

# From parts of speech to the grammar\*

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Making dictionaries is a vital aid to completing a full grammatical analysis of a language, particularly if the dictionary requires the specification of the part of speech for each entry. English (or “universal”) parts of speech may not be relevant in all languages, as can be shown by structural comparisons of “adjectives” in San Lucas Quiavini Zapotec vs. Chickasaw and of “adpositions” in San Lucas Quiavini Zapotec (and Mixtec) vs. Chickasaw. Each language will present its own structurally determined inventory of parts of speech, relevant for its own grammatical facts. Thus, discovering the actual parts of speech of a language is a critical part both of dictionary making and of grammar writing. These aspects of linguistic analysis are crucially interconnected.

Were a language ever completely “grammatical,” it would be a perfect engine of conceptual expression. Unfortunately, or luckily, no language is tyrannically consistent. All grammars leak.

– Edward Sapir, *Language*, ch. II

This is a very personal paper about some ways in which carefully identifying parts of speech can be important for a linguist writing descriptive grammars. I have learned this lesson through years of very rewarding but often difficult work on dictionaries. I believe that dictionary work can elucidate many features of grammatical analysis and reveal problems that must be dealt with that might not have been noticed otherwise. What I discuss here is personal because for the most part I will talk about things I have worked on myself.

All aspects of linguistic analysis are necessarily interconnected. Basic phonological and syntactic analysis must be begun before almost anything else, and textual study is obviously important too, since many times constructions appear in texts that never show up in simple sentences. Work with a variety of speakers from different backgrounds obviously helps make one’s analysis truer and broader. But dictionary work can also make an important contribution, for the simple reason that in making a dictionary one has no license to ignore anything.

My work on dictionaries has perhaps made me more sensitive than many linguists to the need to classify and specify the structural role and thus part of speech of every word. In my experience straight syntacticians are very free to simply ignore difficult or annoying words, but a dictionary maker cannot do this (and be honest), nor can he or she ignore the many vexatious conflicts (or “leaks”) between such categorization and semantic intuition. Figuring out the answers to this kind of puzzle can make a grammar better — more complete, certainly, but also, often, richer and deeper. Dictionaries reveal hidden grammatical secrets of a language that may be overlooked or discounted during other types of analysis. Good dictionaries make — or at least lead to — good grammars. But Sapir’s famous comment about how grammars leak is worth remembering, since close examination of lexical data often will turn up many things that are hard to explain.

Stressing the contribution that working on dictionaries can make to grammatical analysis was of course particularly appropriate for the audience at this symposium, because SIL has produced so many wonderful dictionaries (especially, as I know, for languages of Mexico), in many cases before grammars of the same languages were written. Making dictionaries helps in grammatical analysis, and in fact in the absence of dictionary work a grammatical description is very likely to miss important things.

Do dictionary makers need to know grammar? Of course, but even if they don’t, makers of good dictionaries will learn about it while doing their job.

The different ways I will focus on here in which work on the lexicon can aid grammatical analysis and description are interrelated. Creating a large body of data on lexical items (and their parts of speech!) and how they behave can lead to a better understanding of sentence structure and can help reveal how productive various syntactic and morphological processes are in the grammar. And being forced to look carefully at and decide on an analysis for each lexical item helps one realize the tricky parts of the grammar that must be dealt with if one is to be honest.

I will begin this paper by briefly considering the notion of parts of speech. Next I’ll talk about some cases that help us test the boundaries among these. At the end of the paper I will discuss part of speech classification vs. analytical abstraction, and propose an expanded list of parts of speech for linguists to be on the lookout for.

## 1. Parts of speech: An introduction

Their conference was put an end to by the anxious young lover himself, who came to breathe his parting sigh before he set off for Wiltshire. Catherine wished to congratulate him, but knew not what to say, and her eloquence was only in her eyes. From them, however, the eight parts of speech shone out most expressively, and James could combine them with ease.

– Jane Austen, *Northanger Abbey*, ch. 15

Languages vary in terms of how many parts of speech they have, and linguists need to consider carefully exactly how a language works in order to understand how to classify its words. And a linguistic classification of parts of speech will be different from a traditional grammatical one, even though “part of speech” is not the same as the linguist’s “lexical category”. The eight parts of speech of English referred to in the quotation from Jane Austen at the beginning of this section are nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections. As I’ll discuss in Section 4 at the end of this paper, this list would probably not be the one a linguist making a dictionary or writing a grammar would use to classify the words of English, however, and almost certainly is not the most complete or appropriate list of parts of speech likely to be encountered in other languages. Probably the best linguistic classification of English into “parts of speech” would have more actual categories, a topic I’ll return to in Section 4.

My view of what dictionaries should do in terms of classifying words into parts of speech and finer distinctions has changed and evolved over the last three major dictionary projects I’ve worked on. These projects involved Chickasaw, a critically endangered Muskogean language spoken in Oklahoma (Munro and Willmond 1994); Wolof, the national language of Senegal and Gambia, a member of the West Atlantic branch of Niger-Kordofanian (Munro and Gaye 1997); and San Lucas Quiavini Zapotec (SLQZ), a Valley Zapotec language spoken in the Tlacolula District of Oaxaca (Munro and Lopez, *et al.*, 1999).

I have not always appreciated the usefulness of part of speech identification. In the introduction to my first important dictionary, which I did with Catherine Willmond of her language, Chickasaw, I did not spend enough time discussing parts of speech. In our introduction (1994: xi), we say,

A Chickasaw noun is defined with an English noun....

A Chickasaw verb is defined with an English verb (given in the infinitive “to” form) whose subject matches that of the Chickasaw verb....

Definitions for other classes (adverbs, interjections, and so forth) work similarly.

And that's it. The reason for this cavalier attitude (as I would now, alas, describe it) was that Chickasaw, like many other languages of North America, does not really have many words that are not either nouns (interpreting this class to include pronouns) or verbs. Adverbs are an interesting variety of word (some are nominal in form, some clausal), and there are certainly some interjections, but this language does not have separate classes of adjectives, prepositions, or (for the most part) conjunctions, and quantifiers (like adjectives) are verbal. So my having observed that there were just two major classes of Chickasaw words (noun-type words and verb-type words) was useful, but was hardly sufficient. My statement was certainly of some interest typologically (a point we'll return to later), but it did not advance the analysis of the grammar. However, my knowledge of the grammar of Chickasaw does let me formulate a list of parts of speech for that language.

The task of identifying a list of parts of speech is important for both dictionary makers and grammar writers, for two reasons. First, it's something many readers expect to see,<sup>1</sup> so why not include it? Second, the need to determine the part of speech of every new word encountered maintains a useful analytical tension.

I would recognize a different list of parts of speech for each of the three languages whose dictionaries I just mentioned:

(1) Parts of speech in three languages

*Chickasaw*: nouns, pronouns, demonstratives, verbs, interjections, particles.

*Wolof*: nouns, pronouns, determiners (demonstratives and articles), verbs, quantifiers, adverbs, prepositions, interjections, particles.

*San Lucas Quiavini Zapotec*: nouns, pronouns, demonstratives, verbs, adjectives, quantifiers, adverbs, prepositions, interjections, particles.

The lists in (1) immediately reveal some crucial typological differences among the three languages.

- Although Wolof and SLQZ are much more similar in their part of speech inventories, Wolof, like Chickasaw, does not have a special syntactic class of adjectives; in both languages, “adjectives” are a type of stative verb.
- In both Wolof and SLQZ, quantifiers behave differently from other modifiers, while in Chickasaw they are much more like ordinary (stative, adjectival) verbs.

- Also unlike the other two languages, Chickasaw does not seem to have a class of adverbs. Morphologically speaking, Chickasaw has both simple adverb words that seem to be grammatically nouns and more complex adverb expressions that can be analyzed as clauses, such as *onnakma* ‘tomorrow’, literally ‘when it is the next day’, which contains the verb *onna* ‘to be the next day’ and the irrealis different-subject subordinator *-kma*, as in (2):<sup>2</sup>

(2) *Onna-kma chi-pisa-l-a’chi.*  
 dawn-IRR.DS 2sII-see-1sI-will  
 ‘I’ll see you tomorrow’, (more literally) ‘I’ll see you when it is the next day’

(So what does this mean? Should we claim that Chickasaw *onnakma* is not functionally an adverb? This is an interesting and ultimately extremely important question that I won’t attempt to answer here, one that may shed light on the whole notion of the category of “adverb”, but which seems to me to be outside the realm of basic grammatical description.)

The first two lists in (1) do not appear in the Chickasaw and Wolof dictionaries (though there is discussion that could lead one to extract them, pretty much, especially for Wolof); I included the above list in the SLQZ dictionary mainly because I felt that that language’s unusually large number of syntactically and morphologically distinct parts of speech in this language was worthy of comment for an American indigenous language.

Each of the lists in (1) is augmented with the dread word “particles”. What is a particle, exactly? What are the grammatical characteristics of particles? “Particle” is a cop-out term, but a useful one, which I’ll return to again in Section 4.

The number of separate parts of speech one recognizes (whether or not we count particles!) depends on a number of factors. My analysis in (1), for any target word, is based on consideration of the criteria listed in (3):

- (3) Some criteria for determining part of speech
- syntactic factors: what other types of words a target word can combine with, in what types of phrases;
  - morphological factors: what affixes the target word is used with;
  - semantic factors: what the target word means, and how it contributes to the meaning of the phrases it is used in.

Each of these factors is important. English adjectives, for example, have both predicative and attributive syntactic uses and can be used with the comparative and superlative suffixes *-er* and *-est*.

- (4) Characteristic syntactic and morphological examples of English adjectives

*The house is big.* (predicate use)

*It's a big house.* (attributive use)

*bigger, biggest* (comparative and superlative forms)

Semantically, adjectives generally describe some quality of a noun (such as the bigness of a house). But this semantic characteristic of adjectives, which may be all some people retain from long-ago grade school grammar classes, is not a sufficient criterion for identifying adjective status. One of the underdocumented speech varieties for which I make dictionaries is American undergraduate slang (e.g., most recently, Bonds et al. 2001). I've found that students asked to identify the part of speech of slang words, even advanced linguistics majors, will often report that *sucks* and *bit* in sentences like those in (5) are adjectives:

- (5) Examples of college slang from Bonds et al. (2001)

*I have to work all weekend. That sucks.*

*I saw a horrible movie last night that bit.*

True, we can paraphrase *sucks* and *bit* with *is terrible* and *was really gross* — but the fact that these words are used with the verbal morphology and occur with verbal, rather than adjectival, syntactic distribution proves that they are verbs, not adjectives. Of course this is a trivial piece of analysis for linguists. But it provides a remarkably convincing demonstration when presented to students with no extensive background in — and sometimes an active antipathy toward — grammar. This type of example helps students understand something about the structure of dictionary definitions (which must follow what I call the “substitution principle” in my slang classes) and often shows them that grammar can be a lot more fun than they realized.

Now, the slang words *suck* and *bite* used in (5) are not prototypical verbs (especially as the concept of “verb” is usually presented in school grammar lessons), since they have nothing to do with actions. Each of the three identifying criteria named in (3), when considered carefully, will identify many subtypes<sup>3</sup> (or “exceptions”): for English verbs, for example, this might include verbs with non-prototypical semantics (like *stink*, a standard example that works like the slang verbs *suck* and *bite*), verbs (like *bite*) with non-prototypical morphology, and verbs that occur in non-prototypical syntactic patterns (like auxiliaries or modals).

Here's another example. My student slang collaborators have identified a special use of nouns as address terms or vocatives. Here are a few examples from Bonds et. al. (2001):

- (6) **baby** (ADDR. used by males to male friends)  
**chief** (ADDR. used by one male to another, especially by one who provides some service)  
**girlfriend** (ADDR. used by a female to a female friend)  
**mang** (ADDR. used to a male)  
**nerd** (ADDR. used affectionately to and by females)

Although many of these words look like familiar standard or slang nouns, according to my most recent class these words are used by fluent slang speakers in the meanings given only in direct address, not for nominal reference. A very similar class of words occurs in SLQZ (Munro and Lopez et al., 1999):

- (7) **cagwe't** 1. man, buddy, guy, dude (ADDR. used to a man); 2. man!, dude! (EXCL.)  
**erre'eh** (ADDR. used to someone who could be addressed with INF., primarily someone younger)  
**gu'x**: sibling's spouse's male relative, parent's sibling's spouse's male relative (ADDR. used by men)  
**maa** girlie, little girl, young lady (ADDR. used to a girl or young woman, almost always younger than the speaker)  
**paa** sonny, little boy, young man (ADDR. used to a male, usually a boy, almost always younger than the speaker)

In terms of part of speech, such forms are probably best analyzed as nouns, and speakers would generally identify them as nouns. But speakers report that they cannot be used, as normal nouns can, as the subject or object of sentences (although the first Zapotec word is also used as an interjection, as shown). Thus, for the dictionary and the grammar it makes sense to have a special label for these words (like the "ADDR." used in the shortened dictionary entries in (6–7)).

Subclassification of lexical data is very important both for grammatical analysis and in terms of making dictionary entries that are maximally informative and helpful, but I do not have space to discuss this important notion further today.

## 2. Some tricky cases

In this section, I'll describe two pairs of cases where analysis of part of speech is disputed or difficult, with significant consequences for the grammar. In 2.1 I'll discuss verb/adjective issues and in 2.2 noun/adposition issues, in each case

considering data from Zapotec (and Mixtec, in 2.21) vs. Chickasaw. I will return to the general question of the typological relevance of the analyses for which I will argue and their consequences for the grammar in Section 3.

## 2.1 Verbs or adjectives?

In this section, I'll discuss two cases, one where one class of verbs and the class of adjectives must be distinguished in the grammar and one in which adjectives function as a subclass of verbs. In both cases, a variety of syntactic features distinguish the words in question.

### 2.11 *SLQZ adjectives and Neutral aspect verbs*<sup>4</sup>

Most Zapotec languages<sup>5</sup> have two prefixes of the shape *n-* (alternating with zero for the same meaning), occurring on stative forms that function either as verbs or as adjectives, which have been analyzed as the same morpheme in various grammars. The two *n-* prefixes may well have a common origin, but the morphological forms they mark are synchronically distinct in the syntax of SLQZ. Crucially, the two items differ in part of speech — the adjectives are “adjectives”, and the neutral verbs are “verbs” — as shown by a variety of different grammatical features.

Zapotec languages indicate “aspect” by verb prefixes, with time and mood reference inferable through context, the use of adverbs, and syntactic construction.<sup>6</sup> SLQZ has a rich set of these prefixes, as illustrated by the verb stems in (8).<sup>7</sup> (Zapotec verb morphology is complex, and some stems — like the perfective of ‘puts on a shirt’ — are suppletive.)

- (8) Habitual: ra'ahcw ‘puts on (a shirt)’  
 Perfective: gwu'aht ‘put on...’  
 Irrealis: ga'acw ‘will put on...’  
 Subjunctive: nya'ahcw ‘(if...) had put on...’  
 Progressive: caya'ahcw ‘is putting on...’  
 Definite: za'ahcw ‘will surely put on...’  
 Neutral: naacw ‘is wearing...’

The Neutral prefix *n-* varies with *m-* (before some *b*'s) and (before most consonants) zero. (9) presents a few examples of SLQZ Neutral stems.<sup>8</sup>

- (9) b'è'b is located on § NEUT. of *rb'è'b* ‘gets put on; rides’  
 b'è'cy is wearing (pants, a skirt) § NEUT. of *rb'è'cy* ‘puts on (pants, a skirt)’

*de'èi'by* is wrapped up § NEUT. of *rdeèi'by* 'gets wrapped up'  
*gui'ii'dy* is stuck in § NEUT. of *rguii'idy* 'gets stuck in'  
*nagya'ihsy* is asleep § NEUT. of *ra'ihsy* 'sleeps'  
*nu'bi'izh* is sick-looking § NEUT. of *ru'bi'izh* 'gets sad'  
*nyi'uu'* is shut, is closed (of a door, book, mouth, eye); is shut up, is shut in, is imprisoned, is in jail; is off, is turned off (of a light or faucet) § NEUT. of *riu'* 'gets shut up; gets shut; gets turned off'  
*zèèi'by* is hanging § NEUT. of *rzèèi'by* 'hangs'  
*zucàa* is in a leaning position; is leaning against § NEUT. of *rzucwàa* 'leans against'  
*zuu* is standing, is located (standing) § NEUT. of *rzuh* 'stands'

Cognates of the Neutral prefix *n-*, and the verb forms they mark, are called “Stative” in many Zapotec grammars (e.g. Black (2000: 51) for Quiégolani). Indeed, SLQZ Neutral verbs generally express states (often resultative, usually durative) (10a), and most Neutral verbs cannot express a temporally bounded or punctual event, in contrast to verbs in aspects like the Perfective (10b) or the Habitual (10c).

- (10) a. *Nài' r-cah gàì' n-yi'uu' ru'uh wrraahhly.*  
 yesterday HAB-ring five NEUT-close mouth yard  
 ‘The gate was closed yesterday at five o'clock [that's the way it was then]’
- b. *Nài' r-cah gàì' b-iu' (\*n-yi'uu') ru'uh wrraahhly.*  
 yesterday HAB-ring five PERF-close (NEUT-close) mouth yard  
 ‘The gate got closed yesterday at five o'clock [someone closed it then]’
- c. *R-cah gàì' r-iu' (\*n-yi'uu') ru'uh wrraahhly.*  
 HAB-ring five HAB-close (NEUT-close) mouth yard  
 ‘The gate gets closed at five o'clock [someone does this every day]’

There are problems with the “stative” label, however, since some Neutral verbs don't seem semantically stative.<sup>9</sup> The most clearly non-stative Neutral verb is *nnaħ* ‘says’<sup>10</sup> (11), which is used to report a punctual event (apparently an achievement in the sense of Dowty (1979)), not a state:<sup>11</sup>

- (11) “A *z-a'a,*” *nnaħ Gyèèihly nài.*  
 “already DEF-go=1s” NEUT.say Mike yesterday  
 ‘I'm going,” said Mike yesterday’

In contrast, most SLQZ adjectives are undeniably stative semantically. Like Neutral verbs, SLQZ adjectives have a prefix *n-* (often *m-* before *b*) or are un-prefixed.

SLQZ predicate adjectives are used with or without one of several copulas, as in (12a) and (c) versus (12b), respectively. The copula may itself include the Neutral prefix *n-*, as in (12c):<sup>12</sup>

- (12) a. N-cweeby *nàa rraady* ‘The radio is new’  
 ADJ-new COP radio  
 b. N-cweeby *rraady* ‘The radio is new’  
 ADJ-new radio  
 c. N-gàa’ah *n-aac=ëng* ‘It’s green’  
 ADJ-green NEUT-be=3s.PROX

As attributive modifiers following nouns, as in (13), some adjectives lose the *n-* prefix:

- (13) *rraady cweeby* ‘new radio’  
 radio new

Some native and borrowed adjectives with and without *n-* are given in (14).<sup>13</sup> (The examples, excerpted from our dictionary, give an idea of the complexity of adjective syntax: the adjectives are marked according to whether their predicative use is with a copula {C}, without a copula {P}, or either way {P/C}. Attributive (ATTR.) forms of *n-*initial adjectives without the *n-* prefix are also listed in these entries.)

- (14) a. Non-loan adjectives that don’t start with *n-*:  
**me’eu** dirty, filthy {P/C}  
**la’as** thin, skinny {P/C}  
**qui’ria’ah** provocative, sexy looking; vain {P/C}  
**xniaa** red {P/C}  
**zyu’ua’ll** tall; long {P/C}
- b. Non-loan adjectives that do start with *n-* (or its variant *m-*):  
**mbiihahz** dry {P/C; ATTR. biihahz}  
**na’ahzhy** wet {P/C}  
**ncweeby** new {P/C; ATTR. cweeby}  
**nda’aa’** hot (inan. subj.); (of the weather); hot (of a place) {P/C}; “hot, warm” (culturally out of equilibrium with something “cold” (nahll); of a food or natural phenomenon) {C}  
**nte’u** brown; grey {P/C; ATTR. nte’u, te’u}
- c. Loan adjectives without *n-*.  
**arrie’t** loose, easy, promiscuous (of a woman); daring, adventurous (of a man) {P/C} [< Sp. *arrecho*]  
**biieb** smart; alert {P/C} [< Sp. *vivo*]

- lo'oc** crazy, insane {C} [*< Sp loco*]  
**rrye'cw** rich {P/C} [*< Sp. rico*]  
**traba'jw** hard, difficult (of work; of (life, things in) a location) {C; no ATTR} [*< Sp. trabajo*]  
 d, Loan adjectives with *n-*:<sup>14</sup>  
**nlo'oc** hard to talk to; mean (of a person); apt to charge, badly behaved (of a bull) {P} [*< n- + Sp. loco*]  
**nsua'll** blue {C} [*< n- + Sp. azul*]  
**nto'onn** stupid, foolish {P/C; ATTR. to'onn, nto'onn}; mean-spirited, not nice {P/C; ATTR. nto'onn} [*< n- + Sp. tonto*]

Thus, Neutral verbs and adjectives both have generally stative meanings and are marked with segmentable *n-* prefixes or are unprefixated. Moreover, all Neutral verbs and many adjectives can be related to inchoative verbs. (8) illustrated the relationship of Neutral *n-aac'w* 'is wearing (a shirt)' to inchoative *r-a'ahcw* 'puts on (a shirt)' within a complete aspectual paradigm; additional Neutral/inchoative Habitual verb pairs were given in (9). (15) shows the relationship of some adjectives to inchoative Habitual verbs:

- (15) Adjective *la'as* 'thin, skinny', *r-la'ahs* 'loses weight, gets thin'  
 Adjective *m-biihahz* 'dry', *r-bihahz* 'gets dry'  
 Adjective *n-a'ahzhy* 'wet'; *r-a'ahzhy* 'gets wet'  
 Adjective *n-cweeby* 'new', *r-cweeby* 'gets renewed'  
 Adjective *n-da'aa'* 'hot', *r-da'aa'* 'gets hot'

Perhaps on the basis of such evidence, Black (2000) equates the *n-* on Quiérolani adjectives with the Stative (Neutral) prefix. Her excellent grammar declares that "the Stative aspect marker is usually found on the adjective in these [predicative] constructions" (p. 52).<sup>15</sup>

In SLQZ, however, the apparent similarity of Neutral verbs and adjectives is misleading. While Neutral/inchoative verb pairs like those in (9) represent parts of a paradigm of related verbal forms, adjective/inchoative verb pairs like those in (15) occur only irregularly. Moreover, Neutral and adjective forms themselves are syntactically distinct in a variety of ways, following from the most basic difference between them, which relates to part of speech: Neutral forms are verbs, while adjectives are not; Neutral forms behave like verbs, and adjectives behave like adjectives.

- SLQZ adjectives (even those that are normally used without a copula in sentences like (12b)) require a copula (in the Irrealis) to express a simple future reference, as in (16):

- (16) N-daàa' g-a'c nazh:ih 'Today will be hot'  
 ADJ-hot IRR-be today

In contrast, Neutral verbs cannot cooccur with a copula (17a). A simple future meaning must be expressed with a different aspect from the Neutral, such as the Irrealis (17b):

- (17) a. \*Li'ii'by g-a'c te'ihby sinnydoor làa'iny bùunny...  
 NEUT:get.tied IRR-be one sash in person  
 (for 'A sash will be tied around one's stomach...')  
 b. Y-liii'by te'ihby sinnydoor làa'iny bùunny...  
 IRR-get.tied one sash in person  
 'A sash will be tied around one's stomach...'

- In complex constructions that require the use of the Irrealis (for instance, in complements of *r-càa'z* 'wants'),<sup>16</sup> Adjectives appear with an Irrealis copula, as in (18), while Neutral verbs cannot be used (19), but must be replaced by Irrealis verb forms:

- (18) Que'ity r-càa'z=eng g-a'c=ëng n-to'onn.  
 not HAB-want=3s.PROX IRR-be=3s.PROX ADJ-stupid  
 'He doesn't want to be stupid'

- (19) R-càa'z=ëng g-aacw=ëng (\*n-aacw=eng) cotoony.  
 NEUT-want=3s.PROX IRR-put.on=3s.PROX (NEUT-put.on=3s.PROX shirt  
 'He wants to be wearing a shirt' (literally, it seems, 'He wants to put on a shirt')

- A great many adjectives can also be used as adverbs (modifying verbs or occasionally sentences): (20), for example, shows an adverbial use of the adjective *n-dàa'* 'loose, slack' (modifying a Neutral verb!). However, no Neutral verbs can be used as adverbs.

- (20) Ua's n-dàa' n-ai'y=ëng zùudy=ëng.  
 very ADJ-loose NEUT-put.on.skirt=3s.PROX corte=3s.PROX  
 'She has her corte [traditional wrap-around skirt] put on loosely'

- Neutral verbs cannot be used as postnominal attributive modifiers,<sup>17</sup> the way adjectives can (as in (13), for example), but must occur in relative clauses,<sup>18</sup> as in (21).

- (21) a. nchàaa' nih zuubih 'dish that is cracked'  
 dish REL NEUT.crack

- b. (\*...nchàà' zuubih) (for 'cracked dish')  
 \*...dish NEUT.crack

Clearly, both the noun plus adjective phrase in (13) and the noun plus Neutral relative clause phrase in (21a) are constituents: when they occur in first position in a sentence, for example, second-position clitics like the epistemic modal clitic =*zhyi*' must follow both types of phrases without interrupting them, as in (22).<sup>19</sup> (No other position of the clitic is acceptable.)

- (22) a. Rraady cweeby=zhy=ëng 'It must be a new radio'  
 radio new=MOD=3s.PROX  
 b. Nchààà' nih zuubih=zhy=ëng 'It must be a dish that's cracked'  
 dish REL NEUT.crack=MOD=3s.PROX

However, there are several syntactic differences between these two types of complex noun phrase that show that (as indeed we would expect) the relative clause containing the Neutral verb is not as closely in constituency with the noun it modifies as the adjective is.<sup>20</sup>

- Noun plus adjective versus noun plus Neutral relative structures differ in terms of their possessed forms. Possessed nouns in SLQZ may begin with a prefix *x:-* (*x:a-* before consonant clusters) and are followed by a possessor noun or clitic pronoun,<sup>21</sup> as in (23):

- (23) a. *x:-nna'an=a'* 'my mother' (*nnàaan* 'mother')  
 POSS-mother=1s  
 b. *x:a-rraady=a'* 'my radio'  
 POSS-radio=1s

The possessor must follow a noun plus adjective phrase, as in (24a); it may not appear directly following the noun:

- (24) a. *x:a-rraady cweeby=a'* 'my new radio'  
 POSS-radio new=1s  
 b. \**x:a-rraady=a'* (n-)cweeby (for 'my new radio')  
 POSS-radio=1s (ADJ-)new

With a noun modified by a Neutral verb in a relative clause, however, the speaker has two options, as in (25):

- (25) a. *x:a-nchàà' nih zuubi=a'* 'my cracked dish (my dish that is cracked)'  
 POSS-dish REL NEUT.crack=1s  
 (25) b. *x:a-nchàà=a'* nih zuubih 'my cracked dish (my dish that is cracked)'  
 POSS-dish=1s REL NEUT.crack



Thus, while the two SLQZ *n*- prefixes have some similarities, the syntactic behavior of the forms they mark — Neutral verbs and adjectives — are quite distinct. Thus, adjectives and Neutral verbs have different parts of speech within the synchronic grammar of SLQZ.<sup>24</sup>

### 2.12 Chickasaw adjectival verbs

In Chickasaw, unlike SLQZ, there is no separate class of adjectives; “adjectival” concepts are expressed adjectival verbs that function just like other verbs. In this section, I’ll justify this statement, showing that Chickasaw really has no part of speech “adjective” and that adjectival concepts are expressed by members of the class of verbs, as shown by a variety of morphological and syntactic properties.

Chickasaw is a language with an active system of verb agreement. Chickasaw has three classes of agreement markers for first and second person verb arguments, which are presented in Table 1.<sup>25</sup>

**Table 1.** Chickasaw Agreement Markers

class	I	II	III (including dative <i>im</i> -)
first person singular	-li	sa-	a+m-
second person singular	ish-	chi-	chi+m-
first person plural	ii-	po-	po+m-
second person plural	hash-	hachi-	hachi+m-

Class I markers are used for most agentive or volitional intransitive subjects and for almost all transitive subjects; class II markers are used for many intransitive subjects (often non-agentive or non-volitional) and for most transitive objects: Chickasaw thus has a morphologically active agreement system. As the table shows, Class III markers, which are used for dative, benefactive, and various other objects and subjects, are segmentable, since they include the dative prefix *im*-.

Class I and II markers are added directly to bare verb stems, as in (29–32). For example, *chompa* ‘buy’ (29) is a transitive verb that takes a class I subject and a noun object (specified or not); *malli* ‘jump’ (30) is an active intransitive verb that takes a class I subject; and *tikahbi* ‘be tired’ (31) is a non-active intransitive verb — a canonical “adjectival” verb — that takes a class II subject. Finally, *halili* ‘touch’ (12) is a transitive verb that takes a class I subject and a class II object.

- (29) *chompa*                    ‘buy’, ‘he/she buys it/them’, ‘they buy it/them’  
*chompa-li*                    ‘I buy it/them’ etc.                    – class I subject, noun object

- (30) malli 'jump', 'he/she/it jumps', 'they jump'  
 malli-li 'I jump', etc. – class I subject, intransitive
- (31) tikaḥbi 'be tired', 'he/she is tired', 'they are tired'  
 sa-tikaḥbi 'I am tired', etc. – class II subject, intransitive
- (32) halili 'touch', 'he/she/it touches it/him/her/them'  
 halili-li 'I touch it/him/her/them'  
 sa-halili 'he/she/it touches me', 'they touch me'  
 chi-halili-li 'I touch you', etc. – class I subject, class II object

Such inflected verb words can all be used as complete sentences.<sup>26</sup>

As the first example lines in (29–32) show, verbs without first or second person affixes can be interpreted as having third person arguments (there are no third person markers in the chart in Table 2). Markers from class III (glossed here as units combined with the dative prefix)<sup>27</sup> replace the dative prefix *im-* on a verb, as illustrated in (33–34).<sup>28</sup> The intransitive stative verb *in-takho'bi* 'be lazy' (33), for example — another prototypical “adjectival” verb — takes a dative subject and, thus, class III marking when its subject is non-third person. The transitive verb *i-hollo* 'love' in (34) takes a class I subject and a class III object.

- (33) in-takho'bi 'be lazy', 'he/she/it is lazy', 'they are lazy'  
 an-takho'bi 'I am lazy', etc. — class III subject, intransitive
- (34) i-hollo 'love', 'he/she loves him/her/them', 'they love him/her/them'  
 i-hollo-li 'I love him/her/them'  
 a-hollo 'he/she loves me', 'they love me'  
 chi-hollo-li 'I love you', etc. — class I subject, class III object

A crucial feature of Chickasaw agreement is that it is not fully predictable, either syntactically or semantically (Munro and Gordon 1982). While the verbs exemplified in (29–34) and indeed the overwhelming majority of Chickasaw verbs follow the basic semantic principles outlined here (or the slightly different ones discussed in studies like Payne 1981), a great many other verbs do not. There is no reason (other than convention) why the stative verb *toklo* 'be two in number', for instance, should take class I “active” marking, nor why the verb *issikopa* 'act mean, be mean', which can have either a volitional or a nonvolitional interpretation, should consistently take class II “non-active”/“non-volitional” marking. Although most Class II markers index intransitive subjects or transitive objects, as shown above, there are transitive verbs, such as *banna* 'want' or *nokfónkha* 'remember', whose subjects are Class II. Dative arguments

are similarly problematical. Class III prefixes may index canonical datives or benefactives, as in *in-taloowa* ‘sing to, sing for’, and some class III arguments, like the object of *i-hollo* ‘love’, could be considered semantic experiencers, but the subject of *in-takho’bi* ‘be lazy’ does not seem like an experiencer. While semantic principles categorize the basic system, the agreement features of many verbs must be lexically marked.

In particular, although the majority of stative verbs with meanings comparable to those of English adjectives take Class II marking for non-third person subjects, others are marked with Class I or Class III marking. Thus, there is no particular reason why *pihhihcha* ‘be very short’ should take Class I marking and *tilofasi* ‘be short’ Class II marking, or why *yáppalli* ‘be lackadaisical’ take Class I marking and *lhakcha* ‘be lethargic’ take Class II marking, or on the other hand for why *tikahbi* ‘be tired’ should take Class II marking and *im-aalhlhi* ‘be exhausted’ take Class III marking, or why *abika* ‘be sick’ take Class II marking and *in-chokmishto* ‘be healthy’ take Class III marking.<sup>29</sup> (Another plug for dictionary work: it’s hard to really appreciate the range of agreement possibilities in a language like Chickasaw without extensive lexical study.)

Although Chickasaw adjectival verbs can mark agreement with their subjects in any of three ways, in other ways these verbs work just like other verbs. Below I briefly review a number of features of Chickasaw verbs, including adjectival verbs, exemplified by a selection of both semantically regular verbs (which follow the agreement class marking generalizations just discussed) and other verbs.

- Nominal subjects of Chickasaw verbs of all classes are marked with nominative case (with the suffix *-at*), as in (35a). This is true for subjects of adjectival verbs like *yáppalli* ‘be lackadaisical’, *tikahbi* ‘be tired’, and *in-takho’bi* ‘be lazy’, just as for subjects of other types of verbs of all three classes are, as shown in (35b).

(35) a.	Hattak-at malli. man-NM jump	‘The man jumps’ (class I subject)
b.	Hattak-at yáppalli. Hattak-at toklo. Hattak-at chompa. Hattak-at halili. Hattak-at tikahbi. Hattak-at banna. Hattak-at in-takho’bi. Hattak-at i-hollo.	‘The man is lackadaisical’ (class I subject) ‘There are two men’ (class I subject) ‘The man buys it’ (class I subject) ‘The man touches it’ (class I subject) ‘The man is tired’ (class II subject) ‘The man wants it’ (class II subject) ‘The man is lazy’ (class III subject) ‘The man loves it’ (class III subject)

- As suggested by the translations in examples (29–34), there is no distinction between third person singular and plural in the Chickasaw pronominal inflectional system. However, there is a third person plural subject prefix *hoo-* that can optionally appear on verbs of any inflectional class with third person plural subjects, including adjectival verbs, as in (36).

(36)	Hoo-malli.	‘They jump’ (class I subject)
	Hoo-yáppalli.	‘They are lackadaisical’ (class I subject)
	Hoo-chompa.	‘They buy it’ (class I subject)
	Hoo-halili.	‘They touch it’ (class I subject)
	Hoo-tikahbi.	‘They are tired’ (class II subject)
	Hoo-banna.	‘They want it’ (class II subject)
	Hoo-in-takho’bi.	‘They are lazy’ (class III subject)
	Hoo- <u>i</u> -hollo.	‘They love it’ (class III subject)

(There are a variety of other syntactic properties shared by Chickasaw subjects of all agreement classes, including adjectival verbs, as discussed in Munro (1999).)

- Adjectival verbs use the same morphology for tense-aspect, modality, and questions as other verbs. (36a–b) illustrate the use of the remote past suffix *-ttook*, (37a–b) the incompletive modal suffix *-a’chi*, and (38a–b) the question suffix *-taa*:

(36)	a.	Malli-ttook.	‘He jumped (long ago)’ (class I subject)
		jump-REM	
	b.	Yáppalli-ttook.	‘He was lackadaisical (long ago)’ (class I subject)
		Toklo-ttook.	‘There were two of them (long ago)’ (class I subject)
		Chompa-ttook.	‘He bought it (long ago)’ (class I subject)
		Halili-ttook.	‘He touched it (long ago)’ (class I subject)
		Tikahbi-ttook.	‘He was tired (long ago)’ (class II subject)
		Banna-ttook.	‘He wanted it (long ago)’ (class II subject)
		In-takho’bi-ttook.	‘He was lazy (long ago)’ (class III subject)
		<u>I</u> -hollo-ttook.	‘He loved it (long ago)’ (class III subject)
(37)	a.	Mall-a’chi.	‘He’s gonna jump’ (class I subject)
		jump-INC	
	b.	Yáppall-a’chi.	‘He’s gonna be lackadaisical’ (class I subject)
		Tokl-a’chi.	‘There will be two of them’ (class I subject)
		Chomp-a’chi.	‘He’s gonna buy it’ (class I subject)
		Halil-a’chi.	‘He’s gonna touch it’ (class I subject)
		Tikahb-a’chi.	‘He’s gonna be tired’ (class II subject)

- Bann-a'chi. 'He's gonna want it' (class II subject)  
 In-takho'b-'achi. 'He's gonna be lazy' (class III subject)  
 I-holl-a'chi. 'He's gonna love it' (class III subject)
- (38) a. Malli-taa? 'Does he jump?' (class I subject)  
 jump-Q  
 b. Yáppalli-taa? 'Is he lackadaisical?' (class I subject)  
 Toklo-taa? 'Are there two of them?' (class I subject)  
 Chompa-taa? 'Does he buy it?' (class I subject)  
 Hali-taa? 'Does he touch it?' (class I subject)  
 Tikahbi-taa? 'Is he tired?' (class II subject)  
 Banna-taa? 'Does he want it?' (class II subject)  
 In-takho'bi-taa? 'Is he lazy?' (class III subject)  
 I-hollo-taa? 'Does he love it?' (class III subject)

In many languages, predicate adjectives are used with a copula. A copula is used in Chickasaw with predicate nouns (in sentences with non-third person subjects or marked tense-aspect or modality), as in (39), but cannot be used with stative verbs (40):

- (39) a. Alikchi' sa-ya. 'I'm a doctor'  
 doctor 1sII-be  
 b. Hattak-at alikchi' a-ttook. 'The man was a doctor (long ago)'  
 man-NM doctor be-REM
- (40) a. \*Yáppalli sa-ya. 'I am lackadaisical' (for Yáppalli-li.)  
 be.lackadaisical 1sII-be lackadaisical-1sI  
 b. \*Tikahbi sa-ya. 'I am tired' (for Sa-tikahbi.)  
 be.tired 1sII-be 1sII-tired  
 c. \*In-/An-takho'bi sa-ya. 'I am lazy' (for An-takho'bi.)  
 DAT-/1sIII.DAT-be.lazy 1sII-be 1sIII.DAT-lazy

Chickasaw and languages like it have SOV basic word order but do not follow the "harmonic" pattern characteristic of "typical" head-final languages, since attributive modifiers follow the noun, as in (41):

- (41) a. Hattak toklo yamm-a pís-li-tok. 'I saw those two men.'  
 man be.two that-ACC see-1sI-PT (class I subject)  
 b. Hattak tikahbi yamm-a pís-li-tok. 'I saw that tired man.'  
 man be.tired that-ACC see-1sI-PT (class II subject)  
 c. Hattak in-takho'bi yamm-a pís-li-tok. 'I saw that lazy man.'  
 man DAT-be.lazy that-ACC see-1sI-PT (class III subject)

This order is a reduced form of the typical relative clause order, because “adjectives” in Chickasaw are verbs, and must appear (just like SLQZ Neutral verbs, and other more prototypical Chickasaw verbs) in relative clauses<sup>30</sup> (Munro 1985), as in (42):

- (42) Hattak malli yamm-a p̄is-li-tok. ‘I saw that man who jumps’  
 man jump that-ACC see-1sI-PT

Thus, the Chickasaw words that translate English adjectives are indeed verbs, and Chickasaw has no part of speech “adjective”.

## 2.2 Nouns or adpositions?

In this section I discuss two cases where similar relational words have been analyzed variably as nouns or as pre- or postpositions. Once again, the correct analysis depends on the syntactic behavior of the words in question in each language.

### 2.21 Zapotec and Mixtec body part prepositions<sup>31</sup>

The use of body part words in the expression of location, as in the sentences from San Lucas Quiavini Zapotec in (43–46), is an areal feature of Mesoamerica (Stross 2002).

- (43) Bèècw zùub **ni’ih** mèes. ‘The dog is sitting under the table.’  
 dog NEUT.sit foot/under table
- (44) Gw-eh **dehts** wrraahlly. ‘Go on the other side of the fence.’  
 PERF-go back/behind corral
- (45) B-ìèny=ënn gaan te’ihby rràady **loh** rrièf.  
 PERF-do=1P winning one radio face/in raffle  
 ‘We won a radio in the raffle.’
- (46) M-nnàa’az **gue’ehcy** mèes ch-oo’nn-nèe=n=ëng **la’n-yu’uh**.  
 PERF-grab head table IRR-go.1P-with=1P=3S.PROX stomach/into-house  
 ‘Grab the head of the table and we’ll take it into the house.’

The words *ni’ih* ‘foot, lower leg’, *dehts* ‘back’, *lohoh* ‘face’, *là’iny* ‘stomach’, and *gue’ehcy* ‘head’ boldfaced in these sentences are basic body part terms. In their basic use, such words are always followed by a possessor: thus, *ni’ih mèes* in (43) could be translated as ‘the foot of the table’ or ‘the table’s foot’. In these sentences, however, the meaning of the first four words is more like that of English

prepositions, and the words following them are more like prepositional objects than like possessors.

This is indeed how Lopez and I classified these uses in our dictionary (1999), in contrast with body part senses such as that of *gue'ehcy* 'head' in (46), where *gue'ehcy me'ès* indeed does mean 'the head of the table' (though in other sentences *gue'ehcy* can be used to mean 'on' or 'at the top of'), or the literal use of *ni'ih* 'foot' as the subject of sentence (47).

- (47) R-ahc        ni'=a'                    'My foot hurts'  
           HAB-hurt<sup>32</sup> foot=1s

Are the relational uses of the body part words in (43–46) in fact prepositions, or are they something else? The syntax and semantics of such expressions, and thus how they should be classified in terms of part of speech, is the topic of an important Masters thesis by Brook D. Lillehaugen (2003).

The metonymic extension of the meanings of body part words in Otomanguan languages has received some attention in the literature (for example, in the important studies by MacLaury (1989) and Hollenbach (1995)), and Lillehaugen's study of these words in SLQZ and closely related languages (2001, in preparation, 2003) has considerably enriched our coverage of their uses in the current version of the dictionary. Sometimes the new meanings are transparent (e.g. 'back' > 'behind'), sometimes less so, as the examples here show. Hollenbach's and Lillehaugen's work raises the important question of the degree to which the original metaphor involved in such developments is active and always accessible by the speaker.

There is some difference of opinion on the syntactic status of body part words in sentences like (29–31), however. MacLaury (1989: 120) has claimed that body part locatives in Ayoquesco Zapotec ...

are not prepositions, because there is no justification for setting them apart from their primary classification as nouns. Unlike English prepositions, they are identical in form to the nouns applied to body organs, their use in syntax is optional, they only add specificity to other locative expressions, they do not complicate syntax, they do not denote direction, and they do not mark grammatical relations as do case markers.

While these statements may be appropriate for Ayoquesco, Lillehaugen (2003) argues, they cannot be applied to SLQZ and other similar Valley Zapotec languages.

A sentence like (43),<sup>33</sup> as Lillehaugen notes, contains a locative complement that is a prepositional phrase, not a noun phrase. One indication of this

is the fact that a simple noun phrase cannot replace *ni'ih meès* ‘under the table’ in sentence (43), as shown in (48):

- (48) \*Bèècw zùub meès.  
           dog    NEUT.sit table

Thus, *zùub* ‘is sitting’ takes as complement not simply any noun phrase referring to a location, but a prepositional phrase: as Lillehaugen argues, it cannot be the case that the use of words like *ni'ih* here is optional or only for the purpose of adding specificity to an existing locative.

The question as to whether the use of body part locatives “complicates syntax” is difficult. Since most languages probably have adpositions of some kind, and since in fact most Zapotec languages have some non-body part prepositions,<sup>34</sup> the analysis of words like *ni'ih* as prepositions does not seem to me to complicate the syntax. Indeed, if these words were not prepositions one would need to develop an ad hoc explanation for the facts in (43) vs. (48). The crucial question is that of what syntactic role the body part phrases play in the sentences in which they appear, and it’s for this reason that deciding on their part of speech is relevant for the grammar.

Typically, languages can add locative or other prepositional phrases to a sentence fairly freely regardless of the lexical subcategorization of the verb of that sentence. Thus, in a Zapotec sentence like (49) —

- (49) Ca-gyèht=ëng    dehts    yu'uh.  
           PROG-play=3s.PROX back/behind house  
           ‘He’s playing in back of the house.’

— the verb *r-gyèht* ‘plays’ is intransitive: a sentence with this verb cannot typically take a noun complement. But a locative phrase like *dehts yu'uh* ‘in back of the house’ can be added freely to such a sentence as an adjunct phrase to tell where the event of playing takes place.

There is a clear syntactic difference between a phrase like *dehts yu'uh* used as a noun phrase (‘the back of the house’) (50a) and as a prepositional phrase (‘in back of the house’) (50b):

- (50) a. Ca-cwààa' Jwaany coloory dehts yu'uh.  
           PROG-throw Juan paint back house  
           ‘Juan is painting the back of the house.’  
       b. Ca-cwààa' Jwaany coloory meès dehts yu'uh.  
           PROG-throw Juan paint table back/behind house  
           ‘Juan is painting the table in back of the house.’<sup>35</sup>

The SLQZ phrasal verb *r-cwààa'* *coloory* 'paints' (literally 'throws paint at') is transitive: it must be used with a lexical object. Thus, in (50a) *dehts yu'uh* functions as a noun phrase expressing the direct object of the verb: *dehts* is a part of the house, and *yu'uh* is its possessor. In (50b), however, the object of the verb is *meès* 'table'. *Dehts yu'uh* is not part of the core argument structure of sentence (50b): rather, the speaker adds this phrase in order to specify the location where the action occurs. Note that if *dehts yu'uh* were a simple noun phrase rather than a prepositional phrase, that would mean that sentence (50b) included four noun phrases: *Jwaany*, *coloory*, *meès*, and *dehts yu'uh*. As far as I know, there are otherwise no sentences in SLQZ consisting of a verb and four separate noun phrases. The analysis of *dehts yu'uh* as a noun phrase vs. a prepositional phrase thus has consequences for the description of possible sentence structures in this language.

I have not succeeded in finding a case of actual structural ambiguity resulting from the two interpretations of body part locative phrases in SLQZ, but Lillehaugen and I recorded the following one in the closely related Zapotec language of Tlacolula de Matamoros:<sup>36</sup>

- (51) Ca-ti'a'=na      làa'iny              ydòòò.  
 PROG-paint=3s    stomach/inside    church  
 'He's painting the inside of the church.' / 'He's painting inside the church.'

Here, as Lillehaugen (2001) notes, ambiguity arises according to whether *làa'iny ydòòò'* is a noun phrase (direct object) or an adjunct prepositional phrase. The two interpretations of (51) and the contrast between (50a–b) show that if the body part phrases cannot be interpreted as prepositional the syntax will certainly have to be complicated in terms of specifying prepositional phrase-like structures for certain noun phrases.

It's true, as MacLaury suggests, that body part prepositions prototypically encode locational rather than directional meanings. However, sentences like (44) and (46) above contain directional rather than locational uses of body part prepositional phrases, so it is not the case that such uses are impossible. Moreover, SLQZ body part locatives also are used to express nonspatial relational concepts. The question of whether prepositions in any language can "mark grammatical relations as do case markers" is beyond the scope of this paper, but certainly many uses of SLQZ *lohoh* 'face', in particular, are similar to non-locative meanings of dative and other case markers in many languages, in sentences such as the following:

- (52) Loh              Jwaany    b-zì=a'=ih.              'I bought it from Juan.'

face/from Juan PERF-buy=1s=3s.PROX

- (53) B-zhùu'azh=a' gueht loh bèècw. 'I tore up the tortilla for the dog.'  
 PERF-tear=1s tortilla face/for dog
- (54) Zyuà'all=ru' Rrodriegw loh Lia Oliieb  
 tall=more Rodrigo face/than Ms. Olivia  
 'Rodrigo is taller than Olivia.'

As Hollenbach (1995: 177) notes, “nouns prototypically refer to things, while prepositions express relations”. Examples like (52–54) show that a “referential shift” has occurred with the SLQZ Valley Zapotec body part words, with the result that in this relational use they are no longer nouns.

The classification of the Valley Zapotec body part locative and relational words as prepositions is in line with the analysis in Black's recent grammar of Quiégolani Zapotec: “these prepositions are usually body part terms” and “the preposition *lo* ‘face’ is required with indirect objects” (2000: 46). Pickett and Black (1998: 84–86), while identifying Isthmus Zapotec body part words in sentences comparable to those discussed here as prepositions, nonetheless refer to non-body part words like *ne* ‘CON’ (‘with’) or *pur* ‘por’ (‘because of’; from Spanish) “preposiciones verdaderas” (“true prepositions”).<sup>37</sup>

The notion that the body part locative and relational words are not “true prepositions” probably reflects an idea that the “preposition” classification is inappropriate for words that have such an obvious nominal use and source, recalling MacLaury's statement that “unlike English prepositions, they are identical in form to the nouns applied to body organs”. But many languages have cases of homophony (and indeed semantic and historical relationship) between words of different lexical categories. The English word *down*, for example, can be used not only as a preposition (as in *down the street*), but also as a verb (*He's going to down the beer*), a noun (*fourth down*), and an adverb (*The plane went down*), all of which are related; this does not interfere with classifying their parts of speech differently. The (avian) body part word *down* is not related to the locative/directional *down* set, but (as Lillehaugen suggests) there are certainly English prepositions, such as *behind* and *inside*, that have the same form as body part words.

Another group of Otomangean languages in which body part words are used in the expression of location and other relations is the Mixtec family. Differences in the linguistic analysis of body part locatives can be seen in two descriptions of the Lowland Mixtec language of Silacayoapan, for example.<sup>38</sup> Like SLQZ and Tlacolula Zapotec, Silacayoapan Mixtec has body part locatives, as in (55–57) and other relational uses of body part words, as in (58):<sup>39</sup>

- (55) cuahan da jata yúcu 'He went behind the  
went he back/behind mountain mountain.'
- (56) Quiji rí tixi yíto 'It (an animal) is sleeping  
sleep it stomach/under tree under the tree.'
- (57) íin.coo da nuu ita 'He is sitting on the grass.'  
sitting he face/on grass
- (58) ndítúhún nde saha ñū nde 'We are talking about our town.'  
CON.discuss we.EX foot/about town our.EX

(As Shields (1988: 318) notes, “locative adjuncts are often found in sentences that are metaphorical in nature; in such sentences they do not necessarily refer to a spatial entity”. Lillehaugen would (I assume) question the degree to which active metaphor was actually involved in the uses seen in a sentence like (58).)

In their nontechnical *Gramática Popular*, North and Shields (1986 [1976]: 35–36) identify the boldfaced words in the examples above as prepositions, but they are referred to as “adverbial noun phrases” in the more technical description by Shields (1988: 369–371, 404). “Adverbial noun phrases” seems like a more appropriate description than (simply) “noun phrases” (since adverbs, like prepositional phrases, typically may be used as adjuncts more freely than ordinary noun phrases), and a careful grammatical description will certainly differentiate these uses,<sup>40</sup> since they have important consequences for sentence structure.<sup>41</sup>

## 2.22 Chickasaw applicative marking and relational nouns<sup>42</sup>

According to the online *SIL Glossary of Linguistic Terms* (Loos et al. 1999), “An adposition is a cover term for prepositions and postpositions. It is a member of a closed set of items that occur before or after a complement composed of a noun phrase, noun, pronoun, or clause that functions as a noun phrase, and form a single structure with the complement to express its grammatical and semantic relation to another unit within a clause”. This definition supports identifying the locational and relational uses of the Zapotec and Mixtec body part words discussed in Section 2.2 as true prepositions. However, I would argue that the definition does not go far enough, since the crucial feature of the Otomanguean prepositional phrases that confirms that they are not, in fact, noun phrases is the fact that they can be freely added to sentences that are otherwise structurally complete (perhaps this is actually what the *Glossary* means by “expressing a grammatical relation to another unit within the clause”).

Let's consider a case where there are "relational nouns" whose meanings are very similar to that of the Otomanguean body part prepositions, but whose phrases function not as adjuncts, but as complements. In contrast to English, Zapotec, or Mixtec, Chickasaw has no prepositions, no postpositions, and no oblique case markers. All nominals that would be the objects of adpositions in more typical languages must be licensed in a Chickasaw sentence by applicative affixes on the verb, appearing as arguments rather than syntactic obliques.

We saw in (35) above that the subjects of Chickasaw sentences are marked with the nominative suffix *-at*. Example (59a) shows a Chickasaw object noun marked with the accusative suffix *-a*. Object nouns may also be unmarked, as in (59b). (An unmarked object noun must appear immediately before the verb; cf. Munro (1999).)

- (59) a. Ihoo-at        bala'-a        chompa.        'The woman buys beans.'  
                   woman-NOM beans-ACC buy
- (59) b. Ihoo-at        bala'        chompa.        'The woman buys beans.'  
                   woman-NOM beans buy

Chickasaw is a language with very strict lexical transitivity. A transitive verb like *chompa* 'buy' always takes exactly two arguments, a subject and an object (though they need not appear overtly, as in (60)); no additional nominals can be added to any sentences containing the simple verb *chompa*.

- (60) Chompa.        'She/he buys it/them; They buy it/them'  
                   buy

Thus, a locative, comitative, dative/benefactive, or other semantic oblique can appear in a sentence like those in (61) only if the verb includes the appropriate applicative prefix:

- (61) a. Ihoo-at        Albertsons-a        bala'        aa-chompa.  
                   woman-NOM Albertsons-ACC beans LOC-buy  
                   'The woman buys beans at Albertsons.'
- b. Ihoo-at        i-hattak-a<sup>43</sup>        bala'        ibaa-chompa.  
                   woman-NOM DAT-man-ACC beans CMT-buy  
                   'The woman buys beans with her husband.'
- c. Ihoo-at        chipot-a        bala'        in-chompa.  
                   woman-NOM child-ACC beans DAT-buy  
                   'The woman buys beans for the child'

Each of the sentences in (61) has three arguments, the original subcategorized subject 'woman' and object 'beans', plus an additional argument whose

appearance is licensed by the (boldfaced) applicative prefix on the verb. The added argument is generally more salient in the sentence than the original object (since the speaker feels it's worth adding), and typically appears immediately after the subject, though numerous other word orders are possible. The applicative prefix thus functions to increase the valence of the verb to which it is added — thus, *chompa* is a two-argument verb, but *aa-chompa*, *ibaa-chompa*, and *in-chompa* are three-argument verbs.

Semantic obliques can be added in a similar way to original intransitive verbs like 'jump' and 'be tired', as in (62) and (63):

- (62) a. Ihoo-at kasbi-a aa-malli. 'The woman jumps in the yard'  
 woman-NOM yard-ACC LOC-jump  
 b. Ihoo-at chipot-a i-malli. 'The woman jumps for the child'  
 woman-NOM child-ACC DAT-jump

- (63) Ihoo-at i-hattak-a **ibaa**-tikahbi.  
 woman-NOM DAT-man-ACC CMT-be.tired  
 'The woman is tired along with her husband.'

The sentences in (62–63) are transitive, with two arguments each: the original subject, plus the added semantic oblique, which functions just like any other syntactic object.

The three Chickasaw applicative prefixes whose use was just exemplified are members of a set of eight applicative markers, seven prefixes (in addition to *aa-* locative, *ibaa-* comitative, and *im-* dative, these include *a-* 'against', *imaa-* 'from', *okaa-* 'in', and *on-* 'on') and an instrumental proclitic, *isht*. The applicative verbs these markers derive work like any other verb as regards agreement and other morphological features: in particular, pronominal prefixes (from Table 1 above) generally precede them on the verb, as shown in (64):<sup>44</sup>

- (64) a. Ihoo i-hattak-a bala' ish-**ibaa**-chompa.  
 woman DAT-man-ACC beans 2sI-CMT-buy  
 'You buy beans with the woman's husband.'  
 b. Ihoo-at bala' sa-**baa**-chompa. 'The woman buys beans with me.'  
 woman-NM beans 1sII-CMT-buy

In cases like (61a–c) the semantic "object" of the added applicative is separated from that applicative by the original object noun 'beans', so the applicative and its object do not form a linear constituent. In fact, both nominal objects in any Chickasaw ditransitive sentence might be viewed as syntactically equivalent. The first of a sequence of two Chickasaw objects is normally case-marked

accusative with the suffix *-a*, as in (61), and the second is left unmarked. The order of the nouns (though not the case marking) can be reversed, however. An alternative to (61c), for example, is (65), with the original (patient) object, rather than the applicative (benefactive) object, receiving accusative case marking:

- (65) Ihoo-at            bala'-a        chipota in-chompa.  
           woman-NOM beans-ACC child    DAT-buy

In addition to the applicative prefixes illustrated in (61–63), Chickasaw has a class of relational nouns, postposition-like words such as *anonka'* 'inside', most of which are used to further specify the precise location of locative objects. (These, like the applicative prefixes, are boldfaced below.) Sentence (66) is syntactically entirely parallel to (61a), but with a more specific locative or directional object, *aachompa' anonka'* 'the inside of the store, the store's inside'. *Aachompa' anonka'* is case-marked just like any other noun, and functions in (66) as a nominal argument just like *Albertsons* in (61a) (thus, whether or not the relational noun is present, the verb must have the locative applicative prefix *aa-*).

- (66) Ihoo-at            aachompa' **anonk-a**    bala' aa-chompa.  
           woman-NOM store            inside-ACC beans LOC-buy  
           'The woman buys beans in(side) the store.'

The applicative verb *aa-chompa* means 'buy at' in both (61a) and (66); thus, a more literal translation for (66) would be something like 'The woman buys beans at the inside of the store', with *aachompa' anonka'* filling the same role as the locative object *Albertsons* in (61a).

A relational noun phrase can also be used as a subject in non-locative sentences like (67):

- (67) Aachompa' **anonk-aat**    litiha.            'The inside of the store is dirty'  
           store            inside-NOM be.dirty

Relational nouns like *anonka'* may be analyzed syntactically as inalienably possessed nouns (semantically quite similar to the Zapotec body part words). Others include *pakna'* 'top', *nota'* 'bottom', and *ashaka'* 'rear, back'.

Crucially, a phrase like *aachompa' anompa'* 'inside the store', just like the simpler expression *aachompa'* 'store', can be used only in a sentence whose verb is subcategorized for a nominal or pronominal locative argument, as in (66),<sup>45</sup> or as a subject (67). Because of the structural features of Chickasaw, such locative phrases (like all Chickasaw noun phrases) can only appear as complements, never as adjuncts. A sentence like those in (68–69) is thus impossible:

- (68) a. \*Ihoo-at        aachomp-a    bala'    chompa.  
           woman-NOM store-ACC    beans buy  
           (for 'The woman buys beans at the store')
- b. \*Ihoo-at        aachompa' **anonk-a**    bala'    chompa.  
           woman-NOM store        inside-ACC beans buy  
           (for 'The woman buys beans in(side) the store.')
- (69) a. \*Ihoo-at        bala'-a        aachompa'    chompa.  
           woman-NOM beans-ACC store        buy  
           (for 'The woman buys beans at the store.')
- b. \*Ihoo-at        bala'-a        aachompa'    **anonka'**    chompa.  
           woman-NOM beans-ACC store        inside    buy  
           (for 'The woman buys beans in(side) the store.')

Thus, regardless of word order, neither the simple location noun *aachompa'* 'store' nor the relational noun phrase *aachompa' anonka'* 'inside the store' can be added as an adjunct to a sentence with the simple transitive verb *chompa* 'buy' if that verb does not contain the locative prefix *aa-*.

Nicklas (1979: 103) analyzes the cognates of the Chickasaw relational nouns in the closely related language Choctaw as postpositions, but these words are not postpositions in Chickasaw.<sup>46</sup> The function of Chickasaw relational nouns like *anonka'* is simply to specify more precisely certain locations expressed with ordinary nouns. There are no uses of these words or any simple noun phrase as adjuncts (non-complements, non-subjects or non-objects). There is no sense in which Chickasaw relational noun phrases (relational nouns plus their following possessor) "express [a] grammatical...relation to another unit within a clause", in the words of the SIL *Glossary*. In contrast, MacLaury's statement that "their use in syntax is optional, they only add specificity to other locative expressions, they do not complicate syntax, they do not denote direction, and they do not mark grammatical relations as do case markers", although it was not accurate for SLQZ, is completely appropriate for the use of the Chickasaw relational nouns!

### 3. Parts of speech, typology, and analytical abstraction

This type or plan or structural “genius” of the language is something much more fundamental, much more pervasive, than any single feature of it that we can mention, nor can we gain an adequate idea of its nature by a mere recital of the sundry facts that make up the grammar of the language.

– Edward Sapir, *Language*, ch. VI

In Section 2, I examined two pairs of cases in which there might be some doubt about or analytical confusion between parts of speech, considering data from Zapotec (and Mixtec) and Chickasaw. First (in 2.1) I considered two cases involving adjectival notions:

- In 2.11 I presented evidence that SLQZ adjectives must be distinguished from a certain class of SLQZ verbs, despite their formal and semantic similarity, on the basis of different syntactic behavior.
- In 2.12 I argued that Chickasaw has no separate class of adjectives, since all adjectival concepts are expressed by verbs, and since these adjectival verbs work similarly to other verbs in the language.

Next (in 2.2), I considered adpositional notions.

- In 2.21, following Lillehaugen (2001, 2003) and Hollenbach (1995), I showed that the relational use of body part words in various Zapotec languages and Mixtec is sufficiently different from the use of these words as nouns to justify classifying them as (“true”!) prepositions.
- In 2.22 I examined the expression of adpositional relations in Chickasaw, showing that that language has no pre- or postpositions, and that members of its class of relational nouns are simply nouns, not postpositions.

One interesting consequence of these arguments is to confirm the surprisingly short list of Chickasaw parts of speech given in (1) at the beginning of this paper. Chickasaw simply does not have a class of adjectives or a class of adpositions, although there are obviously ways to express the concepts languages like Zapotec or English convey with adjectives or prepositions.

This is an important typological observation, since word order typologies typically pay a lot of attention to the order of noun and adjective and adposition and noun. When asked about these typological features of Chickasaw, I typically fudge and say that Chickasaw has N ADJ order, since the elements that express adjectival ideas within a (complex) noun phrase do indeed follow the noun, as in (41). The second point is harder, though, since Chickasaw has no adpositions or adposition-like elements — the closest thing to adpositions

in Chickasaw is not the relational nouns but the applicative markers (since it is these which allow the expression of locative and other adjuncts), which are verb prefixes, not independent words. Most typological classifications would probably say that Chickasaw had NP order — the language is otherwise very strictly head-final, and it is tempting to consider that relational nouns fill the role of postpositions. But I hope I showed in 2.22 that they are not, in fact, adpositional at all — so it is very difficult to classify Chickasaw with respect to this typological characteristic.

It is periodically fashionable in syntactic theory to treat bound morphemes as if they were independent words. Within such a paradigm, case markers can be analyzed as adpositions, so that, for example, a language with case suffixes can be considered postpositional. A consequence of this view might be to analyze the Chickasaw applicative markers as adpositions that have migrated to a position before the beginning of the verb of their clause.

This kind of incorporation certainly can occur — for example, in Pima, a Uto-Aztecan language of Southern Arizona, postpositions may either appear in a constituent with a noun or before the verb of their clause (Munro 1989). In the Pima sentences (70a) and (71a), for example, the postposition *daam* follows its object *'u'us*; in (70b) and (71b), *daam* appears in front of the verb, discontinuous from the object. (70a) is an intransitive sentence. (70b) looks more like a transitive sentence — it has a complex (phrasal?) verb, *daam mee*, independent noun phrases for subject and non-subject (note that when a noun phrase is not sentence or PP initial, regardless of grammatical function, it appears with the article *heg*).<sup>47</sup> The situation is similar for the transitive sentence (71a) and its variant (71b) in which there are two independent non-subject phrases.

- (70) a. Kalit 'a-t            mee 'u-'us    daam.  
          car    AUX-PERF run    RED-stick on  
          'The car ran over the sticks.'
- b. Kalit 'a-t            daam mee heg 'u-'us.  
          car    AUX-PERF on     run    ART RED-stick
- (71) a. Kalit 'a-n-t            melc 'u-'us    daam.  
          car    AUX-1S-PERF drive RED-stick on  
          'I drove the car over the sticks'
- b. Kalit 'a-n-t            daam melc heg 'u-'us.  
          car    AUX-1S-PERF on     drive ART RED-stick

But the difference between the Chickasaw and Pima cases is considerable. Not only does Pima have both adpositional and incorporated structures, but in the incorporated structure pronominal object markers (the only bound pronominal markers on the Pima verb) remain prefixed to the verb, between it and the incorporated postposition, suggesting that the postposition is a recent addition to the verbal complex.

Someone who wished to believe that all languages must have adjectives might well propose that adjectival verbs in Chickasaw contained a “non-pronounced” copula, a “light verb” to serve as the bearer of agreement, tense, and other verbal inflection. Thus, by this view, the reason for the incompatibility of adjectival verbs with an overt copula (as shown in (40)) would be that these sentences already have an (incorporated) copula, and do not need another. The fact that some adjectival verbs can occur with Class I and Class III agreement (40a, 40c), rather than the Class II agreement characteristic of the copula (39c) might pose momentary problems but could probably be handled by a determined analyst.

But such abstraction, though it aids the cause of “universal grammar” by suggesting that apparently different structures are more similar than they might at first appear, obscures the important facts that constitute the true “structural ‘genius’” of a language (in the sense Sapir used these words in the quotation at the beginning of this section). If we say that Chickasaw really has adjectives and postpositions, we miss part of the essential quality of Chickasaw.

My suggestion that identifying the actual parts of speech of each language be a critical part of grammar writing does not mean that people who are drawn to abstract syntax cannot show us how all languages can be analyzed with similar rules and underlying structures. But before they do that, I believe, they should tell us about the basic overt characteristics of the words of that language — just as dictionary makers (who as I observed earlier are forced in some ways to be more honest than some syntacticians) must.

#### 4. A linguist’s list of parts of speech

Now I will come back to the “eight parts of speech” mentioned by Jane Austen and listed in any traditional grammar of English: nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections.

Although I am arguing for a traditionally oriented return to part of speech analysis as an important stage in writing a grammar (or dictionary!), I believe that this list of parts of speech, while possibly sufficient for descriptions of

familiar European languages, is likely to be inadequate as a starting point for linguistic analysis.

The most serious problems arise with the traditional category “adjective”, which, according to careful classifications, includes the following types of words in addition to normal adjectives of the type discussed in Section 2.11:<sup>48</sup>

- articles (such as *a* and *the*)
- possessive adjectives (such as *my*, *his*, and so on)
- demonstrative adjectives (such as *that* and *this*)
- quantifiers (such as *all*, *three*, and maybe *any* and *which*)

In English, all of these items (normally) precede a modified noun, so it is barely possible to justify analyzing them all as “adjectives”.

I will not consider possessive adjectives further here, since I do not have extensive data for any language that uses an independent word for this function. I will also assume provisionally that articles and demonstrative adjectives may be analyzed, at least some of the time, as members of a category of determiners, although it seems likely that there might be problems with this view.

There is certainly evidence, however, that both quantifiers and this category of determiners are syntactically very different from ordinary adjectives.

In Zapotec, for example, quantifiers precede the nouns they quantify, while adjectives follow the nouns they modify, as in example (72) from SLQZ:

- (72) tyo’p rraady cweeby                    ‘two new radios’  
       two    radio    new

Moreover, in many languages (including English!) quantifiers have special structural properties (such as “floating” to a position before the verb).

Determiners similarly may occur on a different side of the noun from adjectives. (73) is an example from Tolkapaya Yavapai, a critically endangered Yuman language of central Arizona, in which demonstratives precede nouns but “adjectives” (actually, stative verbs used as modifiers, much as in Chickasaw) follow them (Munro 1985):

- (73) vyaa vqi        hamany                    ‘this young woman’  
       this    woman    young

These features lend support to the view that neither quantifiers nor determiners are simply subtypes of a general category of adjectives — a judgment that will certainly come as no surprise to students of syntactic theory or semantics.

And at this point, finally, I come back to the question of particles. “Particle” is, as I said at the beginning of this paper, a linguist’s cop-out. Here is one

definition of the term, for English (from the *Oxford Companion to the English Language* (McArthur, ed., 1992):

A word that does not change its form through inflection and does not fit easily into the established system of parts of speech. Among individual words commonly so classed are the negative particle *not* (and its contraction *n't*), the infinitival particle *to* (*to go*; *to run*), the imperative particles *do*, *don't* (*Do tell me*; *Don't tell me*) and *let*, *let's* (*Let me see now*; *Let's go*). There is also a set of adverbial and prepositional particles that combine with verbs to form phrasal verbs (*out* in *look out*; *up* in *turn up*) and prepositional verbs (*at* in *get at*; *for* in *care for*). The term pragmatic particle is sometimes used for words that play a role in maintaining discourse and are also known as fillers and discourse markers: *oh*, *ah*, *well*, *yes*, *no*, *actually*, *anyway*.

The SIL online *Glossary* (Loos et al. 1999) adds one more important characteristic of particles: a particle “typically has grammatical or pragmatic meaning”.

The English examples presented in the *Oxford Companion* definition do not really illustrate the kinds of difficulties that lead linguists to use the term “particle”. *Not* and the particles of verb-particle constructions (like *up* in *turn up*) could be analyzed as adverbs,<sup>49</sup> *do* and *let* are certainly verbs, and the discourse markers listed above can be considered either interjections or adverbs. English does not seem to have a serious problem with particles.

But — as just one more problematical example — what about languages like SLQZ that have sentence-final question particles, as in (74)?

- (74) Ncweeby nàa rraady èee?      'Is the radio new?'  
       new          COP radio Q

Èee is an invariable word that does not change its form and has grammatical or pragmatic meaning (it, or another less common alternant, is required in all yes-no questions in SLQZ). It does not seem to fit into the established system of parts of speech: it is not a noun, not a pronoun, not a verb, not an adjective, not an adverb, not a preposition.

The two most likely traditional identifications for a word like èee are interjection and conjunction. Typically, though, interjections are not as fixed in their position as SLQZ èee, and generally they can be used alone, which èee cannot.

In some syntactic analyses èee might be identified as a complementizer, which should make it a conjunction. From the time of the earliest performative analyses in the 1960s and 70s, complementizers like *that* and *whether* have been taken to be diagnostics of the illocutionary force of an associated clause. In a verb-initial language like Zapotec, we would expect question markers, like

other complementizers, to precede their clauses. Lee (2002), for example, explains the unexpected word order in SLQZ sentences like (74) by proposing that the clause questioned with *èee* (*ncweeby nàa rraady*, in (74)) is a left-dislocated topic that has moved in front of the question marker. On the other hand, SLQZ is a language with no clear complementizers whose conjunctions — including *chih* ‘when’, *tye’nn* ‘because’, and the relativizer *nih* — are all invariably clause-initial, and thus very different from *èee*. Thus, until we have a better identification, “particle” seems like a good part of speech label for the question marker *èee*.

Therefore, I would add “particle” to the list of parts of speech that we may have to recognize in at least preliminary grammatical analysis, which thus includes, at least, first Jane Austen’s basic eight:

noun  
 pronoun  
 verb  
 adjective  
 adverb  
 preposition  
 interjection  
 conjunction

and then the following

determiner  
 quantifier  
 particle

Not all languages, as we have seen, will have all these parts of speech. And as I noted at the beginning of this paper, subdividing some of these (particularly verbs!) according to syntactic and other properties is an important task for dictionary and grammar making. And clearly if we can find a way to do without the dread class of particles, that is a desideratum.

But trying our best to find out the part of speech of every word — and the morphological and syntactic arguments in favor of this classification — will help us understand language better and make it easier for us to describe in our grammars how to “combine them with ease”, as Jane Austen’s James did.

## Notes

\* I am grateful to many people whose contributions have helped to shape the ideas I present here. The ones I must mention most prominently are my collaborators on the dictionary/grammar study projects I discuss in detail, Catherine Willmond for Chickasaw (Munro and Willmond 1994) and Felipe H. Lopez for San Lucas Quiaviní Zapotec (Munro and Lopez, et al., 1999), as well as the other speakers of these languages whose input is acknowledged in the dictionaries named; I'm also grateful to Dieynaba Gaye for Wolof (Munro and Gaye 1997), my undergraduate collaborators in the study of UCLA slang (most recently in Bonds et al. 2001), Virgil Lewis and the late Etheleen Rosero for Pima; the late Molly S. Fasthorse for Tolkapaya Yavapai (Munro and Fasthorse in preparation), and to Olivia Martínez, Rodrigo Garcia, and Michael Galant for input on Zapotec. In addition, I thank Larry Gorbet and Brook Lillehaugen, as well as Cheryl Black and other members of the symposium audience, for very helpful discussion.

1. The more experience I have, the more I respect certain traditional aspects of dictionary makeup and format that I might have scorned earlier. Most of these really are included for a reason!

2. Chickasaw data is presented in the orthography of Munro and Willmond (1994). Note that nasalized vowels are underlined. In general I will not comment on rule-governed morphophonemic variation.

The abbreviations used in my glosses include ACC : accusative, ADDR : term of address, ATTR : attributive, BEN: benefactive, C : used predicatively with a copula, CMT = comitative, COM : completive, CON : continuative, COP : copula, DAT : dative, DEF : Definite, DIM : diminutive, DIST = distal, DS : different subject, EX : exclusive, EXCL : exclamation (i.e., interjection, in Bonds et al. 2001), HAB : Habitual, INC : incompletive, INF : informal, IRR : Irrealis, LOC : locative, MOD : modal, NEUT. : Neutral, NM : nominative, P : used predicatively without a copula, PERF : Perfective, POSS : possessive, PROX : proximate, PT = past/perfective, Q : question marker, RED: reduplication REL : relative pronoun, REM : remote past, Sp : Spanish. The Chickasaw pronominal agreement classes are identified with I, II; person and number are indicated with 1, 2, 3; s, p. = marks a clitic boundary and a period separates parts of a complex gloss.

In each of the languages I discuss here, morphophonological changes occur in many words. These are certainly a concern of the grammar, but I will not address them here or comment further on such changes in the examples.

3. Levin (1993) is an outstanding example of such minute classification. Most basic descriptive grammars will not be able to present this level of detail, of course.

4. This section is based on Munro (2002). Input from John Foreman and Ananda Lima was especially helpful.

5. Serious classifications of the Zapotecan languages place the number of languages anywhere from five to 10 (Terrence Kaufman's current proposal; Natalie Operstein, p.c.) to the *Ethnologue's* 57 (Grimes et al., 1996). Resolving this disagreement is not important for this paper, so I will use the term "language" to refer naively to any recognizably different speech

form (which, in the Tlacolula District, would mean that every pueblo has a different language). The situation for Mixtec languages, which I come to later, is similar.

6. For more on the syntax of tense in SLQZ, see Lee (1999).

7. The orthography used in this paper is described in Munro and Lopez et al. (1999); many of the examples in this paper are from this source or from Lopez and Munro (eds., in preparation).. Most of the SLQZ aspect prefixes have several variant forms. (A “stem” is a verb containing an aspectual prefix without added adverbial or pronominal clitics; a “theme” is a stem minus its prefix.) Only the Habitual (*r-* everywhere) does not. The dictionary lists verbs in the Habitual stem (translated in the English simple present), with cross-references to other aspectual stems; such Habitual stems are translated with an English simple present verb.

8. I consider that the unprefixing verbs in (2) contain a zero marker of Neutral status because SLQZ aspectual verb stems are otherwise prefixed, and because such verbs are used in the same context and with the same syntactic restrictions as the prefixed verbs.

9. It’s for this reason that I chose the unhelpful name “Neutral” for the *n-* prefix and the SLQZ verbal form on which it is used. Suggestions for a better name are welcome!

10. Although *nmah* begins with *n* (actually the fortis *nm*), this consonant is part of the verb’s theme. The related habitual is *r-nmiii’*.

11. I’m very grateful to Eric Jackson for extensive discussion of the nature of stativity (cf. Jackson 2002).

12. SLQZ has three copulas, *nàa* (as in (8a)), *naač* (as in (8c)), and *nu’uh*. *Naač* and *nu’uh* are Neutral verbs related to the Habitual verbs *rahc* and *ru’uh*). SLQZ adjectives appear to be lexically specified for which copular verb they can be used with. *Nàa* can also be analyzed as a Neutral verb and arguably also contains the Neutral prefix *n-*, but this is harder to demonstrate, since the paradigm for this verb is defective.

13. In the case of adjectives that start with *n* plus a vowel that don’t have an alternant in which the *n* is missing, it is of course not possible to tell if these include a segmentable *n-* prefixed to a vowel-initial theme that does not occur elsewhere or (as I will assume) whether they are single morphemes beginning with *n*.

14. The use of *n-* on borrowed adjectives (14d) is quite uncommon. It seems likely that the *n-* prefixed loan adjectives were borrowed earlier than the loan adjectives without *n*. This is supported by the case of *lòc* vs. *n-lòc*. Probably the original use of this word in Zapotec was to refer to bulls (an imported concept, unlike all the other meanings for either word).

15. Cheryl Black has suggested to me that it may be best to assume that the marker in question is the same in both cases (at least for Quiégolani). I address here only the question of whether an adjective with an *n-* prefix should be regarded as a Stative verb.

16. I.e., in modal auxiliary or modal same-subject complement verbs (Munro and Lopez et al. 1999: 19).

17. There are apparent rare exceptions to this general claim. For example, *bàany* is used as an attributive modifier meaning 'alive' (e.g. in *bèècw bàany* 'living dog, dog that is alive'); the same form is the Neutral verb corresponding to the Habitual verb *rbàany* 'lives, survives'. Such relationships are not regular and are probably best analyzed as distinct uses of the words in question.

18. There are a variety of complex noun phrases containing very short relative clauses that do not work like the syntactically formed noun plus relative structures I discuss below.

19. In sentences with longer relative clauses the clitic may follow the head. It's possible that it is the modifying function of the Neutral verb 'is cracked' in (22b) that determines the clitic position.

20. Such differences suggest that a noun plus adjective sequence, at least in some cases, should be analyzed as something almost like a compound, an idea that has been discussed for Isthmus Zapotec by Pickett (1997). This idea is supported by native speaker intuition in many cases (as Pickett has also noted), as well as by the fact that the *n*-less attributive forms of adjectives beginning with *n*- in citation form — such as *cweeby* in (13) — cannot be used alone. In addition, a few adjectives (all color terms) have irregular suffixed *n*-less attributive forms, though these do not appear to be fully productive: *ngaàa'ts* 'yellow' (attributives *ngaàa'ts*, *-yaàa'ts*), *ngaàs* 'black' (attributives *ngaàs*, *-yàaàs*), and *ngàa'ah* 'green' (attributives *ngàa'ah*, *-ya'ah*).

21. Here I exemplify only clitic pronoun possessors; the facts are identical if a noun possessor appears in the same (nonaffixed) position. There is an alternative periphrastic possessive construction that supports the same arguments presented here. As (23b) shows, *rr* is phonologically a cluster in SLQZ.

22. The significance of the facts involving the use of the diminutive was suggested by John Foreman.

23. Verbs are not directly borrowed into Zapotec. Rather, Spanish infinitives may appear as unmarked complements of verbs such as *ruhny* 'does' or *rahc* 'is', for example (thanks to Kevin Terraciano and James Lockhart for stimulating my thinking on these constructions).

24. More work is necessary to determine whether and how far the analysis argued here can be applied to the cognates of the Neutral and adjective forms in other Zapotec languages. As I mentioned earlier, these are often treated in other grammars and dictionaries as though they are the same item, but generally these sources do not give enough detail on their use for one to really test how different they are. My work on Macuiltianguis Zapotec suggests that in that language the facts — though perhaps messier — are ultimately similar to those in SLQZ, and briefer work on San Juan Guelavía Zapotec (a language much more similar to SLQZ) suggests the same.

25. Names for the three agreement classes, I, II, and III, follow Munro and Gordon (1982).

26. Case-marked independent pronouns can be added, but are rare except in emphatic contexts.

27. The phonologically conditioned variants of the class III/dative prefixes may include nasalized vowels, which are difficult to segment into pronominal element and dative marker. The *m* of the dative prefix assimilates to a following stop; a nasalized vowel replaces the *Vm* of the prefix before glides, nasals, and fricatives.

28. Traditionally (e.g., by Nicklas 1972), the *im-* prefix has been analyzed as a third person dative marker. Following Ulrich (1986), I regard *im-* as the sign of the dative or a morphological indication of class III marking, but not as a third person prefix. Like class I and II agreement, then, class III agreement uses a bare (though derivationally complex) stem as the third person form. Ulrich (1986) and Munro (1993) provide a number of arguments against considering the dative marker (or, by extension, any applicative) as marking third person. Crucially, these prefixes appear in many contexts without third person reference, which is inferred only in the absence of other person indicators; in some cases, such unmarked forms have first or second person reference.

29. There are of course historical and other reasons for many of such seemingly arbitrary assignments, some of which are discussed in Gorbet and Munro (2002b). It is likely, however, that speakers do not access these every time they use these words.

30. Chickasaw relative clauses are head-internal; see Gordon (1987). The language has a variety of relative structures one of whose features is the omission of nominative marking on subject heads, as in (42).

31. As will be clear, this section owes a great deal to the work of Brook Lillehaugen and to productive discussion with her.

32. This is actually the verb 'be' seen, for example, in (12c) above (so (47) could apparently be literally translated as 'My foot is'). I have not figured out if this is some kind of metaphor or a homophonous verb.

33. Sentences (43), (48), and (51) are cited from Lillehaugen (2001), but I have slightly updated spelling and glosses. In particular, I give both nominal and prepositional interlinear glosses (separated by a slash) for the body part words. The prepositional meanings are those that are appropriate for the particular sentence, since many of the body part words can be translated by a number of different English prepositions.

34. In fact, there are several classes of prepositions in SLQZ: in addition to the body part prepositions just exemplified, these include non-body part native prepositions like *caàa'n* 'along, by' and *gahx*: 'near' (as well as the genitive preposition *x:tè'e'n*), as well as prepositions borrowed from Spanish such as *cèhmn* 'with' and *pahr* 'for'.

35. Unlike the English, the Zapotec sentence is not ambiguous: this does not refer to 'the table in back of the house' (as opposed to another table), but specifies the location of the event of painting.

36. Analysis of the phonology and pronominal system of Tlacolula Zapotec is as yet incomplete, and this sentence is cited in the SLQZ orthography. Thanks to Roberto Antonio for teaching us about Tlacolula Zapotec.

37. Even Hollenbach (1995: 177), in her discussion of Mixtec body part prepositions, refers to “genuine prepositions” that don’t have a body part source!

38. I am grateful to Barbara Hollenbach and Joanne North for graciously sharing information and materials on Mixtec with me. The description here, based on Shields (1988) and North and Shields (1986 [1976]), reflects the speech of San Jerónimo Progreso in the Silacayoapan District of Oaxaca. Marcus Smith and I have been studying a closely related variety of Mixtec with Timoteo Mendoza of San Mateo Tunuchi in the Juxtlahuaca District for several months; I thank Smith for extensive and very productive discussion and Mendoza for his generous teaching, which has helped me understand the Silacayoapan data discussed here. Silacayoapan Mixtec has been written several ways; the examples I cite here are in the orthographies of the original sources.

39. (55–57) are from North and Shields (1986 [1976]: 36); English translations of the glosses and sentences are mine, though I have added body part translations preceding a slash, as in the Zapotec examples above. (Actually, the Spanish translations provided by North and Shields for words like *jata* in (55) (‘detras’) and *tixi* in (56) (‘debajo’) are not in fact full prepositions (they are missing *de*.) (57–59) are from Shields (1988): 318, 336–37). Unlike North and Shields (1986 [1976]), Shields (1988) gives only body part translations for the locative nouns, regardless of their use. I have added prepositional translations following a slash, and have made changes in format to follow the other examples in this paper.

40. Shields’s list of the meanings of the body part locatives (p. 404) regrettably does not consistently distinguish nominal and prepositional uses: for example, *tishi* ‘stomach’ is given only the added translation ‘underside of’ (a possessed noun) rather than (prepositional) ‘under’ (as in (56)).

41. There may be syntactic features of body part prepositional phrases in Silacayoapan that are not shared by other noun phrases. Hollenbach notes (1995: 181) that Mixtec prepositions can be stranded when the prepositional object is fronted for focus, but that possessed nouns cannot be.

42. This section is based on the first section of Munro (2000); cf. also Gorbet and Munro (2002a, b).

43. A dative prefix is used on nouns to indicate alienable nominal possession.

44. There is some relatively more obscure data I will not discuss here that might be adduced in support of the postposition incorporation hypothesis I will discuss in Section 4.

45. Certain verbs, such as *aya* ‘go’ and many positional and locational verbs, take locative or directional (direct) objects; these verbs don’t require applicative prefixes to license a locative or directional object.

46. They are not postpositions in Choctaw either, but I will not cite data to prove this here.

47. There is one important difference between incorporated postpositional objects and ordinary direct objects in Pima, however. The inanimate plural postpositional object *‘u’us* can

optionally trigger the appearance of the third person plural object prefix *ha-* on the postposition, In contrast, a direct object prefix goes on the verb itself.

48. I have synthesized the list of atypical adjective types from a variety of sources, including Palmer (2002) and Hardy (2002) — special thanks to Don Hardy for reminding me about the Austen quote which I used in Section 1.

49. This sort of particle is sometimes considered an “intransitive preposition”.

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