points more to areal typology. An interesting idiosyncracy is the lack of plain lateral *ƛ*, which Quileute has filled in, this writer believes by a Grassmann-like dissimilation. Just as in pre-Chimakuan before front vowel labio-velars palatalized to palatal groove obstruent, so did front velars in Chemakum. Quileute has developed vowel length and pitch accent (or, as this writer believes, more a stress placement) and has undergone stress shift to penult.

Quileute, probably the only language in the world to lack surface nasals completely, has turned them into voiced stops; but the witch Daskʼi·ya of folklore spoke in her characterizing style with nasals.

These are powerful correspondences. Chemakum seems to have revalued its plural on the Clallam model. Quileute may have lost detail in the subject pronouns, and perhaps mirrors Tillamook in the feature-inflexion of feminines.

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Chinantec: Phonology

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Chinantecan is a group of about 14 VSO languages within the Otomanguean family, spoken by approximately 90 000 people in northeastern Oaxaca, Mexico, having branched from the Otomanguean tree more than 16 centuries ago. The 14 major languages (where 'language' is defined as a speech community with mutual intelligibility not in excess of 80% with other communities) are Ojitlán, Usila, Tlacoatzintepec, Chiltepec, Sochiapan, Tepetotutla, Tlatepusco, Palantla, Valle Nacional, Ozumacín, Lalana, Lealao, Quiotepec, and Comaltepec. The first seven are northern languages and tend to be more innovative phonologically; the second seven southern languages are more conservative. Syllables are usually CV, with only a few post-vocalic elements, among them a nasal and/or laryngeals. Proto-Chinantec is reconstructed as possessing consonants *p, *t, *k, *k^w, *b, *z, *g, *g^w, *s, *m, *n, *ŋ, *w, *l, *r, and *j. Laryngeals *h and *ʔ could stand alone prevocalically, or could precede any of the voiced consonants. Additional consonant-glide clusters are reconstructed as well. The reconstructed tonal inventory includes *H, *L, *HL, *LH, and *HLH. Vowels included *i, *e, *a, *u, *ɨ, and *ə, as well as several diphthongs. The vowels may be augmented in a bewildering number of ways, however. In modern Comaltepec – the most conservative Chinantecan language – eight vowel qualities (i, e, æ, a, o, ʌ, ɨ, u) may be combined with five tonal qualities (L, M, H, LM, LH), two voice qualities (plain and aspirated), a nasality contrast, as well as a binary length contrast. The cross-classification of these 5 independent systems results in 320 possible nucleus qualities ($8 \times 5 \times 2 \times 2 \times 2$). Thus, a single vowel quality may possess up to 40 contrastive values.

Chinantec roots and words are usually monosyllabic. The rich inflectional system normally involves modification of root vowels, resulting in monosyllabic stems that bear a particularly high informational load. In Comaltepec, for example, a single syllable may contain not only the root but also (in the case of verb complexes) active/stative markers, gender markers (animate/inanimate), transitivity markers (intransitive/transitive/ditransitive), aspect (progressive/intentive/completive), and possibly subject pronoun clitics (two subsyllabic classes). Methods of stem modification involve nasalization, tone, length, phonation augmentation, and sometimes consonant changes. Additionally, certain irregular patterns are marked by ablaut. Due to their inherent inflection, bare verbal roots do not exist as such in Chinantecan. All Chinantecan languages have a large number of verb classes, along with many lexical exceptions. Classes are differentiated by patterns of identity or nonidentity across aspect/person combinations. For example, in the partial paradigm for the verb 'to hit' shown in **Table 1**, some complexes are identical to others, while others are different. Verbs in this class

Table 1 Partial verb paradigm from comaltepec

hit (transitive/inanimate)	1s	1p	2	3
progressive	bah˩	ba˩	bah˩	bah˩
intentive	bah˥	bah˥	bah˥	bah˩
completive	bah˩	bah˥	bah˧˩	bah˩
hit (transitive/animate)				
progressive	bʌːn̰˦	bʌːn̰˦	bʌn̰˦	bʌːn̰˦
intentive	bʌːn̰˥	bʌːn̰˥	bʌn̰˥	bʌːn̰˦
completive	bʌːn̰˥	bʌːn̰˥	bʌːn̰˧˩	bʌːn̰˦

Table 2 Examples of stem inflection in Quiotepec (Robbins, 1968)

kʷoː˦	I give (something)
kʷoː˥	I gave (something)
kʷo˥ʔo˥	thou givest (something)
kʷo˦ʔo˥	thou gavest (something)
kʷo˥ʔo˦	I give (something to someone)
kʷo˥ʔo˦	I gave (something to someone)
kʷo˥ʔo˥	thou givest (something to someone)
kʷo˥ʔo˧˩	thou gavest (something to someone)
kʷoːj̰ɪ n̰nã˦	I give (something animate)
kʷoj̰˥ n̰nã˥	I gave (something animate)
kʷoːj̰ɪ ʔnỹ˥	thou givest (something animate)
kʷoːj̰˦ ʔnỹ˥	thou gavest (something animate)
kʷoːjʔɪ n̰nã˥	I give (something animate to someone)
kʷojʔ˦ n̰nã˥	I gave (something animate to someone)
kʷoːjʔɪ ʔnỹ˥	thou givest, gavest (something animate to someone)

will tend to show a similar pattern of identity and nonidentity across cells, while verbs in other classes show a different pattern.

Table 2 provides examples of stem inflection from Quiotepec (Robbins, 1968).

In at least some Chinantecan languages, the verb may be prefixed by a subject agreement marker for intransitive verbs, or by an object agreement marker for transitive verbs. Additional verbal prefixes include a negation marker, and tense and aspect markers (imperfect, past, hodiernal past, perfect, past imperfect, etc.). Unlike verbs, nouns do not typically display internal inflection, instead showing stability across inflectional augmentation. In Tepetotutla, for example, noun roots may concatenate with a quantifier, a gender-inflected numeral, a classifier, etc. In Lealao, constituents of the noun phrase may include a quantifier, the head, a modifier, a possessor, and a deictic marker, in that order, as well as a classifier prefix in some cases.

Stem complexes are obligatorily stressed. Posttonic and pretonic syllables are not stressed. Stressed syllables may possess greater phonological and morphological complexity than do unstressed syllables. In Sochiapan, unstressed syllables differ from stressed ones in displaying a more limited distribution of phonemes. Posttonic syllables in Palantla consist of a small list of words that do not contrast for tonal features. Pretonic syllables, while maintaining tonal contrasts, do not possess postvocalic elements, except in very careful speech. In Comaltepec, posttonic syllables consist of a limited set of clitics, person-of-subject inflectors (in verbs), and possessors (in nouns). Pretonic syllables consist of only several verbal prefixes and a few proclitics, and possess a smaller inventory of tone values. These syllables are not a site for further inflection, and thus do not possess morphological complexity. In Quiotepec, too, stress falls on the major lexical classes (verbs, nouns, etc.); most pretonic syllables consist of inflectional material. Pretonic syllables only occur with single tones, never with tonal contours. In at least several Chinantecan languages, the vocalism of posttonic syllables is harmonically determined by the stem vowel. Tone may spread from stem to suffix as well.

Regarding Chinantecan stress, several languages are traditionally characterized as possessing either 'ballistic' stress or 'controlled' stress on stem syllables. In Palantla, Tepetotutla, Sochiapan, and Comaltepec, ballistic syllables have been characterized by an initial surge and rapid decay of intensity, and a loss of voicing of postvocalic elements; controlled syllables exhibit no such initial surge of intensity, displaying a more evenly controlled decrease of intensity, and a lack of postvocalic devoicing. Ballistic syllables tend to be shorter in duration than controlled syllables, and may possess a smaller inventory of tonal patterns. In at least several Chinantecan languages, ballistic syllables cross-classify with almost every other syllable type. Both oral and nasal vowels, both long and short vowels, preaspirated and preglottalized onsets and plain onsets, open and checked syllables, and nasally closed syllables, may all possess ballistic stress. Ballistic stress interacts most significantly with tone, tending to raise high tones and lower low tones. In Lalana, ballistic stress (considered postvocalic h in some analyses) may not occur with glottal checking, and may occur with only H, L, and HL tones, whereas controlled syllables reportedly also possess MH, LH, and HLH, and may be checked. In Lealao, only level tones (L, M, H, VH) may occur with ballistic stress, whereas controlled syllables may also occur with tonal contours (LM, LH). In Comaltepec, ballistic syllables may occur with almost any tonal pattern.

The ballistic stress found in some Chinantec languages corresponds to tonal lowering in Ojitlán and Usila. Quiotepec is variously characterized as possessing ballistic accent or raised tones in these same contexts, often accompanied by postvocalic aspiration. The Chinantecan ballistic syllable

Table 3 Tone sandhi in Comaltepec

Non-sandhi context	*Sandhi context*	*Gloss*
to:˩	kwa˧ to:˥˩	give a banana
ŋ̟ih˩	kwa˧ ŋ̟ih˥˩	give a chayote
ku:˦	kwa˧ ku:˥˩	give money
hi˦	mi:˦ hi˥˨	I ask for a book
moh?˦	mi:˦ moh?˥˨	I ask for squash

corresponds to postvocalic aspiration in related Mixtecan and Otopamean languages, to prevocalic aspiration in related Popolocan languages, and to glottally 'interrupted' (CV?V) syllables in the Chatino, Zapotec, and Tlapanec languages. Chinantecan ballistic syllables may derive from Proto-Otomanguean *CVh syllables (which may or may not have been phonetically realized as interrupted vowels). Indeed, recent phonetic and phonological investigations have recharacterized the ballistic phenomenon as largely laryngeally-based, involving postvocalic aspiration.

Segmental sandhi is rather limited in Chinantecan, although tone sandhi is widespread, being both phonologically and morphologically conditioned. The best-studied tone sandhi system is that of Comaltepec. Here, LH tones spread their H component on to a following vowel. Furthermore, M tones on unchecked controlled syllables (deriving from Proto-Chinantec H) trigger the presence of an H tone on the following syllable. Examples are shown in **Table 3**.

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Chinese

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The State of the Art

If language is ultimately seated in the minds of individual speakers, as some linguists claim, then Chinese can be described as a collection of over 1.3 billion idiolects scattered around the world, in Mainland China, Taiwan, Hong Kong, and Singapore in particular. If on the other hand language is held to be the property of a speech community, as many linguists believe, Chinese is then an assemblage of numerous 'dialects' spreading over different continents and across time zones, some of which are so different that their speakers cannot even communicate with one another. In spite of the vast diversity, and even some mutual oral unintelligibility, all literate speakers can overcome the barrier imposed by the oral unintelligibility via reading (not aloud!) and writing. The writing script partly enables the users to transcend the differences of idiolects and dialects, and bridges the past and the present.

In this article, Chinese will be discussed within its two natural divisions: spoken Chinese and written Chinese. The former includes (1) the classification of dialects and their geographic and demographic distributions; (2) Putonghua as a lingua franca; and (3) a brief discussion plus sound illustrations of three major dialects. The latter includes (1) the writing script, and (2) the historical evolution of written Chinese from archaic Chinese to modern Chinese.