The interplay of synchronic and diachronic discovery in Siouan grammar-writing

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1. Introduction

The study of language typology is often justified on the basis of the fact that it tells us where to look for missing parts when our data are insufficient to elucidate one or another point of grammar or phonology in either synchronic or diachronic studies of a language. A relatively small sample can provide a kind of snapshot of the language and give us an idea of the types and orderings of structures we may expect to find. It is widely accepted that every field investigator should be familiar with the findings of typology. But work within a particular genetic group of languages can be aided even more by overt language comparison within the family. Related languages nearly always share a great deal more structure than universal grammar provides. So the field worker and synchronic grammar writer must be familiar not only with typology but with the comparative method and all that is available in the way of historical and comparative phonology and grammar within the language family he or she is studying.

Oddly, this fact has not always been so well accepted for two very different reasons. First, outside of the languages of Europe, classical languages of the Near East, Chinese, Japanese, and perhaps a few others, most language families have lacked solid comparative work. And second, the use of comparative data in synchronic studies was often felt somehow to violate the Saussurian prohibition against mixing synchrony and diachrony, itself a reaction to some of the excesses of nineteenth century grammar.

By now the first of these difficulties is alleviated by the fact that at least some comparative work has been undertaken in nearly every language
family. The second difficulty is in many ways more serious in that it involves the basic attitudes and trends in educational priorities and training of modern linguistic scholars. It should be obvious that the use of comparative data in field work can no longer be problematic for synchronists if the use of such data relates to methodology, not necessarily description, but if a linguist has never mastered, or perhaps even been exposed to, comparative linguistic methodology, he or she cannot even take advantage of what comparative studies exist. And this unfortunate state of affairs seems increasingly to be the case, at least in the United States. The excuse most often proffered for ignoring diachronic data and study is a Bowdlerized version of the Saussurian dictum. It runs something like this: “little children learning their native language don’t have access to comparative data, so we theoreticians no longer have to deal with such things, and grammars shouldn’t incorporate any such information.” This is nonsense, of course. The linguist’s understanding must be informed from all available sources; how she or he may later choose to constrain a formal statement is a completely distinct matter.

Virtually all linguistic analysis is comparative in nature; one arrives at answers by comparing and contrasting one phoneme, morpheme, word, or syntactic pattern with others, usually in the same language. But comparison of like units in related languages, i.e., explicit use of the Comparative Method during field work and subsequent analysis, greatly advances insight into phonology and grammar while providing easy access to cognate vocabulary. Overt comparison helps identify linguistic elements at all levels of analysis and often extends to particular processes, constraints and uses/semantic ranges of grammatical morphemes. Obviously, matches between languages are often incomplete and occasionally even misleading, as change is a given in all linguistic systems, but even when innovation, loss or merger has occurred, there nearly always remains, within the range of constructions, those that will have to be explained in terms of pre-change function or meaning. Comparison of related languages is never a fruitless undertaking.

However, these indispensable comparative tools are scarcely even mentioned in most of the textbooks and handbooks dedicated to field methodology. One searches in vain for such helpful information in, for example, Samarin (1967), Burling (1987), or Bouquiaux and Thomas (1992). Many grammarians seem completely seduced by the myth that “you have to have a good description of a language before you can undertake comparative or historical work.” This must have seemed logical at one
time, but in fact it is untrue. Linguistic comparison and synchronic analysis are complementary and spiral processes; one constantly moves back and forth between them, refining each as one goes along.

Even introductory linguistics textbooks generally pay only lip service to historical and comparative work. Typically, a passage contrasting Old and Modern English, a smattering of social dialectology, and a passing mention of Grimm’s Law, with the implication that the comparative method relates more to the history of linguistics than to the discipline as it exists in the present, is about all students see. Perhaps this just reflects the experience of the textbook authors, but even textbooks in historical and comparative linguistics generally neglect to point out the usefulness of the historical methodologies in synchronic analysis.

Methodology, although de-emphasized and in some instances even denigrated since 1960, is quite important in field work (and, it should go without saying, in other branches of linguistics as well), and the comparative method is among the most powerful of techniques available to the investigator of unattested languages. Contrast the picture presented by the textbooks with the actual practice of the great field linguists and grammar writers of the twentieth century. One has but to glance at the work of Bloomfield, Sapir, Haas, Dixon or Hale to see the positive influence of diachronic study. They always acknowledged the importance of comparative work, but the example that they set has not always been taken to heart.

2. Contemporary field linguists

Even though overt exposition and recommendation of comparative and historical analyses as field work aids are seldom found, the best contemporary field linguists are quite open about both using and praising them; they simply take for granted that every researcher knows and understands the utility of such study. Ken Hale (2001: 81–84), in his discussion of field work on the Ulwa language of Nicaragua, emphasizes that,

My attitude to the notion ‘linguistic field methods’ or the notion ‘what one should do in linguistic field research’ is this: Do whatever you need to do in order to learn the language. […] setting oneself the goal of learning the language […] has the effect, […] of virtually guaranteeing adequate coverage.
If one accepts as valid the strategy just mentioned, this will determine, to a large extent, the planning one does in preparing oneself linguistically for the actual field-work. [...] In my case, I had available the works of Lehmann (1920) and Conzemius (1929), consisting of comparative vocabularies, with grammatical notes, in [two related languages] Sumu and Miskitu.

They permitted me to gain a basic understanding of Sumu verbal and nominal morphology, to begin acquiring a basic vocabulary of Ulwa, and to form an initial conception of internal relationships within the Sumu subfamily, as well as relationships between Sumu and other Misumalpan languages.

Hale goes on to describe the work on the related languages and how it simplified his early elicitation. Lehmann’s knowledge of vocabulary concepts appropriate to Central America spared Hale an enormous amount of labor in the preparatory stage; and the initial work of Conzemius in documenting the nominal and verbal morphology of the Misumalpan languages was also instrumental in getting me to a position – in advance of my first trip – at which I could easily understand ‘what was happening’ in the very first sentences I elicited for Ulwa. It would have been a serious mistake not to utilize the early work of these excellent scholars – the speed with which actual fieldwork on Ulwa was able to proceed owes much to their contributions to the linguistics of the Atlantic Coast.

Hale naturally insisted on checking and rechecking all of the earlier work, but his research had made him aware of “certain facts about the Misumalpan languages which told me in advance [emphasis mine – RLR] that certain forms would have to be collected for each lexical item in order to document it properly.” 1 Comparative linguistics was simply something that, for Hale, one automatically used both in preparation for, and in, the field.

Dixon was less explicit about precise use made of comparative materials in his work in northern Queensland (earlier, serious work there by linguists was rare), but he mentions them many times (1984: 64–65, 127–129, 173, 230–231). Dixon (2000: 4) compares working on Austronesian and Papuan languages:

Describing a new Oceanic language is like filling in the spaces on an established linguistic grid, and adding a few unexpected spaces for a few language-specific features. In contrast, the Papuan languages of the Solomons are not known to be related to any already-described languages.
Describing a new Papuan language is like establishing a new linguistic grid, and then filling in the spaces on it. He makes it clear that he believes the former task to be considerably easier: Comparative grammar informs us rather precisely what we should expect to find.

Numerous other scholars are more general, e.g., Rice (2001: 248): “it is necessary to embrace all sources of material and learn from them, but at the same time to treat them with necessary skepticism”, while Payne (1997: 15) writes:

It is very important to be aware of all work that has been done on a particular language or language family. […] You should become thoroughly familiar with all historical/comparative work done on the language and/or its family. There are few language families for which no previous work exists. Diachronic and comparative observations will then inform the grammatical description at every point, and you will have a good idea where your own work fits within the general scheme of investigation on this language.

Hyman (2001: 26–27), certainly a prominent figure in linguistic theory over the years, is especially enthusiastic about comparative work, repeatedly emphasizing its usefulness for understanding how languages “manipulate parameters in their treatment of tone, direct object properties, anaphors, etc. What I particularly like is to focus on an area where different languages resolve ‘conflicts’ in different ways.”

3. Siouan linguistics

The remainder of this paper illustrates the utility of comparative linguistics in field work and grammar production with three case histories from the Siouan linguistic family studied for more than twenty five years by the author. Two relate to phonology and one to morphosyntax. Siouan provides a good testing ground for the idea that comparative work is just as useful to linguistic field work and grammar writing as field work and description are to later comparison, i.e., that the two forms of research can and should proceed hand-in-hand. A native North American family, Siouan has not been done to death, and continuing field work is still a necessity if we are to gain full understanding of the languages comprising it. There are
reasonably good grammars and dictionaries for fewer than half of the languages in the family.

Comparative work has proceeded slowly; there are two surveys of comparative Siouan (mostly phonology) either published (Wolff 1950–1951) or available as doctoral dissertations (Matthews 1958). Both of these utilized primarily unpublished word lists and texts recorded in the nineteenth and early twentieth centuries by a variety of scholars, most of them talented amateurs, a few, trained anthropologists. All suffer from transcriptional errors of various sorts. Added to these is the truly expert grammar of Dakota by Ella Deloria and Franz Boas (1941). The present chapter is informed by an unpublished comparative dictionary (Carter, Jones and Rankin, in preparation).

The Siouan languages fall into four major subgroups. Individual language names are italicized; two-letter abbreviations are assigned to some for later use. Extinct languages are marked with the symbol †:

I. Missouri River Siouan: Crow (CR), Hidatsa (HI)
II. Mandan (MA)
III. Mississippi Valley Siouan:
   a. Dakotan (DA) Santee-Sisseton, Yankton-Yanktonai, Teton, Assiniboine (AS), Stoney (ST)
   b. Chiwere-Winnebago (CH) (WI) Ioway, Otoe, †Missouria; Winnebago
   c. Dhegiha Omaha-Ponca (OP), †Kansa (KS), †Osage (OS), †Quapaw (QU)
IV. Ohio Valley Siouan: †Tutelo (TU), †Saponi, †Moniton; †Biloxi (BI), †Ofo (OF)

The first case history deals with a morphophonological phenomenon that has perplexed specialists in the Dakota language for many decades.

3.1. Dakotan ablaut

All Siouan languages for which we have morphological data show active or strong trace evidence of an alternation between stem-final vowels -e and -a. Certain forms in a paradigm will have the one vowel and certain other forms in the paradigm of the same verb, the other vowel. The alternation is rather regular, in most of the languages it most often affects verbs exclusively, and the stem final vowels which alternate are most often, but
not always, unaccented. The problem is that, in Dakota, the best-attested Siouan language (and frequent model for Siouan grammars), certain verbs undergo the process while others do not. In the following examples *make* shows the stem-final vowel unaccented and ablauting, *go* is accented and ablauting, while *spill* is accented and non-ablauting, i.e., invariant.2

<table>
<thead>
<tr>
<th></th>
<th>make</th>
<th>spill</th>
<th>go</th>
</tr>
</thead>
<tbody>
<tr>
<td>verb stem:</td>
<td>káya</td>
<td>kalá</td>
<td>yá</td>
</tr>
<tr>
<td>plural:</td>
<td>káýapi</td>
<td>kalápi</td>
<td>yápi</td>
</tr>
<tr>
<td>negative:</td>
<td>káyéšni</td>
<td>kalášni</td>
<td>yéšni</td>
</tr>
<tr>
<td>habitual:</td>
<td>káyášna</td>
<td>kalášna</td>
<td>yášna</td>
</tr>
<tr>
<td>adverbial:</td>
<td>káyéya</td>
<td>kaláya</td>
<td>yéya</td>
</tr>
<tr>
<td>interrogative:</td>
<td>káyáhe</td>
<td>kaláhe</td>
<td>yáhe</td>
</tr>
<tr>
<td>as if:</td>
<td>káyéšlé</td>
<td>kalášlé</td>
<td>yéšlé</td>
</tr>
<tr>
<td>whenever:</td>
<td>káyákheš</td>
<td>kalákheš</td>
<td>yákheš</td>
</tr>
</tbody>
</table>

So in Dakota, of the many stems that end in -*a*, some are invariant; they always have -*a* and never alternate with any other vowel. Other verbs, like *make* and *go*, alternate -*a* with -*e* preceding certain suffixes or enclitics.3 The replacement of -*a* with -*e* is called ablaut because of the perceived difficulty of specifying any clear phonological conditioning for the alternation. There is nothing in the immediate environment that allows one to predict it. For example, Dakotan verbs followed by the particle -*šna* `habitual’ require the opposite vowel from those followed by -*šni* `negative’, and no appeal to any sort of vowel harmony is productive (Shaw 1980). Syntactic conditioning factors have also been considered and rejected.4 Each verb that ablauts must therefore be marked as an alternating stem. Moreover, the list of verbs that engage in ablaut differs slightly from dialect to dialect in Dakotan, as does the extensive list of particles that seem to trigger it.

While there is an analog of ablaut in virtually every Siouan language, in other Mississippi Valley Siouan languages there is a big difference. In the other languages it is not an underlying -*a* which becomes -*e* conditioned by some inexplicably complex list of lexical environments. Rather it is an underlying -*e* which is replaced by -*a*. And in these languages the environments in which substitution takes place are few, and most often one can see at least remnants of clear phonological conditioning. That the reconstructed final vowel in ablauting verbs was -*e* can be seen in the following cognate sets.
(2) make ripe die go

Proto-Siouan (PS) *káxe *arâte *félére *rêhe
Hidatsa (HI) -kaâxe ôote teê rehe
Dakota (DA) káya latu tâ yâ
Chiwere (CH) gâxe dirje ëlé rê
Omaha-Ponca (OP) gâye niâde tê ôê
Kansa (KS) gâye jâje ëlé yê
Biloxi (BI) atuti té(-dî) dé(-dî)
Ofo (OF) atuti xhê te-
Tutelo (TU) te* alê*-

Assuming from uninflected citation (third person singular) forms that Dakota preserved the original vowel, linguists have tried to discover the phonological cause of ablaut for over fifty years without success. The reason for the lack of success quickly becomes clear the moment comparative evidence enters the picture.

In Quapaw, and other languages of the Dhegiha subgroup, ablaut is found when forms with the underlying, final -e precede any of four postposed grammatical morphemes, ‘plural, negative, imperative’ and as a special case, ‘continuative’. All four of these particles had an initial a-, and it was this vowel that replaced the stem-final -e of the preceding verb: -e + a- yielded a. So it was indeed originally a phonological process and an automatic alternation.

Take for example the Quapaw imperative, which has the form -a. The post-posed -a always replaces a preceding short -e. These examples of imperatives are from Dorsey (1890–94) and the author’s field notes:

(3) ikazo ‘to draw, write’ (4) daxó ‘to break by mouth’
   ikazo-á ‘draw/write!’ zažika daxó-á ‘bite the twig in two!’

(5) stáde ‘to grease something’ (6) dé ‘to go, be going’
   stad-á ‘grease it!’ d-á ‘go!’

The next environment illustrating the origins of ablaut is the plural suffix. In Quapaw it is -awe for women and -awi for men; in Dakota it is analyzed as -pi, but the immediately preceding verb always has the -A grade of ablaut. Dakota pi corresponds regularly to Quapaw wi. Quapaw examples with -e stem verbs (where a of the plural marker remains) and then with other stems (where it is lost) are shown below:
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(7) dé 'to go, s/he goes' dēwe 'they go'
dáwe 'they go'
dathé 'to eat' kdatháwe 'they ate their own'

(8) 
é' to go, s/he goes'

(9) kní 'to sit, camp'
kníwi 'they camped'

The negative morpheme, which has the form *-aži for men and *-aže for women throughout the Dhegiha subgroup shows the same alternation. Examples from Quapaw include:

(10) šike ‘to be bad’ mažá šik-azi ‘pre-war (lit. land bad-not)’ d-že ‘s/he didn’t go’

(11) dě ‘s/he went’ dži ‘s/he went’

(12) kdi ‘he came back’ kdiži ‘he had not come back’
siši ‘s/he is active’ qsišiži ‘I am not active’

The older form of the negative and plural affixes or clitics is easily reconstructed from the following cognate sets, and their initial a- is clear, especially in the Crow, Hidatsa and Dakotan forms that appear as separate words. a is the symbol used by Dakotanists on verb stems that undergo the a-grade of ablaut.

<table>
<thead>
<tr>
<th>(14)</th>
<th>negative</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS</td>
<td>*aši</td>
<td>*ape</td>
</tr>
<tr>
<td>CR</td>
<td></td>
<td>dappaa 'with'</td>
</tr>
<tr>
<td>HI</td>
<td></td>
<td>aapi  'with'</td>
</tr>
<tr>
<td>MA</td>
<td>a-xi</td>
<td></td>
</tr>
<tr>
<td>DA</td>
<td>(-A)-š</td>
<td>(-A)-pi 'pl'</td>
</tr>
<tr>
<td>DA</td>
<td>(-A)-š-ní</td>
<td>apa   'some'</td>
</tr>
<tr>
<td>AS, ST</td>
<td>-ši,</td>
<td>(-A)-bi 'pl'</td>
</tr>
<tr>
<td>CH, WI</td>
<td>š-ką-ñi</td>
<td>-awi  'definite pl'</td>
</tr>
<tr>
<td>OP</td>
<td>-aži</td>
<td>-abe   'pl'</td>
</tr>
<tr>
<td>KS</td>
<td>-aži</td>
<td>-ape   'pl'</td>
</tr>
<tr>
<td>OS</td>
<td>-aži</td>
<td>-awe   'pl'</td>
</tr>
<tr>
<td>QU</td>
<td>-aži</td>
<td></td>
</tr>
<tr>
<td>BI</td>
<td>ači</td>
<td>'Oh, no!'</td>
</tr>
</tbody>
</table>

Let us now examine Dakotan alongside Dhegiha to summarize the parallels. Shaw (1980: 134) lists the Dakotan enclitics which require the –A ablauted form of the verb; among them are those affixes or clitics that have initial a- in Dhegiha.
With these data it becomes clear that Dakota alone among the Siouan languages has reanalyzed the initial a- of these morphemes as part of the preceding verb stem, and that the a was then generalized analogically to the unsuffixed and other forms of the verb. No wonder the environments for ablaut seemed so hard to specify: If one assumes that the basic form of ablauting verbs is the –a form, then the environments one must specify for the -e forms in Dakotan are precisely those in which it did not occur historically! Yet this is what phonologists of Dakota have attempted.

While, historically, the origin of ablaut from reanalysis is clear, in Dakota there are additional complications. After generalization of -a took place within the Dakota -e stems, a significant number of verb stems which had historically ended in (the invariant “real”) etymological -a joined the ablauting verb class. This additional reanalysis was easy, since ablauting and non-ablauting a are homophones. Even some Dakotan verbs ending in nasal -q joined the ablauting class, where they too now alternate with -e. It is these co-opted verbs that tend to ablaut variably in the different Dakotan dialects and that forced morphological restructuring.

This case demonstrates, among other things, that one does not simply incorporate the historical progression into a synchronic grammar. We have known for decades that ordinary sound change often is reflected in synchronic phonology, but massive analogical change often causes a basic reanalysis, and that is what has happened here. So, while comparative linguistics can most often illuminate why things are the way they are in a language, it cannot always provide the best synchronic description. The discovery that analogical, not phonological, change is responsible for the opaque conditioning of so-called ablaut in Dakota does nothing to make the Dakota data any easier to describe or learn. Nevertheless, what comparative Siouan does provide here is understanding and a principled reason why no truly phonological solution to Dakota ablaut can ever be “discovered”. We now know that we can simply stop searching for “the solution” to ablaut and concentrate our efforts elsewhere. No manipulation of feature sets, or gymnastics with rule schemata, markedness or constraint ordering can remake this instance of analogical restructuring into a natural
phonetic process or constraint. Yet those with no historical and comparative training continue to search.

3.2. Biloxi aspirated stops

Another case in which comparative linguistics has clarified synchronic description comes from the Biloxi language, a tongue that has been extinct for many decades. Here the data are the field notes and subsequent publication of James Owen Dorsey, the linguistically talented missionary who recorded the language in the 1890’s, and Mary Haas and Morris Swadesh, who together recorded 54 words of the language in 1934. At issue here is the most basic sort of phonology – the system of stop consonants in Biloxi.

Dorsey wrote two kinds of voiceless stops and occasionally used symbols for voiced stops (these latter virtually all in loanwords). His Biloxi stop and affricate inventory was: fortis \( p, t, tc, k \) and lenis \( p, t, k \). He also wrote the few voiced stops in borrowings. The unmodified series was described by Dorsey as being analogous to the corresponding English sounds in pen, to, catch, and kick. The voiceless series with the subscript diacritic he described as containing "medial" sounds, between voiced and voiceless. (Dorsey 1893b, Dorsey and Swanton 1912: 2). Both sets are well represented in the published Biloxi dictionary and texts.

Haas (1968:80) gave the stop inventory as: \( p, t, \dot{c}, k \) plus two other stops, \( T \) and \( g \). She listed \( d \) among the phonological sonorants where it belongs, as a reflex of *\( r \). She was acutely aware of the problem of Siouan aspiration (see Haas 1969).

There have been several other treatments of Biloxi phonology over the years that have sought to interpret Dorsey's essentially phonetic transcription phonologically. All without exception chose to ignore Dorsey’s subscript diacritic and “normalized” his transcription, erroneously collapsing a phonemic stop distinction.

Voegelin’s (1939: 24) and Wolff’s (1950: 65) stop inventories included only \( p, t, \dot{c}, k \). Both claimed that the multiple Dorsey and Swanton stop series were simply in free variation. Matthews (1958: xiv, 12) gave the same inventory, explaining “... if a comparativist has to work with texts of languages with which he has no personal experience, he will many times have to make purely subjective decisions and arbitrary choices.” Einaudi,
in her 184 page grammar of Biloxi (1976: 16, 22), expressed frustration with “the endless number of cases in which [d] seems to alternate freely with [t] and [ʈ], e.g. topi ~ dopi ~ atopi, ‘new’", and she too reduced Biloxi voiceless stops to the single series. Additional linguists have done the same in unpublished work.

The aspiration contrast has always been a problem in Siouan linguistics. The most popular Dakota orthography in use today does not write it because Stephen Riggs simply could not hear it in 1852 (see Riggs 1893) and published a Dakota Bible without noting it. However, recent field work on several Siouan languages showing that aspiration is phonemic virtually everywhere led this author to reconsider Dorsey’s distinctions in Biloxi (Rankin 1988). If closely related Tutelo and Ofo had an aspiration distinction, which they clearly did (Haas 1969; Rankin 1981, confirmed by Mithun 1983), and Dakota, in an entirely different Siouan subgroup, has the same distinction in cognate vocabulary, then it is only logical to assume that Biloxi also had such a contrast, at least at one time. It was just a matter of finding the evidence.

The evidence comes from two sources: First, there are about six cognate sets in which Dorsey actually transcribed sequences of Cx in Biloxi where other Siouan languages have phonemically aspirated stops. For example,

(16) BI kkipa ~ kipa, DA. akhipha, OS akkihipa, CH akhipha ‘meet’
(17) BI səp’pxi ‘flour’, DA phe, KS phe, CH phe ‘grind’

Second, comparison of Swanton’s Ofo and other Siouan cognate sets that have voiceless stops with Biloxi counterparts. The first of these sources is strongly suggestive; the second is conclusive.

The secret is to examine the data with the known transcriptional strengths of the investigators, Dorsey for Biloxi and Swanton for Ofo, in mind. It develops that the transcription habits of the two men were complementary; Swanton carefully noted aspiration, mentioning explicitly (Dorsey and Swanton 1912: 4) how “very distinct” it was in Ofo. The Ofo vocabulary contains c.125 entries with aspirated stops. Probable Biloxi cognates were found for 76 of these, and in an overwhelming number of cases Biloxi has fortes p, t, tc, k where Ofo shows aspirated stops ph, th, tch, kh. Recall that these Biloxi sounds are the ones likened by Dorsey to English voiceless initial (i.e., phonetically aspirated) stops.
Dorsey’s Biloxi transcription, and in fact his transcription of any of the eight or more Siouan languages he worked with first hand, contains numerous inconsistencies. But when Dorsey was certain a stop was lenis, he wrote the subscript x beneath it in his field notes. When he could not tell whether a stop was lenis or not, he wrote it unmarked. So when we examine stop transcription in any linguistic work by Dorsey, we must bear in mind that, for him, *lenisness was the feature most worthy of note.* Whereas Swanton “listened” for aspiration and marked it, Dorsey “listened” for lenisness (perhaps because it was so un-English) and specifically marked it (in publication with the subscript dot). So when we search for reliability in Dorsey’s Biloxi stop transcription, we should search among the stops modified with the subscript diacritic, not among his unmarked stops. Concentration on Dorsey’s unmodified stops yields the disarray that led Einaudi and the others cited above erroneously to simplify Biloxi transcription arbitrarily.

We find a solid correlation of Swanton’s Ofo aspirates with unmarked Biloxi stops. Then, making use of Dorsey’s demonstrable reliability in perceiving lenisness, we predict that his use of the subscript diacritic will correspond to laxness and lack of aspiration in Ofo and the other Siouan languages. And here again, apart from *p*, which Dorsey did not use except in his inventory, we are rewarded with a secure correlation. Virtually all the marked Biloxi lenes match the weak stop series in Ofo and/or other Siouan languages in the 34 cognate sets we find. A few examples include,

<table>
<thead>
<tr>
<th>Biloxi</th>
<th>Ofo</th>
<th>‘canoe’</th>
<th>Cf. CH báje, KS bajé</th>
</tr>
</thead>
<tbody>
<tr>
<td>nahati’</td>
<td>iya ti</td>
<td>‘canoe’</td>
<td>Cf. CH báje, KS bajé</td>
</tr>
<tr>
<td>niki</td>
<td>niki</td>
<td>‘be none’</td>
<td>Cf. QU njé, DA niđa</td>
</tr>
</tbody>
</table>

The two groups of cognates, based as they are on the complementary transcription habits of Dorsey and Swanton, yield a correlation for the aspiration feature better than ninety percent of the time. This evidence, coupled with those few cases in which Dorsey actually wrote aspiration as Cx, force us to conclude that Biloxi, like the other two attested Ohio Valley Siouan languages, did indeed possess the Siouan aspiration contrast. The
Biloxi stop inventory as revised must then be: aspirates $ph$, $th$, $\check{ch}$, $kh$ and plain $p$, $t$, $\check{c}$, $k$.

3.3. Siouan pronominals and the search for Universal Grammar

Grammar writing and linguistic theory are related but somewhat separate endeavors. The form of a grammar, however, obviously depends a great deal on the linguist’s theory of morphosyntax, even for those who believe devoutly that each language should be described on its own terms. Much is made currently of the notion *Universal Grammar*, often abbreviated simply *UG*. There are competing views on how to discover *UG*. One solution looks cross-linguistically at particular syntactic structures in many languages; the other looks in great depth at a single language. Practitioners of both (though especially the latter) often work with the assumption that historical linguistics plays no part in their work. But the assumption is just as false in the areas of grammatical theory and grammar writing as it was in field linguistics or in phonology.

Siouan languages have complex verb structures with eight or more prefix positions for person-number marking of actor and patient, locatives, instrumentals, dative, benefactive, reflexive, motion returning, incorporated nouns and some other categories. It is not really possible to represent this schema as a template because there is variability in the affix ordering (see Rankin, Boyle, Graczyk and Koontz 2003), but one can give a slightly simplified approximation.
Table 1. Dakotan verb prefix orders: an approximation.

<table>
<thead>
<tr>
<th>1SG &amp; 2SG</th>
<th>DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSO-</td>
<td>1DUAL</td>
</tr>
<tr>
<td>LUTIVE</td>
<td>INCL</td>
</tr>
<tr>
<td><em>(we)</em></td>
<td><em>(we)</em></td>
</tr>
<tr>
<td>3PL</td>
<td><em>(we)</em></td>
</tr>
<tr>
<td><em>(we)</em></td>
<td><em>(we)</em></td>
</tr>
</tbody>
</table>

There is not space to discuss every aspect of this, especially an extensive inventory of enclitics that appear following the verb root that signal the various aspect and modal categories, but a few comments on each order will aid understanding.

1. **Absolutive** *wa*- marks indefinite direct objects and as such is a valence reducer (and a noun-deriving prefix). *Wičha*- ‘3pl patient’ must be ordered before *k*- ‘dual inclusive’.
2. Dual inclusive agent and patient pronominals generally occur preceding locatives but can also occur following them.
3. Locatives also include an abstract ‘instrumentive’ prefix meaning ‘by means of’ but often with unclear semantics or meaning ‘because’. Locatives can double up and co-occur, i.e., recursion is possible, so the table is simplified at this point. The locatives are derivational prefixes.
4. Instrumental prefixes of more recent vintage occur in this slot. ‘By heat’ is really ‘by extreme of temperature or inner force’ and includes cold.
5. 1sg and 2sg pronominals occur in this slot; 3sg is not marked.
6. The prefixes here are (a) dative/benefactive/possessive, (b) vertitive, (c) reflexive, (d) reciprocal. Some of these can co-occur, so the diagram is somewhat simplified here too.
7. Most of the instrumentals occur here. *Yu*- often has a generalized, somewhat abstract, transitivizing meaning and is quite productive. These
prefixes are derivational, so inflection and derivation are
morphotactically mixed.
As noted, *wičha* ‘3pl’ must always precede *uč* ‘1st dual actor/patient’,
and both must precede *ma-*, *ni-*, *wa-*, and *ya-* the 1sg and 2sg pronominals.
Within the latter group, patient precedes actor regardless of person. Now, if
we look, for example, at the order of pronominal prefixes on the Dakotan
verb, especially the discontinuity in the positions of *wičha-*, *uč-*, and 1st and
2nd person prefixes, could this possibly reveal something about universals
of pronoun order; should it be derivable from UG principles? Or should
theoreticians disregard Siouan prefix order and look elsewhere? There is no
obvious solution for practitioners of the “in depth” method. But Siouan
linguistic history answers the question for us handily.
Historically, *wičha-* and *uč-* are grammaticalized from incorporated
nouns, both originally meaning ‘man, person’. The modern Dakotan noun,*
*wičhaša ~ wičhašta* ‘man’, makes this rather clear for the 3rd person plural,
but in the case of *uč-* Dakotan retains no related form. Winnebago and
Chiwere *wqg-* ‘man’ are cognate, but to know this we must appeal to
comparative evidence. The 3rd plural pronominal (and its source-noun) is
found only in Dakotan, while the dual inclusive is pan-Siouan. Proto-
Siouan *wqk-* ‘man, person’ was incorporated and grammaticalized early,
*wičhaša* only much more recently. Once we know this we realize that these
aberrant pronominals occupy the slot in the prefix pattern that such noun
incorporanda held when they became grammaticalized and were frozen in
place. Their synchronic location has nothing to do with universals of
pronominal placement and everything to do with an accident of history,
passed from generation to generation. 6 These data are simply not useful in
any attempt to establish universals of pronoun placement: in fact they are
excellent examples of where not to look for UG. It is also useless to try to
derive their ordering by “stretching” the existing universal principles of any
current, morphosyntactic theory.
Siouan would only be interesting to UG if *wičha-* and/or *uč-* were to
alter their prefix order to join the 1st and 2nd persons. But if we restrict
ourselves to the kind of data available to a young child acquiring his first
language, there is no way to know this. This should suggest a much broader
principle to syntactic theoreticians, namely, that one should try searching
for instantiations of UG precisely among cases of syntactic change, not just
synchronic position. Syntactic position can be passed from generation to
generation by simple imitation – memorization. Morphosyntactic change
affords us the opportunity to see UG asserting itself actively. If universal
grammar exists we should expect it frequently to influence the direction of such change. But without historical and comparative study, proponents of universality and students of language acquisition simply will not know where to look for the influence of UG in their data set(s).

4. Conclusion

In the case of Dakotan ablaut, comparative evidence was absolutely essential in clarifying a phenomenon whose phonological source had eluded Siouan phonologists for decades. While giving us an understanding of what had happened in Dakota, it also informed us about the likelihood of actually discovering further phonological conditioning for ablaut in Dakota and its dialects.

In the case of Biloxi, comparative evidence is absolutely essential in order to proceed to even the most rudimentary sort of grammatical description. Whenever the subscript $p$, $t$, or $k$ is found in any variant transcription of a Biloxi word, the stop should be considered underlyingly lenis. Ignoring this, numerous well-known and well-intentioned linguists have wiped away half the phonological distinctions among the stop consonants.

The affixal position of the morphotactically aberrant Dakotan pronominal prefixes can really only be understood historically; they should neither influence, nor are they influenced by, universal grammar. But a child’s synchronic linguistic knowledge cannot provide this information; only a well-educated, well-rounded linguist suffices here.

Describing each language on its own terms is an ideal that every grammar writer and field linguist should strive towards. But attempting to do it while restricting our data to the sort available to an infant is foolish even (one might say especially) if we are studying acquisition. Comparative data clarify different problems, at different levels (phonological, morphosyntactic, semantic), for different linguists in different ways, but comparison is always useful, and sometimes it is absolutely crucial. Without it, even under the best of circumstances, we work with blinders on.
Notes

1. This is advice that ought to be superfluous throughout most of the world, however: every field linguist should, (as did Hale, Hyman, and others, above) automatically consult available comparative data. Nonetheless, the advice does indeed seem to be necessary. Treatments of historical and comparative linguistics become ever more trivialized in introductory linguistics textbooks, and some students now manage to acquire advanced degrees in linguistics without any exposure to comparative linguistics at all.

2. For convenience I take my examples in this chapter from Lakota, the L-dialect of the Teton Sioux. Other dialects substitute d or n for Lakota l, but are subject to basically the same ablaut rules.

3. There is a third ablaut variant in nasal –į in Dakota preceding certain nasalizing suffixes or clitics (such as irrealis mode); a nasalized e always raises to į, however, so this variant need not concern us further. Ablauting also occurs in reduplicated stems.

4. Dunnigan and Truitner (1975) proposed that Ablaut was conditioned by the class of adjacent syntactic boundary, but the attempt was shown to be a failure by Shaw (1980:135).

5. I have not discussed the matter of Biloxi č here. It is a little more involved, as č corresponds to š in most other Siouan languages. Swanton transcribed both aspirated and unaspirated varieties in Ofo, the aspirated čh appearing originally in accented syllables. Accent shifts and compounding have phonologized the distinction in Ofo over time, and I must assume the same for Biloxi, even though Dorsey did not use the symbol tč in the texts.

6. Typologically, this pattern is not uncommon, of course. Compare modern French use of on ‘one’ as a first plural pronoun, replacing nous in colloquial speech. On is a reflex of Latin homo ‘man, person’, much like the Siouan dual inclusive prefix.

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