouns, and in Section 2.5 present other phenomena that can be accounted for under these proposals.

2.2 Toward a Theory of Pronominal Structure and Licensing

Here I will discuss the derivational account of pronominal licensing proposed by Cardinaletti & Starke (1994) and present evidence from O'odham and Belfast English that would seem to contradict their proposals. In subsequent sections I will present an alternative theory of pronouns structure and licensing that attempts to avoid these problems.

2.2.1 A Derivational Account of Weak Pronouns

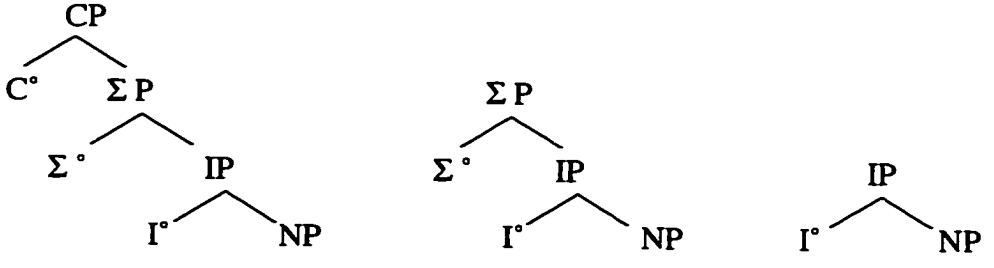
Cardinaletti & Starke (1994, 1996) argue that the behavior of certain Romance and Germanic pronouns similar to that described for Zuni strong and weak pronouns can be accounted for in an analysis in which pronouns have internal syntactic structure, and in

particular where weak pronouns differ from strong in having deficient internal structure. Similarly, clitics differ from weak pronouns in having relatively more deficient internal syntactic structure. The syntactic behavior of weak pronouns (and clitics) is the result of these deficient argument types compensating for their deficient structure by recovering missing syntactic features in alternative ways. Deficient pronouns are therefore excluded from contexts where the recoverability of these features is not an option.

Cardinaletti & Starke (1994) propose the structures in (45) for the internal structure of strong, weak and clitic pronouns respectively. Weak pronouns lack the CP phrase containing case, agreement and referential features, while clitic pronouns lack in addition ΣP, which according to Cardinaletti & Starke is the locus of prosodic features. Case, agreement, referential and prosodic features are all argued to be necessarily in the domain of a pronoun for the pronoun to be properly licensed.

The difference in the internal structure of the pronouns supposedly correlates with an observable morphological difference, so that strong pronouns are morphologically larger than weak pronouns and clitics since strong pronouns contain one more syntactic head than weak pronouns and two more syntactic heads than clitics.

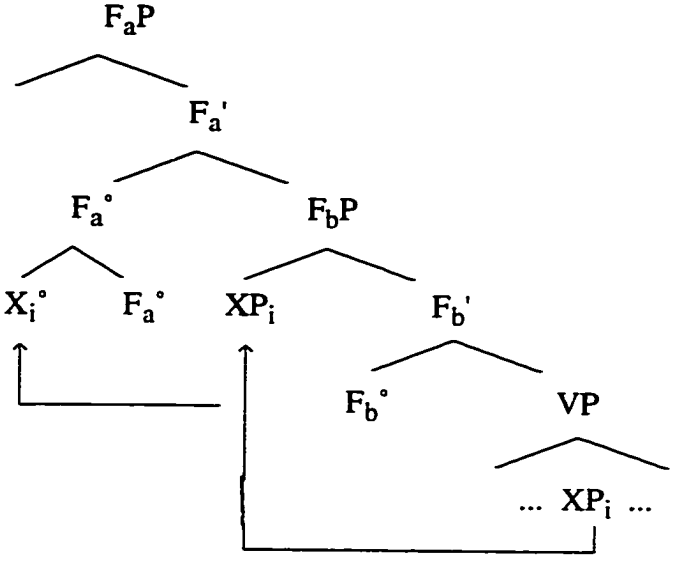
(45) Strong Pronouns Weak Pronouns Clitic Pronouns



[Cardinaletti & Starke 1994]

Since weak pronouns and clitics lack crucial syntactic heads containing necessary licensing features, they must obtain these features (case, agreement, referential and prosodic features) in some other fashion, namely by occurring in a local configuration with some functional head F° containing these licensing features. Weak pronouns will move to the specifier of F° while clitics will undergo this initial movement and then continue on to adjoin to some other F°. Both types of movement are illustrated below in (46). According to this account, the movement of weak pronouns observed in Swedish (and e.g. Zuni) is driven by the need to be associated with certain syntactic features that these pronouns cannot bear on their own, supposedly due to their deficient internal structure.[46]

(46)



[Adapted from Cardinaletti & Starke 1994]

The above account makes the prediction that the licensing requirements of weak pronouns will always induce movement. There is evidence to the contrary, however, that

[46] Holmberg (1991) also proposes an analysis of the licensing requirements of weak pronouns.

the licensing of weak pronouns does not necessarily involve movement. I will discuss two such instances below, from O'odham (Papago) and Belfast English.

2.2.2 O'odham Weak Pronouns and Licensing in Situ

In O'odham, a Uto-Aztecan language, singular personal pronouns have two forms, a long form and a short form, given in (47) (from Hale & Selkirk 1987). The two forms of the pronoun have identical reference but a different syntactic distribution, and I will assume on the basis of these properties that these pronominal forms are comparable to weak vs. strong pronouns in other languages. The weak pronoun occurs when the pronominal argument is to the left of the verb, (48a), and the strong pronoun occurs when the argument is to the right, (48b).

(47) O'odham (Papago)

	'he, she, this'	'he, she, that'
Weak	'íd	hég
Strong	'íida	hégai

[Hale & Selkirk 1987]

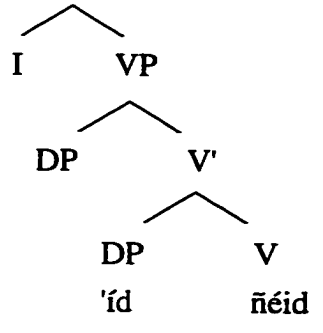
(48)a. 'íd ñéid
him sees

b. ñéid 'íida

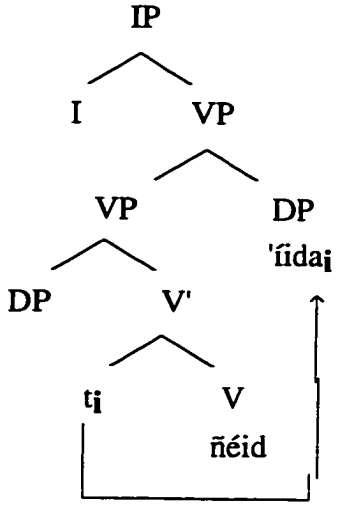
sees him [Hale & Selkirk 1987]

According to Hale & Selkirk (1987), arguments to the left of the Papago verb are complements and are lexically governed by the verbal head. The O'odham weak pronoun in (48a) therefore occurs in a position licensed by V. Elements to the right of the verb are adjoined to VP and are ungoverned. The strong form of the pronoun in (48b) is therefore outside the licensing domain of V.[47] (49a-b) illustrate this difference in structure. The pronoun adjoined to VP in (49b) gets there by moving out of object position inside VP.

(49)a.



(49)b.



Contrary to the predication made by the Cardinaletti & Starke account of deficient pronouns, then, in O'odham the weak pronoun may remain in situ and be licensed in this position.

Note that the movement of the strong pronoun in (49b) is from a licensing domain to a syntactically deficient context[48] (rather than to another licensing domain such as the

[47] While noun phrases in O'odham can occur in the same two syntactic contexts, there is no equivalent morphological alternation for nouns (Hale & Selkirk 1987).
[48] This movement may be driven by stylistic considerations.

specifier of a functional projection). Foreshadowing the analysis in Section 2.2, I hypothesize that movement into such a deficient context blocks the presence of the weak pronoun because the pronoun is unable to locate licensing features in this context.[49]

To sum up, importantly for the proposals I will make in Section 2.2.3 concerning weak pronouns, (i) O'odham weak pronouns do not need to move in order to be licensed, and in addition, (ii) V appears to have some role in licensing O'odham weak pronouns.

2.2.3 Verb Movement and Object Shift in Belfast English

Belfast English affords a more detailed example of the role of V licensing in the distribution of weak pronouns.

Various studies of verb movement and object shift agree that Standard English lacks main verb movement. For example, Pollock (1989) argued that the placement of adverbs (50) and negation (51) in English indicate that the verb remains inside the VP. In the case of negation, the empty T° head must be filled by *do* -support.

(50) [$_{IP}$ Felix [$_{VP}$ quietly [$_{VP}$ closed (*quietly) the window]]]

(51)a. [$_{IP}$Felix did [$_{NegP}$ not [$_{VP}$close the window]]]

b. * Joe closed the window not

Since object shift is contingent on verb movement[50] (Holmberg 1986), Standard English also lacks object shift, even object shift of pronouns.[51]

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[49] A position not incompatible with Cardinaletti & Starke (1994, 1996). Details of pronouns structure and licensing features will differ, however.

[50] At least in Scandinavian. I am not assuming that local object scrambling in languages like German and Dutch (and scrambling in V-final languages like Hindi (Mahajan 1990), Korean and Japanese) is the same phenomenon. This latter type of object movement cannot be dependent on verb movement since it occurs under circumstances where there is no verb movement (cf. e.g. De Hoop and Kosmeijer 1995).

[51] I assume an analysis of the English particle verb construction in which (ii) is derived via movement of the particle. (iv) is excluded for due to licensing requirements of the pronoun.

(52)a.* Joe me$_i$ quickly told t_i

b. * Joe did me$_i$ not help t_i

Henry (1995) reports that Belfast English is unlike Standard English in having verb movement in certain contexts[52], namely imperatives (Henry's Dialect B). Inversion is permitted in the imperative with all verb types and is indicated by the position of adverbs, (53).[53]

(53)a. Write you carefully that letter.

b. Write carefully you that letter. [Henry 1995]

The insertion of *don't* into C as a single lexical item[54] blocks inversion in negative imperatives.[55] This indicates that the inversion in the imperatives in (53) involves movement of V to C.

(i) Felix helped his neighbor out.
(ii) Felix helped out his neighbor.
(iii) Joe helped me out
(iv) * Joe helped out me.

[52] Object shift is also discussed in relation to verb movement in Early Modern English by Roberts (1995).
[53] The various positions of the subjects in (53) are due to the fact that the overt subject either remains in situ or moves out of the VP. According to Henry, VP adverbs are preferred after the subject in these imperatives, though they can also occur between verb and subject.
[54] Similarly in Standard English, where the subject appears to the right of *don't* (the subject obligatorily appears to the left of the verb in non-negative imperatives).

(i)a. Don't you do that.
b. * You don't do that.
c. You tell him.
d. * Tell you him.

[55] Except in unaccusatives and passives where apparent inversion is due not to verb movement but lack of subject raising (Henry 1995: 68).

(54)a.* Don't touch you that.

b. Don't you touch that. [Henry 1995]

It is therefore important to note that in these inversion imperatives that presumably involve V to C movement, weak object pronouns move out of the VP. Moreover, this object shift is obligatory, as illustrated in (55a-b).

(55)a Give you them always your full attention.

b. * Give you always them your full attention. [Henry 1995]

As in Swedish, weak pronouns object shift does not occur unless the main verb moves.

(56)a.* Her carefully you tell the story.

b. * You her carefully tell the story.

(57)a.* Be you her carefully telling the story when I get back.

b. * Be her carefully you telling the story when I get back. [Henry 1995]

These shifted weak object pronouns can appear before or after subjects. In the former case the subject has remained inside VP, (58a, 59a), in the latter case the subject has raised out of VP, (58b, 59b).

(58)a. Eat them you now.

b. Eat you them now. (*you* is stressed in this example)

(59)a. Give it you to the teacher

b. Give you it to the teacher [Henry 1995]

Object shift in inversion imperatives cannot apply to lexical NPs, (60a), stressed pronouns, (61a), coordinated pronouns, (62a), or strong pronouns (ending in *-uns*), (63a).

(60) a.* Make you your mummy always a cup of tea.
b. Make you always your mummy a cup of tea.

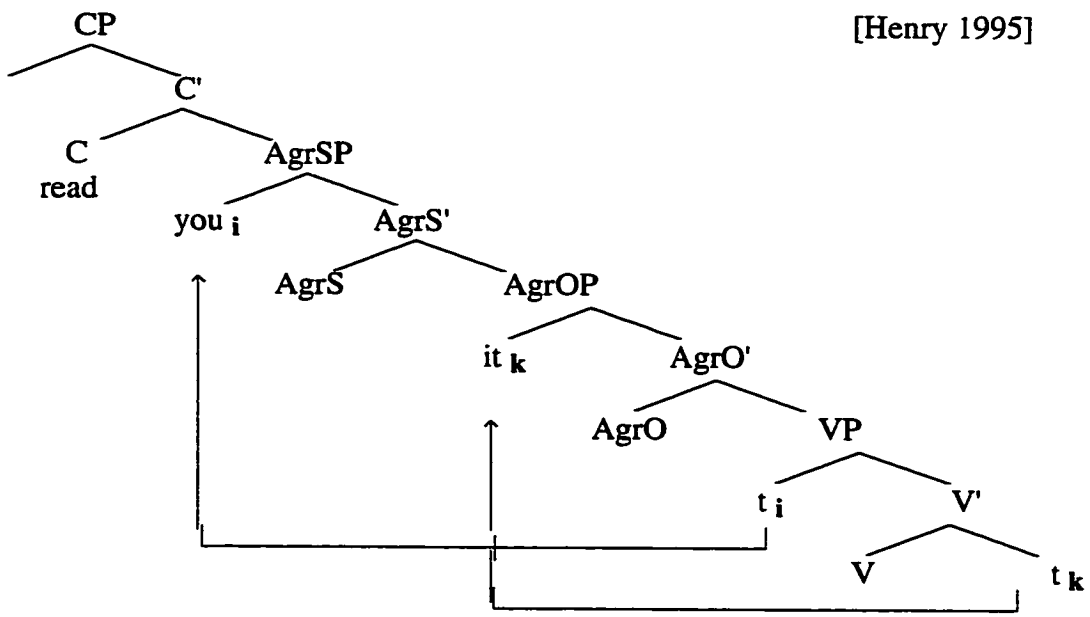
(61)a. * Tell HIM you the truth.
b. Tell you HIM the truth.

(62)a. * Tell him and her you the truth.
b. Tell you him and her the truth.

(63)a. * Tell themuns you the truth.
b. Tell you themuns the truth. [Henry 1995]

Henry argues that weak pronoun objects move to SpecAgrO, while the subject either remains in situ in SpecV or raises to SpecAgrS above the object.[56]

(64) [Henry 1995]



[56] Henry assumes that there are no Tense features in imperatives (p.76) so that she omits the projection TP from the imperative clause structure.

Note that as in the case of Swedish, the weak pronoun need not be adjacent to V after V has moved; this can be seen in examples (55a), (58b), and (59b), repeated below.

(55a) Give you them always your full attention.

(58b) Eat you them now.

(59b) Give you it to the teacher. [Henry 1995]

Despite the possibility of weak pronoun movement in Belfast English, it is not obligatory,[57] for there is no weak pronoun movement in Belfast English clauses where the verb does not move, as illustrated by the position of the pronoun *them* following the verb in the infinitival clause in (65).

(65) I want for to meet them. [Henry 1995]

Movement of weak pronouns in Belfast English therefore is linked to the movement of the verb out of the VP. Assuming the proposal of Cardinaletti & Starke (1994) that weak pronouns must be licensed, weak pronouns in Belfast English are apparently not licensed in situ when V has moved. Belfast English examples like (65), however, provide evidence that when V does not move, V has the ability to license weak

[57] That is, movement simply by virtue of a pronoun being weak.

pronouns in situ. O'odham discussed earlier provides yet another example of V licensing weak pronouns in situ.

We can hypothesize that movement of V out of VP disrupts this licensing, triggering movement of the pronoun to some alternative position in which it can be licensed. Cardinaletti & Starke (1994) suggest that functional specifier positions are licensing positions, and according to Henry (1995) it appears that SpecAgrOP in Belfast English is indeed a position in which weak pronouns can be licensed following V movement. SpecAgrP and SpecTP are licensing positions for weak pronouns in Zuni as discussed in Section 2.1.3, and specifiers of functional projections in IP appear to license weak pronouns in other languages, for example West Flemish (Haegeman 1993).

The Belfast English and O'odham evidence indicate, however, that these functional specifier positions are merely an alternative licensing position for weak pronouns and not the only licensing position. In what follows I will therefore propose an account of pronoun structure and licensing that accounts for ability of V to licensing weak pronouns in situ as well as the licensing of weak pronouns in the specifiers of functional projections.

2.3 Licensing Pronouns

Evidence in the preceding sections has indicated that the distribution of pronouns in several languages is governed by constraints that appear to affect different members of the class of pronouns in different ways. In addition, the same subclass of pronouns may behave differently under different syntactic conditions, as was the case for weak pronouns in Belfast English. In this section I will begin by suggesting why pronouns might require special licensing. This turns out to be a matter of licensing pronominal features, for which there appears to be a range of alternative licensing mechanisms that share one crucial property: functional features in a proximal domain to pronominal

features. Following Cardinaletti & Starke (1994, 1996) I will suggest that pronouns have complex internal structure (though the proposal here differs from theirs in several important details). It is assumed that weak pronouns and strong pronouns differ in their internal structure, and it is this structural difference that accounts for differences in the effect that licensing requirements have on each type of pronominal form.

In the final subsection of 2.3 I will present independent evidence for the existence of the functional features hypothesized to be responsible for licensing pronominal features. Specifically, I illustrate the effect that the presence of case features has on the visibility of other argument features and argue that the hypothesized functional features must be present since they have a similar effect.

2.3.1 Licensing Requirements of Inflectional Feature Bundles

I propose that the licensing requirements of pronouns ultimately stem from pronouns being constituted of inflectional feature bundles.[58] Pronouns therefore require the same special licensing required of inflectional features. Inflectional features generally cannot stand on their own but rather must be located in some functional head F° that is licensed (governed) by some head X°. This entails adjunction of the head F° containing the features to licensing (governing) head X°. For this reason we find inflectional

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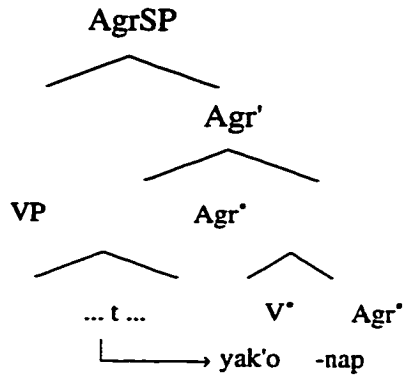
[58] Everett (1996) proposes a somewhat similar conception of the nature of inflectional features (his proposal for the origin of the configurations that these features occur in differs from the proposal here that licensing requirements constrain these configurations). For him, inflectional categories, or inherent features, are stored separately in the lexicon and inserted into functional heads (Agr° and D°), so that inflectional features are associated with spell-out rules rather than taking the form of traditional morphemes stored in the lexicon. These features are inserted into heads in the configurations shown in (i); for Everett the distribution of the heads containing these features is determined by differences in the category of the head inserted into (D° vs. Agr°) and by properties of the selecting head (basically ± subcategorizing).

(i)

	Pronouns:	$[D^{m}$ [D° phi-features]]
	Clitics:	$[X^{m/\circ}$ [AGR° phi-features] $[X^{m/\circ}$ ...]]
	Affixes:	[X° [AGR° phi-features]]

features - and here I mean specifically person, number, and gender features, since tense is often instantiated on its own as a lexical word in some languages - located in affixes to V° and N°.[59] [60] For example, number features for the subject in Zuni are located in an Agr° head adjoined to V°, (66).

(66) hon yak'o-nap-kya
1pl.nom. vomit-pl.subj.-past
'We vomited.'



Pronouns, though consisting of inflectional features, are XPs rather than X°s, as discussed in Section 2.1.3 in relation to Zuni examples (25)-(32). The licensing of a pronoun will therefore mean either the presence of a head-complement relation between pronoun and licensing head X° in the minimal (unextended, in the sense of Chomsky 1993) domain of X°, or the formation of a specifier-head relationship between pronoun and licensing head X°. I will return to this point below.

The proposal is summed up in (67).

(67) (i) Pronouns consist of inflectional feature bundles.
(ii) Inflectional features must be licensed by some head X°.
(iii) To be licensed, the pronoun must be in the minimal domain of licensing head X°.

---

[59] Also located in D°, as in Romance and Germanic languages.

[60] I will assume here that case features are different, as indicated by the fact that case sometimes stands on its own as a particle, for example the ERG case particle *e* in Samoan, as in (i) below. I follow the proposals made by Lamontagne & Travis (1987) and Bittner & Hale (1996a,b) and assume that case features are contained in their own head K° specific to case (as opposed to person, number etc. features which are all contained together in some Agr° head). While I will assume this analysis of case generally, it may turn out to be appropriate for case only in certain languages.

(i) Samoan sa sasa e le teine le maile
PST hit ERG the girl the dog
'The girl hit the dog.' [Mosel & Hovdhaugen 1992]

If features contained in the pronominal head have a special licensing requirement, we should expect to find a contrast in the syntactic behavior of items that are morphologically identical but have a different feature content and therefore different licensing requirements. Such is the case with Zuni 2nd versus 3rd person dual imperatives. The dual marker *'a:či* is used with both 2nd and 3rd person imperative subjects. There is a contrast in the syntactic behavior of *'a:či* , however, depending on its person features. 2nd person *'a:či* undergoes obligatory movement of the kind described in Section 2.1 for Zuni 1st and 2nd person weak pronouns, (68a). In contrast, 3rd person *'a:či* does not undergo this movement, (68b-b').

(68)a. ('a:cawak') 'a:či hom 'ansattu
boys 2du. 1sg.acc. help
'You two (boys) help me'

b. hom ('a:cawak') 'a:či 'ansattu-tu
1sg.acc. boys 3du. help-opt.
'Let those two (boys) help me'

b'. ??? 'a:či hom 'ansattu-tu
3du. 1sg.acc. help-opt.

The behavior of morphologically invariant *'a:či* suggests that it is the feature content of *'a:či* that is driving this movement, and more particularly, that 2nd person features require licensing in Zuni while 3rd person features do not. We might speculate that this is because Zuni 3rd person represents the absence of person features (cf. the lack of overt third person pronouns discussed in Section 2.1).

2.3.2 The Internal Structure of Pronouns

It was argued above that pronouns contain inflectional features that must be licensed. In this section I will present a proposal for the internal structure of pronouns and suggest how differences in this internal structure affect the way that pronominal features are licensed. I will ultimately suggest that the licensing requirements of pronominal features plus differences in the internal structure of pronouns leads to differences in the syntactic behavior of pronouns.

I suggest, following Cardinaletti & Starke (1994) in general terms, that pronouns have complex internal structure and that this internal structure is different for strong and weak pronouns. The licensing requirements of inflectional features play out differently depending on pronoun internal structure and will therefore affect strong and weak pronouns different ways.

The internal structures I assume for strong vs. weak pronouns are shown in (69) below and differ from the Cardinaletti & Starke proposal in several respects. In both types of pronoun the inflectional features that make up the pronoun are located in a D° head that projects a DP maximal category. One functional projection KP dominates DP in the weak pronoun, while two functional projections KP and FP dominate DP in the strong pronoun. Weak pronouns therefore differ from strong pronouns in lacking the functional projection FP. I assume that clitics are formally identical to weak pronouns[61] and that their differing prosodic properties are dealt with in a separate phonological component.[62] I will have nothing further to say about clitics here.

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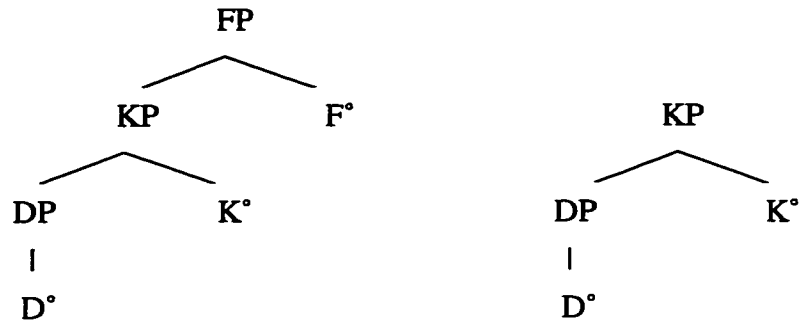
[61] A departure from the assumptions of Cardinaletti & Starke (1994), who assume weak pronouns and clitics are formally distinct.

[62] E.g. the fact that clitics X°-adjoin rather than XP-adjoin.

(69) Strong Pronoun Weak Pronoun



Referential and phi (Φ) features are contained in the D° head of the pronoun itself.[63] KP is a case phrase that is headed by a K° containing case features.[64] FP is a functional category projected by the head F° that contains functional features of some kind. I use generic functional category label F since it is still unclear exactly what this category is and what type of feature(s) it contains.[65] It is hypothesized that the features in F° serve to license the pronominal features in DP in the strong pronoun.

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[63] This assumption contrasts with that of Cardinaletti and Starke (1994), who assume case, agreement and referential features are located together in a C° head. Further, for them NP not DP is the root of the pronoun structure they propose.

[64] More specifically, I assume K° either contains case features itself, or is empty and is associated with case features located elsewhere (Bittner & Hale 1996a). The distinction (and relevance for pronoun licensing) will be discussed below.

[65] In the case of Zuni singular and plural nominative strong forms (cf. the examples in (1) earlier), F° appears to be filled by a copy of the number feature of the base. The morpheme *-no* found in the strong pronouns is also found in the suppletive plural imperative of the verb *'a:* 'go', (i) below. F° can apparently also be filled by an dummy morpheme consisting of final gemination of weak pronoun + *a* and is found in the accusative and possessive singular strong forms. This same gemination + *a* dummy ending can be found (for different reasons) on items from other lexical classes, (ii).

(i) *'a:* go
łu:'-u go.imperative-sg. (harmony of o>u across glottal stop)
łu'-no go.imperative-pl.

(ii) *tap* 'and' > *tappa*
-p 'Different Subject' > *-ppa*

Belfast English (Henry 1995) *-uns* is perhaps another example of a spellout of (plural) feature copy instantiating F° in strong pronouns (see example (63b) for use of the strong form).

(iii) Some Belfast English Pronouns:

WEAK	STRONG
us	usuns
you	yousuns
them	themuns

Recall that it was argued above that pronominal features require licensing as other inflectional features do, and that pronouns are licensed when they are in the minimal domain of some licensing head X°. I suggest more specifically that pronominal-licensing head X° is a functional head, and that there are two ways in which pronominal features can be licensed by a functional head. Either the pronoun must contain some licensing functional head (i.e. F°) as part of its structure, as in the case of the strong pronouns, or if F° is absent, as in the case of weak pronouns, the pronoun must move to the minimal domain of some other functional head (i.e. in IP). In other words, the need for some alternative form of licensing for their pronominal features drives the movement of weak pronouns.

I would like to suggest that in particular, it is the features present in the functional head that are responsible for licensing pronominal features. This is a different claim from the one made by Cardinaletti & Starke (1994) that the pronoun 'recovers' from the functional head certain features (case, referential, phi features) that it lacks. I assume that the pronoun possesses these features but has constraints imposed on its distribution due to the (inflectional) nature of these features. This distinction will be important below, where I will point out that since it is the proximity of (any) functional features that license the pronoun, not necessarily a specific functional head itself, we can account for the fact that case features of lexical V can license weak pronouns, as well as for the fact that more than one type of head with functional features (e.g. V or I) can license the same type of pronoun.

As a final note on the structures in (69) that I have hypothesized for strong and weak pronouns, I mention that I have included KP in pronoun structure[66] since, as argued

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[66] KP is assumed to occur inside the FP projection, since we find strong pronouns that make case distinctions as in (i), while we do not find such case distinctions when K° is acting as a pronominal licenser, (ii) (discussed in Section 2.5).

(i) Zuni

	Nom.	Acc.
Strong (1sg.)	ho:'o	homma
Weak (1sg.)	ho'	hom

in Section 2.5, the case features of pronouns can have a licensing effect on pronominal features similar to the functional features of licensing head F°.

Independent evidence exists that these functional features (i.e., features distinct from the pronominal features) are present in strong pronouns but absent in weak pronouns.

Section 2.3.3 examines the role of inherent case features, whose presence is uncontroversial, in blocking the visibility of other features. We can then compare the behavior of strong pronouns, which can be shown to have a similar blocking effect on person features (in languages that impose a person hierarchy constraint). Weak pronouns are shown to lack this property. I will argue that it is the presence of the hypothesized functional features of licensing head F° in strong pronouns that accounts for the feature-blocking properties of these pronouns.

2.3.3 Evidence for the Presence of Licensing Features

Inherent case features contained in the head K° can be shown to block the visibility of features of the argument dominated by K°. I first discuss the effect that this blocking of feature visibility has on anaphoric relations in colloquial Czech. I then suggest that inherent case features block the visibility of person features in Kashmiri, which can be seen in the way case interacts with the constraint imposed on the Kashmiri clause by a person feature hierarchy.

I will then show that strong pronouns in Southern Paiute behave similarly to arguments with inherent case in other languages. Specifically Southern Paiute strong pronouns behave as if they block the visibility of person features and therefore are not subject to constraints imposed by a person feature hierarchy. The Southern Paiute weak

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(ii)a. Me and him are gonna go. [acc. subject]
b. Give it to me and him. [acc. object]

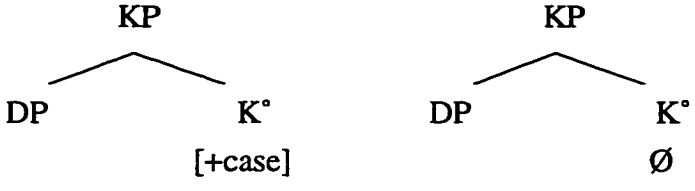
pronouns, on the other hand, are affected by these person hierarchy constraints. I conclude that it is the presence of features in some functional head F° that accounts for the behavior of the Southern Paiute strong pronouns as well as for the parallels in the behavior of strong pronouns and arguments with inherent case.

2.3.3.1 Case, Features, and Visibility

I will first outline the structural notions regarding case that I am assuming in this and subsequent sections.

I assume along with Lamontagne & Travis (1987) and Bittner & Hale (1996a) that the case features of an argument are in some way associated with a head K° that heads a case phrase KP dominating the argument, as in (70).

(70) Inherent Case Structural Case



Inherent or lexical case features are specified directly in K° itself. In the case of structural case, however, K° is empty and case features are associated with K° indirectly through the *Case-binding* relation proposed by Bittner & Hale (1996a). The assumption is that because structural case K° is empty, it must be properly governed like any other empty category, and that the Case-binding relation is such a governing relation.

(71) Case Binding (Bittner & Hale 1996a:12)

[Empty (Ø)] K° is Case-bound if α, a head that delimits a small clause, locally c-commands K° and α governs a Case competitor for K° .

Heads that can Case-bind an empty K° include I, V, and *v* (*v* heads the outer shell of the expanded VP assumed in Chomsky 1995b[67]). The structural case features that are associated with empty (Ø) K° therefore vary according to which head K° is Case-bound by.[68]

It will be important to make this formal distinction between inherent case, where case head K° contains features, and structural case, where K° is empty, since the presence vs. the absence of features in K° will be argued to have different effects on the visibility of the features of the arguments that K° dominates.

As I will argue below, certain syntactic relations such as binding appear to rely on the features of one argument being 'visible' to some other argument (e.g. for the purpose of copying). In addition, the constraints imposed by the person hierarchies found in some languages appear to apply to arguments whose features are 'visible' to one another for comparison. I propose that the referential and phi (person, number) features of an argument β are 'visible' to some other argument γ when there are no functional features such as inherent case features located in some head dominating the argument β. Informally this means that for one set of features to be 'visible' to another set of features, there must be no functional features intervening between the two.

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[67] See Chapter 3 of this dissertation for discussion on this point.

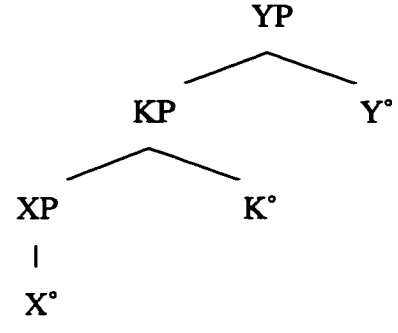
[68] I leave out further elaboration of the Bittner & Hale theory of case binding since such detail is not relevant for present purposes. The distinction between empty K° and K° that contains case features is what is important here.

(72) Feature Visibility

Referential and phi features of an argument β are *visible* to some other argument γ when there are no functional features located in some head δ heading a projection dominating the argument β.

For example, the presence of case features in K° appears to block the features of category YP dominating KP from having access (for copy, comparison, etc.) to the features of some other category XP dominated by KP, the relationship illustrated in (73) . Therefore any syntactic relation that relies on YP's access to XP's features will be affected by the presence of inherent case features. In the case of structural case, K° is empty and therefore does not block the visibility relationship between YP and XP.

(73)



I will now discuss three instances in which the presence of functional features dominating one set of argument features affects the visibility of those argument features to other arguments. The third example provides evidence for the existence in strong pronouns of features that are contained in a functional licensing head F°.

2.3.3.2 Anaphoric Relations in Colloquial Czech

Examples from Colloquial Czech[69] illustrate the ability of inherent case features to block the visibility of argument features. In secondary predication constructions such

[69] I am grateful to Jindřich Toman for bringing this phenomenon and these examples to my attention.

as that in (74), colloquial Czech allows the possessive anaphor *svě* contained in the secondary predicate to be bound both by the structural accusative object (subject of secondary predicate) as well as by the subject of the main predicate.

(74) Našel Karla ve svě posteli
(He$_i$) found Karl.acc.$_j$ in poss.$_{i,j}$ bed.dat.
'He$_i$ found Karl$_j$ in his$_{i,j}$ bed.'

However, when the subject of the secondary predication receives inherent case marking from the main predication verb, as it does in (75), this inherent-case-marked subject cannot be interpreted as a binder of the possessive anaphor *svou* . Inherent case appears to block the necessary licensing relationship between potential antecedent and anaphor. Specifically, it seems that case features in the K° associated with dative *Karlovi* blocks the referential and phi features of this potential antecedent from being visible to the anaphor for copying, this feature-copying between antecedent and anaphor being necessary for proper binding.

(75) Pomohl Karlovi$_j$ na svou lod'
(He$_i$) helped Karl.dat.$_j$ on poss.$_{i,*j}$ boat
'He$_i$ helped Karl$_j$ onto his$_{i,*j}$ boat.'

Further confirmation in Czech that case features in K° block features of an argument it marks from being visible to another argument comes from the effect of inherent case assignment on relativization. In colloquial Czech, the gap corresponding to a relativized object is null if the object is inanimate, as with *ta kniha* 'the book' in (76a), but must be filled by a resumptive pronoun *jí* if the relativized object is animate, as with

ta žena 'the woman' in (76b). According to Toman (1997) this is because there is a [+animate] feature at the gap that must be supported (spelled out).

(76)a. ta kniha$_i$ co jsem Ø$_i$ našel
the book.nom. what 1.sg.aux find
'the book that I found'

b. ta žena$_i$ co jsem jí$_i$ ne-našel
the woman.nom. what 1sg.aux (resumpt.) neg.-find
'the woman that I did not find'

If the relativized object is inanimate as in *ta kniha* 'the book' but assigned inherent case at the gap as in (77), the gap cannot be null as in (76a) but must be filled by the resumptive pronoun. Inherent case features at the gap apparently prevent the formation of a proper licensing relationship between the relativized DP and the features at the gap, i.e. the inherent case feature blocks the features at the gap from being visible to the DP for licensing and interpretation. Since the (features at the) gap in the relative clause is not licensed it must be filled by an overt pronoun.[70]

(77) ta kniha$_i$ co jsem jí$_i$ věnoval mnoho casu
the book.nom. what 1sg.aux dedicated +acc. much time.gen.
'the book that I dedicated much time to'

[70] This analysis is slightly different from the one proposed by Toman (1997).

Comparison of (76a) and (77) indicates that empty (structural case) K° assigned to the object of 'find' in (76a) has no effect on the visibility of the argument's features, while the inherent case features located in K° are responsible for blocking feature visibility.[71]

2.3.3.3 Person Hierarchies in Kashmiri

The effect of case features on feature visibility can be seen in the operation of the Kashmiri[72] person feature hierarchy constraint.

First some background. Kashmiri has two types of pronominal elements, independent pronouns and clitics. Both sets of pronouns are marked for person, number and case features. Several diagnostic behaviors indicate that the independent pronouns are strong pronouns. One such diagnostic is the behavior of the independent pronouns vis à vis non-finite clauses. Clitic pronouns lack the F° projection and so require an alternative licenser[73], usually a functional head of a finite clause. The Kashmiri accusative clitic *an* in (78) therefore climbs out of the non-finite complement into the main clause.

↓

(78) bI chu-s-an yatsha:n (su)[74] vuch-un

1sg.-abs. aux-(N)-(Acc) wanting (he) see-3msg/3fsg

(1sg)-(3sg)

'I want to see him' [Wali & Koul 1997]

[71] Note by the way that we would not expect case to have such an effect on feature visibility if it were simply one of a set of features of DP rather that housed in a syntactic head (K°) of its own.
[72] I thank Gulrukh Ahanger for judgments on the Kashmiri data.
[73] This is jumping a bit ahead (see Section 2.4). N = nominative; abs. = absolutive. D = dative.
[74] Optional doubling of accusative argument with absolutive/nominative pronoun.

Independent pronouns contain functional head F°, however, and are therefore licensed in situ. Independent pronouns are predicted to be able to remain inside a non-finite complement. The position of 1st singular dative pronoun *me* inside the lower clause in (79) shows that this prediction is borne out.[75]

(79) sAli:m chu yatsha:n [ba:gas.manz me vuch-an]
Salim aux wanting garden-in 1sg.-dat see-inf-neut.
'Salim wants to see me in the garden' [Wali & Koul 1997]

Holmberg (1986, 1991) argued that weak pronouns in mainland Scandinavian undergo obligatory object shift when verb movement has taken place.[76] As example (80) shows, in Kashmiri the independent pronouns are not subject to obligatory object shift (i.e. out of the VP past negation) even though V movement has occurred in (80), indicating that these independent pronouns are strong pronouns.[77]

(80) tAm' le:khIno:vus nI bI ciTh'
he-erg. wrote-caus. neg. me-abs. letter
'He didn't make me write a letter'

---

[75] Note also that in (78) that while the clitic pronoun moves out of the non-finite clause, the independent pronoun that doubles the clitic remains inside the non-finite clause.

[76] Cf. the discussion of example (39) earlier.

[77] As expected for strong pronoun, the Kashmiri independent pronouns allow *case matching* when occurring as bare replies to questions, (i). That is, the case on the response form of the pronoun is the same case that would appear on the pronoun in the same function in a complete clause.

(i)a. Who will kick the dog? --- bI (1sg. abs.)
b. Who will the dog bite? --- me (1sg. dat.)
c. Who kicked the dog? --- me (1sg. erg.)

Contrast English, (ii), where accusative case is found on all bare response forms of pronouns. (This difference will be discussed in Section 2.5).

(ii)a. Who will feed the dog? -- me
b. Who will the dog bite? -- me

I now turn directly to the Kashmiri person feature hierarchy. A person hierarchy constraint operates in Kashmiri such that subject person features must outrank object person features. Person features in Kashmiri are ranked 1st > 2nd > 3rd. A curious property of this constraint is that Kashmiri displays hierarchy effects in only non-past tenses. I will argue that hierarchy effects are only found in non-past tenses because (i) the mechanism responsible for hierarchy effects involves the comparison of person features of arguments that are visible to one another, (ii) subject person features are rendered non-visible in past tenses, and (iii) case features are responsible for rendering person features non-visible to one another. In other words, a formal mechanism[78] is behind the Kashmiri person hierarchy constraint and the presence of case features in K° has an effect on this mechanism.

In a non-past Kashmiri clause, if the person feature of the object ranks lower than the person feature of the subject (in conformity with the hierarchy constraint), arguments are assigned structural nominative and accusative case according to regular rules. This type of clause is illustrated in (81) with a 1st person subject and 2nd person object.[79]

(81) (bI) chu-s-ath (tsI) parInaavaan
1sg-abs. be-cl(N)-cl(Acc.) 2sg-abs. teaching
(1sg)-(2sg)
'I am teaching you' [Wali & Koul 1994]

If the person feature of the object ranks higher than the person feature of the subject (in violation of the hierarchy constraint), the higher ranking object feature must be rendered non-visible. Person features of arguments visible to each other must not violate the hierarchy constraint, but person features of non-visible arguments are not subject to the constraint. Person features in non-past tenses are rendered non-visible by marking the

[78] This analysis is novel in that person hierarchies are usually given a functional/pragmatic explanation.
[79] Parentheses in line 1 of the examples indicate an optional doubled pronoun.

pronoun with dative case. Dative has the effect of rendering person features non-visible because dative is not a structural case but rather consists of case features inserted directly into K°. An object pronoun with higher ranking person features and dative case can be spelled out as either a dative clitic, e.g. *am* in (82), or a dative independent pronoun, *me* in (83).

(82) tsI chu-h-*am* parInaavaan
you-abs. be-cl(N)-cl(D) teaching
(2sg)-(1sg)
'You are teaching me' [Wali & Koul 1994]

(83) tsI chu-kh *me* parInaavaan
you-abs. be-cl(N) 1sg.-Dat teaching
(2sg)
'You are teaching me' [Wali & Koul 1994]

Kashmiri exhibits a case marking split according to tense. While arguments in a non-past clause bear nominative/accusative type case, arguments in a past clause bear ergative/nominative case. As mentioned above, the person hierarchy constraint does not operate in a past clause, so that all arguments regardless of person features are marked with ergative and nominative (= absolutive) case by regular rule, (84). In particular, object person features of a nominative object may outrank person features of an ergative subject without triggering alternative (dative) case marking of objects in a past clause.

(84) tse vuch-u-th-as bI
you-erg. saw-agr-cl(Erg)-cl(N) me-abs.
(msg)-(2sg)-(1sg)
'You saw me (masc).' [Wali & Koul 1994]

To summarize, person hierarchy effects occur in Kashmiri non-past clauses, with nominative/accusative case. Hierarchy effects do not occur in past clauses, with ergative/nominative case.

It is standard practice in treatments of Kashmiri to refer to ergative and accusative as distinct cases (for example Wali & Koul 1997), but it is important to note that what are referred to as ergative and accusative case clitics are in fact morphologically identical.

(85) **Kashmiri Clitics** [cf. Wali & Koul 1997]

	Ergative	Accusative
1 sg.	m	m
pl.	Ø	Ø
2 sg.	th	th
pl.	v(i)	v(i)
3 sg.	n	n
pl.	kh	kh

If they are morphologically identical, why are ergative and accusative clitics affected differently by the person hierarchy constraint? I suggest that it is the presence vs. absence of case features in K° itself that formally distinguish 'ergative' instances of the clitics from 'accusative' and that will account for their different behavior with regard to the person hierarchy.

The past form of the Kashmiri verb appears to derive historically from a participle and therefore in the modern language lacks the ability to assign case to its object. Nominative (absolutive) case is assigned to the object in a past clause by I°. This uses up

the structural case assigning ability of the clause. Since no structural case is available for the subject in a past clause, a (non-nominative) case feature must be inserted into the K° associated with the subject. This feature is spelled out as 'ergative'. I am therefore suggesting that 'ergative' and 'accusative' in Kashmiri consist of the same case feature (and thus are spelled out identically morphologically). 'Ergative' case marking on subjects in Kashmiri consists of the spellout of non-nominative case features inserted directly into K°,[80] while 'accusative' is the spellout of the same non-nominative case features when these features are indirectly associated with the empty K° head via a Case-binding relation.

The crucial formal difference between the 'ergative' and 'accusative' forms of Kashmiri non-nominative case is the presence of case features in K° itself for 'ergative' and the absence of any features in K° itself for 'accusative'. Non-nominative (ergative) features in K° block the visibility of the person features that ergative case is associated with, so that there are no person hierarchy effect in past clauses. In non-past clauses, non-nominative (accusative) case is structurally associated with empty K° through a Case-binding relation. Empty 'accusative' K° therefore does not affect the visibility of person features in non-past clauses. Despite these differences, the morphological spellout for both cases will be the same, because the non-nominative features of each are ultimately the same.

2.3.3.4 Strong Pronouns and Feature Visibility in Southern Paiute

[80] Jelinek (1993) and Nash (1995) (among others) argue that ergative is a sort of lexical case, in the sense that it is always spelled-out morphologically (unlike structural cases). In addition, ergative morphology is found in many languages to be the same case morphology that marks a variety of adjuncts - instrumental, locative and genitive (Nash 1995: 416). This view of ergative case as a quasi-inherent case supports the proposal made here that Kashmiri ergative case consists of case features inserted into K° (parallel to the treatment of inherent case features).

I have argued, based on evidence from Czech and Kashmiri, that case (i.e. functional) features can make argument features inaccessible or non-visible to some other argument in the clause, e.g. for the purpose of copy or comparison. I will now argue that strong pronouns are associated with similar behavior. That is, there is evidence that some property of strong pronouns is responsible for rendering features of the strong pronoun non-visible to other arguments. In particular, I examine the behavior of strong pronouns in Southern Paiute with regard to a person hierarchy constraint operating in that language.

Sapir (1930) describes two sets of pronouns for Southern Paiute (Uto-Aztecan), a set of independent pronouns and a set of clitic pronouns. The independent pronouns distinguish subject and object forms, while clitic pronouns do not, a single clitic form being used for all grammatical roles of a particular person/number feature bundle.

The syntax of the two types of pronominal forms appears to be based on two different principles. When independent pronouns are used, their order is determined by grammatical function. Subject always precedes object, regardless of the position of the verb.[81]

	Subj.	**Obj.**	
(86)a.	imi	nïniA	pAxqa'u-mpa:n-:iA
	you	me	kill-fut.-prtcl.
	'You will kill me'		

	Subj.	**Obj.**
b.	nï'	paxqa'ŋu-ŋumwi mwïmwi'A
	I	kill-you.pl. you (pl.obj.)
	'I will kill you'	

[Sapir 1930]

[81] Southern Paiute appears to be a verb-final language, and apparently the verb can also move to some initial position, possibly C°.

A different constraint governs the ordering of the clitic pronouns. The principles responsible for clitic order ignore the grammatical function of the clitic; clitic order is instead based on person features, so that clitic pronouns occur together in a clitic cluster in the order 3rd person - 2nd person - 1st person.[82] Some possible clitic combinations are illustrated in (87a-c). This ordering appears to reflect the operation of some type of person hierarchy constraint (see Jelinek 1993, Nash 1995 among others for further discussion of similar phenomena).

(87) Order of Southern Paiute Clitic Pronominals:
3rd person - 2nd person - 1st person

a. -ŋwï-nï
2pl.-1sg.

b. -ɑmï-nɪ
3pl.an.vis.-1.sg.

c. -aq:a-ŋwï
3inan.invis.-2pl.

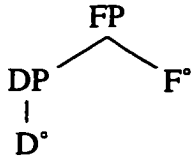
I suggest that the two different types of rules described above as governing pronominal order in Southern Paiute can be reduced to a single principle.

Recall that I assume something like that in (88) as the structure of strong pronouns (I ignore the KP projection here), where the pronoun consists of a D° head

[82] A few violations of this order occur at a superficial level, due to irregularities of spell-out rules.

containing person/number etc. features that projects a DP and is further contained in an FP shell. The existence of F° was initially postulated because it appears to play a role in the licensing of strong pronouns, distinguishing them from weak pronouns and clitics. (This licensing role of F° in strong pronouns will be discussed in Section 2.4.)

(88)a. Strong Pronoun Structure



(88)b. Weak Pronoun & Clitic Structure

I suggest that the Southern Paiute independent pronouns in (86) are strong pronouns and therefore by hypothesis have the structure in (88a). Southern Paiute clitic pronouns have the structure in (88b). The difference in the internal structure of the pronouns essentially accounts for their different behavior in Southern Paiute, in the following way.

If F° is present in the structure of strong pronouns and contains functional features, these functional features should have the same visibility-blocking effect on argument features that other functional features (like inherent case) do. The mechanism responsible for the person hierarchy constraint appears to involve some type of comparison of person features, with the requirement that the features of arguments must be visible to each other in syntax to be comparable. If functional head F° is present in the structure of strong pronouns, the person features of strong pronouns should not be visible to an element outside FP for comparison. The evidence from Southern Paiute bears out this prediction: the ordering constraint imposed by the person hierarchy in Southern Paiute does not apply to strong pronouns, and the order of strong pronouns is instead determined by factors affecting the order of nominal arguments in general, namely grammatical function (or specifier vs. complement relation). Clitic pronouns on the other

hand lack functional head F°. Consequently, the person features of Southern Paiute clitics are visible to other arguments of the clause and are therefore subject to constraints imposed by the person hierarchy rule.

We can therefore account for the ordering behavior of Southern Paiute independent and clitic pronouns by a single set of principles, by assuming that pronouns have internally complex structure as in (88) since the presence vs. absence of the functional features of F° will determine whether a pronoun is affected by the person hierarchy constraint.

To sum up the discussion in this section, I have argued that the presence of functional features such as inherent case features in a projection dominating an argument serves to render the features of that argument non-visible to other arguments in the clause for purposes of copy or comparison. Because of the operation of a person hierarchy constraint in Southern Paiute, the ordering of strong pronouns in Southern Paiute can only be accounted for if we assume that the person features of these strong pronouns are not visible for comparison with those of other arguments. Functional features would have the effect of rendering person features non-visible. We therefore have evidence for the existence of an extra set of functional features in the Southern Paiute strong pronoun that do not occur in the clitic (weak) pronoun.

Thus concludes this short digression concerning the existence of the hypothesized licensing features in strong pronouns. I now return to the notion of licensing and discuss the role of this functional head F° in licensing pronouns, as well as alternative mechanisms for licensing pronominal features.[83]

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[83] As a final note on this section I point out that I have also provided a formal account of person hierarchy phenomena in Southern Paiute and Kashmiri based on feature visibility. It is unclear what the precise mechanism is behind hierarchy phenomena like these, and so it is unclear what the precise role of feature visibility is. Nevertheless, it does seem fairly clear that the comparison of visible person features plays some role. Many variations on the person hierarchy constraint have been observed in other languages. It is hoped that the proposals made here may be of some use toward the construction of a formal account of these mechanisms as well.

2.4 Licensing Strategies and Alternative Licensing

Before the above digression I had proposed that pronominal features need to be licensed because they are in essence inflectional features. In addition, I suggested following Cardinaletti & Starke (1994) that not only do pronouns have complex internal structure, weak pronouns and strong pronouns differ in their internal structure. We might predict that as a consequence of this difference in internal structure, the pronominal features of strong pronouns will be licensed in different structural configurations that the pronominal features of weak pronouns.

In addition, the argument that it is the functional features present in some head that are responsible for licensing pronominal features has different implications than those following from the claim of Cardinaletti & Starke (1994) that the pronoun 'recovers' from a particular functional head specific features (case, referential, phi features) that it lacks. In particular, if we assume that the proximity of functional features licenses the pronoun (not a specific functional head), we can account for the fact that case features of lexical V appear to license weak pronouns, as well as for the fact that more than one type of head with functional features (e.g. V or I) appears to be able to license the same type of pronoun. We can also account for the fact that languages differ according to which particular functional heads of IP license weak pronouns.[84] (Each of these points will be discussed below.)

In short, the analysis presented here accounts both for the Zuni data described in Section 2.1 as well as the O'odham and Belfast English data from Section 2.2 that was argued to be problematic for a purely derivational theory of licensing like that proposed by Cardinaletti & Starke (1994).

In order for pronominal features to be licensed, the pronoun must occur in the minimal domain of some head Z° containing functional features. I assume that pronouns

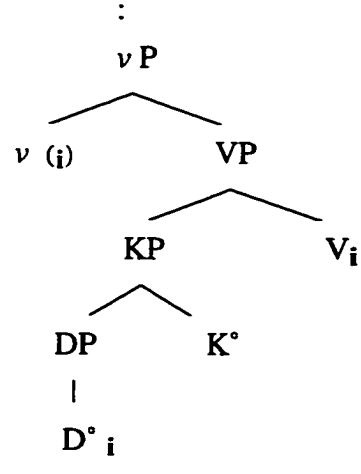
[84] Agr°, T° in Zuni and AgrO° in Belfast English are three that have been discussed here.

are DPs, therefore they cannot adjoin to the head Z° itself.[85] Occurring in the minimal domain of Z° will therefore mean that a DP pronoun must occupy the complement position of Z° or the specifier position of Z°. There are at least three possible configurations in which these conditions are met, each of which will be discussed in turn.

2.4.1 Licensing in Situ

First, the licensing head and the pronoun can be in a head-complement relation to one another. This describes the situation when the case features of a verb license a weak pronoun object complement. The result is the licensing of the weak pronoun in situ, as is the case in the representation in (89).[86] Licensing head and pronominal feature head are coindexed. Neither the verb nor the pronoun has undergone movement out of the VP.

(89)



[85] Note that I am excluding clitics from this discussion.

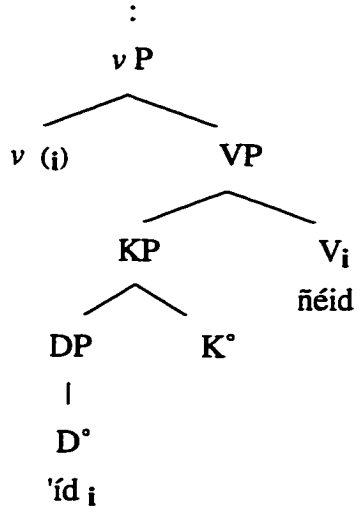
[86] I assume that v has the property of being able to assign/check case (these ideas are developed in Chapter 3 of this dissertation). We have to perhaps assume that v transmits case features to V and that person features of DP are part of the argument at the KP projection as well.

(89) illustrates the configuration in which the O'odham weak pronouns described earlier[87] are licensed in situ. This data is repeated below with the structural representation that is assumed.

(90) O'odham (Papago)

$[_{vP} v_{(i)}\ [_{VP}\ [_{KP}\ [_{DP}\ \text{'íd}_i\ ]\ ]\ \ \text{ñéid}_i\ ]\ ]$

him.[w] sees



Belfast English weak pronouns in non-[imperative + inversion] constructions are also licensed in situ in this way, as illustrated again in (91), as well as Swedish weak pronouns when V movement has not taken place.

(91) Belfast English [Henry 1995]

I want for to $[_{vP}\ v_i\ [_{VP}$ meet $[_{KP}\ [_{DP}$ them$_i$]]]]

[87] See the discussion of examples (48a) and (49a) in Section 2.2.2.

If the ability of V to assign/check case features allows it to license weak pronouns in situ[88], then we predict that another element that has a similar ability vis à vis case features should also be able to license a weak pronouns in similar syntactic contexts. There is independent evidence from Zuni that this prediction can explain. Zuni *tap* is a coordinating conjunction, as illustrated in (92). *tap* also appears to have the ability to assign accusative case, as indicated by the accusative case of the pronoun in the adjunctive use of pronoun + *tap* both in the infinitival construction in (93a) and in the finite clause in (93b).

(92) Nemme' tap Gilbert 'a:n-uwa
N. and G. go-future
'Nemme and Gilbert will go.'

(93)a. hom tap tom 'itok'ya-nakya teni
1sg.acc. and 2sg.acc. feed-infin. hard
'It's hard for me to feed you.'

b. hom tap 'iš 'uss 'ali-ye
1sg.acc. and very that nice-pres.stat.
'To me, that [the rock] is beautiful.'

Since *tap* has this case assigning ability, we predict that *tap* should be able to license weak pronouns in otherwise syntactically deficient contexts (in the sense assumed in Section 2.1.3). This is of course the case in (93a-b) above where weak pronouns are licensed despite apparently occurring as adjuncts to IP. There is a second instance in

[88] Note the inaccessibility of functional projections in this context.

Zuni which this prediction is borne out, namely coordinate structures. I discussed earlier that Zuni nominative pronouns occur in their strong form when coordinated as in (94) below, presumably due to the extra DP node of coordination blocking a licensing relationship between the pronoun and some functional head of IP.[89]

(94) [$_{IP}$ [$_{DP}$ [$_{DP}$ho:'o] tap [$_{DP}$Nemme]] hon 'a:n-uwa]
1sg.nom.[s] and N. 1du.nom.[w] go-future
'Me and Nemme'll go'

Since *tap* is an accusative case assigner/checker, we predict that when a Zuni accusative pronoun is coordinated with *tap* , the pronoun can be licensed by *tap* and therefore can be weak, as illustrated in (95a).[90] In fact, as the contrast in (95b) shows, the accusative pronoun coordinated with *tap* must be weak. The coordination of accusative vs. nominative pronouns in Zuni therefore differs in this important respect (Zuni coordinated pronouns must be strong).

(95)a. hom tap Gilbert 'utte-kya
1sg.acc.[w] and Gilbert bite-past

[89] I will return to strong pronouns in this context below.

[90] I have to assume that the accusative case properties of *tap* are somehow blocked in the case of nominative coordination. Perhaps Zuni nominative and accusative coordination have two different structural representations, i.e. (i) for nominative and (ii) for accusative.

(i) [$_{DP}$ [$_{DP}$ho:'o] tap [$_{DP}$Gilbert]]

(ii) [$_{DP}$ [$_{?PP}$ [$_{DP}$hom] tap] [$_{DP}$Gilbert]]

tap inside the highest DP projection dominating the coordinate structure forms a constituent with the pronoun.

tap cannot act as a licensing head in the same way for a nominative pronoun because its [+accusative] specification would clash with the nominative case of the pronoun. It is still a mystery how the nominative pronoun gets/checks case at all, if it is blocked from being licensed by the nominative checking head in IP. This may suggest that Zuni 'nominative' in fact represents the absence of case rather than the spelling out of a [+nominative] case feature, an assumption also made by Bittner and Hale (1996a) for nominative case in other languages.

'He [the dog] bit me and Gilbert.'

b. * homma tap Gilbert 'utte-kya
1sg.acc.[s] and Gilbert bite-past
'He [the dog] bit me and Gilbert.'

The licensing of the accusative pronoun by *tap* is confirmed by the fact that the coordinated argument in (96a) cannot be repeated by (coindexed with) the (dual) accusative pronoun *ho'no'* presumably in argument position, while a coindexed nominative pronominal argument is required to occur with nominative coordination, (96b-c).

(96)a. [hom tap]$_i$ Gilbert (*ho'no'$_i$) 'utte-kya
1sg.acc.[w] and Gilbert 1du.acc.[w] bite-past
'He [the dog] bit me and Gilbert.'

b. [ho:'o tap Nemme]$_i$ hon$_i$ 'a:n-uwa
1sg.nom.[s] and N. 1du.nom go-future
'Me and Nemme'll go.'

c. * ho:'o tap Nemme 'a:n-uwa
1sg.nom.[s] and N. go-future
'Me and Nemme'll go.'

I assume that the presence of this coindexed pronoun in (96b) is evidence of the DP maximal projection dominating the coordinate structure representation in (94) and indicates that the coordinated strong nominative pronoun itself somehow does not

function as an argument of the verb, while the absence of such a coindexed pronoun in (96a) indicates that the licensed weak accusative pronoun does somehow function as an argument.

2.4.2 Movement and Licensing in Specifiers

I have argued that functional (i.e. case) features associated with some lexical head have the ability to license weak pronouns in situ. If the lexical head in question is moved out of this minimal domain, however, this movement will have the effect of disrupting the licensing relationship between that head and a weak pronoun. This is the case when the verb moves out of VP. The weak pronoun is no longer licensed in situ by features of the verb, therefore the pronoun must move to the domain of another potential licenser of pronominal features.

Any of the functional heads in IP contain features (tense, agreement) and therefore are potential licensers of pronominal features. The weak pronoun must therefore move to the nearest specifier position in which it will be located in the immediate domain of some licensing functional head. This type of obligatory movement characterizes weak pronoun movement to the specifier of a functional projection in Zuni, as illustrated in the examples in (97), and in Swedish when the verb undergoes V-to-I movement. As I am assuming that V moves out of the VP in Zuni finite clauses (cf. the discussion of (42)-(44) at the end of Section 2.1.3), weak pronoun movement is always obligatory in Zuni.

(97)a. $[_{TP}$ tom$_k$ $[_{AGRP}$ ho'$_j$ $[_{VP}$ t_j t_k $t_i]]$ šema$_i$-kya]
2sg.acc.[w] 1sg.nom.[w] call-past
'I called you.'

b. $[_{TP}$ $[_{AGRP}$ hom$_k$ $[_{VP}$ lak^{w}k^w $[_{VP}$ t_k 'e'le' t_i]]] palo$_i$-ye]
1sg.acc.(poss.).[w] over.there daughter be.buried-pres.stat.
'My daughter is buried over there.'

When the specifier of a functional head, as the only potential licensing position for Zuni pronoun features, is absent as in the case of non-finite clauses, we expect weak pronouns to climb out of the non-finite clause into a higher finite clause. This prediction is borne out in Zuni - weak pronouns climb obligatorily out of non-finite clauses since these clauses contain no licenser for pronoun features.

(98) $[_{TP}$ **tom$_k$** $[_{AGRP}$ ho'$_j$ $[_{VP}$ t_j $[_{CP}$ $[_{VP}$ Pilpo 'an t_k $t_i]$ tap$_i$ -kyan] $t_m]]$ 'iy$_m$-a]

2sg.acc.[w] 1sg.nom.[w] Filbert P get-in.order come-pres.

'I have come to get you away from Filbert.'

Note that without a theory of the licensing requirements of pronominal features, weak pronoun climbing is unexpected.[91]

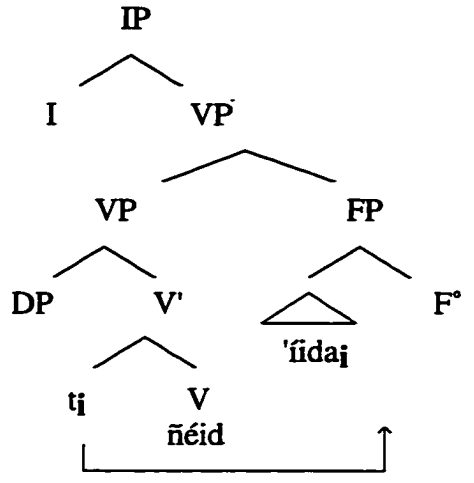
2.4.3 Strong Pronouns and Licensing in Deficient Contexts

The final set of cases is that in which no other licenser is available for the pronoun. This circumstance can arise when the pronoun is moved out of a licensing domain for stylistic or semantic reasons and moved into a syntactically deficient context, as in the case of O'odham pronouns that are moved out of V complement position and adjoined to VP, (99). The strong form of the pronoun must be used under these circumstances since it contains a head F° with functional features that can serve as a

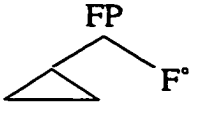
[91] Since it cannot be phonologically motivated.

licenser for the features of the pronoun. DP is not only in the domain of F°, it is in a head-complement relation with F°.

(99)



The strong pronoun is also used when the pronoun originates in a syntactically deficient context, i.e. a context in which the clause does not provide a licensing head with functional features. Three such contexts were described for Zuni: bare response, predication and coordination. In these three contexts, any potential licensing head is either entirely absent as in the case of bare responses, (100), or outside the immediate domain of the pronoun as in the use of a pronoun as a predicate nominal, (101), and in coordination, (102).



(100)	čo-p waccita 'utte-kya	homma	(*hom)
	who-Q dog bite-past	1sg.acc.[s]	(1sg.acc.[w])
	'Who did the dog bite?'	'me.'	

(101)	[$_{IP}$ [$_{VP}$ 'ussi [$_{DP}$ho:'o] $Ø_{V}$]]	(* 'ussi ho')
	that 1sg.nom.[s]	(1sg.nom.[w])
	'That's me.'	

(102) [$_{IP}$ [$_{DP}$ [$_{DP}$ho:'o] tap [$_{DP}$Nemme]] ... hon 'a:n-uwa]
1sg.nom.[s] and N. 1du.nom.[w] go-future
'Me and Nemme'll go.'

And finally, there appear to be two different types of languages with respect to the distribution of strong pronouns. In one type, represent by Zuni and perhaps O'odham, strong pronouns occur only in syntactically deficient contexts. The other type consists of languages like Belfast English, Swedish, (103), Italian and French (Cardinaletti & Starke 1994), in which strong pronouns can appear in non-deficient domains (i.e. in the domain of some potential licenser furnished by the clause). Strong pronouns in such contexts often appear to have extra semantic value, for example emphatic or focused interpretation, thought it is unclear exactly what mechanism enables this semantic property to allow strong pronouns to occur in such contexts in these languages but not in languages like Zuni, (104).

(103) Anna såg kaske inte DEN
Anna saw maybe not it [Holmberg 1991]

(104) hom(*ma) to' 'ansattu-nna
1sg.acc.[w](*[s]) 2sg.nom. help-fut.
'You should help ME!'

As a final note on the proposals in this section for how pronominal features are licensed, I point out that despite arguments here that functional features have the ability

to license pronominal features in their minimal domain, it is not clear why this should be the case. I must therefore present the current study as a suggestive line of research and hope that further investigation will clarify the problem somewhat.

2.5 Other Licensing Phenomena

In this section I suggest extending the account of pronominal licensing beyond the facts of pronominal syntax the account was developed to explain. In particular, I will discuss how licensing might account for certain properties of multiple WH movement in Zuni as well as so-called default accusative case in English.

2.5.1 Zuni Multiple WH Movement

I have argued that the licensing requirement of pronominal features accounts for the movement undergone by weak pronouns in certain syntactic contexts. In particular, the analysis accounts for the distribution of short and long pronoun forms in Zuni, including the obligatory movement of weak pronouns. It is noteworthy, therefore, that in Zuni in addition to pronouns, question words also appear to have strong and weak forms in Zuni. These are listed in (105).

(105) **Strong & Weak Forms of Zuni WH Words**

	WHO	WHAT[92]	WHAT[93]	WHERE	WHEN
Strong	čoppi	k^{w}appi	koppi	hoppi	kya:yippi
Weak	čop	k^{w}ap	kop	hop	kya:yip

[92] Concrete reference, e.g. *k^{w}ap to' 'aše:'a* 'What are you making?'
[93] Abstract reference, e.g. *ko' to' leye:'a* 'What are you doing?'

The distribution of Zuni WH words is similar to that of the pronouns. Strong WH words occur in syntactically deficient contexts such as single word questions, (106), and as predicates, (107). The weak form of the WH word cannot occur here.

(106) Nemme' tommiyo:-kya . čo-ppi ? (* čo-p ?)
N. fainted-past who-Q.[s] (who-Q.[w])
'Nemme fainted.' 'Who?'

(107) 'ussi čo-ppi (* 'ussi čo-p)
that who-Q.[s] (that who-Q.[w])
'Who is that?'

Like strong pronouns, strong WH words cannot occur as (uncoordinated) arguments of the clause.[94]

(108) * čo-ppi tommiyo:-kya
who-Q.[s] faint-past
'Who fainted?'

Like weak pronouns, weak WH words only occur as arguments of the clause. And again like weak pronouns, Zuni weak WH words undergo obligatory movement, (109a), and cannot remain in situ, (109b). This movement is comparable to WH movement in other languages, however, since it targets the specifier position of CP.

[94] If the short forms of the WH words were the result of phonological sandhi, we might expect the elided portion to be optionally restored in this context, but note that it is not.

(109)a. $[_{CP}\, k^{w}a\text{-}p_k \quad [_{IP}\, to'_j \quad [_{VP}\, t_j \; t_k \; t_i] \quad 'aše\text{-}:_i\text{-}'a\,]]$

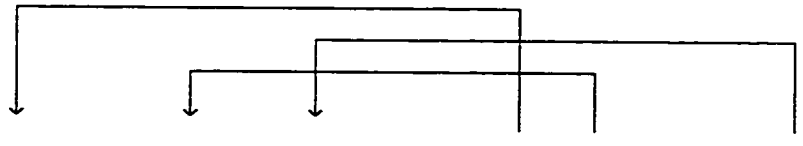
what-Q.[w] 2sg.nom. make-cont.-pres.

'What are you making?'

b. * $[_{IP}\, to'_j \quad [_{VP}\, t_j \quad k^{w}a\text{-}p \quad t_i] \quad 'aše\text{-}:_i\text{-}'a\,]]$

2sg.nom. what-Q.[w] make-cont.-pres.

We might hypothesize that if licensing requirements force weak elements to move out of unlicensed positions, these requirements may govern the behavior of weak WH words as well. If this is the case, we should expect any and all weak interrogative elements present in a Zuni clause to undergo WH-movement. This prediction is borne out: Zuni interrogative clauses are characterized by obligatory multiple WH movement. This is illustrated in (110).[95] Note that this movement also creates discontinuous constituents, as in *k^{w}a'tikyap .... 'e'nin* 'which.....belt' in (110) and (111). Compare the discontinuous constituents in (15a) and (16a) discussed above in Section 2.1.1 formed as the result of weak (non-interrogative) pronoun movement.



(110) kya:yi-p_n čo-p_j k^{w}a'tikya-p_k t_n t_j Gilbert-ya' t_k'e'ni-n 'uk-kya

when-Q.[w] who-Q.[w] which-Q.[w] G.-acc. belt-sg. give-past

'Who gave which belt to Gilbert when?'

[95] The ordering of fronted WH words in Zuni is rigid and is assumed to be parallel in structure to multiple WH constructions with similar ordering constraints in Serbo-Croation. Note from the order of WH elements that while Zuni weak pronoun movement obeys superiority, weak WH word movement does not. Adjunct WH words appear outside any WH argument words. I assume that Zuni argument WH words move to the specifier of CP and adjunct WH words adjoin to CP.

(111) kwa'tikya-p_k to' t_k 'e'ni-n 'ilopčo-kya
which-Q.[w] 2sg.nom.[w] belt-sg. borrow-past
'Which belt did you borrow?'

The Zuni evidence is suggestive, but it is unclear whether licensing requirements similar to those for pronouns are responsible for other kinds of syntactic argument movement, such as WH movement. It does seem, however, that there is a generalization to be made that will capture properties of form and movement of both Zuni pronouns and WH words.

2.5.2 Default Case

I suggested above that the case features of some lexical head allow a pronoun to be licensed in situ (e.g. by V inside VP). I will argue here that case features located in K° itself can also license pronominal features and therefore plays a role similar to that of the functional features of F° in licensing pronouns. In particular I will suggest that so-called default accusative case in English is an example of this phenomenon and that accusative case features function to license English pronouns in syntactically deficient contexts.

2.5.2.1 English Default Accusative

Unexpected accusative case is found on pronouns in several contexts in English, illustrated in (112) and (113). (64a-l) in particular are compiled by Schütze (1997) and also discussed in part by Emonds (1985, 1986) and Akmajian (1984), and I add (113) to this list.

(112)a. What? Her/*she cheat on you? Never! (Non-finite emphatic)

b. Her/*She in New York is what we must avoid. (Argument small clause)

c. Him/*He tired, they decided to camp for the night. (Adjunct small clause)

d. Him/*He liking beans surprised them. (NP-ing gerund)

e. It was us/*we. There's me/*I. The murderer is her/*she. (Predicate nominal)

f. Me/*I, I like beans. (Left dislocation/appositive)

g. Me/*I too. (Ellipsis)

h. Everyone but them/*they gets on John's nerves. The Jets did that, not us/*we. (Subject of understood predicate)

i. Who did it? --Me/*I. (bare DP reply to question)

j. We can't eat caviar and him/*?he (eat) beans. (Gapping)

k. Us and them/*We and they are gonna rumble tonight. (Conjoined subject)

l. The real me/* is finally emerging. Lucky me/*I gets to apply for a green card. (Modified pronoun)

[Schütze 1997]

(113) It was me/*I what told her. (Relativization) [British dialectal; Radford 1981:7]

Standard accounts of English default accusative case assume that there are certain contexts in English in which nominative case assignment is blocked or unavailable. In coordination, (112k), the maximal projection dominating the conjoined subject blocks nominative case assignment/checking[96], while in examples like (112a) and (112d), case is unavailable due to the absence of any finite functional head responsible for case.

It is further assumed that case features are a necessary property of English pronominal arguments, so that a default case specification must be assigned to arguments

[96] In Schütze (1997)'s terms, the Accord relationship between I° and the conjuncts inside coordination is blocked.

in the contexts in (112) and (113). Schütze (1997) compares English default accusative to default case in other languages; the assumption is that the mechanism of default case is cross-linguistically available while the assignment of particular default features is language specific. In English the default selected is accusative, whereas for Dutch and German Schütze suggests (based on evidence from acquisition) that the default is nominative.

I suggest, however, that default accusative in English is of a different nature than default case assignment in these other languages. In particular, accusative in English has a licensing role that the other kinds of default accusative case do not. There are at least two bits of suggestive evidence for understanding English default accusative case in this way. The first is treated here and the second in Section 2.5.2.2.

Firstly, default accusative in English patterns strikingly like strong pronouns in Zuni.[97] Zuni strong pronouns and English default accusative pronouns are found in the same syntactically deficient contexts, namely coordination, predication and bare responses. These are illustrated for the two languages together below.

Coordination

(114)a. ho:'o tap Nemme hon 'a:-nuwa
1sg.nom.[s] and Nemme 1pl.nom. go-future

b. Me and Nemme will go.

Bare Response

(115)a. čo-p k'yawe' tutu-kya ho:'o
who-Q water drink-past 1sg.nom.[s]
'Who drank the water?' 'me.' (*I)

[97] Where Zuni has a similar construction.

b. čo-p waccita 'utte-kya homma

who-Q dog bite-past 1sg.acc.[s]

'Who did the dog bite?' 'me.' (*I)

Predicate Nominal

(116)a. 'ussi ho:'o

that 1sg.nom.[s]

b. That's me (* That's I)

I hypothesize that accusative case K° in the English examples has the same function as F° of the Zuni strong pronouns: both contain functional features, therefore both are potential licensers of pronominal features in a syntactically deficient context.

I assume that English unstressed pronouns are structurally weak pronouns, (117).[98] As such they lack the immediate licensing head F° that is part of the internal structure of strong pronouns. As a result, they must occur in some configuration in which they are licensed by some head with functional features. This is generally I for nominative pronoun arguments and V (or *v*) for accusative pronoun arguments. When access to one of these potential licensers is impossible, as in the contexts in (112)-(113), a last resort licensing option is the insertion of case features into K°. This non-empty K° will license the pronominal features in its domain.

---

[98] English possessive pronouns are strong since they can occur in deficient contexts as well as be unlicensed by the verb in particle verb constructions.

(i) That's mine

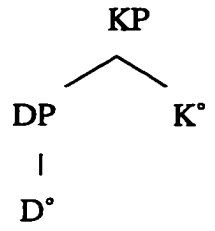
(ii)a. He threw mine out.

b. He threw out mine.

c. He threw me out.

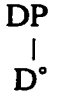
d. * He threw out me.

(117) English Unstressed Pronoun

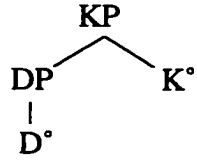


I assume with Bittner and Hale (1996a) among others that morphological nominative case is not the result of the spellout of a [+nominative] feature, but rather represents the morphological spellout assigned to a bare DP.[99] No case head K° containing no specified [+nominative] feature is involved. This appears to be the case for nominative in Zuni, as discussed at the end of Section 4.1. Morphological accusative case, on the other hand, represents the spellout of a case feature specified [+accusative]. The nominative form of the English (weak) pronoun is therefore not a licensed form in deficient contexts since no specified case features are in its domain. For this reason, the accusative form of the English pronoun *must* be selected in syntactically deficient contexts since it is the only form of the pronoun containing case (and therefore licensing) features.

(118) English Nominative Pronoun



English Accusative Pronoun



[99] One that is properly licensed, of course. Bittner & Hale (1996a) assume this analysis of nominative case universally and I follow this assumption here, but further research is required to demonstrate whether this is in fact tenable.

Recall that under the standard hypothesis of default case, it is accidental whether default case is spelled out as accusative or nominative in a particular language. Under the hypothesis proposed here, English 'default' accusative case is not a randomly selected Case feature but rather specifically required by the constraints placed on pronominal feature licensing.

2.5.2.2 Case Licensing vs. Case Matching

The treatment of English default accusative suggested here makes a prediction about the types of 'default' case that can occur and where they can occur. True default case, that is, case features without a licensing function, should be able to show up on pronominal arguments of the clause since these are in the licensing domain of either V, *v* or some functional head in IP. What I call true default case occurs in child German, (119); the example comes from Kaper (1976) and is also discussed by Schütze (1997: 243).[100] Nominative is a legitimate choice for default case here since the pronoun is already otherwise licensed.

(119) Wenn er kommt, peitschst du er
when he comes whip you he [Kaper 1976]

As for predication, the options are slightly different because pronouns occurring as nominal predicates are licensed by F° in Zuni, nominative case is a valid choice for default case here too. It is unclear precisely whether the nominative case found on the strong pronoun in Zuni predication, (120), is true default nominative case or merely the absence of case (see discussion below example (117) above and in Section 2.4.1).

[100] Schütze reports default nominative on articles and nouns as well in child German.

(120) 'ussi ho:'o

that 1sg.nom.[s]

'That's me'

The situation with bare response forms is even more revealing, so that I will discuss bare response forms as representative of deficient contexts in general and assume that the conclusions developed here apply generally to the other contexts.

Only pronouns that are strong and therefore are otherwise licensed (i.e. have the additional licensing head F°) should be able to show true default case in bare response contexts. The licensing requirements of weak pronouns will require the selection of accusative[101] case in contexts where no other potential licenser is available. In bare responses, any default case specification (or case specified somehow in a clausal structure that is then deleted) will be overridden on bare weak pronouns in favor of accusative case because of the licensing properties of accusative. Therefore we should find never find languages with only bare nominative weak pronouns but only bare accusative weak pronouns for all possible responses in a language;[102] languages with strong accusative pronouns f.a.p.r. or strong nominative pronouns f.a.p.r.; and languages with strong matching-case pronouns f.a.p.r. in bare response forms. 'Case matching' is the preservation on the bare pronoun of the case the pronoun would show as an argument in a full clause. Since licensing considerations override case in weak pronouns, case matching can only show up in strong pronouns, as in Zuni, (121).

(121)a. čo-p k'yawe' tutu-kya ho:'o

who-Q water drink-past 1sg.nom.[s]

'Who drank the water?' 'me.'

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[101] Or dative, or any other case feature in a particular language.

[102] That is, for all bare responses regardless of whether the answer corresponds to the subject, object, indirect object, possessor, etc. of a full clause response.

b. čo-p waccita 'utte-kya homma

who-Q dog bite-past 1sg.acc.[s]

'Who did the dog bite?' 'me.'

Interestingly enough, we only seem to find the first and fourth option in cross-linguistically, namely weak accusative bare pronouns and strong matching-case bare pronouns.[103]

(122) **Types of Bare Response Forms Found in Language**

	WEAK ACCUSATIVE		STRONG CASE-MATCHING	
	English	French	Zuni	Kashmiri
Who will drink the water?	me	moi	ho:'o (nom.)	bI (nom.)
Who will the dog bite?	me	moi	homma (acc.)	me (dat.)

This suggests that the correct case features are always selected in bare response forms but must be overridden by licensing requirement in certain languages (i.e. those with no strong pronouns).

If default case assignment were a real option, we should expect to find languages with strong accusative or strong nominative pronouns possible for every possible response. The fact that we do not seems to indicate that true default case assignment is not available in UG in these contexts. The examples of true default case we do seem to have occur in child language (cf. Schütze 1997) or perhaps in second language acquisition, suggesting that true default case assignment is of a different nature (i.e. simply a choice between features of equal status) than the type of case assignment found

[103] Ken Hale, p.c.

in deficient syntactic contexts.[104] More work is clearly needed on this topic, however, in light of the fact that the entire empirical range of so-called default case is not yet known.

The claims and observations made in this section are summarized in (123) below.

(123) (i) English default accusative case is not a true default but rather required for the licensing of pronouns in deficient contexts.

(ii) Only two strength/case combinations seem to be found in language: weak accusative and strong case-matching.

(iii) True default case may not exist.

As a final note to this section I should point out here that the discussion of case and bare response forms does not necessarily generalize or generalize easily to all supposedly syntactically deficient contexts. I picked bare response forms to illustrate my argument since in this context it is easiest to distinguish between default case assignment and case licensing. For example, as noted in connection with example (120), it is difficult to tell whether case (and how) is in fact assigned to a predicate nominal, so that claims about default case and licensing cannot be based solely on case facts of predicate nominals. Similar cautions apply to case facts in coordination, as discussed in the final subsection below. Other supposedly syntactically deficient contexts are subject to similar scrutiny. For example, as Höskuldur Thráinsson points out to me (p.c. & Thráinsson 1979), left-dislocated constituents in Icelandic are assigned nominative case regardless of the case on the pronominal copy, as shown in the examples in (124).

[104] Or perhaps default case assignment is possible in deficient syntactic contexts, but licensing requirements ensure that its effects never surface. Under such circumstances, it would be difficult to determine what the distribution of default case actually is - always assigned vs. assigned only in certain syntactic contexts - since it would always be overruled.

(124)a. Haraldur, Helga elskar hann ekki
Harold.nom. H. loves him.acc. not
'As for Harold, Helga doesn't love him.'

b. Haraldur, Helga saknar hans ekki
Harold.nom. H. misses him.gen. not
'As for Harold, Helga doesn't miss him.'

According to the account argued for here, it is possible that nominative on the dislocated element in these structures is a real instance of default cause only if these left dislocated nouns are somehow otherwise licensed. Further research is needed to determine in what range of configurations arguments are licensed and what the mechanisms are for this licensing. That is, it is not entirely clear that the left dislocated constituents in (124) are *not* otherwise licensed (e.g. by predication, cf. Rothstein 1983, 1992, 1995). Therefore we cannot easily assume examples like (a-b) are evidence that default case can occur in any configuration.

On the other hand, it may be the case that morphological nominative case in some languages does not represent the absence of case (as suggested earlier) but in fact instantiates some positive feature [+nominative]. If so, [+nominative] may in fact be a licensing case in some languages in contexts like that in (124), and therefore acts like the licensing functional projection F° in strong pronouns in parallel fashion to the way [+accusative] licenses pronouns in English.

2.5.2.3 Why Coordination is Special

As mentioned just above, English coordination is somewhat special and must be treated with care. In some dialects of English where accusative case occurs on coordinated pronominal subjects, nominative case marking can also occur, (125b), so that one might argue that coordination does not represent precisely the same deficient context as the others in (112)-(113).

(125)a. Me and Felix climbed Mount Monadnock.

b. Felix and I climbed Mount Monadnock.

There are some complexities to the distribution of nominative case in English coordination, so that, for example, the position of the 1st person nominative pronoun is different from and perhaps more restricted than 3rd person nominative.[105]

(126)a. Felix and I climbed Mount Monadnock.

b. * I and Felix climbed Mount Monadnock.

(127)a. ? Felix and she climbed Mount Monadnock.

b. She and Felix climbed Mount Monadnock.

The point of these examples is that nominative case *can* be assigned in these contexts and is not entirely blocked for this dialect.

The apparent optionality of nominative case here probably reflects the fact that the English coordination structure has two possible interpretations, though admittedly it is not clear precisely what these structures would look like. Under one interpretation the pronoun has access to a head with specified features and is therefore licensed. As a

[105] In fact, for many people, (127b) is slightly better than (127a).

result, the pronoun gets nominative case. Under the second interpretation, the pronoun does not have access to a licensing head, and therefore accusative case features will be specified for the pronoun in order to fulfill the licensing requirements of the pronoun.

The possibility of nominative case under one structural interpretation should not exclude coordination from consideration in this study as a deficient context, since the pronoun may not in fact have access to nominative case under the second structural interpretation.[106]

2.6 Summary and Conclusion

This chapter began with the presentation of details of the syntax of Zuni weak and strong pronouns. It was argued that Zuni strong pronouns only occur in syntactically deficient contexts, while weak pronouns only occur as clausal arguments. Furthermore, Zuni weak pronouns move obligatorily out of the verb phrase. It was suggested that the distribution of the Zuni strong and weak pronouns is correlated with the (in)accessibility of functional projections to the pronoun.

Cardinaletti & Starke (1994) recognized the relationship between functional structure and pronoun syntax and proposed that pronouns have complex internal structure, and in addition argued that weak pronouns move in order to recover certain case, referential and phi features that they lack as a result of their deficient internal structure. I pointed out problems for this analysis posed by weak pronouns in O'odham and Belfast English that are licensed in situ.

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106 I.e. we should not assume coordination is a non-deficient context simply because nominative case assignment is never an option in other deficient contexts, like predication and non-finite emphatic constructions, (112a,e)).

(112)a. What?Her/*she cheat on you? Never! (Non-finite emphatic)
e. It was us/*we. There's me/*I. The murderer is her/*she. (Predicate nominal)

I then proposed an account of pronoun structure and licensing that suggested that pronouns consist of inflectional features that must be licensed by being situated in proximity to some head bearing functional features. I presented independent evidence for the presence of these functional features in strong pronouns from the operation of the person hierarchy constraint in Southern Paiute.

Finally, I suggested that the ideas developed in order to account for strong and weak pronoun syntax in Zuni and other languages can be extended to various other phenomenon. Specifically, I proposed that multiple WH movement in Zuni as well as default accusative case on pronouns in English might be given an account in terms of licensing that captured significant generalizations in each case. I also suggested that true default case may not exist, and proposed a typology of language consisting of two types: that is, according to whether a language allows case-matching on bare pronouns vs. requires case assignment to be overridden on pronouns by licensing considerations.

This chapter has covered a wide range of data and phenomena in an attempt to give some picture of the complexity of pronoun syntax not just in Zuni but cross-linguistically. Many arguments presented are somewhat speculative, but it is hoped that the observations made here, as well as the issues and problems raised will encourage further research into the nature of pronouns and the constraints on their distribution.

Chapter 3

Case in Unaccusatives and Event Structure

3.0 Introduction

I now turn to an investigation of the structure of Zuni unaccusative and passive verbs. I will argue that arguments of unaccusative and passive verbs in Zuni are assigned structural accusative case. Structural accusative case in this context is problematic in light of generally accepted proposals for the structure and case properties of unaccusative and passive constructions. The analysis proposed here to account for structural accusative case assignment in Zuni will take advantage of recent theoretical proposals (Pustejovsky 1995, Chierchia 1989) concerning the event structure of unaccusatives. In addition, I will argue that Zuni has fairly direct mapping between event structure and syntactic structure. Zuni therefore turns out to provide a different type of evidence to support that which the original proposals were based on.

In the first half of the chapter (Sections 3.1 and 3.2) I discuss in detail the nature of the Zuni unaccusative and passive constructions. In the second half (Sections 3.3 and especially 3.4), I argue for an analysis of these constructions based on the evidence developed in preceding sections.

In Section 3.1 I present details of the Zuni unaccusative and passive constructions. In Section 3.2 I investigate the nature of these constructions in greater detail by reviewing analyses of non-nominative case in unaccusatives and passives in Icelandic. I discuss proposals for Icelandic concerning the assignment of lexical or quirky case, subjecthood properties of unaccusative and passive arguments, and the presence of null indefinite elements in structural subject position of one type of Icelandic passive. I will argue that the Zuni constructions differ in several ways from the Icelandic unaccusative and passives constructions. In particular, I will argue that accusative case marking in Zuni is

not inherent (or quirky) but rather structurally assigned and, in addition, that syntactic tests involving anaphor binding and pseudo-raising predicates indicate that the accusative arguments of Zuni unaccusatives and passives are structural objects. I will also provide evidence for the absence of any null element (indefinite or expletive) in subject position in the Zuni constructions.

Section 3.3 will address the issue of whether the assignment of structural accusative in unaccusatives and passives is problematic and suggest that in fact it is not. In Section 3.4 I will argue for an analysis of Zuni unaccusatives and passives based on Pustejovsky (1995), Chierchia (1989), Davis (1996) and Demirdache (1996) and claim that these verbs have hidden causative event structure. The hidden causative analysis of Salish proposed by Davis and Demirdache proposes a complex lexical event semantics for a monomorphemic verb root, whereas Zuni verb morphology reveals a fairly direct mapping between syntax and lexical event structure. Based on this, it will turn out to be predictable that unaccusatives and passives in Zuni have the structural case assigning properties of transitives. I argue that Zuni directly confirms the hidden causative analysis of the event structure of unaccusatives, and in addition provides evidence to suggest that this lexical semantic event structure may be represented morphosyntactically as well.

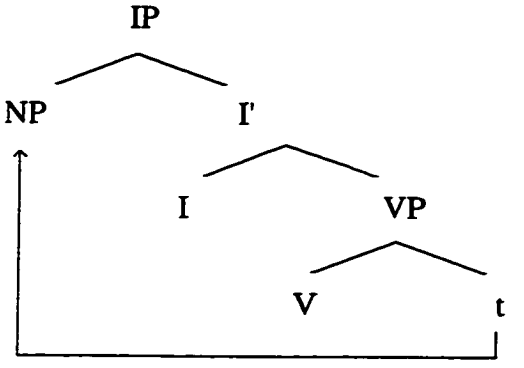
In a final section of this chapter I turn to the question of the Extended Projection Principle and how its requirements are fulfilled in Zuni constructions with no apparent structural subject. I consider the parameterization of the EPP vs. the alternative that an object inside the VP somehow satisfies the EPP in Zuni.

3.1 Accusative Arguments and Unaccusative Structures

In standard treatments of unaccusativity, (e.g. Grimshaw 1987, Belletti 1988, Levin & Rappaport Hovav 1995) based originally on Perlmutter (1978), it is assumed that (i) the single argument of an unaccusative intransitive originates inside the VP (as in (1) below), that (ii) the unaccusative verb has no structural case assigning properties, and

therefore that (iii) the unaccusative argument must move out of the VP to a case position. This case position is usually a position in which structural nominative case can be assigned or checked and is usually some specifier of a functional projection (SpecIP).

(1)



A similar analysis is standardly argued for in the case of passives (e.g. Chomsky 1981, den Besten 1981, Kayne 1981). Passive verbs are similar to unaccusative verbs in lacking the ability the ability to assign structural accusative case.[107] Consequently the passive argument originating as an internal argument moves to some VP external position where it checks nominative case features and acquires structural subject properties.

The ability to assign structural accusative case is argued to be correlated with the presence of an external argument (Burzio 1986, Rothstein 1992, Levin & Rappaport Hovav 1995), which both unaccusative and passive constructions lack. Therefore the inability to assign structural accusative case is considered to be a core property of unaccusatives and passives.

It is significant for an analysis of unaccusativity that claims to be universal that this relationship between external argument and case assignment does not appear to hold in Zuni. Certain Zuni verbs appear to be able to assign structural accusative case to their arguments despite the absence of any external argument associated with the predicate.

[107] Various mechanisms have been proposed for passive morphology absorbing structural case, e.g. Chomsky (1981), Baker (1988) among others.

One such class of predicates are unaccusative intransitives; the verbs *palo* 'be buried', *'uli* 'be inside' and *'ansatto* ' be helped' belong to this class and are shown in (2)-(4). These verbs have an interpretation similar to that of an eventive passive but without having undergone any passive derivation.[108]

(2) tom palo-k'yanna
2sg.acc. be.buried-future
'You will be buried.'

(3) tom 'uli-'kya
2sg.acc. be.inside-past
'You were put inside; you were arrested.'

(4) tom 'ansatto-'kya
2sg.acc. be.helped-past
'You were helped.'

A striking feature of these constructions is that the single argument of these intransitive verbs is marked with accusative case despite the fact that there is no external argument associated with the construction, as the unacceptability of (5a) indicates.[109] (Notice also that an agentive by-phrase cannot occur in the unaccusative construction either, illustrated by the ungrammaticality of (5b).)

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[108] At first glance it may seem unusual for verbs with the meaning of 'be buried' and 'be helped' to be included in this unaccusative class. Subsequent discussion, particularly in 3.4.1 will clarify how these Zuni verbs fit naturally into this class.

[109] Recall that, as noted in Chapter 1 Section 1.3.3.2, 'accusative' case is found on Zuni (indirect and direct) objects of transitive verbs as well on possessive nouns & pronouns. 'Accusative', as the only non-nominative case in Zuni, therefore functions something like a more general 'dependent structural case'. I refer to this case as 'accusative' throughout the dissertation to render it easier to recognize the parallelism between the Zuni unaccusative and passive constructions discussed in this chapter and similar constructions and their analysis that have been discussed for other languages. To avoid confusion, however, I gloss the case on possessive arguments as acc.(poss.)

(5)a. * tom ho' 'ansatto-'kya
2sg.acc. 1sg.nom. be.helped-past
'I helped you.'

b. * hom 'an / 'akkya tom 'ansatto-'kya
1sg.acc. P / with 2sg.acc. be.helped-past
'You were helped by me.'

In order to form in Zuni a fully transitive version of 'help' with an overt agentive subject, the stem seen in the above examples must be further derived with the derivational causative suffix *-u* . Example (6) below illustrates this type of transitive formation.[110] Note also the change in the past tense inflectional allomorph from *-'kya* in the unaccusative form to *-kya* in the agentive transitive below.

(6) tom ho' 'ansatt-u-kya
2sg.acc. 1sg.nom. be.helped-past
'I helped you.'

Passives[111] in Zuni have properties similar to these unaccusative intransitives. An eventive passive verb is derived from the active transitive by suffixing the morpheme *-na* to the stem; compare (7a, 8a) and (7b, 8b). Zuni passives differ from passives in English and many other languages in not assigning nominative case to a (former[112]) internal argument. The arguments of the Zuni passives in (7b) and (8b) are marked with

[110] The final vowel of the stem is usually elided before a vowel-initial derivational suffix.
[111] Cook & Frantz (1978) also describe properties of the Zuni passive.
[112] I.e. in English.

structural accusative case[113] and thus receive the same case marking they bear in the active clauses (7a) and (8a).

(7)a. to' Pilpo-ya' 'antowowo-kya
2sg.nom. Filbert-acc. shoot-past
'You shot Filbert.'

b. Pilpo-ya' 'an-towowo-na-'kya
Filbert-acc. P-shoot-passive-past
'Filbert was shot.'

(8)a. hom to' nicikya 'uk-kya
1sg.acc. 2sg.nom. ring give-past
'You gave me a ring.'

b. hom nicikya 'uk-na-'kya
1sg.acc. ring give-passive-past
'I was given a ring.'

But unlike the active predicate, the Zuni passive predicate does not theta-mark an external argument and like the accusative-assigning intransitives in (2)-(4) above cannot appear with one, (9).

(9) * hom to' nicikya 'uk-na-'kya
1sg.acc. 2sg.nom. ring give-passive-past

[113] Not that this is the only passive construction in Zuni, unlike Icelandic, for example, which appears to have several types of passives, according to Maling & Sigurjónsdóttir (1997): the Nominative Passive, an Oblique passive, an Impersonal Passive, and a so-called "New Passive" (the latter to be discussed further below).

The passive in Zuni generally cannot appear with an agent, so that an agent cannot be added by means of a postpositional phrase.[114] (10b-c) illustrate the unacceptability of a passive construction with an agent, marked respectively with the postpositions *'an* 'to, from, at' and *'akkya* 'with'.

(10)a. hom nicikya 'uk-na-'kya
1sg.acc. ring give-passive-past
'I was given a ring.'

b. * tom 'an hom nicikya 'uk-na-'kya
2sg.acc. P 1sg.acc. ring give-passive-past
'I was given a ring by you.' [115]

c. * tom 'akkya hom nicikya 'uk-na-'kya
2sg.acc. with 1sg.acc. ring give-passive-past
'I was given a ring by you.'

In sum the case-marking properties of the passive verbs in (7b) and (8b) appear to refute the correlation between case and external argument as well as the claim that passive morphology absorbs structural case.

I have been assuming in this section that the accusative case borne by Zuni arguments in the unaccusative and the passive is structurally assigned. This is not necessarily clear from the evidence discussed so far, nor is the nature of these constructions in general clear - e.g. there is the question of the grammatical function of

[114] I will return to this point again in Section 3.4.
[115] This sentence could in fact mean 'I was given your ring.'

the accusative argument (subject vs. object) or the possibility of a null element in subject position of either construction. I therefore turn to a discussion of phenomena associated with unaccusatives and passives in Icelandic and analyses proposed for them in order to clarify the nature of the Zuni unaccusatives and passives.

3.2 Case and Subjects

In this section I briefly review several proposals that have been made concerning the nature of unaccusatives and passives in Icelandic. I will focus in particular on inherent or quirky case assignment and structural subject properties of unaccusative and passive arguments. I will also discuss evidence for a null element in subject position in the so-called "new passive" in Icelandic (Maling & Sigurjónsdóttir 1997).

I then proceed to discuss evidence that accusative case on Zuni unaccusatives and passive arguments is structural and not inherent case, as well as argue that these arguments are structural objects. In addition, I provide evidence that there are no null expletive or indefinite elements in structural subject position of Zuni unaccusatives in passives. All three sources of evidence set the Zuni structures apart from Icelandic unaccusatives and passives, including the "new passive".

3.2.1 Icelandic Unaccusatives and Passives

Work on Icelandic unaccusative and passive constructions has revealed several interesting properties of these constructions, including the assignment and behavior of quirky case and the subject properties of arguments bearing non-nominative case. Rather than attempt to duplicate the extensive discussion in the literature on these

constructions[116], I will focus below on those properties which will be specifically relevant to the discussion of Zuni.

3.2.1.1 Quirky Case

Certain verbs in Icelandic have the ability to assign inherent (or 'quirky') case, including both transitive and unaccusative verbs (Zaenen & Maling 1984). For example, the transitive verb in (11a) assigns dative case to its direct object, and the unaccusative verb in (11b) assigns accusative case to its sole argument.

(11)a. Skipstjórinn sökkti skipinu
the-captain (NOM) sank the-ship (DAT)
'The captain sank the ship.'

b. Bátana hefur brotið í spón
the-boats (ACC) has broken in pieces
'The boats have broken into pieces.'

[Zaenen & Maling 1984]

The assumption is that the assignment of a particular quirky case is unpredictable, unlike structurally assigned nominative or accusative case, and depends on the case specification of the individual verb.[117] Compare for example the quirky accusative vs. nominative case marking of the two semantically similar verbs in (12a-b).

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[116] But see e.g. Andrews (1990), Cowper (1988), Jónsson (1994), Levin & Simpson (1981), Schütze (1993, 1997), Sigurðsson (1989, 1992), Taraldsen (1995), Thráinsson (1979), Yip, Maling & Jackendoff (1987), Zaenen & Maling (1984), Zaenen, Maling & Thráinsson (1985).

[117] Although it is argued (e.g. Andrews 1982) that the subjects of psychological predicates apparently tend toward dative case marking, while the subjects of physiological predicates tend toward accusative marking.

(12)a. Okkur vantaði vinnu.
us(A) lacked(3sg.) a job(A)
'We lacked/needed a job.'

b. Við þurftum vinnu.
We(N) needed(1pl.) a job(A) [Sigurðsson 1992]

One of the hallmarks of this quirky case is that it is preserved under passivization[118], as in (13a), and when the quirky unaccusative argument has undergone raising into a higher clause, as in (13b).

(13)a. Skipinu var sökkt af skipstjóranum
the-ship (DAT) was sunk by the-captain (NOM)
'The ship was sunk by the captain.'

b. Bátana er talið hafa brotið í spón
the-boats (ACC) is believed to-have broken in pieces
'The boats are believed to have broken into pieces.'

[Zaenen & Maling 1984]

In addition, quirky case arguments do not trigger verbal agreement (Sigurðsson 1992), as shown by (12a) and (13a) above and (14) below.

(14) Okkur vantaði vinnu
us (A) lacked (3sg.) a job (A)
'We lacked/needed a job.' [Sigurðsson 1992]

[118] According to Zaenen & Maling (1984:145), quirky accusative case in Icelandic is absorbed in the passive, though it is not absorbed when this same argument undergoes raising and then passivization. Such tests will not apply to Zuni, as will be discussed below, since Zuni apparently does not raise arguments out of the VP to case positions.

This brief survey of the properties of quirky case is relevant to Zuni since, as Yip, Maling & Jackendoff (1987) point out, while nominative case is never lexically assigned as quirky case, accusative may be. For example, (13b) and (14) above indicate that accusative case can indeed be lexically assigned to an argument, and in particular, to the argument of an unaccusative verb. An important task is therefore the determination of whether the accusative case marking on Zuni unaccusative (and passive) arguments is lexically assigned by the verb or structurally assigned.[119]

3.2.1.2 Subject Properties of Unaccusative Arguments

Despite their non-nominative case, quirky case marked arguments of accusatives and passives in Icelandic behave syntactically like structural subjects. For example, as illustrated below in (15a-b) quirky case-marked arguments of unaccusatives and passives can (and must) control reflexivization (Zaenen, Maling & Thráinsson 1985). Compare the inability of objects to control reflexivization, (16).

(15)a. Henni þykir bróðir sinn/*hennar leiðinlegur
her (DAT) thinks brother (NOM) her *[-refl] boring
'She finds her brother boring.'

b. Konunginum voru gefnar ambáttir í höll sinni/?hans.
the-king (DAT) were given slaves in palace his (+refl/?-refl)
'The king was given maidservants in his palace.'

[119] I will hold off presenting arguments for the nature of Zuni case assignment in unaccusatives and passives until Section 3.2.2 so that I may present in one place all the structural details argued for the Zuni constructions.

(16) Ég barði Siggu með dúkkunni hennar/*sinni

I hit Sigga (ACC) with doll her (*[+refl])

'I hit Sigga with her doll.'

[Zaenen, Maling & Thráinsson 1985]

In addition, quirky case arguments can undergo raising away from their predicate into a higher clause, as in (17a-b).

(17)a. Ég tel henni hafa alltaf þótt Ólafur leiðinlegur

I believe her (DAT) to-have always thought Olaf (NOM) boring (NOM)

'I believe her always to have found Olaf boring.'

b. Ég tel konunginum hafa verið gefnar ambattir.

I believe the-king (DAT) have been given (fem-pl) slaves (NOM)

'I believe the king to have been given maidservants.'

The constrast between (18b-c) indicates that only subjects can raise, confirming that the quirky case arguments in (17 above are structural subjects.

(18)a. Guðrún saknar Haraldar

Gudrun (NOM) misses Harold (GEN)

b. Ég taldi Guðrúnu í barnaskap mínum sakna Haraldar

I believed Gudrun (ACC) in foolishness my to-miss Harold (GEN)

'I believed Gudrun in my foolishness to miss Harold.'

c. * Ég taldi Haraldar sakna Guðrún

I believed Harold (GEN) to-miss Gudrun (NOM)

[Zaenen, Maling & Thráinsson 1985]

Finally, the argument of the Icelandic unaccusative and passive can be understood as an arbitrary PRO subject of an infinitive (Zaenen, Maling & Thráinsson 1985), (19a-b).

(19)a. Að vanta peninga er alltof algengt.

to lack money is all-too common

'To lack money is all too common.'

b. Að vera hjálpað í prófinu er óleyfilegt.

to be helped on the-exam is un-allowed

'To be helped on the exam is not allowed.'

cf.

c. Að fara heim snemma er óvenjulegt

to go home early is unusual

[Zaenen, Maling & Thráinsson 1985]

In the case of Icelandic passives, it is assumed (Zaenen, Maling & Thráinsson 1985) that passive morphology does not absorb quirky case (nor does nominative replace it) when the underlying object is moved to subject position. In the case of unaccusatives, Zaenen & Maling (1984) argue that quirky case marked subjects are not necessarily always underlying objects, and in fact argue that the Icelandic unaccusative argument is a structural subject that is assigned a <theme> semantic role. So for example an expletive

cannot be inserted into subject position of Icelandic unaccusatives, (20), in order to force the unaccusative argument to 'remain' in object position.

(20)a. * það sökk báturinn.
there sank the-boat

b. * Eg talkdi (það) hafa sokkið báturinn
I believed (there) to-have sunk the-boat

[Zaenen & Maling 1984]

Each of the above tests for subjecthood can be applied to Zuni unaccusatives and passives, with, however, a different outcome. I will discuss the results in detail in Section 3.2.2.

3.2.1.3 The Icelandic "New Passive"

Maling & Sigurjónsdóttir (1997) describe a variation of the passive in Icelandic, which they refer to as the "new passive". This construction is apparently an innovation among certain groups of speakers and is reportedly ungrammatical in standard Icelandic. (21a-b) illustrate the standard passive and "new passive" respectively.

(21)a. Ég var lamin(n) á leikvellinum.
I-NOM was hit on the.playground
'I was hit on the playground.'

b. það var lamið mig á leikvellinum.
there was hit me-ACC on the.playground
'I was hit on the playground.' [Maling & Sigurjónsdóttir 1997]

The "new passive" differs from the regular passive in two respects. The underlying object of the "new passive" bears accusative case, in contrast to the nominative of the standard passive. In addition, the standard passive exhibits a Definiteness Effect when an expletive in subject position allows the underlying object of a transitive verb to remain in postverbal position. This postverbal argument must be indefinite, (22).

(22) það voru seldar margar boekur/*boekurnar.
there were-pl. sold-f.pl. many books-f.pl.-NOM/*the books-f.pl.NOM

[Maling & Sigurjónsdóttir 1997]

In the case of the "new passive", however, there is no Definiteness Effect, so that an argument with definite reference may occur postverbally, as (21b) above illustrates.

Maling & Sigurjónsdóttir (1997) assume that the "new passive" has a structure like that in (23) below, where the subject position is occupied by a phonologically null small *pro* .[120]

(23) $[_{IP}$ *pro* $[_{I}$ Tns, Agr] $[_{VP}$ V NP]]

Because this null *pro* subject is assumed by Maling & Sigurjónsdóttir to be assigned an agentive thematic role, it is predicted to be interpreted with indefinite or generic reference. As such, null *pro* in subject position of the "new passive" should be able to bind non-subject anaphors.[121] Maling & Sigurjónsdóttir (1997) claim that this is

[120] I.e., rather than by pleonastic *það* , which they assume is needed to satisfy the Verb-Second Constraint.
[121] As well as be associated with a number of other behaviors, such as subject control of participial adjuncts, impossibility of agentive by-phrase, no restriction of the "new passive" to unergative verbs (Maling & Sigurjónsdóttir 1997). I will not detail these here since they are inapplicable to Zuni., except for

in fact the case.[122] They argue that this result supports the hypothesis represented by (23) above, namely that the "new passive" is syntactically active with a thematic subject position. The accusative case found in "new passive" constructions like that in (21b) above therefore represents canonically assigned structural accusative case.[123]

The structure hypothesized by Maling & Sigurjónsdóttir for the Icelandic "new passive" raises a number of questions about the possible structure of Zuni unaccusative and passive constructions. In particular, is there some phonologically null element, either a null expletive or null indefinite *pro* in structural subject position of the Zuni constructions? At least in the case of the latter (i.e. null indefinite *pro*), the assignment of structural accusative case in these Zuni constructions would be unproblematic.

I now turn to the Zuni constructions themselves and discuss the details of their syntax that are clarified as a result of the discussion of Icelandic unaccusatives and passives above.

3.2.2 The Nature of Zuni Unaccusatives and Passives

The Zuni unaccusative and passive construction are characterized by similar case properties. Their arguments also behave similarly with regard to subjecthood tests. In addition, the Zuni unaccusative and passive provide similar evidence for the absence of null subject elements of any sort in subject position of these constructions.

I review each of these types of evidence in turn.

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one: Zuni unaccusatives and passives cannot occur with an agentive by-phrase. This point will be discussed again in Section 3.4.

[122] Though unfortunately they provide no examples to reproduce here.

[123] The "new passive" object argument is also found marked with dative case; Maling & Sigurjónsdóttir speculate that the construction may have originated with quirky dative object constructions and spread from there to structural accusative object constructions.

3.2.2.1 Lexical vs. Structural Accusative Case

As discussed above with respect to Icelandic, accusative case may be assigned by verbs as inherent or quirky case. And, as it has been observed (e.g. Burzio 1986, Sigurðsson 1992) that structural accusative case is not assigned without structural nominative case also being assigned, the accusative case found on arguments of unaccusative and passive verbs in Zuni looks at first glance like it might be inherent accusative case. I will argue, however, that Zuni unaccusative verbs do not assign accusative case simply by lexical rule. Rather, there is evidence that accusative case in unaccusatives is structurally assigned and therefore somewhat of a puzzle.

First, if we were to assume that accusative case were lexically assigned by Zuni unaccusative verbs, we would also have to make a similar assumption for passives verbs since, as I will argue shortly, Zuni unaccusatives and passives show a number of striking structural parallels that ought to be captured rather than ignored. However, if we assume that Zuni passive verbs assign case by lexical specification, we lose what appears to be a significant generalization, namely that a passive verb assign the same case to its arguments as the derivationally related active transitive stem, cf. (24a-b). *tom* and *Albert-ya'* bear accusative case in both the passive and non-passive examples in (24).

(24)a. tom ho' Albert-ya' k'ešku-kya
2sg.acc. 1sg.nom. A.-acc. put.in.arms-past
'I gave Albert [the baby] to you to hold.'

b. tom Albert-ya' k'ešku-kya
2sg.acc. A.-acc. put.in.arms-past
'Albert was given to you to hold.'

We can argue against the assignment of inherent or quirky accusative case by Zuni unaccusative and passive verbs on the basis of another distributional fact, namely that aside from the cases under discussion, there are no instances of inherent or quirky case assignment anywhere else in the grammar of Zuni.

The accusative case on arguments of Zuni unaccusatives is just as predictable as in passives. Unaccusative verbs and derivationally related stative verbs occur in minimal pairs with respect to interpretation and case assignment. The unaccusative form has eventive interpretation and assigns accusative case, while the related stative form occurs with nominative case. One such pair is illustrated below in (25).[124] Every accusative assigning unaccusative Zuni verb has a stative counterpart of this sort.

(25)a. ho'no' tina-'kya
1pl.acc. pl.be.sitting-past
'We were seated [e.g. by the waitress].'

b. hon tina-'kya
1pl.nom. pl.be.sitting-past
'We were sitting [for a while].'

The predictability of accusative case in pairs like this suggests that the accusative case in (25a) is not inherent case, since a property of inherent case is that it is unpredictable to a certain degree. Based on this and the above arguments, I will assume that the accusative case on arguments of Zuni unaccusative and passive verbs is structurally assigned.

While it would be desirable to use syntactic tests like raising (cf. Icelandic above) to confirm the structural nature of accusative case in Zuni passives and unaccusatives,

[124] More pairs are listed in Section 2.4 and discussed in greater detail.

there are independent reasons that preclude the use of raising as such a test in Zuni. The most important such reason[125] is the fact that only subjects can undergo raising, and as I will argue next, the arguments of unaccusatives and passives in Zuni are structural objects.

3.2.2.2 Tests for Structural Subjects

There are three types of evidence in Zuni that indicate the arguments of unaccusative and passive verbs are structural objects rather than subjects as in Icelandic. These are the inability of these arguments to bind anaphors, the inability of these verbs to occur in a certain type of non-finite complement construction akin to raising, and the inability of the arguments of these verbs to be understood as an arbitrary PRO subject of an infinitive. I will discuss evidence for each case.

One test for subjecthood in Zuni involves the possessive anaphor *nam ~ yam* .[126] Canonical reflexives are formed in Zuni by prefixing the verb with *'i-* , as illustrated in (26a). No object argument appears, and the subject is marked with nominative case. Compare the reflexive construction with the regular transitive construction in (26b).

(26)a. Nemme' (*-ya') 'i-k'ošo-kya
N.(*-acc.) reflex.-wash-past
'Nemme washed herself.'

[125] The other reason has to do with the fact that raising is a test for inherent case assignment since it involves moving the argument to a nominative case position in another clause. As discussed in Chapter 2 Section 2.1.1, there is evidence that Zuni arguments do not move out of the VP (unless they are weak pronouns) and therefore do not undergo regular movement to case positions (we have to assume Zuni case is somehow assigned/check inside the VP or in situ).
[126] *nam* is preferred by younger speakers, *yam* by older speakers.

b. Nemme' waccita k'ošo-kya

N. dog wash-past

'Nemme washed the dog.'

Zuni possessive constructions consist of either an accusative possessive pronoun (27a) or accusative NP + *'an* [127] (27b) to the left of the possessed NP.[128]

(27)a. hom pimc'ana 'aše-kya

1sg.acc.(poss.) piglet die-past

'My piglet died.'

b. ho' Nemme-ya' 'an pimc'ana k'ošo-kya

1sg.nom. N.-acc.(poss.) P piglet wash-past

'I washed Nemme's piglet.'

When the possessor of an object argument is coreferential with the subject of the clause, the possessive anaphor *nam* must be used, as in (28a). *nam* can be coreferential with either a singular (28a) or plural (28b) subject. The use of this reflexive anaphor is not optional, as illustrated by the ungrammaticality of (28c).

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[127] *'an* occurs with pronouns in constructions of alienable possession, (i).

(i) hom 'an nicikya

1sg.acc.(poss.) P ring

'my ring'

contrast:

hom 'e'le

1sg.acc.(poss.) girl

'my daughter'

[128] Not all nouns are inflected overtly for accusative case, cf. *picu:ti 'an 'ito:we* 'pig P food; the pig's food'.

(28)a. ho' $_i$ nam $_i$ pimc'ana 'itok'e-kkya

1sg.nom. self.acc.(poss.) piglet feed-past

'I fed my piglet.'

b. hon $_i$ nam $_i$ pimc'ana 'itok'e-kkya

1pl.nom. self.acc.(poss.) piglet feed-past

'We fed our piglet.'

c. * ho' $_i$ hom $_i$ pimc'ana 'itok'e-kkya

1sg.nom. 1sg.acc.(poss.) piglet feed-past

*'I fed my piglet.'

When the possessor of an object argument is not coreferential with the subject of the clause, the regular possessive pronoun specified for person and number is used, e.g. 1sg.acc.(poss.) *hom* in (29).

(29) Nemme' hom pimc'ana 'itok'e-kkya

N. 1sg.acc.(poss.) piglet feed-past

'Nemme fed my piglet.'

Nam can also occur as the subject of a subordinate clause, if the subject of the subordinate clause is coreferential with the subject of the main clause. This is illustrated in (30), where *yam* in subject position of the subordinate clause is coreferential with *tačču* 'father' in the main clause. Example (30) provides evidence that *nam* is a subject-oriented anaphor since the direct object argument *hom* of the main clause does not serve as a potential antecedent for *yam* in the subordinate clause. This indicates that only structural subjects can bind *nam* .

(30) [$_{IP}$ hom **taccu$_i$** 'akkya [$_{CP}$ ko'lehoł **yam$_i$** paču k'ohana 'ayna-kkowa]
[1sg.acc.(poss.) **father$_i$** so [how **self.acc.(poss.?)$_{i\,/\,*k}$** Navaho white kill-comp.]

hom$_k$ 'atine-kya]
1sg.acc. tell-past]
'so my father told me all about how he killed the albino Navaho'
(*his Navaho)

[Bunzel 1933]

That the antecedent of *nam* must be a subject is confirmed by the inability of the indirect object to bind direct object possessor *nam* . Assuming a Larsonian VP-shell (Larson 1988), the indirect object would c-command the direct object, and thus one might expect the indirect object to be able to bind the direct object. Nevertheless in Zuni the indirect object cannot serve as binder of *nam* , as (31) below indicates.

(31) hom $_k$ Nemme' $_i$ nam $_{i/*k}$ nicikya 'uk-kya
1sg.acc. N. self.acc.(poss.) ring give-past
'Nemme$_i$ gave me her$_i$ (*my) ring.'

When an indirect object is coreferent with a possessor of a direct object in Zuni, both of these are realized fully specified in person and number (i.e. if pronouns), as for example *tom 'an* 2sg.acc.(poss.) + Postposition ... *tom* 2sg.acc. in (32).[129]

[129] The object *tom 'an takun* 'your necklace' has undergone focus movement in (32) (see Chapter 2 Section 2.1.1), perhaps to avoid a slight awkwardness felt with the order in (i).

(i) ? tom 'ik'^{w}alte ho' tom 'an taku-n 'uc'i-nna
2sg.acc. back 1sg.nom. 2sg.acc.(poss.) P necklace-sg. give-future
'I will give you back your necklace.'

(32) tom 'an taku-n 'ik'^{w}ałte tom ho' 'uc'i-nna
2sg.acc.(poss.) P necklace-sg. back 2sg.acc. 1sg.nom. give-future
'I will give you back your necklace.'

Ability to bind *nam* is therefore a test for subjecthood in Zuni.

If the accusative argument of the Zuni unaccusative and passive is a structural subject despite its accusative case, it should be able to bind the possessive anaphor *nam* . As (33) and (34) indicate, however, the accusative argument in neither the unaccusative (33a) nor the passive in (34a) can be interpreted as coreferent with *nam* . (Compare (33a) and (34a) with (33b) and (34b) respectively.[130])

(33)a. * hom$_i$ nam$_i$ teyači-n 'an palo-k'yanna
1sg.acc. self.acc.(poss.) field-sg. P be.buried-future.'
'I will be buried in my own field'

b. ? hom (lak^{w}k^{w}) hom teyači-n 'an palo-k'yanna
1sg.acc. (over.there) 1sg.acc.(poss.) field-sg. P be.buried-future
'I will be buried (over there) in my field.'

Judgments of these constructions with morphologically similar pronominal arguments are tricky; for example speakers seem to find (ii) below somewhat odd. See also the following note.

(ii) ?? tom ča'le' tom ho' k'ešku-nna
2sg.acc.(poss.) child 2sg.acc. 1sg.nom. put.in.the.arms.-future
'I will give you your child.'

[130] A slight awkwardness is felt in (33b) and (34b) by speakers due (they have commented) to the close juxtaposition of the morphologically similar pronominal forms; the insertion of the adverb helps somewhat. The preferred form would appear to involve putting the coreferent accusative and possessive arguments in separate clauses.

(34)a. * hom $_i$ nam $_i$ ča-'le' 'an-hanłi-na-'kya

1sg.acc. self.acc.(poss.) child-sg. P-steal-passive-past

'My child was stolen from me [e.g. out of my arms].'

b. ? hom (lak^{w}k^w) hom ča-'le' 'an-hanłi-na-'kya

1sg.acc. (over.there) 1sg.acc.(poss.) child-sg. P-steal-passive-past

'My child was stolen from me [e.g. out of my arms] (over there).'

We can conclude that *hom* in both (33) and (34) is a structural object and not a subject. The arguments of Zuni unaccusatives and passives are therefore structural objects and therefore differ in this respect from their counterparts in Icelandic.

A second test for subjecthood in Zuni comes from the behavior of unaccusative and passive arguments in certain non-finite complement constructions. There are two such constructions that we can use as tests for subjecthood, *'iha* + complement and *hakk'ya* + complement. While it is unclear what the exact nature of these constructions is (e.g. raising vs. control, vs. perhaps even auxiliary in the case of *'iha*), it can be shown that only the subject of the complement clause can serve as the subject of *'iha* and as the object of *hakk'ya* . We can therefore use these two constructions as tests for subjecthood vs. objecthood.

The verb *'iha* is used as both desiderative and immediate future and is inflected for both tense and number like an intransitive verb. *'iha* takes a non-finite complement suffixed with *-n* , as shown in (35).[131]

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[131] (ia) below shows that the subject of *'iha* can be an idiom chunk (cf. (ib)).

(i)a. k^{w}a' hoł Nemme' 'an 'asin 'akš-amme-' 'iha
neg. there N. P hand be.mixed.in-neg.-non-fin. desid./fut.
'Nemme is not going to help.'

b. k^{w}a' hoł Nemme' 'an 'asin 'akš-amme-'kya
neg. there N. P hand be.mixed.in-neg.-past
'Nemme didn't help'; literally 'There was no use of Nemme's hands involved.'

(35) ho' pimc'ana 'itok'ya-n 'iha
1sg.nom. piglet feed-non.fin. desid./fut.
'I'm going to feed the piglets'; I want to feed the piglets.'

It is difficult to show with ordinary transitive sentences that an object cannot be the subject of *'iha* , since Zuni does not have movement to A-positions.[132] We can, however, infer that the subject of *'iha* cannot be a structural object from the very fact that *'iha* cannot occur with unaccusative and passive verbs. Since a sentence with *'iha* is always acceptable if there is some structural subject present, as in (35) above, the ungrammaticality of *'iha* with unaccusative intransitive *palo* 'be buried' in (36) suggests that there is no structural subject in this unaccusative construction.

(36) * tom palo-n 'iha
2sg.acc. be.buried-non.fin. desid./fut.
'You are going to be buried.'

Similarly, *'iha* cannot take a passive clause as its complement, as shown in (37). Again we can infer that there is no structural subject in the Zuni passive construction.

(37) * tom 'itok'ya-na-n 'iha
2sg.acc. feed-passive-non.fin. fut.
'You are going to be fed.'

[132] See Note 125 and the discussion in Chapter 2 Section 2.1.1.

Important evidence is provided by examples like (38a) and (38b) that show that the meaning of *'iha* is not incompatible with unaccusative and passive verbs respectively and therefore (36) and (37) above are not excluded on a semantic basis.

(38)a. tom palo-k'yanna
2sg.acc. be.buried-future
'You are going to be buried.'

b. tom 'ito-k'ya-na-k'yanna
2sg.acc. feed-passive-future
'You are going to be fed.'

Similarly, the verb *hakk'ya* 'request someone to do something' can be used as a test for subjecthood in Zuni. Like *'iha* , *hakk'ya* takes a non-finite complement in *-n* , as illustrated in (39). *hakk'ya* differs from *'iha* in that it is the object of *hakk'ya* that must be the subject of the lower non-finite clause.

(39) tom ho' šema-n hakk'ye-kkya
2sg.acc. 1sg.nom. call-non.fin. request-past
'I asked you to call him.'[133]

Based on the unacceptability of *hakk'ya* with unaccusative verb *'ansatto* 'be helped' in (40a) and with passive verb *k'ošona* 'be washed' in (40b), we can again infer that there is no structural subject in the Zuni unaccusative and passive constructions.

[133] Also, 'I asked him to call you.'

(40)a. * tom ho' 'ansatto-n hakk'ye-kkya
2sg.acc. 1sg.nom. be.helped-non.fin. request-past
'I asked you to be helped.'

b. * tom ho' k'ošo-na-n hakk'ye-kkya
2sg.acc. 1sg.nom. wash-pass.-non.fin. request-past
'I asked you to be washed.'

We can apply at least one other test to Zuni unaccusatives and passives that indicates that the arguments of these two constructions are structural objects and not subjects. Zaenen, Maling & Thráinsson (1985) argued that the argument of an Icelandic unaccusative or passive can be understood as an arbitrary PRO subject of an infinitive (see the examples in (19) above). In contrast, the argument of the Zuni unaccusative or passive cannot be understood as an arbitrary PRO subject of an infinitive, as illustrated below in (41b-c). Compare the acceptability of (41a).

(41)a. 'ał-nakya teni
sleep-infin. hard
'It's hard to sleep.'

b. * 'ansatto-nakya teni
be.helped-infin. hard
'It's hard to be helped.'

c. * 'ampeye:-na-nakya teni
scold-pass.-infin. hard
'It's hard to be scolded.'

To sum up the results of this section, I conclude that the accusative arguments of Zuni unaccusative and passive constructions are not structural subjects since they fail to exhibit subject properties in the binding of a subject-oriented anaphor, cannot occur as complements of the verbs *'iha* 'desiderative/future' and *hakk'ya* 'request someone to do something', and cannot be understood as an arbitrary PRO subject of an infinitive.

In patterning like structural objects, the arguments of Zuni passives and infinitives are therefore unlike Icelandic unaccusative and passive arguments (which behave like subjects) and more like German arguments of passives with non-structural (oblique) case, (42a). As in Zuni, these German arguments cannot for example occur as an arbitrary PRO subject, (42b) (Zaenen, Maling & Thráinsson 1985).

(42)a. Ihm wurde geholfen
him (DAT) was helped
'He was helped.'

b. * Geholfen zu werden, ist angenehm.
helped to be is agreeable
'To be helped is nice.'

[Zaenen, Maling & Thráinsson 1985]

I now turn to the final structural question relevant to Zuni unaccusatives and passives brought up in the discussion of Icelandic above, namely whether phonologically null elements occur in structural subject position of these constructions.

3.2.2.3 Evidence Against Null Subjects

The question of whether there is some phonologically null element in structural subject position of Zuni unaccusatives and passives is an interesting one, since the presence of such an element would suggest that these constructions are akin to canonical transitive clauses. Based on the evidence discussed in the last section, I assume that the accusative arguments of Zuni unaccusatives and passives are structural objects. Therefore evidence of a null element in subject position would render the assignment of structural accusative case to this object no different than its assignment in a more straightforwardly transitive clause.

Like the Icelandic "new passive" discussed in Section 3.2.1.3, Zuni unaccusatives and passives show no Definiteness Effect. (43a-b) show that arguments with definite reference can occur as the arguments of Zuni unaccusatives and passives. This confirms that the Zuni arguments in (43) are structural objects[134], but in addition suggests the possibility that null *pro* with indefinite reference occupies subject position, as it does in the Icelandic "new passive".

(43)a. 'ussi hewe' palo-k'yanna
that money be.buried-future
'That money will be buried.'

b. 'ussi te'le' k'ošo-na-k'yanna
that pot wash-pass.-future
'That pot will be washed.'

[134] Since the Definiteness Effect is assumed to apply to subject arguments originating inside the VP. See Milsark (1974), Safir (1982, 1985), Pollock (1983), Reuland (1983), Szabolcsi (1986), among others.

This type of null *pro* indefinite subject is also found, for example, in Ute (Uto-Aztecan), which has what Givón (1990) has called a non-promotional passive. The arguments of the Ute 'passive' verb bear accusative case, and the *pro* indefinite subject can trigger either singular (44a) or plural (44b) agreement, which correspond to slightly different interpretations.

(44)a. sivḁ́ḁtu-ci paxấ-ta-pu̥ga
goat-OBJ kill-PASS-REM
'Someone killed the goat.'
'The goat was killed (by someone).'

b. sivḁ́ḁtu-ci paxấ-qa-ta-pu̥ga
goat-OBJ kill-PL-PASS-REM
'Some persons killed the goat.'
'The goat was killed (by some persons).'

Evidence from the binding of anaphors in Zuni suggests, however, that a phonologically null indefinite *pro* does not occur in the subject position of Zuni unaccusatives and passives. Recall examples (33a) and (34a) from the discussion of the Zuni possessive anaphor, repeated below in (45a) and (46a). (45a) and (46a) are not only ungrammatical under the interpretation where 1sg.acc. *hom* binds the possessive anaphor *nam* , (45a) and (46a) are bad under any interpretation, including that in (45b) and (46b).[135] (45b) and (46b) represent the interpretation that should be possible if *pro* with

[135] Cf. (i) (slightly odd due to the repeated pronoun).

(i) ?? hom hom teyačin 'an palo-k'yanna
1sg.acc. 1sg.acc.(poss.) fieldsg. P be.buried-future
'I will be buried in my own field.'

indefinite interpretation were assigned an agentive thematic role and occupied subject position of the unaccusative in (45a) and the passive in (46a). The ungrammaticality of interpretations (45b) and (46b) indicate that *nam* in (45a) and (46a) is not bound by some null indefinite element in subject position.

(45)a. * hom $_i$ nam $_i$ teyači-n 'an palo-k'yanna
1sg.acc. self.acc.(poss.) field-sg. P be.buried-future.'
'I will be buried in my own field'

b. * 'I will be buried in someone's field.'

(46)a. * hom$_i$ nam$_i$ ča-'le' 'an-hanli-na-'kya
1sg.acc. self.acc.(poss.) child-sg. P-steal-passive-past
'My child was stolen from me [e.g. out of my arms].'

b. * ' His/their [someone's] child was stolen from me.'

This result is confirmed by the example below in (47a), where *nam* has no interpretable antecedent.[136] In contrast, in (47b) *nam* is bound by a null third person plural subject with specific reference, whose presence is indicated by the plural subject agreement suffix *-nap* on the verb.

[136] The adverb 'yesterday' intervening between possessor and possessed noun is not a factor in the ungrammaticality of this sentence, since this fronted position is in fact the natural position for a possessive pronoun (See Chapter 2 Section 2.1.1). Compare (47b).

(47)a. * nam teššuk'ʷa' 'e'laštok'-ona' pokłi-k'ya-na-'kya
self.acc.(poss.) yesterday daughter-topic.(acc.) smoke-caus.-pass.-past
'Yesterday self's daughter was made to smoke.'

cf.

b. nam teššuk'ʷa' 'e'laštok'-ona' pokłi-k'ya-nap-kya
self.acc.(poss.) yesterday daughter-topic.(acc.) smoke-caus.-pl.subj.-past
'Yesterday they made their daughter smoke.'

The ungrammaticality of (45a), (46a), and (47a) does not rule out an analysis in which the subject position of Zuni unaccusatives and passives is filled by a phonologically null expletive element. This possibility can be ruled out on the basis of other evidence, however. Non-referential non-thematic subjects occur in a few types of constructions in Zuni. These include predicates involving natural phenomena, as in (48a), as well as certain other intransitives, for example (49a).[137] The presence of this non-thematic or expletive subject is indicated by the presence of special *te-* agreement morphology prefixed to the verb. Compare the use of the same verb stem in (48a) and (49a) with non-thematic subject to its with a thematic subject in (48b) in (49b).

(48)a. te-k'ałi
[-referential]-hot
'It's hot out'

b. nočapi: (*te-)k'yałi-kya
coffee hot-past
'The coffee was hot.'

[137] Further examples are given in Section 3.5 as well as in Chapter 4.

(49)a. te-[l]-oše-kya

[-ref.]-hungry-past

'There was a famine.' [Bunzel 1933 ((49a)only)]

b. 'iš hon 'a:w-oše-:-'a (*teloše:'a)

very 1pl.nom. pl.-hungry-cont.-present

'We're hungry.'

The absence of this expletive agreement morphology *te-* in the unaccusative (50a) and passive (50b) construction indicates that these constructions do not contain a null expletive in subject position.

(50)a. tom palo-k'yanna

2sg.acc. be.buried-future

'You will be buried.'

b. tom k'ošo-na-k'yanna

2sg.acc. wash-pass.-future

'You will be washed.'

In fact, *te- cannot* occur with unaccusative and passive verbs, as (51a) and (51b) indicate.

(51)a. * tom **te**-palo-k'yanna

2sg.acc. [-ref.]-be.buried-future

'You will be buried.'

b. * tom **te**-k'ošo-na-k'yanna

2sg.acc. [-ref.]-wash-pass.-future

'You will be washed.'

To sum up the results of this section, while the arguments of the Zuni unaccusative and passive and the Icelandic "new passive" are all assumed to be structural objects, the Zuni constructions differ from the Icelandic "new passive" in lacking a phonologically null *pro* with indefinite or generic reference in subject position. In addition, I presented evidence that Zuni unaccusatives and passives do not contain a null expletive in subject position. Specifically, the *te-* agreement that indicates the presence of a subject expletive cannot occur with unaccusatives or passives.

3.2.3 Summary of Results: Zuni vs. Icelandic

The discussion of the various syntactic tests in the preceding two sections suggests that Zuni unaccusatives and passives are quite different from their counterparts in Icelandic.

In particular, the accusative case found on arguments in the Icelandic unaccusative or passive is assumed to be inherent or quirky case, while I have argued that the accusative case on arguments of the Zuni unaccusative and passive is structurally assigned. Furthermore, (quirky case marked) arguments in Icelandic unaccusatives and passives are argued by Zaenen, Maling & Thráinsson (1985) to be structural subjects. I have argued, however, on the basis of binding facts and other evidence that the accusative arguments of Zuni unaccusatives and passives are in fact structural objects.

The construction that Zuni unaccusatives and passives are most similar to is the Icelandic "new passive" described by Maling & Sigurjónsdóttir (1997). All of these constructions have structural accusative case marked arguments[138] that behave like objects. Even here, however, Zuni parts ways with Icelandic. Maling & Sigurjónsdóttir (1997) argue that the "new passive" contains a phonologically null *pro* with indefinite reference in subject position. Binding evidence indicates Zuni unaccusatives and passives contain no null indefinite *pro* subject. It was argued on the basis of additional evidence that these Zuni constructions do not contain a null expletive subject either. This evidence for the absence of a null subject in Zuni unaccusatives and passives argues against these constructions being impersonal transitives.

In short, Zuni unaccusatives and passives appear to represent quite different constructions from unaccusatives and passives found elsewhere. The structure of Zuni unaccusatives and passives can be represented as in (52) below. This structure is noteworthy in that it is hypothesized to lack a structural subject position.[139]

(52) **Zuni Unaccusative and Passive**

$[_{IP}\ [_{VP}\ NP\ \ V]\ ]$

Further evidence for the absence of a structural subject position outside the VP in Zuni comes from the absence of A-movement to case positions outside of VP. This evidence was discussed in Chapter 2 Section 2.1.1 and 2.1.3. (A structural subject position *is* projected inside the VP (i.e. by light verb *v*) in canonical transitive structures in Zuni.)

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[138] The argument of the Icelandic "new passive" is also found with dative case.

[139] While the absence of indefinite or expletive *pro* in this construction does not necessarily imply the absence of a structural subject position, its absence can at least be indirectly inferred from this evidence. Nevertheless, I will present in Section 3.4.3 independent evidence for the absence of a structural subject position as hypothesized in (52).

(52) can be contrasted in this respect with the structures hypothesized for canonical passives and unaccusatives[140] and the Icelandic "new passive" shown below, both taken from Maling & Sigurjónsdóttir (1997).

(53)a. **Canonical Passive without NP-movement**

$[_{IP}$ e $[_{I}$Tns, Agr, Pass$]$ $[_{VP}$ V NP]]

b. **Icelandic "New Passive" (Syntactically Active Impersonal)**

$[_{IP}$ *pro* $[_{I}$ Tns, Agr$]$ $[_{VP}$ V NP]]

Many studies beginning with Burzio (1986) and Rosen (1981) have made the observation that structural accusative case is assigned only when an external argument is present, or as stated by Sigurðsson (1992), only when structural nominative case is also assigned. If Zuni unaccusatives and passives have the structure hypothesized in (52) above, this leaves us with the question of how exactly structural accusative case is assigned in these constructions.

It may be the case that the correlation between external argument and structural accusative case is in fact epiphenomenal. In other words, unaccusative and passive verbs in all languages may have the ability to assign structural accusative case but this property is somehow masked in language like English. In languages like Zuni, however, the structural case assigning properties of verbs is directly observable. The correlation between external argument and structural case would therefore be only an indirect correlation, arising in only certain languages and resulting from unrelated constraints, e.g. on subjects, argument movement or chain formation.

The remainder of this chapter will be devoted to the proposal of an alternative account of structural accusative case assignment in Zuni.

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[140] Though perhaps not Icelandic unaccusatives, whose arguments Zaenen & Maling (1984) argue to be underlying subjects.

3.3 Accusative Case vs. the EPP

In this section I lay the groundwork for the analysis in 3.4 and argue that it is theoretically feasible, as well as consistent with the unaccusative hypothesis illustrated in (1) earlier, that at least certain unaccusative (and passive) verbs have the ability to assign or check structural case.[141]

3.3.1 Movement for Case?

Burzio's Generalization (Burzio 1986)[142] describes a correlation between external arguments and structural accusative case assignment properties that has been widely confirmed. This correlation is even able to capture the fact that unergative verbs in English can assign accusative case to resultative pseudo-objects, shown in (54a) and (55a). The sole argument of unergative intransitives is external. Therefore in a context in which the unergative verb can be associated with a structural object provided by an argument of another clause, it should be able to assign that object accusative case, as it does in (54b) and (55b).[143]

(54)a. Dora shouted herself hoarse.

b. * Dora shouted herself.

(55)a. The dog barked him awake.

b. * The dog barked him.

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[141] Note that if this is the case, the term *unaccusative* is somewhat of a misnomer for these verbs. I will, however, continue to refer to the Zuni intransitives under discussion as *unaccusative* to preserve clarity in the discussion and comparability with the phenomenon in other languages. The defining characteristic of Zuni unaccusative verbs will therefore be not their case marking but rather the origin of the intransitive predicate's argument in structural object position.

[142] Also see Rosen (1981) for a different formulation of similar observations.

[143] Examples from Levin and Rappaport Hovav (1995).

Marantz (1991) suggests a reinterpretation of the factors that produce the apparent correlation described by Burzio's Generalization. In particular he suggests that sentences like those in (56a) and (56b) below are bad not because of the inability of unaccusative and passive verbs to assign case, but rather due to principles governing the presence of subjects in English.

(56)a. * It fell Sidney.

b. * It was defeated Baxter in the election.

c. [e] fell Sidney.

d. [e] was defeated Baxter in the election.

First, assume that the underlying structures in (56c-d) must have subjects in English surface syntax to be well-formed. In a grammar where movement is less costly than insertion of overt phonological material, the NP to the right of the verb will move into subject position as the most economical way to satisfy the condition on subjects. When an NP moves to the position occupied by [e] in (56c-d), the NP will receive nominative case. The NP has no opportunity to receive accusative case even if it is assignable in these structures, because it must move out of the accusative position to satisfy the Extended Projection Principle condition on subjects. Marantz therefore hypothesizes : "since objects may freely solve the subject requirement through movement, it misleadingly appears as if objects are not licensed (assigned case) if there is no subject."[144] [145]

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[144] Sigurðsson (1992) argues for a variation on Marantz's analysis, namely that NPs do not raise for case reasons but rather because 'it is impossible to keep two potential chains 'chain distinct' if their structural relationship meet the general structural condition on chain formation and if they do not have any distinct features. In other words, chains must combine or be visibly distinct, structurally or featurally.'

[145] The issues are not necessarily this simple. For example, some languages may allow either movement or the insertion of an expletive subject (cf. Icelandic examples (21a) and (22) in Section 3.2.1.3), or insertion of expletive subjects in a variety of constructions (transitives, unaccusatives, and/or unergatives (e.g. (i) below for the last where it is not clear that satisfaction of the EPP is the driving force). In addition, expletive constructions are restricted to unaccusative intransitives in some languages but yet in other languages allowed in a variety of intransitive construction types. The issue is further complicated by the

Similarly, other evidence held to confirm Burzio's Generalization can be shown to be uninformative on the question of the structural case assigning properties of verbs. For example, we can reinterpret the unacceptability of unaccusatives with pseudo objects. Levin & Rappaport Hovav (1995) attribute the inability of the unaccusative verb in (57) to take a pseudo object (in contrast to the unergative verbs in (54b) and (55b)) to the fact that only one of the NPs in (58a) can get case by moving to subject position.[146] However, we can rule out (57) without appealing to case by pointing out that the base structure in (58a) is simply not generable. The double object construction does not allow a small clause to be constructed off of it, as indicated by the ungrammaticality of (58b, b').[147]

(57) * During the spring thaw, the boulders rolled the hillside bare.

(Levin & Rappaport Hovav 1995)

(58)a. * $[_{VP}V\ NP_1\ [NP_2\ ADJ]\ ]$

b. * Johnny gave Felix the stew cold.

b.' * Johnny gave the stew to Felix cold.

(both with the interpretation that it was Felix who was cold)

Definiteness Effect and its role in these constructions. For an overview of these and related issues see Vikner (1995). See also Falk (1993).

(i) það var sungið hátt.
it/there was sung loudly [Maling & Sigurjónsdóttir 1997]

[146] Levin and Rappaport Hovav (1995:287) do point out that "there is no generally accepted account of how the inability of a verb to assign structural case can be reduced to the unaccusative D-structure configuration."

[147] In other words, even when (structural) case is available for NP_2, the small clause construction is bad. Höskuldur Thráinsson suggests (p.c.), however, that the likelihood that a small clause predicate is interpreted with an argument may be influenced by morphological case marking and thus vary cross-linguistically. He cites the Icelandic example below in (i), in which there are three case (and gender) marking possibilities on the adjective that give rise to one interpretation each.

(i) Haraldur gaf Helgu s'upina kaldur/kaldri/kalda
H.nom. gave H.dat. soup-the.acc. cold(nom./dat./acc.)
$Harald_i$ gave $Helga_j$ the $soup_k$ cold $_{i/j/k}$.

This puts case assignment in unaccusatives and passives in a new light. If a language must resolve requirements of the EPP and does so by moving an object into subject position, we can also imagine the case of a language that does not have a requirement to satisfy the EPP, or at least need not do so via movement with overt phonological material. We might wonder about the case assigning properties of unaccusatives and passives in languages where EPP fulfillment is not required, or in particular, not does not required fulfillment by movement of objects into subject position. If unaccusative and passive verbs can assign structural accusative case, it should show up in such languages. I will put aside for now the status of the EPP in Zuni given structures like that in (52) argued for in Section 3.2 but will return to the topic at the end of the chapter in Section 3.5.

(52) **Zuni Unaccusatives and Passives**

$[_{IP}\ [_{VP}$ NP V]]

Testing the above proposals concerning the EPP will have cross-linguistic implications, since in addition to the Zuni evidence introduced above, evidence exists for the assignment of structural accusative in the passive in other languages . I will describe two examples in Section 3.3.2 below. After this, in Section 3.4 I turn directly to an account of the structure of Zuni unaccusatives and passives and their case properties.

3.3.2 Structural Accusative Case in Passives Elsewhere

Borer (1986) gives examples of what appears to be structural accusative case assignment in the passive in colloquial Hebrew, (59a). She accounts for the case facts in

(59a) vs. (59b) simply by the assumption that unaccusative verbs in colloquial Hebrew are optional case assigners.

(59)a. Haya katuv 'et ha-yedi'a ha-zot ba-'iton
was written-m acc the-message the-this-f in-the-paper
'This message was written in the paper.'

b. Hayta ktuva yedi'a xashuva ba-'iton
was written-f message-f important-f in-the-paper
'An important message was written in the paper.'

Ukrainian passives with accusative case are reported by Sobin (1985). In one type of Ukrainian passive, the passive participle (which takes adjectival endings) agrees in gender, number and case with the passive argument. The passive argument itself receives nominative case, (60).

(60) Stadion buv zbudovanyj v 1948 roc'i.
stadium(nom.masc.) be(past) built+part.+nom.masc.sg. in 1948
'The stadium was built in 1948.'

In a second type of passive in Ukrainian the passive participle reflects neuter agreement and the passive argument retains the accusative case it would bear in the active clause.[148] According to Sobin, the accusative passive in (61) differs from the nominative passive in (60) in having an eventive interpretation.

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148 This passive is formally distinct from impersonal subject constructions with passive-like interpretations, shown in (i), where the passive argument also retains its non-nominative case. (i) differs from a true passive by its indication of an impersonal subject via 3rd person plural subject agreement.

(i) Mene poslaly v kanadu
I(acc.) send+past+3pl. to Canada + acc.

(61) Stadion bulo zbudovano v 1948 roc'i.
stadium(acc.masc.) be+past+neut. built+part.+neut. in 1948
'The stadium was built in 1948.'

Sobin demonstrates that the accusatively marked argument in (61) lacks the subject properties of the nominative argument in the passive in (60). The accusative argument of the passive in (61) cannot control a PRO subject of a subordinate clause and in addition behaves like a direct object in negative clauses. Like all direct objects in Ukrainian negative clauses, the accusative argument in passives like (61) can bear genitive case, (62).

(62) cerkvy ne bulo zbudovano
the church+gen was not built

Sobin suggests that the core property of passives (and by extension we may assume unaccusatives) is not the inability to assign case but rather the absence of the external argument. He proposes that the point at which case is assigned is parameterizable and bases Ukrainian case assignment on the principle in (63).

(63) Case assignment in Ukrainian is delayed and based on the 'leftmost' Grammatical Function (Sobin 1985: 661)

'Leftmost' Grammatical Function essentially refers to the last grammatical function borne by an argument in a derivation.[149] While (63) assumes that accusative

'I was sent to Canada.'

[149] This idea is somewhat similar in spirit the Left-to-Right association of case with arguments proposed for Icelandic (and nominative/accusative languages in general) by Yip, Maling, & Jackendoff (1987). (Ergative languages were proposed by them to associate case with arguments in a Right-to-Left fashion.)

case assignment by Ukrainian passive verbs is possible, it says nothing about the mechanism responsible for assigning accusative case. We need an explicit statement of such a mechanism, however, in order to be able to explain why accusative case is not found in passives cross-linguistically.

Section 3.4 of this chapter will propose a mechanism for the assignment of accusative case in Zuni passives and unaccusatives. To the extent that [+accusative] passives and unaccusatives have a similar eventive interpretation, such as do the passives in Ukrainian in (61) and (62) above, I will argue for the generality of the account proposed.

3.4 Case and Event Structure

In what follows I propose an account of the structural properties of Zuni unaccusatives and passives argued for in Section 3.2. I will argue in Section 3.4.1 that accusative case assignment in Zuni unaccusatives and passives is correlated with eventive interpretation and in turn, eventive interpretation is correlated with a particular compositional morphosyntactic structure. In other words, there is a formal and interpretive correlation associated with accusative case in these contexts, indicating that the assignment of accusative in Zuni unaccusatives and passives is predictable.

Section 3.4.2 and 3.4.3 propose an analysis of the Zuni facts discussed in 3.4.1 that will have cross-linguistic implications for proposals for the mapping between lexical event structure and syntax. I will argue that structural accusative case is assigned in Zuni to unaccusative and passive arguments by a functional head that translates hidden causative event structure directly into a transitive syntactic structure. The fairly direct

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In both the Sobin (1985) and the Yip, Maling, & Jackendoff (1987) proposals, case is associated to surface grammatical function, though in the former grammatical function apparently play a direct role in determine case value, while for the latter grammatical function plays an indirect role in so far as it determines how far to the right or left an argument will be in surface structure when association from the case 'tier' takes place.

mapping between semantics and syntax in Zuni provides new support for the hidden causative analysis of unaccusatives proposed by Pustejovsky (1995) and Chierchia (1989).

3.4.1 Case, Morphology and Interpretation

An important property of these Zuni unaccusatives and passives with accusative case is that they all have eventive interpretation and therefore form a coherent semantic class. Structural evidence for such a class in Zuni exists as well.[150]

Since Zuni unaccusatives and passives can be shown to have the same structural and interpretive correlations, the proposal for structural accusative case assignment in Section 3.4.2 will apply to both types of construction.

Unaccusatives with accusative arguments in Zuni all have an eventive change of state interpretation. Examples include *'uli* 'be put inside', *tina* 'be seated(pl.)', *'učču* 'be put inside (clothing)', *'ansatto* 'be helped', and *palo* 'be buried' and are illustrated in (64a-e).

(64)a. hom 'uli-'kya
1sg.acc. be.inside-past
'I was put inside; I was arrested'

b. ho'no' tina-'kya
1pl.acc. pl.be.sitting-past
'We were seated [e.g. by the waitress].'

[150] I therefore avoid a problematic aspect of analyses of (non-nominative vs. nominative) case marking in unaccusatives based on semantic classification alone. Levin and Rappaport (1992) argue that such analyses often claim an epiphenomenal 'unaccusative mismatch', the result of suggesting a semantic classification that is not supported by structural evidence for the class, for example the ± control classification cited by Merlan (1985).

c. hom 'učču-'kya
1sg.acc. be.inside-past
'It [shirt] was put on me.'

d. hom 'ansatto-'kya
1sg.acc. be.helped-past
'I was helped.'

e. tom palo-'kya
2sg.acc. be.buried-past
'You were buried quickly.'

One property of these verbs that sheds light on the distribution of accusative case in intransitives is the fact that they occur in minimal pairs with respect to interpretation and case assignment. The same root occurs in a construction with accusative case and eventive interpretation as well as in a second type of construction with nominative case and stative interpretation. These pairs are illustrated in (65)-(69)

(65)a. hom 'uli-'kya
1sg.acc. be.inside-past
'I was put inside; I was arrested'

b. ho' 'uli-'kya
1sg.nom. be.inside-past
'I was inside'

(66)a. ho'no' tina-'kya

1pl.acc. pl.be.sitting-past

'We were seated.'

b. hon tina-'kya

1pl.nom. pl.be.sitting-past

'We were sitting.'

(67)a. hom 'učču-'kya

1sg.acc. be.inside-past

'It [shirt] was put on me.'

b. ho' 'učču-'kya

1sg.nom. be.inside-past

'I wore it [shirt]'

(68)a. hom 'ansatto-'kya

1sg.acc. be.helped-past

'I was helped.'

b. ho' 'ansatto-ye

1sg.nom. be.helped-present

'I have been helped.'

(69)a. tom palo-'kya

2sg.acc. be.buried-past

'You were buried quickly.'

b. to' palo-ye ke:si
2sg.nom. be.buried-present already
'You are now buried.'

These minimal pairs indicate a regular correlation between case assignment and interpretation. When an intransitive verb has eventive change-of-state meaning, it predictably assigns accusative case to its argument.

In addition to case differences, the interpretive difference in intransitives also correlates with a morphosyntactic difference. In certain morphological contexts only, an additional verb derivational suffix *-k-* appears with eventive intransitive stems but not with their stative versions. *-k-* surfaces only in certain contexts due to morphophonological factors but is assumed to be part of the derivational makeup of all eventive forms.

By chance, basically only two types of inflectional suffixes occur with eventive transitive verbs, those with initial *n* and those with initial non-sonorant consonant *k* or consonant cluster *? + C*. These are {Negation, Same-Subject} and {Future, Different-subject, Past, Past Subordinate, Negative Future, Hortatory, Optative} respectively, shown in (70).[151] In the derivation of the inflected verb stem, *-k-* occurs immediately before the inflectional suffixes in (70).

(70)a. -na'm Negation
-nan Same-Subject

[151] (70) is not an exhaustive list. There are a few other inflectional suffixes, all of which fit the pattern described here. For semantic reasons to be detailed below, present tense inflection does not occur with this class of verbs.

b.	-k'yanna	Future
	-k'yappa	Different-Subject
	-'kya	Past
	-'kowa'	Past Subordinate
	-'šukwa	Negative Future
	-'še	Hortatory ("let's")
	-'tu	Optative

-k- appears to be suppressed in the inflectional contexts in (70b). While geminates *kk* and *kk'* are both permitted in Zuni (cf. continuative past *-kkya* and continuative causative *-kk'ya*) apparently they are not permitted to be formed via derivation across a morpheme boundary.[152] In addition, consonant clusters *C + ? + C* do not occur. Thus this additional *-k-* in eventive intransitives only surfaces in stems inflected with suffixes having other than initial *k* or *? + C* , namely Negation or Same-Subject. Despite its absence in the surface spellout of the latter type of stems, its interpretive value remains, as the glosses in (64) and (65a)-(69a) attest.

(71) and (72) below illustrate the contexts in which this morpheme *-k-* surfaces. In (71a) *-k-* is present in the negative form of the eventive intransitive, while (71b) shows that *-k-* is absent in the stative form.

(71)a kʷa' tom palo-k-na'ma
neg. 2sg.acc. buried-K-neg.
'You will not be buried.'

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[152] There is another possible interpretation of these forms. The Future and Different-Subject suffixes for this inflectional class (also shared coincidentally - or perhaps not coincidentally, see below - by stative stems) are traditionally analyzed as *-k'yanna* and *-k'yappa* (that is, *-k'yanna* , by Newman (1965) for stative stem inflection - this dissertation represents the first discussion of unaccusative inflection, and therefore of unaccusative DS suffix *-k'yappa* in Zuni). In light of the discussion in this section, however, it may be more appropriate to analyze these suffixes as *k + 'anna* and *k + 'appa* (*'anna* and *'appa* occur elsewhere as allomorphs of these suffixes).

b. k^{w}a' tom pal-'amme (* palo-k-amme)

neg. 2sg.acc. buried-neg.(stat.)

'You are not now buried'

-k- also is overt in eventive forms inflected for Same-Subject (SS) marking, (72a) but not in the corresponding stative form, (72b).

(72)a. tom 'uli-k-nan tom 'ansatto-k'yanna

2sg.acc. be.inside-K-SS 2sg.acc. helped-future

'You will be put inside and then helped.'

b. to' 'uli-n to' 'imo-'kya (* 'uli-k-n)

2sg.nom. be.inside-SS 2sg.nom. be.seated-past

'You were inside and were seated [a long time]'

Zuni passives also have eventive interpretation, and as expected this *-k-* morpheme also surfaces in the passive verb under exactly the same morphophonological conditions as in unaccusatives. Compare the passive stems suffixed with negation (73a) and same-subject (73b) below to the passive stem in (74) suffixed directly with past tense inflection.

(73)a. k^{w}a' ho'no' 'a:w-itok'ya-na-k-nam-kya

neg. 1pl.acc. pl.obj.-feed-passive-K-neg.-past

'We were not fed.'

b. ho'no' 'a:-yaktoh-na-k-nan ho'no' 'a:w-ansatto-'kya

1pl.acc. pl.obj.-hit-passive-K-SS 1pl.acc. pl.obj.-helped-past

We were hit [by a car] and then we were helped.

(74) Pilpo-ya' 'an-towowo-na-'kya
Filbert-acc. P-shoot-passive-past
'Filbert was shot.'

The presence of this morpheme *-k-* is responsible for the addition of the eventive meaning to Zuni unaccusatives and passives. Since eventive meaning is also correlated with accusative case, *-k-* is in some way responsible for the assignment of structural accusative case in these intransitives.

We can confirm that *-k-* is responsible for eventive interpretation by the behavior of inflectional morphology that is highly sensitive to the [± stative] distinction made in verb stems. Stative and non-stative stems take different allomorphs of certain inflectional suffixes, as illustrated in (75a) vs. (75b).

(75)a. k^{w}a' pimc'ana 'itok'ya-**nam**-kya
neg. piglet feed-**neg.**-past
'He didn't feed the piglet.'

b. k^{w}a' (kwa'aɬ) pimc'ana 'ill-**'amme**
neg. (any) piglet have-**neg.(stat.)**
'He doesn't have any piglets.'

Certain Zuni inflectional morphemes themselves happen to contain the stative morpheme *-na* .[153] One example of such inflection is plural transitive subject agreement *-na:w*. Following such 'covert stative' morphology, the stative allomorph of any further

[153] Though adding no stative interpretation to the stem.

inflection must be selected (even though the verb stem itself is active). Compare the singular stem plus non-stative form of inflection in (76a) and the plural stem containing *-na* plus the stative form of negation in (76b).

(76)a. k^{w}a' pimc'ana 'itok'ya-**nam**-kya
neg. piglet feed-**neg.**-past
'He didn't feed the piglet.'

b. k^{w}a' pimc'ana 'itok'ya-na:w-**amme**-kya
neg. piglet feed-pl.subj.-**neg.(stat.)**-past
'They didn't feed the piglet.'

In light of this sensitivity, the following facts are quite interesting. Passive morphology consists of stative *-na.* When the passive bears negation or same-subject inflection, however, the non-stative allomorph of inflection is selected, as (77) illustrates.

(77)a. k^{w}a' tom 'itok'ya-na-k-**na'm**-a
neg. 2sg.acc. feed-passive-K-**neg.**-pres.
'You are not going to be fed.'

b. ho'no' 'a:-yaktoh-na-k-**nan** ho'no' 'a:w-ansatto-'kya
1pl.acc. pl.obj.-hit-passive-K-**SS** 1pl.acc. pl.obj.-helped-past
We were hit [by a car] and then we were helped.

The addition of *-k-* serves to change the passive stem from stative to non-stative, whereupon non-stative inflection is then appropriate. *-k-* is therefore responsible for adding the non-stative or eventive meaning to the passive (and unaccusative) Zuni stem.

I conclude that accusative case in Zuni unaccusatives and passives is predictable since its presence is correlated both with eventive interpretation as well as additional verbal morphology. The investigation into this additional verbal morphology *-k-* reveals in particular that Zuni unaccusatives and passives have parallel compositional structure. Both consist of a stative root or stem plus eventive *-k-* , (78). Intransitive roots are covertly stative while passive verbs are overtly stative.

(78) **Intransitive roots**

['uli] + **K** --> 'uli-k-
be.inside **eventive** be.put.inside

Passive stems

['utte + na] + **K** --> 'utte-na-k-

[bite + stative] + **eventive** be.bitten

Stative intransitive verbs have no external argument, *-na* derivation is used in the passive to derive a structure with no external argument.[154] The further addition of *-k-* makes the passive into an eventive predicate without adding an external DP agent.

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[154] *-na* can be added to non-stative intransitives to derive a corresponding stative form with similar argument structure, (i) and (ii), but *-na* cannot be added to a transitive verb with the same result, (iii).

(i)a. hon 'itiw'an hapo-kya
1pl.nom. noon gather-past
'We gathered at noon.'

b. hon hapo-na-ye
1pl.nom. gather-stative-present
'We were gathered together.'

(ii)a. 'okšik'o k'umm 'an k^{w}ato-kya
cottontail.rabbit log P enter-past
'The rabbit entered the log.'

b. 'okšik'o te'ana k^{w}ato-na-ye
cottontail.rabbit footprints enter-stative-present

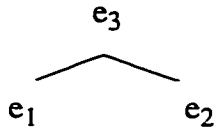
3.4.2 Hidden Causative Event Structure

In this Section I explore how it is that *-k-* does not add an external agent yet is responsible for eventive interpretation, as well as how *-k-* is responsible for accusative case assignment in unaccusatives and Passives.

I will adopt the approach to event structure proposed by Pustejovsky (1995), who suggests a way to represent the subevent structure associated with lexical items as well as capture the relation between events and related arguments structures.

Pustejovsky assumes that events are complex and can be decomposed into subevents.[155] He suggests that events have at most a binary event structure, so that complex event e_3 in the semantic representation in (79) is composed of subevents e_1 and e_2.

(79)



Pustejovsky also suggests subevents may be related by several types of temporal ordering relations, so that the event structure above can describe at least three types of

---

'The rabbit tracks entered the log.'

(iii) * ho' Nemme-ya' nicikya 'uk-na-ye (transitive meaning)
1sg.nom. N-acc. ring give-stative-present
'I have given Nemme a ring.'

[155] Pustejovsky (1995) claims that one advantage of his approach is that it addresses the problem of accounting for both constructional and compositional unaccusativity, (ib), as well as lexical unaccusativity.

(i)a. Gianni ha corso.
'John has run.'

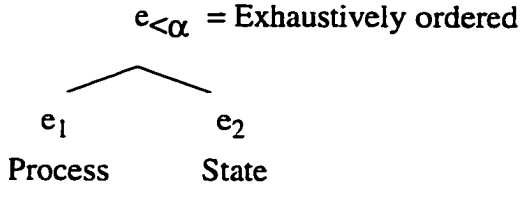
b. Gianni è corso a casa.
'John ran home.'
[Pustejovsky 1995]

events, processes, states and transitions, depending on how events are related. Of the ordering relations he describes, $<$ is a strict partial order, o is overlap, $\subseteq$ is inclusion and in addition * indicates the head of an event.

Event headedness is proposed as a way of indicating foregrounding or backgrounding of the arguments of an event, so that in addition to being ordered as above, events are also ordered according to relative prominence. In particular, headedness allows the event structure to map to syntactic structure, which is constructed around a requirement that there be heads of phrases. Evidence indicates that prepositional and adverbial phrases can take scope over individual subevents.

Pustejovsky claims that, for example, English *build* and *arrive* have similar event structures with a strict partial ordering of subevents as in (80) but differ according to which subevent is the head. *Build* is an accomplishment verb, whose initial process event is the head; head focus on the state results in an achievement verb like *arrive.*

(80)



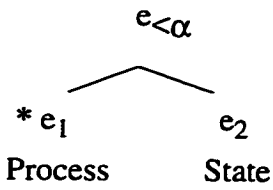
With regard to unaccusatives, Pustejovsky (1995), Pustejovsky (1988) and Chierchia (1989) suggest that the lexical representation for an unaccusative is an underlying causative. This suggestion is intended to capture the relatedness of transitive and unaccusative argument structure alternations of verbs like English *sink* , as in (81a) and (81b) and to avoid having to represent them as unrelated lexical items as for example in Levin and Rappaport Hovav (1995).

(81)a. The bomber sank the boat.

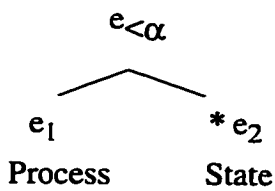
b. The boat sank.

Pustejovsky (1995) argues that whether a verb surfaces as unaccusative or transitive will be determined by which subevent is selected as the head in the semantic representation. If e_1 is the head, the verb inserted into syntactic structure will be transitive, and if e_2 is the head, the verb will be unaccusative.

(82)a. Transitive



b. Unaccusative



The positing of a single representation for both types of verbs rests partially on the notion that there are two conceivable types of events of causation, that brought about by some process associated with an external agent, as in (83a), and that brought about simply by a process, as in (83b).

(83)a. Felix melted the ice.

b. The ice melted. ['the sun shone' --> 'the ice melted']

Davis (1996) and Demirdache (1996) adopt Pustejovsky's proposals outlined above in order to account for the behavior of unaccusative roots in St'át'imcets Salish. I illustrate their analysis of Salish here in order to highlight the further contribution that Zuni will make to the general approach.

Davis (1996) and Demirdache (1996) suggest that the approach to lexical semantics described by Pustejovsky (1995) can be used to explain the syntactic properties of St'át'imcets unaccusative verbs.[156] They argue that St'át'imcets monomorphemic unaccusative roots such as those in (84) have the complex event structure shown in (85).

[156] Van Hout (1996) uses an event structure analysis for somewhat different purposes.

(84a) **k'ac** ti s-ts'wán-a

dry DET NOM-salmon-DET

'The salmon dried'

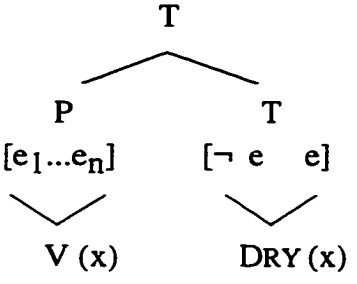
b. **sék** ti sqáycw-a

hit DET MAN-DET

'The man was hit (with a stick or whip)'

Specifically, unaccusatives consist of a process event P followed by a change of state event T ('transition').[157] The causing process event is specified as V(x) a variable ranging over predicates.[158]

(85)



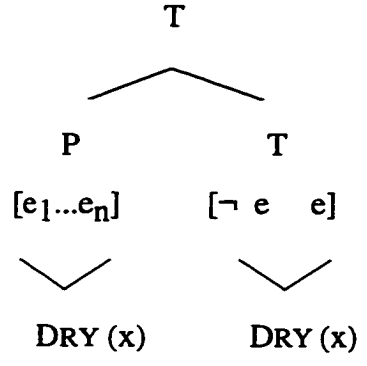
A transitive is formed in St'át'imcets with the causative *-s* or directive *-an* suffix and is given a semantic structure (86 below) similar to that of the unaccusative stem. The transitive is distinguished by the foregrounding of the process event. This is signaled by

[157] The labeling of the second subevent of an unaccusative as state vs. change of state (transition) varies in the literature depending on the analysis as well as on the language.

[158] Borer (1997) and Arad (1997) take a different approach to somewhat related unaccusative aspectual phenomena.

the copying of the verb constant[159] onto the predicate variable in the semantic representation; in the syntax this corresponds to copying the constant onto the light verb that heads the predicate associated with the external agent (cf. Chomsky 1995b, Hale & Keyser 1993, 1996a).

(86)



According to Demirdache (1996), the existence of parallel semantic event structures for St'át'imcets unaccusatives and transitives accounts for the parallels in their behavior. For example, in certain contexts unaccusatives and transitive causatives are grouped together and contrast with unergatives. The account of 'out of control' reflexives in Demirdache (1996) will serve as an illustration.

St'át'imcets 'out of control' (OOC) morphology consists of the circumfix *ka...a*. When OOC derivation applies to a full control directive transitive[160] as in (87b)[161], the resulting interpretation is one of accidental causation. When applied to unaccusative intransitives, OOC derivation also results in an accidental (or spontaneous) causative interpretation, (88b).

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[159] The 'name' associated with the idiosyncratic part of the verb meaning.
[160] The derivation does not apply to neutral control transitives.
[161] DIR = directive, ERG = ergative, DET = determiner, OOC = out of control, CAU = causative, MDL = middle, ACT = active intransitivizer.

(87)a. sek - en - ás ti sq'úm'ts-a ti twéw'wet-a
hit - DIR - 3ERG DET ball-DET DET boy-dET
'The boy hit the ball.'

b **ka** - sék - s - as - **a** ti sq'úm'ts-a ti twéw'wet-a
OOC - hit - CAU - ERG - OOC DET ball-DET DET boy-dET
'The boy hit the ball (accidentally).'

(88)a. qám't 'to become hit'
b. **ka** - qám't - **a** 'to be hit suddenly, accidentally'

When OOC derivation applies to an unergative, the result is an ability interpretation. (89a) shows a basic unergative and (89b) a derived unergative.

(89)a. **ka** - píx - em - **a**
OOC - hunt - MDL - OOC
'to be able to hunt'

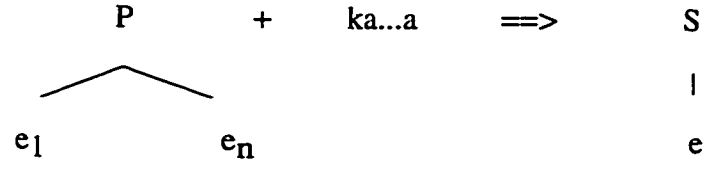
b. **ka** - sék - cal - **a** ti twéw'wet-a
OOC - hit - ACT - OOC DET boy-DET
'The boy is able to hit (people).'

Demirdache (1996) argues that the similarity in derived interpretation in (87b) and (88b) for transitives and unaccusatives is a result of their having the same event structure semantic representation; they differ only in their headedness (which subevent is focused). She adopts the proposal of Levin & Rappaport Hovav (1995) that morphological processes that operate on lexical representations can affect either the aspectual template or the paring of a constant associated with the aspectual template. Derivation with

St'át'imcets OOC *ka...a* has the effect of suppressing the constant associated with the initial subevent or suppressing this initial subevent itself. In the case of transitives this means the removal of the constant associated with the process subevent in (86). This has the effect of removing agent control since there is no longer any intrinsic relation between the causing (process) event and the resulting change of state event. Causation is therefore interpreted in directly, or more particularly, accidentally. When OOC derivation applies to an unaccusative, it suppresses the causing (process) event itself. The resulting causative has the event structure of a simple change of state (transition) predicate. Again, the causing factor must be interpreted indirectly as accidental or spontaneous.

Because transitives and unaccusatives have the same complex event structure, a morphological operation like the OOC that alters the first subevent of a semantic representation will have a similar effect on the semantic interpretation of each. In contrast, because the semantic representation of an unergative is simply a process, (90), the effect of OOC derivation on an unergative is to delete the initial event e_1 of the process and derive a state. Demirdache follows Vendler (1967) in assuming that stative verbs have an inherent ability meaning.

(90)

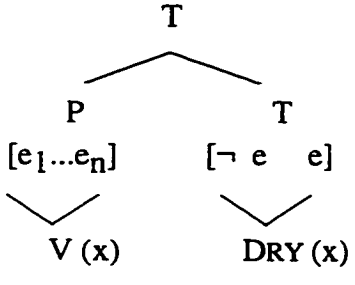


The above discussion serves to illustrate the point that the semantic structure of a lexical item can be represented in terms of a complex event structure. This representation and the assumption that derivational operations can affect it are able to account for certain properties of lexical items. In addition, we can account for similarities in the behavior of transitives and unaccusatives by assuming similar event structures, in particular, by assuming a causative event structure for unaccusatives.

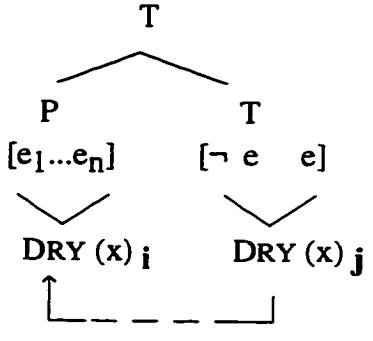
3.4.3 Mapping Directly From Event Structure to Syntax in Zuni

The St'át'imcets Salish evidence for complex event structure representation of unaccusatives and transitives has two peculiarities. First, the St'át'imcets derivation that produces a transitive stem from an unaccusative root operates on the semantic representation only. While the resulting semantic representation can be mapped to a syntactic structure, there is only an indirect association between the derivational process and the syntactic structure it ultimately creates. A transitive stem is derived from an unaccusative root via the causative suffix *-s* or the directive suffix *-an* . This derivation triggers a morphological process that operates on the semantic representation and copies the constant associated with the lexical verb onto the predicate variable V(x). The resulting semantic structure is associated with syntactic structure as illustrated in (91b-c); the predicate variable bearing a copy of the constant is mapped to a light verb *v* heading a projection associated with an external agent argument.

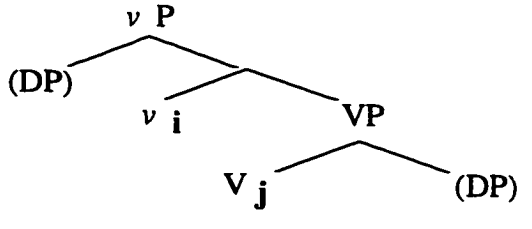
(91)a. **Unaccusative**



b. **Transitive**



c. **Syntactic Structure**



Even though there is a mapping between the semantic and syntactic representation of the transitive, the morphological operation associated with transitivity has no morphosyntactic correlate: transitivizers *-s* and *-an* do not correspond to heads in morphosyntactic structure.

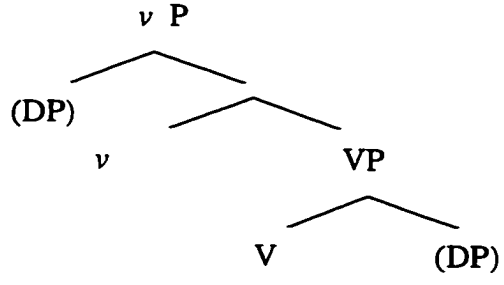
Similarly, and perhaps most importantly for this analysis of Zuni, the causative event structure for St'át'imcets unaccusatives is 'hidden' in the sense that it is the representation associated with a monomorphemic root. The predicate variable V(x) representing the causing event in the unaccusative semantic structure does not have a corresponding representation in the syntactic structure. We therefore must rely on indirect tests like Out of Control interpretation to discover this semantic structure.

I will propose an analysis of Zuni unaccusatives and passives that makes the following claims. (i) Zuni unaccusatives and passives provide evidence for the representation of semantic structure of lexical items in terms of event structure. (ii) Unlike St'át'imcets, in Zuni the mapping between semantic structure and syntactic structure is direct. (iii) Light verb v is not the only head of its kind but rather is one of several possible 'flavors' of head that can head the highest projection of the articulated verb phrase. It will be argued that Zuni *-k-* represents another type of such a head, a functional head corresponding specifically to the process event in the semantic representation. *-k-* (or the head k°) therefore has a distribution different from light verb v. k° takes stative complements, while v only houses a copy of a lower transitive constant.

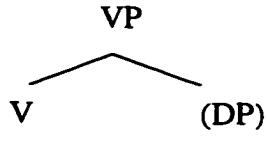
I assume the structure of the verb phrase argued for by Hale & Keyser (1993, 1996a) and adopted by Chomsky (1995b) as in (92) below. v is a light verb and heads a

projection that contains the external argument. This projection appears in the transitive clause[162], where V contains a copy of the lexical verb in V. As a result lexical verb V is linked to an external argument. Intransitive verb phrase structure is assumed to take the form in (93).

(92) Transitive

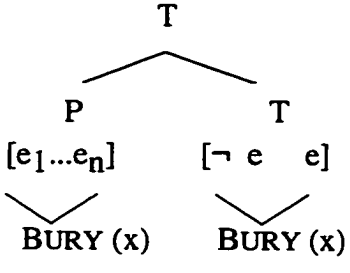


(93) Intransitive

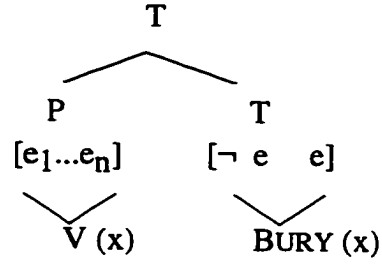


Note that while the semantic representations of transitives and eventive unaccusatives is argued by Pustejovsky (1995) and Demirdache (1996) to be the same, for the latter as in (94a-b) below, their syntactic representations in (92) and (93) differ.

(94)a. **Transitive**



b. **Unaccusative**



Recall that in foregoing sections of the analysis I had shown that Zuni *k°* adds eventive interpretation and takes a stative complement.

[162] And in unergative intransitives.

(95) Unaccusative:

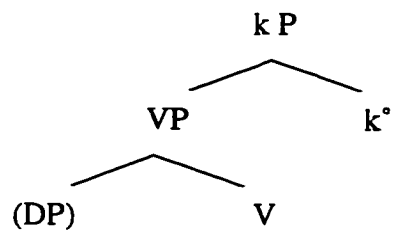
[palo]	+ **K**	-->	palo-k-
[buried]	**eventive**		be.buried

Passive:

['utte + na]	+ **K**	-->	'utte-na-k-
[bite + stative]	+ **eventive**		be.bitten

In the transitive syntactic structure in (92) the process event is represented by the head *v* . I argue that Zuni *k°* is the equivalent of *v* in the intransitive clause. Specifically, Zuni *k°* heads a projection in the syntax that corresponds to the process event V(x) represented in the semantic structure of the intransitive unaccusative in (94b). This means that (parallel to transitives) each subevent in the semantic structure (94b) of Zuni unaccusatives maps directly to an element in the syntax.[163] The result of this mapping is illustrated in (96).

(96)



It is presumably because this head k° directly represents the causing *process* event in syntax that it does not project an external (agent) argument position (cf. the structure proposed in (52) earlier) and in addition does not allow the occurrence of an agentive by-phrase with Zuni unaccusatives (97a) and passives (97b).

(97)a. * hom 'an / 'akkya tom 'ansatto-'kya
1sg.acc. P / with 2sg.acc. be.helped-past

[163] (96) is configured according to the head parameter of Zuni.

'You were helped by me.'

b. * tom 'an/'akkya hom nicikya 'uk-na-'kya
2sg.acc. P/with 1sg.acc. ring give-passive-past
'I was given a ring by you.'

Because event structure maps directly onto morphosyntactic structure in Zuni, the analysis proposed for Zuni unaccusatives has the result of confirming the semantic analysis of event structure for unaccusatives proposed by Pustejovsky (1995) in a way that the analysis of St'át'imcets monomorphemic unaccusative roots cannot. In addition, we have the beginnings of a typological categorization of languages according to the semantics - syntax mapping. The analysis of Zuni introduces evidence of the existence of a language with a direct semantics - syntax mapping, whereas St'át'imcets represents a type with a more indirect mapping. It remains to be seen the exact range of types that may be found in natural language.

We are now in a position to account for the assignment of accusative case in Zuni unaccusatives and passives. Zuni k° allows the causing process event to be represented as a syntactic head, both in unaccusatives as well as in passives. Note that both of these constructions therefore have causative interpretation despite the fact that they lack an external (agent) argument. Now, light verb v and k° are equivalent in syntactic structure in that they are both associated with the process event in semantic structure and therefore both convey a causative interpretation. Since the causative interpretation is already represented by one of these heads associated with the process event, the external DP agent argument itself must not be what is adding the causative interpretation in the case of the transitive with v. The addition of the external argument simply adds the interpretation of direct causation. On the other hand, the absence of the external

argument in structures headed by k° implies indirect causation in these cases (rather than the absence of causation).[164]

From this I conclude that Burzio's Generalization is not really about external arguments but rather describes a correlation involving the representation of the causing process event V(x) in syntax. In the languages considered in this light to date, the only example of V(x) in syntax appears to be light verb v, whose projection contains the external argument. Therefore the presence of V(x) in syntax in these languages is necessarily always accompanied by an instantiation of the external argument.[165]

For this reason I argue that Burzio's Generalization is in fact describing an indirect correlation when it describes a correlation between external argument and accusative case. The correlation can be reduced to a more direct form: the appearance of structural accusative case is linked to the representation of the causing process event as *a syntactic head in syntactic structure*.

(98) Revised Case Generalization:

Representation of Causing Process Event in Syntactic Structure <===> Structural Accusative Case

From the correlation in (68) we can trace the source of accusative case: I conclude that the functional head k° associated with the process event has the property of being able to assign (check) structural accusative case in its specifier position. We need

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[164] One might predict that direct causative interpretation can be added to a structure containing the k° head simply by adding a DP agent to specifier position of the k° projection. (97a-b) show that this is not the case in either the Zuni passive or the unaccusative - overt agents are excluded from both constructions (also reported by Cook and Frantz 1978).

[165] There is presumably cross-linguistic variation on whether V(x) (either the type corresponding to light verb v or non-external argument projecting types like Zuni k°) corresponds to some syntactic element. As for evidence for the representation of V(x) in syntax, this section suggests that case assignment facts may be one type of evidence of the presence of V(x), but presumably there are additional independent sources of evidence; the nature of these is left to future research.

In addition, the discussion of Zuni in this section of the dissertation presents evidence that the relationship between the syntactic representation of V(x) and ±projection of an external argument varies cross-linguistically, since the head k° in Zuni does not project an external argument position. Further research is needed to determine whether in fact the relationship specifically between V(x) = light verb v and ±projection of an external argument varies cross-linguistically.

not increase the complexity of the grammar to accommodate this behavior of k° since it is already covered by the same set of rules for functional head I° and the property of being able to assign (check) nominative case.

Both Zuni unaccusatives and passives contain k°, which we now see has structural accusative case assigning properties according to assumptions about the grammar (functional heads in particular) that were already in place. Therefore the presence of accusative case in these contexts without external argument is predictable rather than exceptional. As I have argued, the external argument/accusative case correlation is merely an indirect correlation, since external arguments usually occur with the syntactic representation of V(x) as light verb v. The real correlation is between the representation of the causing process event V(x) as a syntactic head and accusative case.

3.5 Satisfying Requirements of the EPP in Zuni Unaccusatives and Passives

In this final section I return to the question of structural subjects in Zuni, and in particular their absence in unaccusative and passive constructions. If, as the Zuni evidence in Section 3.2 and the discussion in Section 3.3 indicate, the internal argument can remain in object position to receive accusative case, what is the status of the Extended Projection Principle in Zuni? I will assume the form of the EPP as proposed in Borer (1986) and adapted in Manzini (1992) and Chomsky (1995b). This proposal assumes that the EPP is not a requirement that there be an obligatory subject position (obligatory SpecIP position) and that this position must be filled. Rather, Borer proposed that the EPP be understood in terms of the selectional properties of I°: some element must be present that satisfies the selectional properties of I°. As adapted by Chomsky (1995b:232) this means that the inherent features of I° (D-features) must be checked. Other constraints on grammar will conspire so that these selectional properties of I° can

only be fulfilled in certain structural positions in some languages, thus making the EPP look on the surface like a condition on subjects.

Because of constructions in Zuni like (99b-c) without overt subjects (for which the structure in (99a) has been hypothesized), in which the only argument of the clause can remain inside the VP as a structure object, one might rightly wonder whether (i) the EPP is parameterizable cross-linguistically and simply does not hold in Zuni, or whether (ii) the EPP does in fact hold in Zuni but its requirements are fulfilled in some alternative fashion.

(99)a. **Zuni Unaccusatives and Passives**

$[_{IP}[_{k\ P=VP}$ NP V]]

b. tom palo-k'yanna
2sg.acc. be.buried-future
'You will be buried.'

c. Gilbert-ya' 'utte-na-'kya
G.-acc. bite-pass.-past
'Gilbert was bitten.'

Recall that the evidence discussed in Section 3.2.3 excluded the possibility of a null *pro* indefinite element in subject position of Zuni unaccusatives and passive. The presence of a phonologically null expletive element in subject position was ruled out as well. I will briefly review this latter evidence.

The agreement prefix *te-* on the Zuni verb indicates the presence of a non-referential, non-thematic element in structural subject position.[166] *te-* occurs with

[166] I will discuss this evidence further in Chapter 4 Section 4.2.

predicates referring to natural phenomena, as in (100a) and (101a-c), as well as with certain other intransitives, (102a).[167] Compare the use of the same verb with an expletive subject marked by *te-* , (100a) and (102b), and with a referential subject, (100b) and (102b).

(100)a. te-k'ałi

[-referential]-hot

'It's hot out'

b. nočapi: (*te-)k'yałi-kya

coffee hot-past

'The coffee was hot.'

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te- also occurs in pseudo-transitive constructions and appears to be associated with the direct object position of the verb, for example with *'ank'oha(ti)* 'discover' in (ii). *'ank'oha(ti)* can take an NP direct object or a CP complement (but not both at the same time, (iii)). When *'ank'oha(ti)* takes an NP direct object, as in (i), the verb takes regular prefixal agreement morphology. When *'ank'oha(ti)* takes a CP complement instead of an NP direct object, as in(ii), the prefix *te-* appears instead of any agreement morphology. It appear that *te-* in this context indicates an object expletive.

(i) Nemme' k'yawin 'an pic'ana: 'a:w-ank'ohati-kya
Nemme river P piglets pl.-discover-past
'Nemme discovered the piglets in the river.'

(ii) ho' te-[l]-ank'ohak'e-kkya hom 'an hewe' hanłi-na'-kya
1sg.nom. [-ref.]-discover-past 1sg.acc.(poss.) P money steal-passive-past
'I discovered that my money had been stolen.'

(iii) * ho' les te-[l]-ank'ohak'e-kkya
1sg.nom. the.following [-ref.]-discover-past

hom 'an hewe' hanłi-na'-kya
1sg.acc.(poss.) P money steal-passive-past
'I discovered this, that my money had been stolen.'

cf.

(iv) ho' les k^{w}a-kya ho' 'ito:w 'aš-anna
1sg.nom. the.following say-past 1sg.nom. food make-future
'I said I would make the food.'

[167] It is not entirely clear whether this second intransitive use of *te-* is productive or not.

(101)a. te-tešla

[-referential]-scary

'It's scary [what happened during the riots].'

b. 'is kʷato-p te-pa'čo-:-'a

there enter-Diff.Subj. [-referential]-haunted-contin.-present

'It's haunted in there.'

c. 'iš 'is te-k'ina-p lak'y topa telit'an te-k'usna

very there [-ref.]-damp-Diff.Subj. over.there other room [-ref.]-wet

'It's damp here but in that room it's dry.'

(102)a. te-[l]-oše-kya [Bunzel 1933 ((102a) only)]

[-ref.]-hungry-past

'There was a famine.'

b. 'iš hon 'a:w-oše-:-'a (*teloše:'a)

very 1pl.nom. pl.-hungry-cont.-present

'We're hungry.'

The absence of this *te-* agreement with Zuni unaccusative (103b) and passive verbs (104b) argues explicitly against the presence of null expletive subjects in these constructions.

(103)a. tom palo-k'yanna

2sg.acc. be.buried-future

'You will be buried.'

b. * tom **te**-palo-k'yanna
2sg.acc. [-ref.]-be.buried-future
'You will be buried.'

(104)a. tom k'ošo-na-k'yanna
2sg.acc. wash-pass.-future
'You will be washed.'

b. * tom **te**-k'ošo-na-k'yanna
2sg.acc. [-ref.]-wash-pass.-future
'You will be washed.'

With this evidence in mind, note that examples (100a), (101a-c) and (102a) above provide important evidence bearing on the question of whether the EPP is a parameter that varies cross-linguistically and therefore whether (103)-(104) indicate that the EPP may simply not apply to Zuni. (100a), (101a-c) and (102a) all indicate that null expletive subjects are indeed required in certain contexts in Zuni, indicating that the EPP does in fact hold in Zuni.

In light of this evidence of the necessity of fulfilling the EPP in Zuni, as well as the evidence for the absence of any phonologically null element in SpecIP in Zuni unaccusatives and passives, we are forced to conclude that the selectional properties of I° are somehow satisfied by the accusative object inside the VP of Zuni unaccusatives and passives. I will not speculate here how this might but accomplished but will leave this question to future research.

3.6 Summary and Conclusions

In chapter I presented new data from Zuni concerning the existence of unaccusative and passive construction in that language. I argued that Zuni unaccusatives and passives are similar in nature and possess a number of interesting properties: the ability to assign structural accusative case to their arguments, the behavior of unaccusative and passive arguments as structural objects, and the absence of any type of null subject element. I showed that the Zuni constructions contrast in these respects with unaccusatives and passives in Iceland, including the so-called "new passive" described by Maling & Sigurjónsdóttir (1997). I hypothesized the structure in (52) below for Zuni unaccusative and passives, which therefore appear to represent a typologically new and quite interesting syntactic type.

(52) **Zuni Unaccusative and Passive**

$[_{IP}\ [_{VP}\ NP\ V]\ ]$

In the second half of this chapter I suggested an account of the Zuni structure in (99a) that argued that Zuni unaccusatives and passives contain a morpheme *-k-* associated with eventive interpretation. I argued that *-k-* instantiates in syntactic structure the causing process event V(x) of the event structure semantic representation. This *-k-* (or k°) is assumed to be a functional head of the same type as light verb *v* proposed by Hale & Keyser (1993, 1996a) and Chomsky (1995b) for transitive structures. The structure in (52) was therefore revised to (99a).

(99a) **Zuni Unaccusatives and Passives**

$[_{IP}\ [_{k\ P=VP}\ NP\ V]\ ]$

Zuni k° differs from light verb v in not projecting an external argument. Thus, it is argued, there is more than one type of syntactic instantiation of causing event V(x) cross-linguistically. Zuni not only provides new evidence to support the 'hidden causative' analysis of unaccusatives proposed by Chierchia (1989), Pustejovsky (1995), Zuni provides perhaps more direct evidence that does St'át'imcets Salish (cf. Demirdache 1996, Davis 1996). The analysis of Salish relied on evidence from monomorphemic unaccusative roots, while the event structure of Zuni unaccusatives and passives was argued to map fairly directly into morphosyntactic structure. The 'hidden causative' structure of Zuni unaccusatives (and passives) is not in fact hidden at all.

As for the assignment of structural accusative case in Zuni unaccusatives and passives, I suggested that it is k° that is responsible for assigning/checking accusative case in these structures. I also suggested that Burzio's Generalization, stated as a correlation between external argument and structural case, in fact describes an indirect correlation. Based on the Zuni evidence, this correlation can be reduced to (98).

(98) Revised Case Generalization:

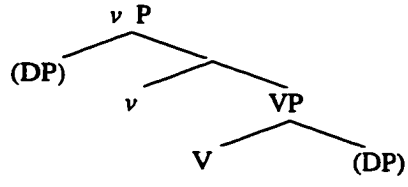
Representation of Causing Process Event in Syntactic Structure <===> Structural Accusative Case

Finally, back in Chapter 2 of this dissertation I discussed evidence for the absence of a structural subject position outside the VP in Zuni, namely the absence of A-movement to case positions outside of VP. In addition, Zuni unaccusative and passive structures do not contain a structural subject position outside VP[168] (and the k° of unaccusatives and passives does not project an external argument

[168] A structural subject position *is* projected inside the VP (i.e. by light verb v) in canonical transitive structures in Zuni - namely SpecVP.

inside VP[169]). Since fulfillment of the EPP was shown to be required in Zuni based on evidence from *te-* agreement, it was concluded that the structural object argument of Zuni unaccusatives and passives must satisfy the EPP in these structures.

[169] That is, as do canonical transitives essentially as a specifier of *v* P in the structure:



Chapter 4

Agreement and Locality

4.0 Introduction

In this chapter I investigate the nature of agreement in Zuni, and in particular consider a group of somewhat unusual agreement patterns. The chapter consists of two sections that are thematically somewhat distinct but are related by the fact that both treat some aspect of Zuni agreement.

Section 4.1 focuses on patterns of verbal agreement that are indicative of a complex sub-lexical syntactic structure for these verbs. There has been some recent debate on the nature of the lexical structure of verbs and whether this structure is syntactically represented and constrained by similar rules that constrain constituent structure, movement and empty categories in clause syntax (Hale & Keyser 1993, 1996a,b,c represent this approach), or whether the sub-lexical structure of verbs is only semantically represented (verb meaning is decomposed into basic semantic predicates (Levin & Rappaport Hovav 1995)). Still others argue that the verb both is syntactically simple and consists of unstructured meaning; the verb is inserted into a structured argument configuration frame that provides the construction with its syntactic properties and interpretation (e.g. Goldberg 1995). I will argue that patterns of Zuni verbal inflection provide evidence of the syntactic representation of (sub)lexical structure and thus support the view of lexical structure proposed by Hale & Keyser (1993, 1996, 1996a,b,c). In short, while agreement is generally though to be an indication of surface syntactic structural relations, apparent irregularities of Zuni agreement at the syntactic inflectional level turn out to provide evidence of deeper lexical regularities.

In section 4.2 I discuss a somewhat different phenomenon, an agreement pattern that indicates the presence of object expletives in Zuni. The data from Zuni, with similar

evidence from nearby (though unrelated) Tanoan languages, adds new material to the debate over whether true object expletives do in fact exist (cf. Postal & Pullum 1988, Authier 1991 vs. Rothstein 1995). The patterning of object expletives in Zuni and Tanoan suggests that the presence of such expletives is determined by the case assigning properties of the verb, a positions that follows the arguments of Pesetsky (1982) linking case and complement selection.

4.1 Inflection and Lexical Structure

It is an interesting question whether inflection can in fact indicate something about the lexical structure of verbs. Inflection is generally considered to be the spellout of syntactic features whose appearance is determined by surface structure relations (cf. Anderson 1992, Chomsky 1993, 1995, Halle & Marantz 1993 and others). Lexical structure (if any) is hidden inside the morpheme inserted into syntax as an atomic unit, so that it is not obvious how inflection might have access to sublexical structural information.

In Section 4.1.1 I will describe regular and non-canonical patterns of agreement in Zuni. In 4.1.2 I argue, based on several types of syntactic evidence, that apparent monomorphemic verbs displaying non-canonical agreement have complex lexical structures. I will suggest in 4.1.3 an analysis of Zuni agreement and propose a locality constraint on agreement spellout on a lexical head (as opposed to a functional head). I then argue that the operations involved in deriving the complex lexical structures proposed in 4.1.2 are responsible for destroying the local domain of agreement of some lexical head L. Evidence that the locality constraint on agreement may be overridden under certain circumstances supports the proposals made in this section.

4.1.1 Agreement Patterns in Zuni

While verbal agreement in Zuni is for the most part regular, there are some notable exceptions to this regularity. Below I illustrate each type before proceeding to evidence concerning the nature of these phenomena.

4.1.1.1 Regular Verbal Agreement

Chapter 1 Section 1.3.1.2 described basic properties of Zuni verbal agreement. I will briefly review these here. Recall that the Zuni verb agrees with both subjects and objects when they are plural (the verb bears no agreement in the singular). Agreement with a plural intransitive subject or a transitive object is indicate by a prefix, most commonly *'a:-* . Agreement with a plural transitive subject is indicated by a suffix *-nap* . The examples in (1) - (4) below illustrate this agreement.

(1a) and (2a) illustrate the absence of agreement in the singular. In (1b) the transitive verb agrees with its object, while in (2b) the intransitive verb agrees with its subject using the same agreement prefix *'a:(w)-*

(1)a. ho' c'ana 'awa-kya
1sg.nom. child find-past
'I found the child.'

b. ho' 'a:-c'ana 'a:w-awa-kya
1sg.nom. pl.-child pl.obj.-find-past
'I found the children.'

(2)a. c'ana k'ewowok'e-kkya

child chatter-past

'The child chattered.'

b. 'a:-c'ana 'a:-k'ewowok'e-kkya

pl.-child pl.subj.-chatter-past

'The children chattered.'

(2b) illustrates verb agreement with a plural transitive subject. (3b) illustrates that the same agreement suffix *-nap* is used in the case of agreement with the subject of an unergative intransitive.

(2)a. ho' pimc'ana k'ošo-kya

1sg.nom. piglet wash-past

'I washed the piglet.'

b. hon pimc'ana k'ošo-nap-kya

1pl.nom. piglet wash-pl.subj.-past

'We washed the piglet.'

(3)a. 'akcek' yak'o-kya

boy vomit-past

'The boy vomited.'

b. 'a:w-akcek' yak'o-nap-kya

pl.-boy vomit-pl.subj.-past

'The boys vomited'

The verb stem in (4a) bears both of these agreement affixes.

(4)a. hon pic'ana: 'a:w-ampeye:-nap-kya

1pl.nom. piglets pl.obj.-scold-pl.subj.-past

'We scolded the piglets.'

(cf. the singular stem:)

b. ho' pimc'ana 'ampeye-kkya

1sg.nom. piglets scold-past

'I scolded the piglet.'

While the above examples illustrate the most common types of inflectional relations between a verb and its arguments, they do not represent the only agreement pattern in Zuni.

4.1.1.2 Non-Canonical Agreement Patterns

Certain verbs depart from the regular patterns of agreement described above, and display what I will refer to as 'non-canonical' agreement. This non-canonical agreement

is characterized by two properties: (i) it involves only transitive object agreement, and (ii) it consists of the absence of this object agreement with certain verbs.

In each instance of non-canonical agreement, a verb takes a direct object but does not agree with that object if it is plural. I will argue that there are at least two classes of verbs with non-canonical agreement, both of which involve the notion of possession in some way. The first class consists of the verb *'illi* 'have' and the second consists of the verbs of change of possession *hanłi* 'steal', *'ilopčo* 'borrow', and *haliso ~ hayso* 'buy/sell'. These two classes of verbs exhibit slightly different behavior with respect to non-canonical agreement.[170]

The following examples illustrate the behavior of *'illi* 'have' with regard to agreement. *'illi* 'have' is a regular transitive verb in Zuni, taking a subject in the nominative case and an object in the accusative, as illustrated in (5).[171]

(5) ho' te-'le' 'illi
1sg.nom. pot-sg have
'I have a pot.'

When the object of *'illi* is plural, as in (6a) and (7a), plural agreement morphology does not show up on *'illi* (cf. the ungrammaticality of the plural-inflected verb in (6b) and (7b)), so that the form of *'illi* in this context is the same as with a singular object. The examples in (6) and (7) together show that *'illi* lacks object agreement regardless of whether the noun itself bears plural inflection as with *te-we'* 'pots-pl.' in (6a) or not as with *nicikya* 'ring(pl.)' in (7a).[172]

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[170] This will be discussed in detail in the next section.
[171] Since *'illi* takes only inanimate objects, there is no overt morphological mark of the accusative on the object.
[172] See Chapter 1 Section 1.3.1.3.

(6)a. Nemme' te-we' 'illi

N. pot-pl. have

'Nemme has some pots.'

b. * Nemme' te-we' **'a:w**-illi

N. pot-pl. **pl.obj.**-have

(7)a. Nemme' nicikya 'illi

N. ring(pl.) have

'Nemme has some rings.'

b. * Nemme' nicikya **'a:w**-illi

N. ring(pl.) **pl.obj.**-have

This absence of object agreement in the Zuni transitive construction I refer to as non-canonical agreement.

The verbs of change of possession *hanłi* 'steal', *'ilopčo* 'borrow', and *haliso ~ hayso* 'buy/sell' exhibit this same obligatory lack of agreement with a plural object. Examples are given below in (8) - (10) for each of these verbs parallel to the examples for *'illi* 'have' above.

(8)a. Nemme' te-we' / nicikya hanłi-kya

N. pot-pl. / ring(pl.) steal-past

'Nemme stole pots /rings.'

b. * Nemme' te-we' / nicikya **'a:**-hanɬi-kya

N. pot-pl. / ring(pl.) **pl.obj.**-steal-past

(9)a. Nemme' te-we' / nicikya 'ilopčo-kya

N. pot-pl. / ring(pl.) borrow-past

'Nemme borrowed pots /rings.'

b. * Nemme' te-we' / nicikya **'a:w**-ilopčo-kya

N. pot-pl. / ring(pl.) **pl.obj.**-borrow-past

(10)a. Nemme' te-we' / nicikya hayso-kkya

N. pot-pl. / ring(pl.) buy-past

'Nemme bought pots/rings.'

b. * Nemme' te-we' / nicikya **'a:**-hayso-kkya

N. pot-pl. / ring(pl.) **pl.obj.**-buy-past

Each instance of non-canonical object agreement illustrated above involves a verb that is fully transitive. This can be demonstrated by the fact that all of these verbs can form passives, except for stative verb *'illi* 'have' which lacks passives in many languages. Recall that Chapter 3 argued that arguments of the Zuni passive are structural objects. Passive forms of *hanɬi* 'steal', *'ilopčo* 'borrow', and *haliso ~ hayso* 'buy/sell' are

illustrated below in (11a-c) respectively. Note the absence of object agreement in the passive as well.

(11)a. te-we' hanɬi-na-'kya
pot-pl. steal-pass.-past
'Pots were stolen.'

b. te-we' 'ilopčo-na-'kya
pot-pl. borrow-pass.-past
'Pots were borrowed.'

c. te-we' hayso-na-'kya
pot-pl. sell-pass.-past
'Pots were sold.'

Despite the absence of regular agreement in the above cases in (6) - (11), note that I do not refer to this phenomenon as 'irregular agreement' or to the verbs *'illi* 'have', *hanɬi* 'steal', *'ilopčo* 'borrow', and *haliso ~ hayso* 'buy/sell' as 'non-agreeing verbs.' The reason for this is that, as I will argue in the next section, the pattern of non-canonical agreement is actually a reflection of deeper regularities in the lexical structure of these verbs. Furthermore, these verbs do show object agreement in certain syntactic contexts.

4.1.2 Non-Canonical Agreement and Sublexical Structure

I present here further details of the syntax of the verbs that exhibit non-canonical agreement patterns in Zuni. I first discuss the circumstances under which the verb *'illi* does in fact agree with a plural object. Based on this evidence I argue that the form *'illi* corresponds to two different elements in surface syntax, a syntactically simple postposition and a derivationally complex verb. I conclude that the absence of agreement with *'illi* in contexts where it occurs as a verb is directly related to the fact that this form of *'illi* is derivationally complex. On the basis of independent evidence, I argue for a similar analysis of the verbs *hanli* , *'ilopčo* and *haliso* .

4.1.2.1 Zuni 'Have' and Derivational Complexity

While *'illi* fails to agree with its object[173] in a simple transitive construction like that in (12), *'illi* does agree with a plural object when followed by another verb in the 'have + come/go' type construction illustrated in (13)[174].

(12) Nemme' pic'ana-: (*'a:w-) 'illi
N. piglet-pl. (*pl.obj.-) have
'Nemme has (some) piglets.'

(13) ho' Gallup 'an pic'ana-: 'a:w-ill 'i-kya
1sg.nom. Gallup P piglet-pl. pl.obj.-have come-past
'I brought the piglets to Gallup.'

[173] The plural of multisyllabic nouns in this syntactic context is formed by lengthening the final vowel of the stem, indicated here by ' -: ' (see the discussion in Chapter 1 Section 1.3.1.3).
[174] The final vowel of *'ill(i)* here is elided by regular phonological rule.

Despite surface appearances, the 'have + come' construction in (13) is not a V-V verbal compound. Two properties distinguish this 'have + come' construction from a V-compound. First, the object agreement *'a:w-* in (13) is associated with *'illi* only and does not represent agreement assigned to a morphological unit consisting of *'illi + 'i* .[175] If *'illi 'i* were a V-V compound, it should be able to bear only a single agreement as do true V-V compounds in Zuni, such as *tuna-k^{w}ayi* 'look out' in (14).

(14) hon (*'a:-) tun uk^{w}-k^{w}ayi-kya
1pl.nom. (pl.subj.-) see pl.subj.-exit-past
'We looked out.'

But as (15) illustrates, both *'illi* and *'i* can bear agreement in the 'have + come/go' construction. Moreover, as the subscripts and glosses indicate, they agree with different arguments. The prefix *'a:w-* to *'illi* indicates agreement with the object, but the prefix *'a:w-* to *'i* indicates agreement with the subject.

(15) hon$_{i}$ pic'ana-:$_{k}$ 'a:w$_{k}$-ill 'a:w$_{i}$-i-kya
1pl.nom. piglet-pl. pl.obj.-have pl.subj.-come-past
'We brought the piglets.'

A second property of the 'have + come/go' construction that distinguishes it from a V-V compound is the fact that since *'illi + 'i* is not a morphological unit, elements such

[175] That is, object agreement here is not the single agreement usually assigned to a V-V compound in Zuni, nor does it result from a transfer of the agreement properties of the head verb *'i* 'come' to *'illi*.

as adverbs can intervene between the two parts. This illustrated by the position of the adverb *teššuk'ʷa'* 'yesterday' following *'illi* in (16).

(16) 'a:w-illi teššuk'ʷa' 'i-kya
pl.obj.-have yesterday come-past
'He brought them yesterday'

In contrast, the morphological unit formed by the V-V compound cannot be broken up by an intervening element. This is illustrated in (17).

(17) * tuna teššuk'ʷa' kʷayi-kya
see yesterday exit-past

This evidence suggests that *'illi* in the 'have + come/go' construction may not in fact be a verb at all. Note that unlike verbs in general, (18a), and in particular *'illi* in the canonical transitive construction, (18b), *'illi* in the 'have + come/go' construction in (18c) cannot bear a subject agreement suffix (here *-(a)p(a)* for stative verbs).

(18)a. hon pimc'ana 'awa-nap-kya
1pl.nom. piglet find-pl.subj.-past
'We found the piglet.'

b. hon$_i$ pic'ana-: 'ill-apa$_i$
1pl.nom. piglet-pl. have-pl.subj.
'We have piglets.'

c. hon $_i$ pic'ana-: 'a:w-ill (*-apa$_i$) 'a:w$_i$-i-kya

1pl.nom. piglet-pl. pl.obj.-have (*-pl.subj.) pl.subj.-come-past

'We brought the piglets.'

All of the properties of *'illi* in the 'have + come/go' construction described above, namely agreement, ability to be followed by an adverb, and lack of subject agreement are, however, consistent with the hypothesis that *'illi* in this construction belongs to the category Postposition (P).

For example, non-affixal postpositions[176] in Zuni agree with their complements, as illustrated in (19b) by the presence of plural agreement prefix *'a:-* on the postposition *'an* 'for, to, at, from' when the indirect object (object of the postposition *'an*) is *'a:w-akcek'* 'pl.-boy'.

(19)a. ho' 'akcek' 'an 'e'ni-n 'aš-kya

1sg.nom. boy P belt-sg. make-past

'I made a belt for the boy.'

b. ho' 'a:w-akcek'$_i$ 'a:w$_i$-an 'e'ni-n 'aš-kya

1sg.nom. pl.-boy pl.obj.-P belt-sg. make-past

'I made a belt for the boys.'

The postposition *'an* cannot agree with the subject of a clause, however, as illustrated in (20).

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[176] Bound postpositions do not show this behavior: 'a:wakcek' - (* 'a:) - k^{w}in
boys - (* - pl.obj.) - with

(20) hon Gallup (*'a:w-) 'an 'a:w-a:-kya
1pl.nom. G. (pl.subj.-) P pl.subj.-go-past
'We went to Gallup.'

Finally, the adverb *teššuk^{w}a'* 'yesterday' can intervene between *'an* and the following verb, as in (21).

(21) ho' 'a:w-akcek' 'a:w-an teššuk'^{w}a' 'e'ni-n 'aš-kya
1sg.nom. pl.-boy pl.obj.-P yesterday belt make-past
'I made a belt for the boys yesterday.'

Since the properties of *'illi* in the 'have + come/go' construction exactly parallel the properties of postpositions in Zuni, I hypothesize that *'illi* in this construction, illustrated again below, belongs to the syntactic category Postposition (P).

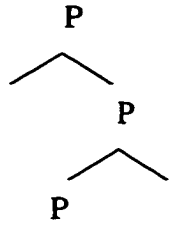
(22) ho' Gallup 'an pic'ana-: 'a:w-ill 'i-kya
1sg.nom. Gallup P piglet-pl. pl.obj.-have come-past
'I brought the piglets to Gallup.'

I further hypothesize that there are two forms of *'illi* , a postposition and a verb, and that the postposition *'illi* is the basic form and the verb *'illi* , despite the fact that it is monomorphemic on the surface, is a derived form.

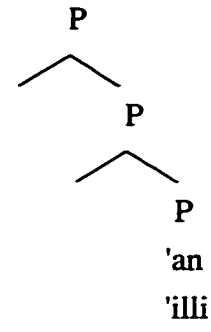
I assume that lexical structure can be represented according to syntactic principles, as proposed by Hale & Keyser (1993, 1996a). In particular, I follow Hale & Keyser in assuming that a postposition (or preposition) is transitive since it encodes a

relation between two arguments and therefore is represented as in (23a), or in terms of the head parameter of Zuni, as in (23b).

(23)a.

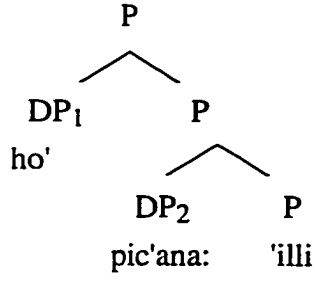


(23)b.



I therefore assume (23b) to be the lexical structure of the Zuni postpositions *'an* and *'illi* . For instance, the arguments of the postposition *'illi* in example (22) above would correspond to *ho'* '1sg.nom.' = DP_1 and *pic'ana:* 'the piglets' = DP_2 in (24) below. (24) would have an interpretations roughly akin to 'I am with the piglets'.[177]

(24)



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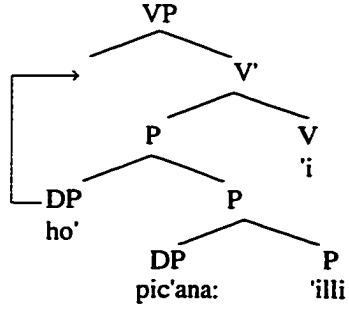
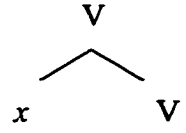
[177] The sentence in (22) therefore is hypothesized to have the structure shown below. The surface form is derived via movement of DP_1 to the specifier position projected syntactically by the verb *'i* 'come'.

(i)

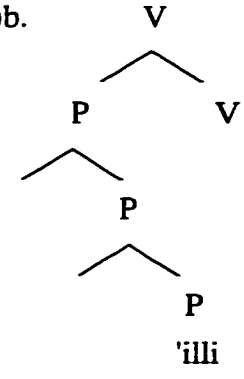


Verbal *'illi* , on the other hand, is hypothesized to consist of a monadic predicate[178], (25a), specifically, an intransitive predicative taking only a postpositional complement. The lexical structure of verbal *'illi* is therefore hypothesized to consist of the structure in (25b).

(25)a.



(25)b.



Lexical Structure of verbal *'illi*

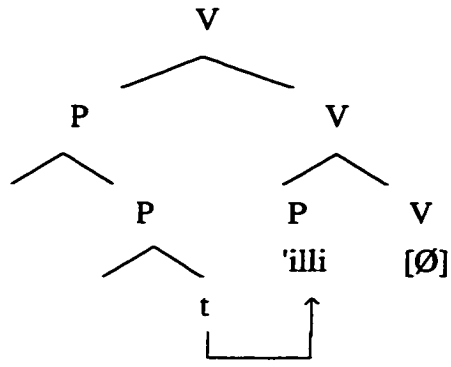
The proposed structure of Zuni verbal *'illi* 'have' in (25b) fits in nicely with similar cross-linguistic proposals for the structure of HAVE as consisting of some verbal element (typically BE) plus some adpositional element (Fillmore 1968, Bach 1967, Freeze 1992, Benveniste 1971, Kayne 1993, Mahajan 1994, Hale 1996).

Hale and Keyser (1993, 1996a) argue that syntactic constraints and syntactic operations like movement and incorporation operate on these lexical substructures to derive surface forms. (25b) represents only the argument structure of verbal *'illi* . I suggest that the surface form of the verb *'illi* is derived by raising and incorporating the postposition *'illi* into the phonologically null V, as represented below in (26).

---

[178] Hale & Keyser (1996a:3) use 'monadic' and 'diadic' to refer to the number of arguments that must appear internal to the lexical structure associated with a lexical item. The sentential syntactic subject is claimed to be an external argument and therefore not is an argument contained in the lexically projected structure.

(26)



The possibility of syntactic postpositional incorporation (cf. Baker 1988) in Zuni suggests the likelihood of postpositional incorporation at the sublexical level.[179] In (27a) the postposition *'an* has incorporated into the verb. (27b) shows the same construction without incorporation of *'an* .

(27)a. ho' 'okya' nicikya **'an**-ilopčo-kya
1sg.nom. girl ring **P**-borrow-past
'I borrowed a ring from the girl.'

b. ho' 'okya' **'an** nicikya 'ilopčo-kya
1sg.nom. girl **P** ring borrow-past
'I borrowed a ring from the girl.'

Verbal *'illi* is therefore a derivationally complex form. As a derived V, *'illi* can bear subject agreement and tense like any other verb in Zuni, (28).

[179] Yet another way in which *'an* and *'illi* behave alike. Though is is not necessarily clear that the two types of incorporation are related; e.g. Hale & Keyser (1993) assume preposition incorporation as a lexical operation in English despite the lack of syntactic preposition incorporation in the language.

(28) hon hewe' 'ill-ap-kya

1pl.nom. money have-pl.subj.-past

'We had some money.'

There is independent syntactic evidence for the structure of *'illi* proposed in (25b) and (26), namely the formation of derivational causatives in Zuni. Hale and Keyser (1996a) distinguish two types of derivational causatives, syntactic and lexical. Syntactic causatives are able to take a wide range of complements and are not restricted, for example, to taking complements projecting an internal subject[180] argument (e.g. as in the lexical structure proposed for P in (25) above. True lexical causatives, on the other hand, require a complement that projects its own internal argument. The internal argument of the selected predicate becomes the object of the lexical causative predicate.

The syntactic causative in Zuni is formed with *-k'ya* and ranges over several complement types.

(29) k'uhmo-k'ya [intransitive, internal subject]
be.broken-cause

yaktoh-k'ya [transitive, external subject]
hit-cause

yak'o-k'ya [unergative, external subject]
vomit-cause

'a:-k'ya [intransitive, external subject]
go-cause

[180] 'Subject' here refers specifically to a notion in the Hale & Keyser theory of lexical structure and does not necessary correspond to the syntactic subject.

The lexical causative formed with *-u* in Zuni requires as its complement a predicate with an internal subject argument.[181] These internal subjects are structural objects in Zuni and are assigned accusative case.[182] *'ansatto* 'be helped' is an example of a predicate taking such an internal argument, illustrated in (30a). (30b) shows that a lexical causative can be formed on this intransitive base, while it cannot be formed on the unergative intransitive *yaktoh* 'hit', which projects no internal subject.

(30)a. hom 'ansatto-'kya
1sg.acc. be.helped-past
'I was helped'

b. hom 'ansatt-u-kya
1sg.acc. be.helped-caus.-past
'He helped me'

(31) * yaktoh-u
hit-caus.

(32) shows that a lexical causative with *-u* can be formed from *'illi* .

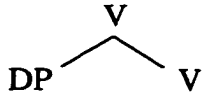
(32) 'i:w-ill-u-kya
recipr.-have-caus.-past
'He made them marry (each other).'

---

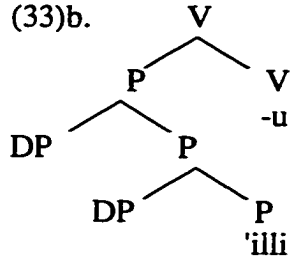
[181] This is not the case for a similar looking Zuni causative morpheme *-'u* .
[182] These structures were discussed extensively in Chapter 3.

This behavior would be unexpected if the basic syntactic category of *'illi* were V, i.e. having the lexical structure in (33a)[183], but it would be predictable if *'illi* belongs to the category Postposition. Postpositions are assumed to be transitive predicates taking both an internal subject (specifier) and complement, as in (33b).

(33)a.

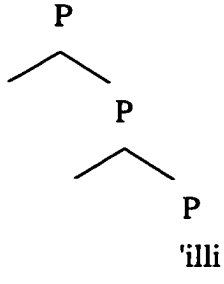


(33)b.

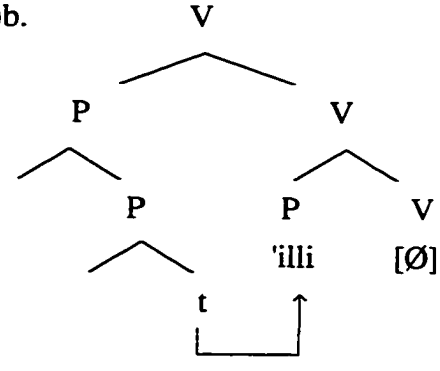


Returning once more to the lexical structures postulated above for *'illi* = P, (34a) and *'illi* = V, (34b),

(34)a.



(34)b.



we can now say that *'illi* in (35a) below agrees with an argument when that argument is the complement of *'illi* = P in situ. *'illi* does not agree with its complement, as in (35b),

[183] Transitive verbs add a subject as an external, not internal, argument.

when *'illi* has moved to V and is no longer in a strict head-complement relation with this argument.

(35)a. ho' Gallup 'an pic'ana-: 'a:w-ill 'i-kya
1sg.nom. Gallup P piglet-pl. pl.obj.-have come-past
'I brought the piglets to Gallup.'

b. Nemme' pic'ana-: (*'a:w-) 'illi
N. piglet-pl. (*pl.obj.-) have
'Nemme has (some) piglets.'

I have demonstrated that *'illi* is an element that can bear agreement inflection. I conclude that the absence of agreement on *'illi* in (35b) has to do with the derivational complexity of verbal *'illi* . Specifically, the absence of agreement with verbal *'illi* appears to be related to the fact that the head *'illi* undergoes movement out of one domain into another in sublexical structure.

In the next section I discuss a second example in which the absence of agreement appears to be linked to movement in sublexical structure. Following in Section 4.1.3 I propose an analysis of this phenomenon.

4.1.2.2 Zuni Verbs of Change of Possession 'Steal', 'Borrow', 'Buy/Sell'

The second class of Zuni verbs that display non-canonical patterns of agreement includes the changes of possession verbs *hanłi* ' steal', *'ilopčo* 'borrow' and *haliso ~ hayso* 'buy/sell.' Each of these verbs, like verbal *'illi* 'have', fails to agree with a plural

object in a simple transitive clause.[184] Examples illustrating this absence of agreement are repeated below in (36) - (38).

(36) Nemme' te-we' / nicikya (*'a:-) hanɬi-kya
N. pot-pl. / ring(pl.) (pl.obj.-) steal-past
'Nemme stole pots /rings.'

(37) Nemme' te-we' / nicikya (*'a:-) 'ilopčo-kya
N. pot-pl. / ring(pl.) (pl.obj.-) borrow-past
'Nemme borrowed pots /rings.'

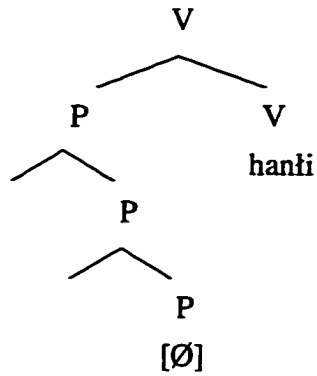
(38) Nemme' te-we' / nicikya (*'a:-) hayso-kkya
N. pot-pl. / ring(pl.) (pl.obj.-) buy-past
'Nemme bought pots/rings.'

I suggest that object agreement is absent on these verbs for the same reason it is absent from verbal *'illi* . In essence, while these verbs may appear on the surface to be monomorphemic, the absence of agreement in (36)-(38) is hypothesized to be evidence of a complex derivational history for *hanɬi* , *'ilopčo* , and *hayso* .

I suggest that like verbal *'illi* , these three verbs consist of a monadic V that takes a transitive P complement, as in (39).[185]

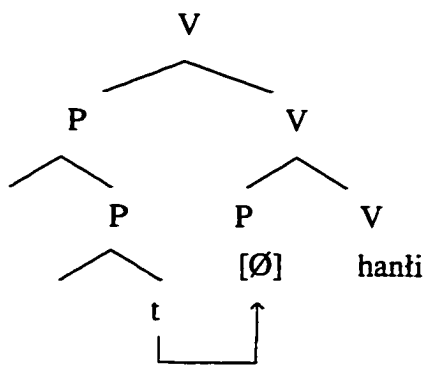
[184] Recall from Section 4.1.1.2 that each of these verbs forms a passive.
[185] Like *'illi* , the roots of all three of these verbs are monomorphemic (ignoring the aspectual suffix *-čo* on *'ilopčo*).

(39)



The difference between *'illi* and these verbs, *hanłi* for example, is that *'illi* is an overt postposition that incorporates into a phonologically null V (see example (34b)). In the case of *hanłi* and the other verbs of this class, it is P that is phonologically null. This null P is hypothesized to incorporate into the lexically overt verbal head, as illustrated in (40).

(40)



Evidence that the phonological spellout of *hanłi* and the other verbs of this class is associated with a syntactic head V in lexical structure comes from the fact that each these three verbs can also be used intransitively. The intransitive usage of *hanłi* ' steal', *'ilopčo* 'borrow' and *haliso ~ hayso* 'buy/sell' is illustrated in (41).

(41)a. Nemme' hanłi-kya

N. steal-past

'Nemme went around stealing.'

b. Nemme' 'ilopčo-kya

N. borrow-past

'Nemme went around borrowing.'

c. Nemme' hayso-kkya

N. buy-past

'Nemme did some shopping.'

In addition, independent syntactic evidence suggests that the lexical structure of these three verbs consists of an intransitive predicate plus postpositional complement. Specifically, postpositional incorporation treats these change of possession verbs as if they were intransitive verbs.

P-incorporation can apply to both transitive and intransitive verbs in Zuni.[186] Productively P-incorporated forms exist alongside a verb + *'an* PP complement construction. P-incorporation appears to treat transitive and intransitive verbs differently with respect to the interpretation of these constructions.

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[186] Although many of these appear to be lexicalized forms whose meaning is unanalyzable and unpredictable.

(i)

'ansatto	'help'	(*satto)	
'antešema	'want'		(šema 'call')
'anik^{w}a	'know'		('ik^{w}a 'say')
'an'aše	'bewitch'		('aše 'die')

Incorporation of P to a transitive verb appears to change the argument structure of the verb, as illustrated in (42). *šema* means 'call or summon X' in its basic transitive form, (42a). With an *'an* PP complement, it means 'call/summon X on Y', as in (42b). In contrast, *'anšema* with incorporated P means 'request X from Y', (42c).

(42)a. ho' šiwa:ni šema-kya
1sg.nom. rain.priest summon-past
'I summoned the rain priest.'

b. ho' Nemm'an 'a:tošle šema-kya
1sg.nom. Nemme P [type of bogeyman] summon-past
'I summoned the *'a:tošle* on Nemme'

c. ho' Nemme -ya' tepiša 'an-šema-kya
1sg.nom. Nemme-acc. broom P-summon-past
'I asked Nemme for a broom.'

Intransitives differ from transitives in that the intransitive V + *'an* PP complement and the P-incorporated form generally have similar interpretations.[187] (43a) and (44a) illustrate the V + *'an* PP construction with the verbs *lopapa* 'flash' and *łito* 'rain', and (43b) and (44b) show that the interpretation of the sentences under P-incorporation is essentially the same.

[187] This is possibly because the case assigned to the complement of *'an* is also assigned to it by *'an* after incorporation. The intransitive verb has no object case assigning properties, so that no alternation in the argument structure of the clause has taken place under incorporation.

(43)a. hom 'an teššuk'ʷa' lopapa-ti-kya

1sg.acc. P yesterday flash-inchoative-past

'He flashed [a light] at me, He blinked at me yesterday.'

b. hom teššuk'ʷa' 'an-lopapa-ti-kya

1sg.acc. yesterday P-flash-inchoative-past

'He flashed [a light] at me, He blinked at me yesterday.'

(44)a. hom 'an teššuk'ʷa' łito-kya

1sg.acc. P yesterday rain-past

'I got rained on yesterday.'

b. hom teššuk'ʷa' 'an-łito-kya

1sg.acc. yesterday P-rain-past

'I got rained on yesterday.'

If we look at the Zuni verbs *hanłi* 'steal', *'ilopčo* 'borrow', and *hayso* 'buy/sell', we see that despite their surface transitivity in constructions like (36) - (38), they behave like intransitives when P is incorporated. That is, sentences in which *'an* is not incorporated and those in which *'an* is incorporated into the verb have the same interpretation. Compare the interpretation of the unincorporated forms in (45a), (46a), (47a), with their incorporated counterparts in (45b), (46b), (47b).

(45)a. ho' 'okya' 'an 'e'ni: hanɬi-kya
1sg.nom. girl P belts steal-past
' I stole the belts from the girl.'

b. ho' 'okya' 'e'ni: 'an-hanɬi-kya
1sg.nom. girl belts P-steal-past
'I stole the belts from the girl.'

(46)a. ho' 'okya' 'an nicikya 'ilopčo-kya
1sg.nom. girl P ring borrow-past
'I borrowed a ring from the girl.'

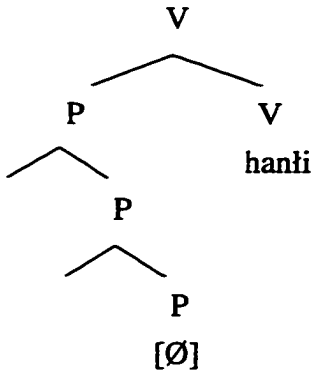
b. ho' 'okya' nicikya 'an-ilopčo-kya
1sg.nom. girl ring P-borrow-past
'I borrowed a ring from the girl.'

(47)a. ho' Nemm 'an te'le' hayso-kkya
1sg.nom. N. P pot buy-past
'I bought a pot for Nemme.'

b. ho' Nemme' te'le' 'an-hayso-kkya
1sg.nom. N. pot P-buy-past
'I bought Nemme a pot.'

Evidence from P-incorporation therefore supports a decomposition of the lexical structure of these verbs of change of possession as in (48) below, i.e. consisting in part of an intransitive V.

(48)



As in the case of verbal *'illi* , I hypothesize that the absence of object agreement on these change of possession verbs is a result of the nature of the lexical structure of these verbs. I will argue in the next section that the derivational process that moves P out of its original domain and incorporates it into V destroys the agreement domain of P and renders the derived V a non-agreeing form.

4.1.3 Locality in Agreement

In what follows I hypothesize that Zuni agreement consists of two syntactically distinct kinds of inflection. Based on the evidence discussed in Sections 4.1.1 and 4.1.2 I argue that the two types of agreement are subject to different locality conditions. One type of agreement is constrained to occur within a certain minimal domain, while the other type has no such restriction on its appearance. I will argue that sublexical derivational processes such as movement and incorporation destroy the minimal domain

of agreement so that agreement cannot occur. Non-canonical agreement patterns in Zuni are therefore not surface syntactic phenomena but rather evidence of the syntactic representation of lexical substructure and the application of syntactic operations such as movement to these substructures.

4.1.3.1 I -Agreement vs. L-Agreement

I begin by suggesting that plural agreement in Zuni consists of two different syntactic types. Zuni suffixal plural agreement (plural transitive subject) belongs to the category I ('I-agreement'). That is, suffixal agreement features are contained in functional head I that is attached to the verb stem. Zuni prefixal plural agreement (plural transitive object, plural intransitive subject), in contrast, consists of features spelled out directly on lexical head V (or P[188]). I therefore refer to prefixal plural agreement as 'L-agreement'. All examples of non-canonical agreement in Zuni involve L-agreement.

There are two reasons for hypothesizing this distinction between the two types of agreement. First, I-agreement and L-agreement differ with respect to (ir)regularity. Suffixal I-agreement is highly regular and is spelled out as *-(na):w ~ -(na)p* (preceding a consonant) for all verb classes.[189] [190] Prefixal L-agreement, on the other hand, displays several irregularities.

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[188] Recall that postpositions in Zuni agree with their objects.

[189] The only exception appears to be *hapo* 'gather (intrans.)', which lacks subject agreement entirely in the plural. This might be explained by the distributive reading given to examples like (i) with plural subjects.

(i) hon 'an-hapo-kya
1pl.nom. P-gather-past
'We gathered around him.'

[190] Apparently *-:w ~ -p* can only attach to stative stems, so that non-stative stems take in addition stative *-na* preceding the plural morpheme. It is possible that the stativity requirement is the result of plural verbal agreement having its origin in morphology from the nominal paradigm, cf. *no'li-nne* 'nose-sg.', *no'li-:we* 'nose-pl.' and *'ito* 'eat.sg.' *'ito-na-:we* 'eat-pl.'

For example, there are five L-agreement plural prefixes, the distribution of three of which is unpredictable. The morpheme *'a:-* is the most productive L-agreement prefix. *'i-* is apparently limited to particular verbs that can only take arguments with human referents, though the exact degree of the productivity of this prefix is unclear.[191] There are in addition to these a few L-agreement prefixes whose distribution is severely limited and unpredictable. For a limited number of verbs it appears that the lexical entry for a particular verb must be specified for a specific agreement prefix out of the set {wo-, t(e(t))-, 'ut- ~ 'uk^{w}-}[192]. Some examples are given in (49).

(49)

Pl.-Stem		**Pl.-Stem**	
wo-k'ošo	'wash'	*tet-toma:yo*	'forget'
wo-:tiha	'take'	*te-powa*	'tie'
'ut-ula	'run away'	*t-ik^{w}a*	'say'
'uk^{w}-k^{w}ayi	'exit'		

A second irregularity of these L-agreement prefixes is that the five prefixal variations are distributed among two different positions on the verb stem. The sketch of the Zuni verb stem in (50) indicates two positions for prefixal L-agreement, one **(a)** adjacent to the verb root and another **(b)** further away. {t(e(t))-, wo-} occupy position (a) and {'a:-, 'ut-, 'i-} occupy position (b).

---

[191] Some instances of *'i-* may fall into the next category described in (i).

[192] There appear to be no discernible semantic regularities to the verbs taking each type of prefix. The different prefixes themselves convey no difference in meaning.

(50) $Agr_{1(b)}$ - reflex. - P - Asp. - $Agr_{1(a)}$ - Root

'a:-	t(e(t))-
'ut-	wo-
'i-	

A second reason for postulating a syntactic distinction between the two types of agreement is that I-agreement and L-agreement appear to be determined in two different domains. The processes responsible for non-canonical agreement affect only the domain in which L-agreement operates. It is hypothesized that for this reason, all examples of non-canonical agreement discussed in previous sections are restricted to L-agreement. I lay out the proposals for this account in the next section.

4.1.3.2 Agreement Domains

I assume plural 'agreement' in Zuni to consist of copying the [+plural] feature of an argument onto some head, to be spelled out later on in the derivation. Both I-agreement and L-agreement make use of this same copying process. The two types of agreement differ, however, in the domain in which this copying of the [+plural] feature can take place.

I-agreement can be described as the copying of the [+plural] feature of a transitive subject or an unergative intransitive subject onto the functional head I° (Agr°). The plural agreement suffix *-nap* on the transitive verb in (51a) and on the unergative verb in (51b) is I-agreement.

(51)a. tom hon 'ansattu-**nap**-kya

2sg.acc. 1pl.nom. help-pl.subj.-past

'We helped you.'

b. hon yak'o-**nap**-kya

1pl.nom. vomit-pl.subj.-past

'We vomited.'

Now note that arguments in Zuni do not move out of the VP to case positions, e.g. for the purposes of case assignment/checking. Evidence for this was discussed in Chapter 2, namely the position of the negation particle *k^{w}a'* with respect to arguments. Weak pronouns move out the VP in order to be properly licensed, (52a), but other types of arguments do not move out of VP. Assuming that the negation particle marks the edge of the VP[193], the position of *k^{w}a'* in (52b) to the left of the NP subject and object arguments indicates that these arguments remain in situ. Contrast the ungrammatical position of the negation particle following one or both of the NPs in (52c-d).

(52)a. teššuk'^{w}a' ho' k^{w}a' waccita yaktoh-nam-kya

yesterday 1sg.nom.[w] neg. dog hit-neg.-past

'I didn't hit the dog yesterday.'

b. teššuk'^{w}a' k^{w}a' waccita wihac'ana 'utte-nam-kya

yesterday neg. dog baby bite-neg.-past

'The dog did not bite the baby yesterday.'

c. * teššuk'^{w}a' waccita k^{w}a' wihac'ana 'utte-nam-kya

yesterday dog neg. baby bite-neg.-past

'The dog did not bite the baby yesterday.'

---

[193] Please refer to the discussion in Chapter 2 Section 2.1.1, as well as the discussion of negation in Chapter 1 Section 1.3.3.1.

d. * teššuk'^{w}a' waccita wihac'ana k^{w}a' 'utte-nam-kya

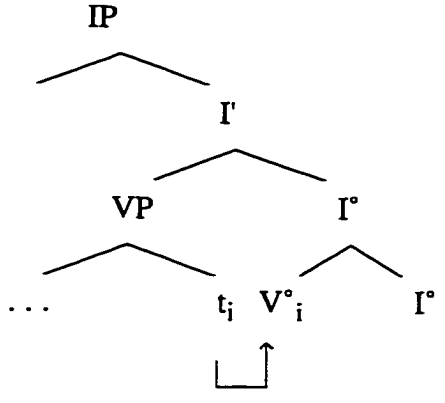
yesterday dog baby neg. bite-neg.-past

'The dog did not bite the baby yesterday.'

Therefore the argument triggering agreement onto I° (Agr°) does not occur in the specifier of this functional head, or, does not occur in local configuration with I° (Agr°). In order for the [+plural] feature of an argument inside the VP to be copied onto I° (Agr°), we must assume that this I-agreement feature copy is possible non-locally, i.e., from an element inside VP to I° (Agr°) outside VP.

Assuming that V moves to I in Zuni[194], (53), I hypothesize that V-to-I movement renders the VP transparent to relations between I° (or V°+I°) and some element inside VP.[195]

(53)



For Baker (1988) this relation is government of an argument in VP by V°+I°, for Bittner and Hale (1996a) this relation is Case-binding of an argument in VP by V°+I°. For present purposes, I assume that V° to I° movement renders arguments in VP visible to

[194] Discussed in Chapter 2 section 2.1.1.

[195] I assume the architecture of the clause argued for in Chomsky (1995b), simplified here. I use IP here as an abbreviation for AgrP; TP is left out for simplicity.

I°, so that the [+plural] feature of the highest argument visible in SpecVP can be copied to I°.[196] I summarize the proposals concerning I-agreement in (54) below.

(54) **Principle of Zuni I-agreement:**

(i) V° to I° movement renders VP transparent to feature copy between I° and some element of VP.

(ii) The features of the first argument visible to I° are copied onto I°.

(cf. agreement with the transitive and unergative subjects in (51))

A different principle of agreement determines the result of [+plural] feature copy for L-agreement. L-agreement can be described as the copying the [+plural] feature of a transitive object or intransitive subject argument onto V (or P in the case of postpositional agreement). Despite the presence of two prefixal positions on the Zuni verb stem for L-agreement, (see (50) above), the [+plural] feature of only a single object argument can be copied onto the Zuni verb. Therefore only one of two [+plural] arguments in a ditransitive construction will be associated with verbal agreement. Which [+plural] feature will be copied onto verbal agreement is determined in the following manner.

The[+plural] feature nearest to V is copied, starting with the first sister complement (direct object), (55a). The ungrammaticality of (55b) when plural agreement is absent shows that the direct object *pic'ana:* 'piglets' rather than the indirect object *tom* '2sg.acc.' indeed controls agreement in (55a).

(55)a. tom ho' pic'ana-:$_i$ 'a:w$_i$-uk-kya

2sg.acc. 1sg.nom. piglet-pl. pl.obj.-give-past

'I gave you(sg.) the piglets.'

[196] I assume that the 'external argument' of transitives and unergatives is in SpecVP (or, more precisely, in Spec$v$ P).

b. * tom ho' pic'ana-: __'uk-kya

2pl.acc. 1sg.nom. piglet-pl. give-past

If there is no [+plural] direct object feature, the [+plural] feature of the indirect object complement is copied, as in (56a).[197] The ungrammaticality of (56b), where this plural agreement is absent, indicates that it is the indirect object in (56a) that is controlling agreement.

(56)a. k^{w}a' k^{w}a'ał $_{k}$ ho' pic'ana-:$_{i}$ t $_{k}$ 'a:w$_{i}$-itok'ya-nam-kya

neg. something. 1sg.nom. piglet-pl. pl.obj.-give-past

'I didn't feed the piglets anything.'

b. * k^{w}a' k^{w}a'ał $_{k}$ ho' pic'ana-: t $_{k}$ ____'itok'ya-nam-kya

neg. something. 1sg.nom. piglet[sg.] give-past

The feature [+human] disrupts the determination of agreement according to the process of 'nearest [+plural] feature is copied onto V.' A more distant argument with the features [+human, +plural] will trigger L-agreement over a closer argument that is simply [+plural]. This is illustrated in (57)-(59). In (57a) the [+human] direct object *'a:c'ana* 'children' controls agreement (compare (57b-c) with no agreement or agreement triggered by *suski* 'coyote(pl.)').

---

[197] In (56a) the direct object *k^{w}a'ał* 'something' has undergone movement from the trace position to the front of the clause.

Notice that [+human, +plural] agreement triggers a different L-agreement prefix, namely *y-* . Compare [+human, +plural] agreement with *y-* in (57a) with [-human, +plural] agreement with *'a:w-* in (58).

(57)a. ho' suski 'a:-c'ana$_i$ y$_i$-uk-kya
1sg.nom. coyote(pl.) pl.-child pl.obj.-give-past
'I gave the children to the coyotes.'

b. * ho' suski 'a:-c'ana ___'uk-kya
1sg.nom. coyote(pl.) pl.-child give-past

c. * ho' suski$_i$ 'a:-c'ana **'a:w$_i$**-uk-kya
1sg.nom. coyote(pl.) pl.-child pl.obj.-give-past

(58) tom ho' pic'ana-:$_i$ 'a:w$_i$-uk-kya
2sg.acc. 1sg.nom. piglet-pl. pl.obj.-give-past
'I gave you(sg.) the piglets.'

Based on the presence of this special agreement affix *y-* for [+human, +plural] in (59a), we can tell that it is the [+human, +plural] indirect object *to'no'* '2pl.acc.' in (59a) that controls agreement, despite the presence of the [+plural] direct object *pic'ana:*

'piglets' closer to V.[198] [199] In addition, note the ungrammaticality of the absence of agreement (59b) or agreement triggered by direct object *pic'ana:* 'piglets', (59c).

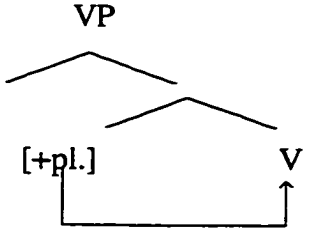
(59)a. to'no'$_i$ ho' pic'ana-: y$_i$-uk-kya
2pl.acc. 1sg.nom. piglet-pl. pl.obj.-give-past
'I gave you(pl.) piglets.'

b. * to'no'$_i$ ho' pic'ana-: __'uk-kya
2pl.acc. 1sg.nom. piglet-pl. give-past

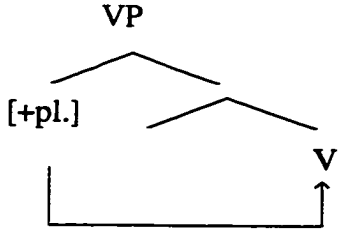
c. * to'no' ho' pic'ana-:$_i$ **'a:w$_i$**-uk-kya
2pl.acc. 1sg.nom. piglet-pl. **pl.obj.**-give-past

The results of the above discussion are summarized in (60a-c) below

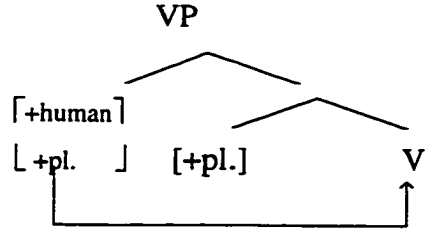
(60)a.



b.



c.

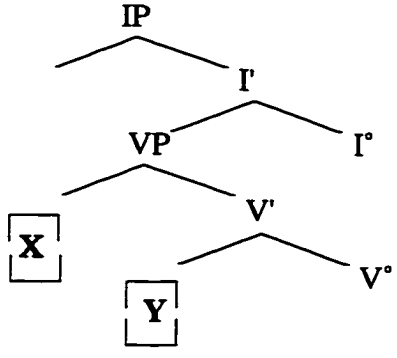


[198] Assuming a Larsonian VP-shell, where the indirect object c-commands the direct object.
[199] If the two object arguments refer both to humans or both to non-humans, verbal agreement will appear but will be indeterminate as to which of the two is the trigger of the agreement since the morphological outcome would be identical, shown in (i).

(i) ho' pic'ana-: mansan 'a:w-uk-kya
1sg.nom. piglet-pl. apple(pl.) pl.-give-past
'I gave apples to the piglets.'

L-agreement therefore differs from I-agreement in two respects. L-agreement consists of features copied from within the immediate domain of V, which is the projection VP. (Recall that I-agreement copied features from outside its immediate domain, the projection IP.) In addition, L-agreement features are copied to V from either position X or Y inside VP in (61), according to the locality condition.[200] The nearest [+plural feature is copied], starting with the first sister complement (direct object). If there is a [+human, +plural] object argument, however, then it is the [+plural] feature of the [+human, +plural] object that is copied.[201]

(61)



[200] [X] and [Y] are object positions; the external argument (subject) is not represented in (61).

[201] The type of feature copy illustrated in (60) occurs before V° moves out of VP to I°. As a result, L-agreement is determined before I-agreement. Given the constraint in (i),

Constraint on Zuni Agreement:
(i) A verb stem can only bear one copy of the agreement (Φ) features of an argument.

in the case of the presence of a single argument (i.e. in an intransitive), an argument triggering L-agreement is not available for feature copy by I-agreement (once VP is rendered transparent upon V° movement to I°). Example (ii) illustrates the effect of (i) by showing that the I-agreement (plural transitive subject, plural unergative subject) suffix *-nap* cannot occur on the verb *'i* 'come' since the intransitive subject has already triggered L-agreement prefix *'a:w-* .

(ii) hon 'a:w - i (-*nap) - kya
1pl.nom. pl.subj.-come-pl.subj.-past
'We came.'

The principles determining Zuni L-agreement are summarized in (62).

(62) **Principles of Zuni L-agreement:**

(i) The features of the argument nearest to lexical item L° are copied onto L°.

(ii) L° is restricted to copying features from its local domain (= VP).

(iii) The feature [+human] may override locality.

The formal difference between I-agreement and L-agreement is therefore one of locality, specifically whether the domain of feature copy is local or not. I-agreement is determined by feature copy to I° from VP, i.e. outside the *immediate domain* of I°. The immediate domain of I° is its projection, IP. In contrast L-agreement is determined inside the immediate domain/projection of V, that is, inside VP.[202]

Further evidence for this formal difference between L-agreement and I-agreement based on locality comes from the patterning of suppletive verbs in Zuni. There are a number of verbs in Zuni that indicate agreement with a plural transitive object or a plural intransitive subject with a suppletive stem. Some examples are listed in (63), and an illustration of their use is given in (64). These stems occur instead of, not in addition to, an agreement prefix. Note that there are no verbs in Zuni that are suppletive for transitive plural subject or unergative plural subject (I-agreement).

(63) **Zuni Suppletive Stems**

Sg.	Pl.		Sg.	Pl.	
'ayna-	łata-	'kill'	'ahha-	wo:tiha	'take'
'ala-	ya:tela-	'sleep'	łeya-	woppona-	'hold'
'ela-	łuwa-	'be standing'	'ana-	'utula-	'run away'
'imo-	tina-	'be sitting'	'učču-	'uppo-	'be inside'
čuwa-	wo'yo-	'be lying'			

[202] For another treatment of locality see Manzini (1992).

(64)a. ho' 'imo-'kya

1sg.nom. be.sitting(sg.)-past

'I was sitting; I stayed there.'

b. hon tina-'kya

1pl.nom. be.sitting(pl.)-past

'We were sitting; we stayed there.'

Hale, Jeanne & Pranka (1991) suggest that similar patterning of verbs suppletive for number in Hopi is determined by a principle, given in (65), that is similar to the principle of locality proposed here.

(65) Suppletive verbs agree in number with the closest direct argument.

[Hale, Jeanne & Pranka 1991: 265]

Furthermore, they argue that suppletive agreement is determined in the lexical domain, occurring inside syntactic inflection. Evidence of this is the fact that suppletive stems in Hopi can serve as the base for further derivational process. This is also true for Zuni, an example of which is given in (66a). Here a conversative causative is formed from the suppletive stem *łuwa-* 'be standing (pl.)'.

(66)a. 'i-łuwa-ha

reflex.-be.standing(pl.)-convers.caus.

'run (pl.)'

b. y-e:la-ha

reflex.-be.standing(sg.)-convers.caus.

'run (sg.)'

The proposals made above that Zuni transitive plural object/intransitive plural subject agreement is agreement in the lexical domain and is constrained by locality accounts for the fact that there are no verbs in Zuni that are suppletive for transitive plural subject or unergative plural subject.

4.1.3.3 Disrupting Locality in Lexical Derivation

We are now in a position to account for the phenomenon of non-canonical agreement with *'illi* , e.g. the absence of agreement in (67) below, and with the Zuni verbs of change of possession.

(67) ho' pic'ana-: (*'a:w-) 'illi

1sg.nom. piglet-pl. have

'I have piglets.'

I argued that Zuni plural object agreement spelled out on V (or P), or L-agreement, is subject to a locality constraint. Evidence for this locality constraint is the copying onto V of the [+plural] feature of an argument nearest to V. I hypothesize that Zuni L-agreement is further restricted such that only features from within the immediate domain of L are visible to L for copy. The immediate domain of L is the projection of lexical head L. I further hypothesize that feature copy to a lexical head L takes place

after all lexical derivation involving L has been completed. The proposal is summarized in (68).

(68) **Interaction of L-agreement and Lexical Derivation**

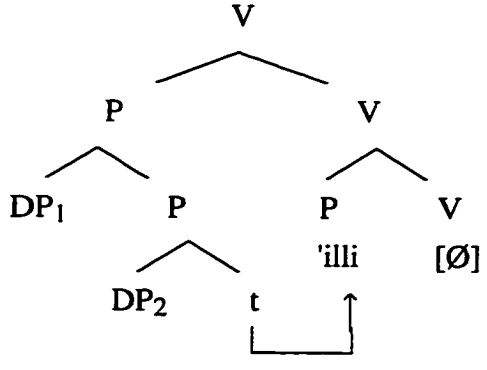
(i) Only features from within the immediate domain of lexical head L are visible to L for copy.

(ii) Feature copy to a lexical head L takes place after all lexical derivation involving L has been completed (but before movement takes place between lexical and functional domains).

In other words, agreement features are not copied to lexical item L' until L' has been fully derived.

Consider again the proposed derivation of verbal *'illi* , shown in (69) below.

(69)



L-agreement involving object argument DP_2 and the derived verb $[_V [_P$'illi] + $[_V Ø]]$ is therefore absent (cf. (67) above) for the following reason. In the course of deriving this verb, the postposition *'illi* raises out of its immediate domain, the lexical projection P, and as a result is no longer in local configuration with its [+plural] DP_2 complement at

the point that feature copy would take place (namely, the end of the lexical derivation cycle).

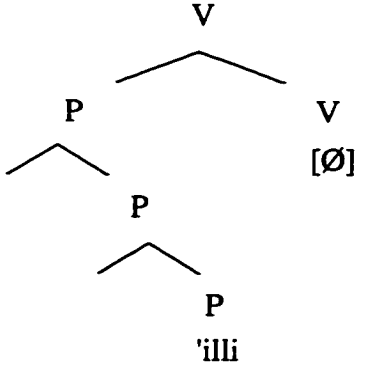
That is, L-agreement feature copy to P or V can only take place upon the completion of lexical derivation, but at this point in (69) the conditions necessary for feature copy to *'illi* have been destroyed.[203]

Finally, note that because we assume Zuni object agreement (L-agreement) and subject agreement (I-agreement) are formally distinguished in Zuni, it is no surprise that verbal *'illi* has regular subject agreement, (70), despite its non-canonical object agreement.

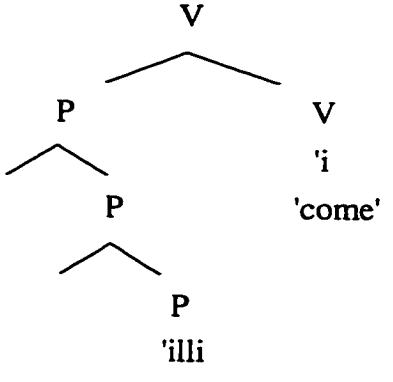
(70) hon pic'ana: 'ill-apa
1pl.nom. piglets have-pl.subj.
'We have piglets.'

(71a) represents the basic lexical structure of *'illi* . When the node V in the structure in (71a) is lexically overt, as in (71b) where the verb *'i* 'come has been inserted, the postposition *'illi* remains inside its immediate domain with its complement.

(71)a.



(71)b.



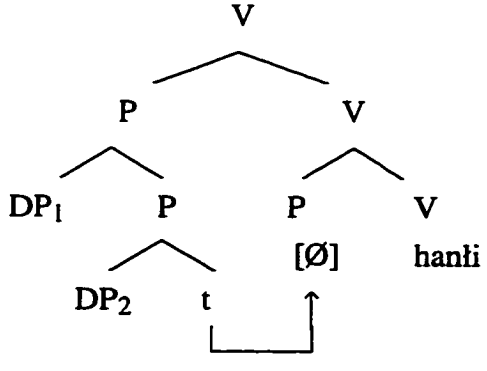
[203] The absence of agreement with derived verbal *'illi* indicates that the movement in (65) does not extend the domain of L-agreement, i.e. to include the V projection. Thus lexical derivation differs from syntactic movement proper, since for the latter the movement of V to Agr is assumed to extend the checking domain of the object (cf. Chomsky 1993).

The placement of the adverb between *'illi* and *'i* in (72) supports the analysis if (71b). The postposition *'illi* in the construction in (71b) and (72) is able to undergo L-agreement feature copy since *'illi* is in local configuration with its [+plural] complement at the time feature copy talks place.

(72) 'a:w-illi teššuk'^{w}a' 'i-kya
pl.obj.-have yesterday come-past
'He brought them yesterday.'

Turning to the Zuni change of possession verbs *hanłi* ' steal', *'ilopčo* 'borrow' and *haliso ~ hayso* 'buy/sell', I suggest that the non-canonical agreement pattern of these verbs is also the result of lexical derivation that removes a head from its minimal domain. In the derivation of these verbs as well, P incorporation into V destroys the local configuration between P and its object complement DP_2 , represented in (73). The Zuni change of possession verbs differ only from *'illi* in that P in this case is phonologically null.

(63)



In addition to accounting for the properties of the two Zuni classes of non-canonical agreement verbs, the proposals made here concerning the role of lexical derivation in disrupting agreement is able to provide an account for a phenomenon that would otherwise go unexplained. Despite the fact that both intransitive plural subject agreement and transitive plural object agreement are indicated by the same set of L-agreement prefixes on the Zuni verb, the disruption of agreement in Zuni that I have termed 'non-canonical agreement' *only affects transitive object agreement* . There are no examples in Zuni of the disruption of intransitive plural subject L-agreement.

The analysis argued for here can account for this phenomenon. All of the instances where L-agreement was disrupted involved the presence of a transitive P complement to the verb. Surface intransitive verbs consist only of a simple V, so that it is assumed that there is no sublexical derivation involved in the formation of intransitive verbs. If there is no sublexical derivation involving movement from one lexical projection to another, the disruption of locality never occurs. Thus intransitive verbs in Zuni are predicated to always exhibit canonical patterns of agreement.[204]

4.1.3.4 Overriding the Locality Constraint

I provide in this section additional evidence to support the claims made above concerning the role of lexical derivation in disrupting agreement in Zuni. I repeat in (74a) below an example illustrating that the verb *hanli* 'steal' does not agree with a plural direct object, despite the fact that verbs in Zuni generally do agree with a plural direct object (74b).

[204] Of course, certain *morphological* spellouts of agreement may still be irregular.

(74)a. Nemme' te-we' (*'a:-) hanɬi-kya

N. pot-pl. (pl.obj.-) steal-past

'Nemme stole (some) pots.'

b. Nemme' te-we' 'a:w-awa-kya (* ___awak-kya)

N. pot-pl. pl.obj.-find-past

'Nemme found (some) pots.'

We can confirm that the disruption of locality by lexical derivation is responsible for the absence of object agreement, or L-agreement, in (74a) above by observing that plural object agreement is *restored* for the verb *hanɬi* in precisely the circumstances under which the locality constraint can be overridden.

Recall that a [+human, +plural] indirect object argument will control L-agreement on the verb, as does *to'no'* '2pl.acc.' in (75a) below, despite the fact that there is a [+plural] direct object *pic'ana:* 'piglets' argument closer to the verb.

(75)a. to'no'$_i$ ho' pic'ana-: y$_i$-uk-kya

2pl.acc. 1sg.nom. piglet-pl. pl.obj.-give-past

'I gave you(pl.) piglets.'

b. * to'no'$_i$ ho' pic'ana-: __'uk-kya

2pl.acc. 1sg.nom. piglet-pl. give-past

c. * to'no' ho' pic'ana-:$_i$ **'a:w$_i$**-uk-kya

2pl.acc. 1sg.nom. piglet-pl. **pl.obj.**-give-past

Note therefore that the presence of the [+human] feature on a [+plural] direct object will trigger object agreement on *hanłi* , as (76a) below illustrates.

(76)a. hom ča-we' **'a:**-hanłi-kya
1sg.acc.(poss.) child-pl. **pl.obj.**-steal-past
'He stole my children.'

b. * hom ča-we' ___ hanłi-kya
1sg.acc.(poss.) child-pl. steal-past

The restoration of object agreement to change of possession verb *hanłi* indicates that *hanłi* is not an irregular verb, e.g. not specified in the lexicon as [-agreeing]. Rather, the presence vs. absence of object agreement with *hanłi* depends on the syntactic context, and I have suggested here that it is the structural complexity of lexical item *hanłi* that determines whether or not agreement is manifested in a particular context.[205]

To sum up, I have argued in this section and the previous section for a role for locality in determining agreement. Specifically, a locality constraint on L-agreement

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[205] Somewhat confusing the issue, however, is the fact that unlike *hanłi* 'steal', the other change of possession verbs *'ilopčo* and *haliso* 'buy/sell' do not appear to agree with a [+human, +plural] object, (i) and (ii) below, although note that these sentences are considered somewhat odd by speakers. If this oddness is not a factor, it may be that these verbs may have an irregular agreement specification, e.g. [-agreeing]. The verbs *'ilopčo* and *haliso* do not provide counterexamples to the arguments I have developed above and in previous sections, however, since like *hanłi* they behave like derivationally complex verbs with regard to P-incorporation and intransitive use (see Section 4.1.2.2).

(i) ? ča-we' (*'a:-) haliso-kkya
child-pl. (pl.obj.-) buy-past
'He bought the children [as slaves].'

(ii) ? ča-we' (*'a:-) 'ilopčo-kya
child-pl. (pl.obj.-) borrow-past
'He borrowed the children [for the dance].'

agreement limits the domain in which agreement may be determined and in which feature copy may take place. Movement for the purposes of lexical derivation does not extend the agreement domain to allow long-distance-agreement, but certain features of arguments appear to be able to override the domain limitation on L-agreement. It may be that L-agreement, namely agreement spelled out on a lexical head L, is particularly sensitive to local domains, and it is only lexical features, like [+human] in the case of Zuni, that can override constraints on this domain.

4.1.4 Summary and Conclusions

I began this chapter by presenting examples of regular vs. non-canonical agreement in Zuni. While Zuni transitive verbs generally agreement with a [+plural] object, I described two classes of verbs, *'illi* 'have' and the verbs of change of possession *hanłi* 'steal', *'ilopčo* 'borrow' and *haliso* ~ *hayso* 'buy/sell', that fail to agree with a [+plural] object.

I argued that the verbs in these two classes are derivationally complex, based on several types of syntactic evidence. *'illi* actually does agree in one syntactic context, and I argued that this was because this form of *'illi* is a postposition. Verbal *'illi* was hypothesized to be a derived form, and I proposed a lexical structure for verbal *'illi* that consisted of a monadic predicate taking a prepositional complement. The surface form of *'illi* was derived by movement and incorporation of the postposition. In positing this structure I assumed that lexical structure can be represented according to syntactic principles, following the proposals of Hale & Keyser (1993, 1996a). In addition, syntactic operations such as movement and incorporation are applicable in this lexical domain. Evidence from adverb placement and causative formation confirmed the complex lexical structure proposed for *'illi* . I proposed similar lexical structures and

lexical derivations for the verbs of change of possession *hanłi* 'steal', *'ilopčo* 'borrow' and *haliso ~ hayso* 'buy/sell'. The proposed structures were supported by evidence from postposition incorporation.

I then introduced the notion that there are at least two different types of agreement in Zuni,[206] I-agreement and L-agreement. I agreement was argued to consist of features copied onto functional head I° (Agr°), while L-agreement consists of features copied directly on to some lexical head (either V or P). These two types of agreement are also distinguished by the domain in which agreement feature copy takes place and as well as the constraints on this feature copy. I argued that while I-agreement can copy a [+plural] feature from outside the domain of IP (i.e. from SpecVP), L-agreement copies the nearest [+plural] feature within its minimal domain, where the minimal domain of L is the lexical projection L.

Finally, I accounted for the non-canonical agreement patterns of the verbs *'illi* 'have', *hanłi* 'steal', *'ilopčo* 'borrow' and *haliso ~ hayso* 'buy/sell' by arguing that the movement operation in lexical structure that derives the surface forms of these verbs destroys the conditions for object agreement (L-agreement) by removing the agreeing head from its minimal agreement domain. I then presented further evidence for the complex lexical structures proposed as well for the locality constraint on Zuni L-agreement, namely the fact the feature [+human] that overrides the locality restriction on agreement in simple transitive sentences also overrides locality in the derived structures. As a result, the verb *hanłi* 'steal', for example will agree after all with a [+human] object.

I conclude that agreement may be more than an indication of surface syntactic relations, since as I have argued, certain types of agreement are affected by lexical derivational rules. Consequently so-called irregularities of agreement at the syntactic inflectional level may in some cases provide evidence to the learner of deeper lexical regularities.

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[206] I will describe a third category of Zuni agreement in Section 4.2.

4.2 Object Expletives

To complete the discussion of Zuni agreement undertaken in this chapter, in what follows I will describe a third type of agreement in Zuni, the distribution of which is related to argument structure. I will refer to this type of agreement by its morphological form, namely *te-* agreement. In Section 4.2.1 I describe the distribution of Zuni *te-* agreement and argue that it marks the presence of a non-referential non-thematic element either in subject position or in object position. In Section 4.2.2 I describe similar agreement patterns in Tiwa (a group of nearby Pueblo languages, unrelated to Zuni) where likewise agreement (*na-* agreement) indicates the presence of non-thematic subjects and objects.

The evidence for object expletives in Zuni and Tiwa presented here bears on the debate as to whether true non-thematic objects do in fact exist (cf. Postal and Pullum 1988, Authier 1991, Rothstein 1995). I will summarize the debate in section 4.2.3 and argue that the distribution of non-thematic objects in both Zuni and Tiwa is related to the nature of complement selection and in particular the Case-assigning properties of verbs.

4.2.1 Zuni *te-* Agreement and Expletives

As argued in Section 4.1, Zuni I-agreement can be described as the copying of morphological features spelled out in I°; under L-agreement copied morphological features are spelled out directly on some lexical item L (V or P). The third type of agreement, *te-* agreement, occurs as a prefix to the verb stem like L-agreement but is otherwise distinct from L-agreement. *te-* agreement consists of the single prefix *te-* and

is formally distinguished from both L-agreement and noun incorporation[207] by the epenthetic [l] that occurs between *te-* and a following vowel-initial verb stem, (77). L-agreement and noun incorporation both take epenthetic [w] in this context, (78).

(77) te-[l]-oše
TE-hungry

(78)a. 'a:-[w]-oše
pl.subj.-hungry

b. pi-[w]-itok'ya
pig-feed

While L-agreement spells out a copy of the feature [+plural], *te-* agreement appears to spell out the feature [-referential] copied from a non-thematic element in an argument position. For example, *te-* marks the presence of a phonologically null non-thematic subject and is common with verbs that refer to natural phenomena, (79a-d). Such examples were already discussed in Chapter 3 (Section 3.2.2.3) with regard to the absence of a phonologically null expletive element in structural subject position of Zuni unaccusatives and passives. Examples (79b-d) below in particular are new and were not previously discussed.

(79)a. **te-**k'ałi
[-referential]-hot
'It's hot out'

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[207] Zuni noun incorporation consists of a noun reduced to its initial CV and adjoined to the left of the verb root, with an epenthetic [w] inserted between the final vowel of the incorporated noun and the initial vowel of the verb stem.

(i) picu:ti
pig

(ii) pi[w]-itok'ye-kkya
pig-feed-past
'He fed the pig.'

b. 'iš 'is **te**-k'ina-p lak'y topa telit'an **te**-k'usna

very there [-ref.]-damp-Diff.Subj. over.there other room [-ref.]-wet

'It's damp here but in that room it's dry.'

c. **te**-tešla

[-referential]-scary

'It's scary [what happened during the riots].'

d. 'is k^{w}ato-p **te**-pa'čo-:-'a

there enter-DS [-referential]-haunted-contin.-present

'It's haunted in there.'

Because *te-* agreement indicates that a non-thematic element fills a syntactic position, it cannot be doubled by a thematic NP, (80).

(80) * nočapi: te-k'yałi

coffee [-referential]-be.hot

Furthermore, there is a clear contrast in interpretation when the same verb occurs with and without *te-* . Without *te-* the verb is obligatorily interpreted as having a referential argument.

(81)a. te-k'yałi-kya

[-referential]-hot-past

'It was hot out.'

b. k'yaɬi-kya

hot-past

'It [=coffee, stew, bread] was hot.'

c. nočapi: k'yaɬi-kya

coffee hot-past

'The coffee was hot.'

Non-thematic subjects triggering *te-* agreement also occur with certain other verbs, like *'oše* 'be hungry' and *hati* 'hear', shown in (82b) and (83b).

(82)a. 'iš hon 'a:w-oše-:-'a

very 1pl.nom. pl.-hungry-cont.-present

'We're hungry.'

b. **te**-[l]-oše-kya [Bunzel 1933]

[-referential]-hungry-past

'There was a famine.'

(83)a. k^{w}a' hatiya:-kya

neg. hear-past

'He didn't hear it.'

b. k^{w}a' tenakya **te**-hat-'amme

neg. music [-referential]-hear-neg.

'The music couldn't be heard; no one could hear the music.'

Non-thematic or expletive objects are also possible in Zuni, as the presence of *te-* agreement in (84b) illustrates. There are certain verbs that take an NP complement and assign accusative case that also take a CP complement. I assume that CPs are not assigned case, so that when one of these verb selects CP, its structural accusative case must still be discharged (checked) somehow. It seems that a non-thematic (phonologically null) *pro* is inserted in object position to resolve the issue of the otherwise unassigned/unchecked case. These proposals regarding case will be developed below.

The verb *'ank'oha(ti)* 'discover' in (84) is just such a verb that takes either an NP or a CP complement. In (84a), the verb *'ank'oha(ti)* takes an NP object. In (84b), *'ank'oha(ti)* takes a CP complement and no NP direct object. *te-* agreement in (84b) signals the presence of an expletive in direct object argument position of the verb *'ank'oha(ti)* .

(84)a. Nemme' k'yawin 'an pic'ana: 'a:w-ank'ohati-kya

Nemme river P piglets pl.obj.-discover-past

'Nemme discovered the pigs in the river.'

b. ho' **te**-[l]-ank'ohak'e-kkya hom 'an hewe' hanłi-na'-kya

1sg.nom. [-referential]-discover-past 1sg.acc. P money steal-passive-past

'I discovered that my money had been stolen.'

Expletives therefore do not freely occur in object position instead of an NP argument, as the ungrammaticality of (85) shows.

(85) * Nemme' te-yaktoh-kya

N. [-referential]-hit-past

* 'Nemme did some hitting.'

The proposals developed below will suggest that non-thematic objects occur in Zuni just in case accusative case cannot otherwise be assigned by a verb.

4.2.2. Agreement and Expletives in Tiwa

In the Tiwa languages as well, special agreement is used to indicate a non-thematic element in syntactic structure. As in Zuni, these non-thematic elements or expletives are found both in subject and object position. Here too, the distribution of object expletives is linked to the Case assigning properties of verbs. Object expletives occur in Tiwa to receive Accusative case that otherwise cannot be assigned.

Agreement marking the feature [-referential] is found both in Northern and Southern Tiwa.[208] Unlike in Zuni, this agreement is not a distinct form of agreement but also occurs as agreement with a special class of spatial nouns.[209] [210] I will refer to the

[208] Picurís (Northern Tiwa) data from Harrington and Roberts (1928); Isleta (Southern Tiwa) data from Harrington (1920).

[209] This fact, as well as the fact that this morphology is excluded form contexts where agreement is usually excluded - e.g. a non-finite verb incorporated into a higher verb, compare (69a-b) - indicates that this morphology is not some kind of incorporated noun. (Certain verbs like *wɕl* 'dig' show initial consonant ablaut when subordinate and incorporated.)

agreement with Tiwa expletives by its morphological form as well, namely *na-* agreement.

The presence of *na-* agreement indicates that such non-thematic elements[211] are found for example in subject position of *mia'ąn* 'seem', a verb that is traditionally analyzed as heading a predicate that does not assign an external thematic role to the subject position, (86a). An expletive is also found in subject position of weather verbs, like *łelia* 'be hot' (86b), and the adjective + CP construction (86d), certain existentials, (86e), and idioms, (86f), etc.[212] The Southern Tiwa example shows the use of expletives

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(i)a. nąˉwęl-męn męnčoho węn k'olene Ø-kəu-Ø
agr.-dig.-sub. then one gourd 3sg.erg./ag(A)abs.-catch-perf.
'as he dug he reached one of the gourds'

b. toxʷia-łołe mąˉ(-*nąˉ)-xʷęl-sai
coyote-old.man 3sg.erg.-dig-begin
'the old coyote began to dig'

210 Information regarding the person, number, and case for up to three arguments is encoded in a single agreement morpheme prefixed to the verbal complex. Information on the noun class of Absolutive arguments is also included in this prefix. There are three primary noun classes distinguished by this verbal agreement, traditionally referred to in the literature on Tiwa as A,B,C, or alternatively, as singular, inverse, plural (Watkins 1995). Every noun has a basic class designation, while its plural (or individuated) designation belongs to another agreement class. Example (i) is from Picurís (Northern Tiwa) . Information in the agreement prefix corresponding to different arguments is separated in the glosses by a slash.

(i) tiˉ 'ąnąmˉ kąw -
1sg.erg/sg.abs. 1sg.dat./inv.(B)abs. 1sg.erg./2sg.dat./pl.(C)abs.

There is a fourth noun class members of which trigger additional verbal agreement. Nouns of this class trigger type A agreement in the singular and type B (inverse) in the plural but also trigger special *nąˉ* agreement which appears inside the other agreement prefix closer to the verb stem, as in (ii).

(ii) t'auenę 'o-nąˉ-c'ək-kęnna-yo
gun-pl. 3.inv-NA.Agr.-enter-after-emph.
'after guns were introduced'

211 I.e. phonologically null *pro* .

212 In Northern Tiwa Picurís (unlike Northern Tiwa Taos) dat./abs. agreement morphology for dative possessors vs. dative experiencer subjects differs. While dative possessors are marked with e.g. *'ąˉ-* (3sg.dat/sg.abs.), the latter appear as *'ąˉ-nąˉ-* in 3sg.dative=experiencer (e.g. *'ąˉ-nąˉ-p'ia* '3sg. laughs'; *'ąˉ-nąˉ-łohąn* '3sg.tires'). I suggest that these experiencer arguments actually occur in the structural dative position proper, not in 'subject' position unlike such dative subjects in other languages, e.g . Icelandic. As a result, some higher structural 'subject like' position is left empty (either SpecIP or SpecVP) and a non-referential *pro* must occur here, triggering, *nąˉ* agreement.

in the 'tough' construction, (86h). An example of the phenomenon from the Towa (Jemez) branch of Tanoan is also included here in (86i).[213]

Picurís

(86) a. 'in-nạ-mia'ạn-'an

3pl.dat-[-ref.]-seem-condit.

'If it should seem to them [that they are going to die]'

b. nạ-łelia-'e-pa

[-ref.]-be.hot-nominalization-instrumental

'As it was hot.'

c. nạ-łol-pe

[-ref.]-fall-cease

'It stopped raining.'

d. kiya-tạn-tǫkạn-ke nạ-k'o

mother-father-obey-gerund. [-ref.]-good

'It is good to obey one's parents.'

e. hoi-ke nạ-wia-'ạn'ạn

bet-gerund. [-ref.]-be-condit.

'If there should be any betting'

[213] While such expletives occur in Tiwa and Towa, the third branch of Tanoan, Tewa, lacks them.

f. kạ-nạ-wan-Ø

2sg.dat.-[-ref.]-come-perf.

'Now it is your turn.'

g. łęụtẹn nạ-pui-men

shortly [-ref.]-happen-sub.

'In a short time ... '

Isleta (Southern Tiwa)

h. nạ-t'aratawem i-'u'u-mu-če-hi-'i

[-ref.]-hard 3pl.(B)abs.-baby-see-pass.-fut.-sub.

'It's hard to see the babies.' [D. Frantz]

Jemez (Towa)

i. nǫǫ-pa-hụụl ... nǫǫ-pa

[-ref.]-happen-future [-ref.]-happen

'It will happen and indeed is happening [that ...]'

Non-thematic elements occur in object position in Tiwa where a verb's accusative case cannot otherwise be assigned. This occurs when a verb that takes an NP direct object and therefore assigns accusative takes a CP complement instead. The Picurís *thạn* 'discover' in (87) and (88) is such a verb.[214] In (87) *thạn* takes a CP complement, and is prefixed with *na-* agreement. In (88) *thạn* takes a NP direct object.

[214] Note that *nạ* in (70) is not special agreement triggered by CP - not all verbs that take CP complements have this *nạ* agreement, as Picurís *miau* 'want' in (i) illustrates.

(87) ta-nạ-thạn-'ạn xạ pęčonę

1sg.abs-[-ref.]-find-pluperf. Comp. snakes

'I discovered that snakes

weček^{w}il-lo 'iw-nạc'auwa-pəlho'ạn-ęn

two.ways-in-emph. 3pl.erg/pl.(C)abs.-rattle-use-subord.

can use their rattles in two ways.'

Cf.

(88) wesen pę-'o'o-nę 'i-thạn-Ø

two deer-little-pl. 3sg.erg./inv.(B)abs.-find-perf.

'She found two little fawns.'

4.2.3 Case and Complements

Grimshaw (1979, 1981) argues that the categorial-selection (c-selection) properties of a predicate must be specified independently from semantic selection (s-selection) properties, since the semantic properties of a predicate are not enough to predict selection of the right type of complement. She argues that this is because the canonical structural realization rules for some types of complements are indeterminate

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(i) sənenę 'ạ-t'ala-t'a-či-'e Ø-miau-męn

men 3sg.dat/3inv.(B)abs.-work-do-modal-nom. 3sg.(A)abs.-want-subord.

'She wanted the men to work [/that they work]'

In addition, while in some languages it is default agreement that occurs in the presence of expletives, Tiwa *nạ* is not default agreement but rather is agreement actually triggered by expletive *pro*. Whereas the default agreement that occurs with expletives in languages such as Icelandic (Zaenen, Maling and Thráinsson 1985) and Hebrew (Ritter 1995) is the most unmarked form of agreement, Tiwa *nạ* represents a highly marked category of agreement.

between NP and CP, for example questions. Some verbs selecting questions take both NP and CP, (89a) & (90a), while others take only CP, (89b) & (90b).

(89)a. I asked what the time was.

b. I inquired what the time was.

(90)a. I asked the time.

b. * I inquired the time.

Pesetsky (1982) argues that complement selection is predictable and is based on whether a verb has Accusative case assigning properties or not. This [+ accusative] property is a lexical feature of the verb and allows the verb to select an NP complement. So for example both *believe* and *complain* select for a proposition and therefore both take CP complements, but only believe assigns case and therefore may take a so-called concealed proposition, i.e. an NP complement.

Authier (1991), following Pesetsky (1982), assumes that verbs are lexically specified as ± accusative case assigners. To account for the presence of overt object expletives in English vs. their absence in French, Authier claims that where accusative case is obligatorily assigned, a structural object position must be projected. If there is no theta-marked NP in this position, an expletive must be inserted to receive the obligatory structural case. According to Authier, English is [+obligatory accusative case assignment] while French is [-obligatory accusative case assignment], accounting for the facts in (91a,b).

(91) a. We demand it of our employees that they wear a tie.

b. Nous exigeons (*ça) de nos employés qu'ils portent une cravate.

Rothstein (1992) and Rothstein (1995) address the case/categorial selection issue and case/object expletive issue respectively.

Rothstein (1992) argues that Pesetsky's original case account of complement selection is inadequate, based on the fact that some [-accusative] verbs can accusative case-mark a complement, for example subjects of secondary predicate complements to unergative verbs.

(92) They laughed him off the stage.

She argues that Burzio's Generalization better predicts when case can be assigned to complements and reaffirms Grimshaw's claim that both categorial and semantic selection are necessary. Rothstein (1995) points out that so-called object expletive *it* in English is optional, cf. (93), and that under Pesetsky's (1982) account of case properties, this should not be the case.

(93)a. I hate (it) when Timmy complains like this.

b. They regretted (it) that Finbarr used so many double entendres.

Rothstein (1995) proposes a framework in which the distribution of syntactic dummies is determined by the predication relation and therefore predicts that dummies only occur in subject position. Rothstein argues that so-called pleonastic *it* in object position in English is in fact a theta-marked pronoun with semantic interpretation. Her analysis reaffirms the claims of Chomsky (1981) that expletives do not occur in object

position and argues that the sentences in (93) with and without *it* have different interpretations.

I will address both case and selection issues below and argue that, based on evidence from Zuni and Tiwa, contra Rothstein object expletives do in fact exist. These expletives occur with a different class of verbs from the so-called object expletive *it* in English. The analysis will support Authier's proposal that Accusative case properties of verbs force the occurrence of object expletives.

4.2.4 Object it vs. Object Expletives

Rothstein (1995) argues that expletive pronouns cannot occur in object position and shows that the so-called expletive *it* observed in object position in English by Postal and Pullum (1988) is in fact thematically licensed. Here I present her arguments and later argue against extending her approach to the Tiwa data.

Rothstein argues that expletive pronouns are licensed by predication. While referential NPs are licensed at least thematically and sometimes both thematically and syntactically (e.g. subjects), a non-thematic (pleonastic) pronoun can only be licensed syntactically via the predication relation. Since only subjects can be licensed predicationally, only subjects can be non-thematic; non-thematic pronouns cannot be predicationally licensed as objects. She concludes that so-called expletive *it* in object position in English must be thematically licensed and gives the following argument that this is so, i.e., that these object pronouns have some semantic interpretation.

In cases like (94a) involving the construction *it* + adverbial quantifier, *it* behaves as a variable bound by the adverbial operator. Compare (94a) and (94b). In examples like

(94a) Rothstein argues that there is a matching between number of dinners and number of events of regretting, whereas there is no such necessary correspondence in (94b).[215]

(94) a. I regretted it every time I had dinner with Igor.

b. I regretted every time I had dinner with Igor.

A second case brought up by Postal and Pullum is the *it* + CP construction.[216] Here Rothstein observes that " ... in the absence of a quantifier, the bound interpretation will never be available. The pronoun is free and denotes a specific event recoverable from the discourse" (p.519). In interpreting *it* in this case, she draws on a proposal of Bolinger (1977) " ... that *it* in these circumstances refers to something already broached - an event already mentioned or for other reasons contextually prominent." In reference to example (95a)[217], Rothstein observes that "without *it*, [this example] is appropriate as a report of the fact that John and Mary made an announcement of information that is new to the speaker. ([95]b) is more appropriate if the speaker is reporting that John and Mary have made a public announcement of an event that she already knew to have occurred. The pronoun denotes a specific event prominent in the discourse, and the CP identifies that event explicitly."

(95) a. John and Mary have announced that they got married.

b. John and Mary have announced it that they got married.

In contrast, (96a) with *it* is bad due to a "hypothetical regret with a non-specific object." In (96b), however, where *it* is allowed, the object of *regret* is an actual event.

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215 I.e., there can be one event of regretting everything.

216 Rothstein proposes that the CP in this construction is licensed by predication.

217 (69) and (70) are her (61) and (62).

(96) a. If he asks you to help him, just say that you regret (*it) that you can't.

b. You shouldn't regret it that you were helpful.

To sum up, according to Rothstein (1995), instances of *it* in object position in English formerly analyzed as pleonastic are in fact instances of thematically licensed pronouns whose interpretation derives from their function as a bound variable or is contextually determined.

Rothstein's arguments for English object *it* are not available for the Tiwa and Zuni data. This can be recognized in light of the fact that the distribution of object expletives in Tiwa is fundamentally different from that of the cases of English object *it* that Rothstein examines.

Different syntactic properties have been attributed to constructions involving verbs that takes non-propositional (factive) complements vs. those that take propositional (non-factive) complements. As discussed by Hegarty (1991), Cinque (1990) and others, extraction of *wh* adjuncts is not permitted from the complement of factive verbs, (97a) while such extraction is permitted from the complement of non-factive verbs, (97b). (The *wh* adverbial in (97a) can only be interpreted with the higher verb).

(97) a. * Why do you regret [that Igor never came back ___]

b. How do you suppose [that Mario contacted her ___]

Hegarty points out another correlation of the two complement types, namely that so-called object expletives in English can occur with verbs that take factive complements but not with verbs taking non-factive complements.[218]

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[218] Hegarty (1991) proposes an analysis that relates these two facts which I will not go into here.

(98) a. I regret it [that Igor never came back]

b. * I suppose it [that Mario contacted her]

In contrast to English, the Zuni and Tiwa verbs that occur with an expletive object pronoun are not of a uniform complement selecting type. Zuni and Tiwa object expletives are found both with verbs that take non-factive complements ('believe', 'want'), as well as with those that take factive complements ('know', 'see', 'discover'). The distribution of object expletives in these two languages cuts across distinctions made by object *it* in English. Note also that while object *it* is optional in constructions like (93) above, the agreement indicating the presence of a non-thematic object *pro* in Zuni and Tiwa in examples like (99) and (100) (*te-* agreement and *na-* agreement respectively) is obligatory. Finally, unlike the cases of English object *it* discussed by Rothstein, the Zuni and Tiwa object *pro* in question is non-thematic and has no semantic interpretation. Rothstein's account is therefore not adequate for these cases, and we are therefore forced to look to an alternative explanation.

(99) ho' te-[l]-ank'ohak'e-kkya hom'an hewe' hanłi-na'-kya
1sg.nom. [-ref.]-discover-past 1.sg.acc.(poss.) money steal-passive-past
'I discovered that my money had been stolen.'

(100) ta-nąˌ-thąn-'ąn xą pęčonę
1sg.abs-X-find-pluperf. Comp snakes
'I discovered that snakes

wečekʷil-lo 'iw-nąc'auwa-pəlho'ąn-ęn
two.ways-in-emph. 3pl.erg/pl.(C)abs.-rattle-use- sub.
can use their rattles in two ways.'

I will attempt to demonstrate that case assignment properties of the verb are responsible for the distribution of object expletives in Zuni and Tiwa. Each instance of a non-thematic object in Zuni and Tiwa involves a verb that can take either an NP or CP complement. I illustrate this in (101)-(104). In the (a) examples the verb is shown with an NP complement, and in the (b) examples the same verb takes a CP complement. When the verbs in (101)-(104) take a CP complement instead of an NP, expletive *pro* occurs in structural object position (triggering *te-* or *na-* agreement). The presence of the expletive indicates that the direct object position is projected - despite the fact that no theta-role is assigned to it (the theta-role has already been assigned to the CP complement).

Zuni

(101)a. Nemme' k'yawin 'an pic'ana: 'a:w-ank'ohati-kya

Nemme river P piglets pl.-discover-past

'Nemme discovered the pigs in the river.'

b. ho' te-[l]-ank'ohak'e-kkya hom 'an hewe' hanłi-na'-kya

1sg.nom. **[-ref.]**-discover-past 1sg.acc. P money steal-passive-past

'I discovered that my money had been stolen.'

Picurís (Northern Tiwa)

(102)a. wesen pę-'o'o-nę 'i-thąn-Ø

two deer-little-pl. 3sg.erg./inv.(B)abs.-find-perf.

'she found two little fawns'

b. ta-nạ-thạn-'ạn xạ pęčonę

1sg.abs-[**-ref.**]-find-pluperf. Comp. snakes

wečekʷil-lo 'iw-nąc'auwa-pəlho'ạn-ęn

2.ways-in-emph. 3pl.erg/pl(C).abs.-rattle-use-subord.

'I discovered that snakes can use their rattles in two ways.'

Taos (Northern Tiwa)

(103)a. ti-mụ-Ø

1sgerg./sg.(A)abs.-see-perf.

'I saw him'

b. piasi-phon Ø-kuyi-'i ti-na-mụ-hu p'ian-'oyạ

much-snow 3sg.(A).abs.-lie-nom. 1sgerg./sg(A).abs.-[**-ref.**]-see-imperf.

mountain-in

'I see that there is still much snow in the mountains'

Isleta (Southern Tiwa)

(104)a. na 'ạwạ te-beawa

1st 3rd 1sg.abs.-want

'I want him'

b. Ø-we-na-beow-mi-pa bartulu Ø-su-hi-'i

3sg.abs.-neg.-[**-ref.**]-want-neg.imperf.-past B. 3sg.(A)abs.-drink-

immed.fut.-nom.

'She didn't want Bartolo to drink.'

I adopt the suggestion of Authier (1991) that Case forces the projection of the syntactic object position where it is not thematically licensed. The distribution of object expletives above is consistent with this view, but the following may perhaps be more convincing evidence. The verb 'want' differs in Northern and Southern Tiwa precisely in its ability to assign accusative case.[219] In one language, the cognate for 'want' is [+accusative] while in the other language it is [-accusative]. The expletive in structural object position is found only where the lexical item 'want' is [+accusative].

In Isleta (Southern Tiwa), 'want' can take either an NP or CP complement, as shown in (105a-b). Isleta 'want' is found with an expletive in object position when selecting a CP complement, (105b). In Picurís (Northern Tiwa), however, the cognate of 'want' does not assign accusative case and therefore no extra structural complement position is projected in addition to the CP complement. This is indicated in (106) by the lack of any special *nạ* agreement on *miau* 'want'.[220]

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[219] Case assigning properties can be expected to vary even among cognate lexical items, for example in the instance that 'want' is a transitive verb in one language but an unaccusative verb in another.

[220] In connection with the inability of Picurís 'want' to take an NP complement, note from the example below that the lexical meaning of Picurís *miau* is differs somewhat from a basic meaning of 'want'.

(i) 'ạn-miau-ɬəu-Ø
1du.abs.-want-descend-perf.
'We have come down to make a plea'

Interestingly, Taos (Northern Tiwa) 'want' behaves like its S. Tiwa cognate. As in S. Tiwa, Taos *maw* 'want' can take both an NP or CP complement, shown in (ii) below. Note that in both languages when a NP complement is selected, the verb 'want' is defective in its agreement: 'want' registers intransitive agreement, i.e. agreement with its subject only, despite the syntactically transitive nature of the construction, (ii)b (the syntactic transitivity of these constructions is confirmed by the possibility of incorporation of the head of the NP object). This type of irregular agreement is peculiar to the lexical item 'want' and is not correlated in any way with the ability of a verb to occur with object expletives.

(ii)a. 'i-wo-maw-mẹ-'an 'i-hu-ya'i
3pl.abs.-neg.-want-imperf.-past 3pl.erg./Aabs.-kill-inf.
'they$_i$ didn't want to kill them$_j$'

b. musane 'o-maw-hu
cat 1sg.abs.-want-imperf.
'I want a cat' (cat = class A; class A agreement prefix is ordinarily ti-)

Isleta (Southern Tiwa)

(105)a. na 'ąwą te-beawa

1st 3rd 1sg.(A)abs.-want

'I want him'

b. Ø-we-na-beow-mi-pa bartulu Ø-su-hi-'i

3sg.(A)abs.-neg.-**[-ref.]**-want-neg.imperf.-past B. 3sg.(A)abs.-drink-immed.fut.-nom.

'She didn't want Bartolo to drink

Picurís (Northern Tiwa)

(106) sənenę 'ą-t'ala-t'a-či-'e Ø-miau-mę n

men 3sg.dat/3inv(B).abs.-work-do-modal-nom. 3sg.(A)abs.-want-subord.

'She wanted the men to work [/that they work]'

The object expletive therefore occurs in (105b) by virtue of case assignment to that position, while the verb in (106) assigns no case.

4.2.5 Summary and Conclusion

In this section I suggested that there is a third type of agreement in Zuni, which I have referred to as *te-* agreement. *te-* agreement consists of agreement features spelled out on the lexical head like L-agreement described earlier but instead marks the feature [-referential]. *te-* agreement identifies non-thematic elements in syntactic argument

positions. These non-thematic elements occur not only in subject position but also in object position. The evidence presented here allows us to settle the question of whether there can be true expletives in object position.

I presented similar evidence from Zuni and Tiwa, a neighboring Tanoan language, that demonstrated that the distribution of expletive elements in object position is determined by the case-marking properties of the verb.

4.3 General Summary

This chapter discussed in detail three different types of Zuni agreement. One type behaves like surface syntactic inflection and is regular throughout Zuni (I-agreement). Another type of agreement is spelled out on a lexical head (V or P) and provided evidence that certain Zuni lexical items have complex internal syntactic structure (L-agreement). A third type (*te-* agreement) indicates the presence of an expletive in either structural subject or structural object position.

It is hoped that this discussion not only gives a detailed picture of the nature of Zuni agreement and its syntactic context but that it also may prove useful to cross-linguistic treatments of inflection and agreement.

Appendix

This appendix contains a list of materials specifically on the Zuni language that are known to me.[221] * indicates that phonological transcriptions are unreliable. Entries marked % are not on the language per se but contain some Zuni data nonetheless.

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* Bunzel, Ruth. 1932b. Zuni ritual poetry. *Report of the Bureau of American Ethnology.* Smithsonian Institution, Washington DC. Reprinted in *Zuni Ceremonialism.* 1992. Albuquerque: University of New Mexico Press.

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* Bunzel, Ruth. 1933. *Zuni texts.* Publications of the American Ethnological Society, v. 15.

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[221] And is therefore not necessarily complete.

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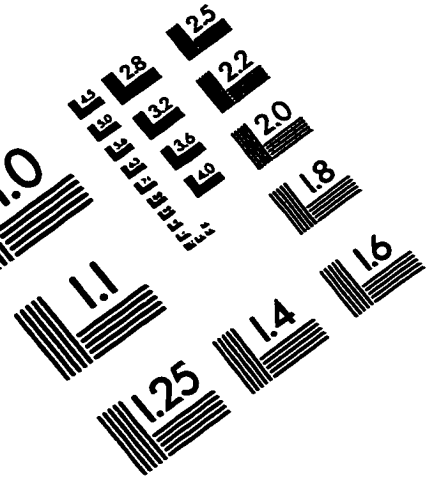
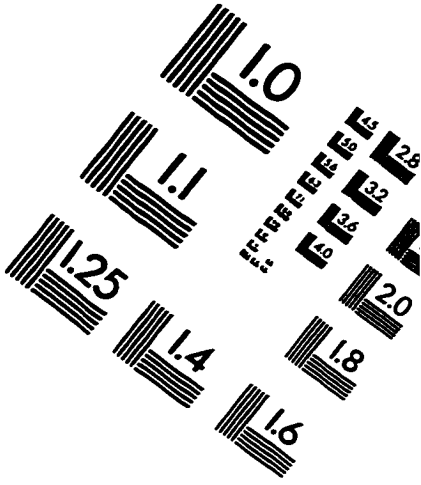
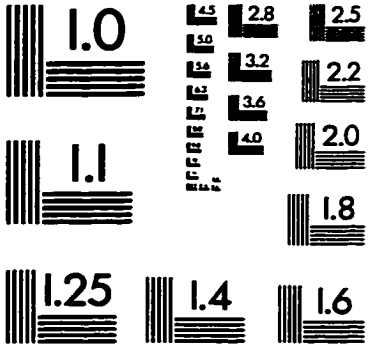
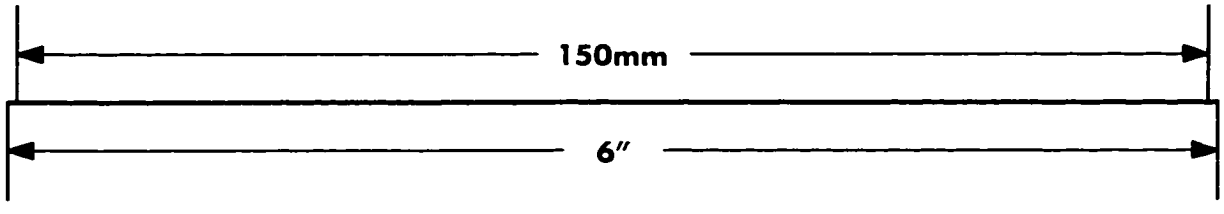
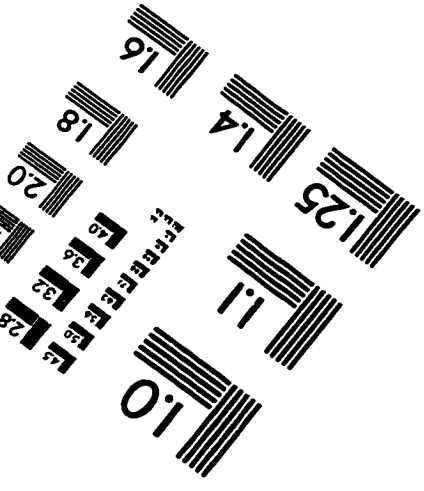
IMAGE EVALUATION TEST TARGET (QA-3)

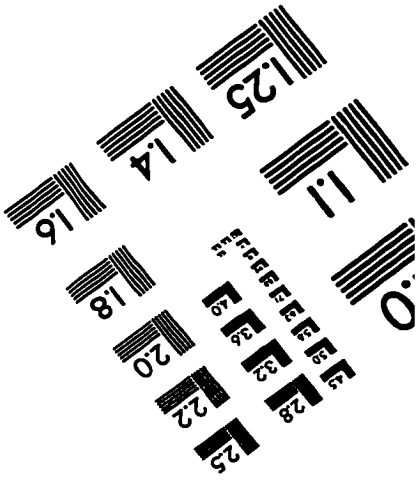












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