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The joys and challenges of contact effects without substance

Abstract: A multitude of factors can shape the effects of language contact. The more we know about circumstances surrounding contact situations the better we can identify mechanisms by which features of one language can influence another. Where substance has been replicated, and there is detailed documentation of social and cultural characteristics over a long span of time, along with deep philological records, the mechanisms may be easier to discern. But for many languages such knowledge is nonexistent. Here some mechanisms are explored by which structure was apparently transferred without substance in the development of tense categories in languages of Northern California.

Keywords: category transfer, contact, linguistic areas, subjectivity, tense

1 Introduction

As shown richly in work by Thomas Stolz and others, the power of contact in shaping language has become ever clearer as we have learned more about more languages (Stolz 2002, 2005, 2006, 2008, 2010, 2012, 2015, and more). The majority of the world's citizens are multilingual. They may command their languages equally or not, they may use them in different contexts or not, they may accord them different prestige or not, and they may see them as markers of identity or not. The multilingualism may be relatively uniform across all members of a group, or different languages may be primary in different parts of it. The language under investigation may have been the first language of its speakers over a long period of time, or the result of recent language shift. In some cultures, code-switching, language mixing, and borrowing are the norm or even admired, while in others, efforts are made to keep the languages apart. In all cases, the presence of multiple languages within a single brain can affect each language to at least some degree.

Identifying contact effects on a language can be facilitated if the history, circumstances, and nature of the contact are known. Identifying transferred matter, particularly vocabulary, can be more straightforward than identifying affected

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structure. But contact effects can sometimes be discerned even without such advantages. Here such a situation is illustrated in languages indigenous to the Northern California area of North America.

2 Indigenous California

What is now California is a well-known language area, but it shows considerable genealogical diversity: it is home to around twenty distinct indigenous genetic groups. Some of these are families that also include languages spoken outside the area as well, many are families with just few members, and some consist of just a single language isolate. Northern California is the center of a particularly strong cultural and linguistic area. It is not delimited by modern state boundaries: areal relations extend in all directions, and within it there are a number of sub-areas. The locations of the languages can be seen in Figure 1.

Archaeological evidence suggests that Yukians (Yuki and Wappo) entered the area around 9500–9000 B.C., then Pomoans and the Karuk, Chimariko, Shasta, Yana, Atsugewi, Achumawi, and Washo several thousand years later, followed by Wintun, Maidun, and Klamath-Modoc peoples several thousand years after that (Golla 2011). First contacts with Europeans were not until the late eighteenth century for some, and the mid or late nineteenth century for others. Among the earliest significant ethnographic descriptions are those in Powers (1877), followed by more detailed study at the beginning of the twentieth century under Kroeber, including his major 1925 *Handbook of the Indians of California*. There is thus little detailed information about social relations and interactions within and among groups over the millennia during which the languages took their modern shapes, crucial for understanding the nature of language contact in depth.

So far as can be known, most of the communities have been relatively small throughout their histories. Describing the social and political organization of California groups, Heizer (1978: 5) mentions the term *tribelet*.

The word was coined by Kroeber to indicate the basic, autonomous, self-governing, and independent sociopolitical group found all over the state. The term *village community* has also been used in the same sense. The *tribelet* consisted of the aggregation of people living in two or more (often up to a dozen) separate villages, acknowledging the leadership of a chief who usually resided in the largest and most important of the several settlements. The data on number and nature of the *tribelets* of some larger tribes (that is, linguistic units) is known with fair completeness. The Pomo, for example, were divided into 34 *tribelets* living on 3,370 square miles of land and numbering altogether about 8,000 persons (Steward 1943). The Achumawi were divided into 11 *tribelets* and their total numbers are calculated at 3,000 persons, their territory comprising about 6,000 square miles of plateau land (Kniffen 1928).



Figure 1: Indigenous Languages of California. Heizer (1978: ix).

The small sizes of communities resulted in traditions of exogamy, patrilocality, and multilingualism (Harold et al. 2016). But there are also traditions of place-based language use: one speaks the language where one is, without mixing. There has accordingly been relatively little lexical borrowing, apart from the incorporation of terms from Spanish for items brought in with the recent arrival of missionaries. Yet a striking number of structural features are shared across the area among unrelated languages.

In the absence of deep philological records, we can only posit hypotheses about the mechanisms by which parallel patterns developed, but the results are suggestive. Speakers accustomed to specifying certain distinctions in one of their languages may, often unconsciously, replicate the frequency of those distinctions in another language, using material from that language. Over a certain period of time, high-frequency distinctions can become routinized and even ultimately result in parallel morphological structures between languages in contact, though the markers of these distinctions will be different in form in the two languages. Effects of this process are illustrated here with tense systems.

3 Graded past tense

A number of languages indigenous to Northern California distinguish multiple past tenses.

3.1 Shasta

Shasta is a small set of very closely related languages or dialects once spoken in the northernmost part of California and into Oregon. The last speaker of any Shastan variety, Clara Wicks, died in 1978. Apart from wordlists, there is little documentation of any except Shasta proper, described by Silver (1966). Shasta declarative verbs are inflected with prefixes that mark mode, subject person and number, and tense. Silver distinguishes present, near past, and distant past tenses. She characterizes them as follows.

- The **present tense** describes an action or state of being at the time of speech. It is also used when talking about immediately past actions or states if the context for them is still in force at the time of speech. (Silver 1966: 125)
- The **near past** is used in conversation and anecdote to describe events relatively recent in time from the speaker's point of view; for example, in an anecdote involving himself, SS [speaker Sargeant Sambo] might use the near past to refer to an event that happened any time from the day before to fifty or sixty years ago. (Silver 1966: 127)
- The **distant past** prefixes are usitative or simply markers of distant past time . . . <p> is distant past inferential. <t'w>, which has a variant <tw>, is distant past reportative. (Silver 1966: 129)

The past tense markers also distinguish evidentiality.

- <k'w> is near past inferential. <t> 'reportative' is used when describing events of which the speaker has no personal knowledge; however, there is a tendency to substitute <t> for the other forms in the near past and use it simply as a past time marker. (Silver 1966: 128)
- <t'w> and <t> are used in the narration of myths. They are also used in conversation and anecdote, along with the other near past and distant past forms. (Silver 1966: 129)

An important variable in such tense distinctions is subjectivity. Silver notes that speaker Sergeant Sambo used the near past for events that happened any time from

the day before to 50–60 years before. He was already 105 years old when he began working with her in 1957. It is also significant that the distant past markers are fused with inferential and reportative evidentials.

3.2 Chimariko

Immediately to the south of the Shasta is Chimariko. Chimariko is an isolate, last spoken in 1950. Fieldnotes from various researchers have been assembled in a grammar by Jany (2009). Like many other languages of the area it shows a rich tense/aspect system, though, as noted by Jany, it is not always easy to distinguish the two kinds of distinctions, due to the nature of the data. Among the verb suffixes are those in (1). Jany notes (2009: 104) that both *-neq* and *-nip* encode events that happened in the past, and both are often accompanied by a temporal adverb, *šur* ‘formerly’, *šuraku* ‘already’, or *moʔa* ‘yesterday’. Of significance here is the distinction between basic and remote (‘ancient’) pasts.

- (1) Chimariko past tenses (Jany 2009: 103–104)
- ak/-k* Past (completed action)
 - neq* Past (formerly)
 - nip* Past (‘already’), completive
 - taʔ* Ancient Past, perfective (Remote)

Chimariko thus distinguishes basic past and remote past tenses, but the forms do not resemble those of its immediate neighbor Shasta.

3.3 Achumawi and Atsugewi

Directly to the east of Shasta is Achumawi. Achumawi was earlier linked with its southern neighbor Atsugewi in a family termed Palaihnihan, though whether they constitute a family of their own remains under discussion (Nevin 2019). Achumawi was spoken in small communities along the Pit River. Nevin (p.c.) notes that verbs without overt tense markers are atemporal, used for both present and immediate past situations. A Recent Past is formed with a suffix *-íní*, and a Remote Past, used in myths, is formed with a prefix *ck-*. It also contains a Pluperfect suffix *-o’oy*, which indicates a time prior to the main time under discussion.

(2) Achumawi Pluperfect (Bruce Nevin, p.c.)

- a. *Qá cuucé tikusqáátó'oy púk ckwammíci.*
'The comb that she **had** set up plop fell down.'
- b. *Q'ééwáté ís tiikááco'oyí twiyí qá itt^{hú} íssílóo.*
'My ancestors **used to** live there.'

In Atsugewi, directly to the south of Achumawi, the basic finite verb is used for both present and immediate past. There is also a Past marker *-n-* or *-i?n-*, (de Angulo 1930: 96, Leonard Talmy, p.c.), which shows up in folk tales, perhaps cognate with the Achumawi Remote Past.

Both Achumawi and Atsugewi thus distinguish Recent and Remote Past tenses, though the forms of the markers resemble those of neither Shasta nor Chimariko.

3.4 Yana

Immediately to the south of Achumawi and the west of Atsugewi is the isolate Yana, with three dialects. So far as is known, the language was last spoken nearly a century ago. Like Shasta, Chimariko, Achumawi, and Atsugewi, Yana distinguishes basic and remote past tenses. The Yana markers are also associated with evidentiality as in the unrelated but neighboring Shasta. Among the Northern Yana verb suffixes Sapir lists those in (3).

(3) Northern Yana past tense suffixes (Sapir 1922: 230, 232)

- ha* 'past, implies personal knowledge on part of speaker'
- ?ni, -n?* 'remote past' (generally prefixed to other tense-modal elements)
- n?ha-* 'quite some time ago, on personal knowledge of speaker'
- n?ni-wara* 'remote non-quotative past'
- n?ti* 'long ago, as they say' (used in myths)
- n?t'i-wara* 'remote quotative past'

(The element *-wara* is apparently a Perfective.)

3.5 The periphery: Karuk and Yurok

Languages spoken to the west of Shasta show past tense distinctions, but these are somewhat less grammaticalized, expressed as enclitics and particles.

Immediately to the west of Shasta is the isolate Karuk. Karuk contains just one past tense suffix *-at*, but additional markers have been added to it to form enclitics for further distinctions.

(4) Karuk pasts (Bright 1957: 125)

-at Past

=ahe:n Anterior tense (Immediate)

designates time previous to that indicated by *-at* Past Tense. In narratives where tenseless forms predominate, however, anterior forms, like past tense forms, may be used in reporting an event immediately past. In either case, *-ahe:n* may be translated by the English pluperfect construction.

=anik Ancient tense (Remote)

designates a time more remote than that indicated by the past or anterior morpheme. Forms with this postfix [enclitic] are frequently used to begin stories, which are then continued with tenseless forms.

Distinctions of time are also indicated by two particles.

?ip(a) ‘near past’ is used principally in conjunction with the past tense suffix *-at*, the meaning of which it duplicates in part. It contrasts, however, with *mit(a)* ‘remote past’ which is also used with past tense verb forms. (Bright 1957: 126)

Yurok territory is further away from Shasta, to the west of Karuk. Robins (1958: 32) reports: “There are no formally differentiated tenses in the Yurok verb. Verb forms of any of the paradigms, except the imperative, may be interpreted as referring to past, present, or future time, according to the linguistic and non-linguistic contexts in which they occur.” There is, however, a substantial set of preverbal particles, many of which Robins translates with tense and aspect-like meanings. In addition to several simply glossed as ‘past time’ is *?ockic* ‘time just past’, presumably an immediate or recent past.

3.6 Elaboration: Washo

Washo territory is further to the south and east, straddling the modern boundary between California and Nevada, but it is considered part of the California area linguistically. Genealogically it is an isolate, not demonstrably related to any other language. In his 1964 grammar, Jacobsen describes a full set of past tense categories.

(5) Washo pasts

-leg Recent Past

used to place the time of an event at an earlier point on the same day, or during the preceding night. (Jacobsen 1964: 631)

The adverbial expressions of time that have been found associated with verbs bearing this suffix include *watlí:ʔiŋ* ‘early in the morning’, *téšciw watlí:* ‘just this morning’, and *lélim* ‘at night, last night’. (Jacobsen 1964: 632)

-ay? Intermediate Past

indicates a time in the past earlier than the same day but not in the extremely distant past. (Jacobsen 1964: 636)

-áyt'i? Pluperfect

places the time of an event prior to that of another event in the event prior to that of another event in the past. (Jacobsen 1964: 636)

-gul Remembered Past

places the time of an event in the distant past but still within the lifetime of the speaker. (Jacobsen 1964: 636)

-lul Distant Past

places the time of an event in the distant past, before the lifetime of the speaker. (Jacobsen 1964: 636)

-elem Distant Tense

attested only in material from RJ and HP [speakers Roy James and Bertha Holbrook], occurs always followed by one of the three prefinal suffixes expressing past or future tenses: *-ay?* Intermediate Past, *-lul* Distant Past, or *-gab* Distant Future. It has the meaning of making the time of the action more distant, either in the past or in the future, than it would otherwise be. (Jacobsen 1964: 637)

3.7 Maidun

To the west is Maidun (or Maiduan) territory. The Maidun family consists of four main languages: Nisenan, Konkow (= Northwestern Maidu), Chico, and Maidu (= Northeastern Maidu = Mountain Maidu).

Nisenan is directly to the west of Washo. Anderson (2024) discusses the past tense suffixes of Southern Hill Nisenan and their uses documented by Uldall in unpublished fieldnotes (1950) and published oral narratives (Uldall and Shipley 1966). There are three past tense suffixes.

(6) Nisenan pasts (Anderson 2024)

-’as(i) Immediate/Recent Past

Most “recent”: Seconds prior to the reference time

Most “distant”: During the preceding night

-’a Intermediate Past

Most “recent”: 1–2 days prior to the reference time

Most “distant”: 6 months prior to the reference time

-t’o Distant Past

Most “recent”: 1–2 years prior to the reference time

Most “distant”: Creation Time

Anderson notes that *-t’o* Distant Past does not occur in sentence elicitation, because of the nature of the task, which consisted of asking speakers to translate English past tense sentences without additional context.

To the northeast of Nisenan is the Maidun language Konkow. Ultan (1967) distinguishes several past tense markers, but notes that identifying their precise meanings is challenging.

(7) Konkow pasts

-ma Past

In most examples, past tense seems to fit the situations but there are apparent exceptions, some of which are certainly due to deficiencies in translation, others perhaps not so. Furthermore, on the basis of the present analysis: 1) there are a few constructions which must represent tautologies, i.e. *ma* occurs twice or with *wono* ‘remote past’ in the same string, 2) *ma* must be accorded triple privilege of occurrence as a thematic suffix, a participle, and as an inflectional suffix. (Ultan 1967: 99)

-in Recent Past

Its primary function is to identify a non-finite verb, yet where it is necessary to make explicit a distinction in tense (between past and non-past), between two parallel or otherwise identical constructions, *-in* serves as a contrastive non-past (or recent) to *ma*. Aside from such situations, *-in* can and does occur with themes in any tense: past, remote past, future, and unmarked or recent. (Ultan 1967: 119)

-wono Remote Past

refers to situations which occurred at some time in the past which is felt to be remote by the speaker. This may have been in an absolute sense such as for an event which transpired before the speaker was born, or in a relative sense associated with an occurrence which is beyond the speaker’s range of memory. (Ultan 1967: 96–97)

Konkow is also directly to the south of Yana.

To the north of Nisenan and Konkow is Maidu. Shipley (1964) did not find the past distinctions seen in Nisenan and Konkow within the Maidu verb.

The present-past is used:

1. To describe a recently completed punctual action, but only if the context in which that action occurred persists at the time of speech. It is never used to describe events from the previous day; the passing of a night is conceived as an inevitable change of the context.
2. To describe some punctual action which is taking place at the time of speech.
3. To express a state of being at the time of speech.
4. To express the idea of present static location (Shipley 1964: 46–47).

There is, however, a periphrastic construction for remote pasts. *kyʔy'm* + the past punctual of *ka . . .* 'be' is used for remote past punctual time within the speaker's lifetime, for example,

- (8) Maidu (Shipley 1964: 53–54)

a. *Tibím kylém p'y'm maʔá.*

'Long ago I was a little girl.'

b. *Nèkbék'ym béj, ník ʔejáj kyʔy'm maʔám.*

Thus did my father speak to me **that one time long ago.**'

No past tenses can thus be reconstructed for Proto-Maiduan. The fact that the Maidu remote past construction is a full word suggests that the distinction entered the language later than it did in Nisenan, spoken in an area adjacent to that of Washo, and in Konkow, directly to the north of Nisenan.

3.8 Wintun

West of the Maidun languages are those of the Wintun (Wintuan) family. Wintun consists of two major divisions, Northern Wintun (Wintu and Nomlaki), and Southern Wintun (Patwin and Southern Patwin). In her 2006 reconstruction of Proto-Wintun, Shepherd found no past tense distinctions. In his 1984 grammar of Wintu proper, Pitkin lists no past tense distinctions. But in his 2015 grammar of Patwin, Lawyer reports that Patwin distinguishes two past tense suffixes.

(9) Patwin pasts

-sa Past Declarative

is attested in all Patwin dialects, and it signifies the past tense. . . . It is in semantic contrast with the remote past tense. (Lawyer 2015: 225)

-n(i) Remote Past

The prefinal suffix *-ni* Remote Past marks an event occurring in the remote past. It selects the hortative stem of the verb to which it attaches. In Hill Patwin, *-ni* is always followed by one additional inflectional suffix – either *-sa* PAST or *-ta-*, *-te-* Q.PAST [interrogative past]. (Lawyer 2015: 231)

Lawyer (2015: 232) further comments on variation in use of the distinction.

The temporal boundary between events marked with past *-sa* and events marked with remote past *-ni* varies by speaker, and maybe by dialect. Hill Patwin speaker Nelson Lowell uses *tilansa* (hila-n-sa) ‘shot (RPAST)’ for an event happening one year earlier; and *tila:sa* (hila-sa) ‘shot (PAST)’ for an event happening one day, one week, or one month earlier (Ultan notebook 6.41). Hill Patwin speaker Daisy Lorenzo describes a similar division, using the remote past for events occurring a ‘year, 2 years, or 2–3 months’ in the past (Ultan notebook 6.46). On the other hand, River Patwin speaker Sarah Gonzales uses *wmni* (win-ni) ‘saw (RPAST)’ for an event happening w or 3 days earlier; and *wínsa* (wini-sa) ‘saw (PAST)’ for an event happening one day earlier (Ultan notebook 7.38).

He further notes differences across the languages.

A cognate of *-ni* ‘RPAST’ is attested in South Patwin, but is a general past tense marker rather than a remote past tense marker . . . Shepherd (2005) does not mention the suffix *-ni*, and no obvious Wintu cognate presents itself. (Lawyer 2015: 232)

Southern Patwin has its own distinctions, however.

The suffix *-t* apparently marks the remote past in Southern Patwin, as in *Pisú-t* (pisu-t) ‘created’ and *Téhomat* (te*homa-t) ‘gave birth’, in the contexts of the Christian creation and the birth of Jesus, respectively . . .

Another Southern Patwin form denoting remote past tense is *-net*, probably a combination of the past tense suffixes *-ni* and *-t*. This suffix occurs three times in Vallejo’s translation of the Apostle’s Creed, referring to activities carried out in the remote past. (Lawyer 2015: 233)

Patwin and Southern Patwin territories, as noted, directly border Nisenan territory.

3.9 Utian

Directly to the south of Nisenan and Southern Patwin are the Sierra Miwok languages, members of the Miwok-Costanoan or Utian family. The northernmost of these, Northern Sierra Miwok, also contains multiple past tense verb suffixes.

(10) Northern Sierra Miwok: (Callaghan 1987)

<i>-ke-</i> ~ <i>-k:e-</i>	Past
<i>-ma-</i>	Immediate Past
<i>-ka-</i>	Recent Past
<i>-se-s:y-</i>	Remote Past

The Remote Past consists of two elements. The first, *-se-*, is a nominalizer. Callaghan notes (1987: 196) that forms with *-se-s:y-* appear with the possessive pronominal series. This suggests that the Remote Past is a later formation than the other pasts.

To the south of Northern Sierra Miwok is Central Sierra Miwok, described by Freeland (1951). The Present tense is based on the verb stem with no further marking, and Perfects are based on the verb stem with a suffix *-(n)ak*. Freeland (1951: 62) reports that “[i]n ordinary usage, both the present and the perfect apply to time of the present day, the present referring to incompleting action, the perfect to completed action”. But other tenses are based on nominal stems, usually agentive nominalizations.

(11) Central Sierra Miwok (Freeland 1951 60–61, 72; Broadbent 1964)

<i>-e-</i> , <i>-š:e-</i> , <i>-k'e-</i>	Recent Past
<i>-š:ĩ</i> :-	Distant Past (East Central, Southern Sierra Miwok)

Freeland notes that the three Recent Past forms alternate according to the preceding phonological context. She characterizes their meanings as follows.

When it is used predicatively, the recent past tense refers to events before the present day, from the day preceding to as far removed as several months or a year . . .

When it is used in subordinate constructions, the recent past tense does not necessarily refer to action of the previous day, or more remote, but is used for any action anterior in time to that of the main verb. This is an extremely important use of this tense, and most of the examples of the recent past in the text (since so little of the text deals with events in recent past time) are subordinate forms. (Freeland 1951: 66)

The Distant Past marker is a nominal suffix ‘past, erstwhile’: *hayá:po* ‘chief’, *hayá:po-š:u* ‘ex-chief’; *šiyéŋ-tu-* ‘comer from seeing’; *šiyéŋ-tu-šu-* ‘past comer from seeing’ (Freeland 1951: 72).

To the west of Northern Sierra Miwok is Plains Miwok. For this language, Callaghan (1984) lists just a two-way distinction. (The symbol H indicates ‘length when canonically permissible’). The Plains Recent Past suffix matches the Immediate Past of Northern Sierra Miwok.

(12) Plains Miwok (Callaghan 1984)

<i>-Htu ~ -HtY-</i>	Past
<i>-ma-</i>	Recent Past

Callaghan (1984: 142) does not list a Plains counterpart to the Northern Sierra Miwok Recent Past *-ka-*, though she does list a noun suffix *-s:y-* which she tentatively glosses ‘former?’.

Still further to the west, Lake Miwok contains no tense affixes. Temporal particles usually occur at the beginning of clauses, immediately after introductory particles, or at the end of clauses, before any clause markers. Callaghan lists a number of particles with tense and aspect meanings.

(13) Lake Miwok (Callaghan 1963: 247)

<i>há(a)li (ko)</i>	‘still, yet’
<i>hójot, hojot</i>	‘quite a while ago’
<i>húke, huke</i>	‘a while ago’
<i>jóllejole</i>	‘often’
<i>káša</i>	‘still’
<i>keláckelac</i>	‘long, long go’
<i>máahuke</i>	‘a while ago’
<i>máate</i>	‘soon, until’
<i>maháli</i>	‘still’
<i>née</i>	‘now’
<i>nĩh</i>	‘now’
<i>niháli ko</i>	‘still’

Thus no past tense suffixes can be reconstructed for Proto-Miwok-Costanoan, Proto-Miwok, or even Proto-Sierra-Miwok. The languages closest to Nisenan, that is, Plains, Northern, Central, and Southern Miwok have developed multiple past tense suffixes, in some cases with still clear etymologies, while the more distant Lake Miwok has not.

3.10 Yokuts

To the south and east of the Sierra Miwok are the Yokuts languages. Graded past tenses have been identified in just one of these: Chukchansi. In his 1968 grammar, Collord lists basic past, recent past, and remote past suffixes.

(14) Chukchansi past tenses

-it Simple Past

indicates that the event has happened very recently or is about to be completed. In a narration it may mark events which are recent in comparison to an action by the more remote past, *-t^ha?*. . . . The simple past can also be used very generally for any past action that is not simply an event (where *-t^ha?* or *-hil* would be used). (Collord 1968: 39)

-hil Aorist (Recent Past)

marks an event as having occurred recently, but usually not more than a few days ago. It is used, for example, with *lakyiw* ‘yesterday’. An event of the past few moments is indicated by the simple past tense *-it^h*, and an event of more than a few hours or days past is referred to by the use of the past perfective *-t^ha?*. These three tenses are, hence, relative to each other. Their use depends on whether the speaker thinks of the event as more remote or more immediate. (Collord 1968: 40)

-t^ha? Past Perfective (Remote Past)

marks action as remote in past time and is the typical tense marker in narratives both formal and informal. (Collord 1968: 40)

Such distinctions do not appear in other Yokuts languages, as reported by Newman (1944: 121–122).

In its semantic pattern the category of tense in Yokuts is remarkably simple. There are only two fundamental tenses: the aorist, referring to a present or past time, and the future . . .

In a strictly semantic sense, the aorist suffix denotes present or past time. But even its wide semantic application does not fully suggest the almost unlimited scope of this suffix in actual usage, for it is employed about as frequently as all the other verbal suffixes of Yokuts combined. Undefined as to voice, aspect, or mode, and covering a wide temporal reference, the aorist serves as a kind of neutral (but non-future) suffix, fulfilling the formal requirement of completing the verb with a final suffix but acting as a relatively indefinite and ambiguous semantic element.

The cognate of the general Yokuts Aorist *-hin* in Chukchansi is the Recent Past *-hil*.

It should be noted that Chukchansi is located in a small area directly adjacent to Sierra Miwok, to its southeast, visible in Figure 1 as the small point of land between Miwok and Monache.

4 Implications and challenges

The languages indigenous to California show tremendous genealogical diversity, with around twenty distinct families and isolates. During the 20th century, efforts were made to uncover deeper relations among them, resulting in proposals of two major stocks: Hokan, consisting of Karuk, Shastan, Palaihnihan, Yana, Chimariko, Pomoan, Washo, Esselen, Salinan, Yuman, Cochimí, and Seri on the one hand, and Penutian, consisting of Takelma, Wintuan, Klamath-Modoc, Maiduan, Yokuts, Costanoan, and Miwok on the other, in addition to a few other recognized families including Algic, Na-Dene (Athabaskan), Uto-Aztecan, perhaps Yukian (Yuki-Wappo), and Chumash. The Hokan and Penutian proposals are not now generally accepted: perceived similarities were generally structural rather than substantive.

It is striking that groups of unrelated but neighboring languages show parallel elaboration of past tense categories. In the north, neighboring languages Shasta, Chimariko, Achumawi, Atsugewi, Yana, and Karuk all distinguish basic pasts from remote pasts. At the periphery of this area, Karuk has a basic past tense verb suffix, but has added Immediate and Remote categories as enclitics. Still further away, Yurok has no tense morphology, but it does have a rich array of tense/aspect particles. None of the forms of these markers are similar in form, however.

To the east, the isolate Washo contains a rich set of past tense markers, distinguishing Recent, Intermediate, Remembered, and Distant pasts. Its immediate neighbor to the west, the Maiduan language Nisenan, distinguishes Immediate or Recent, Intermediate, and Distant pasts, and its relative Konkow, another Maidun language immediately to the north of Nisenan but not adjacent to Washo, distinguishes a basic Past, Recent Past, and Remote Past. Their relative Maidu, to the north, makes no such distinctions at all. Immediately to the west of Nisenan, the Wintun languages Patwin and Southern Patwin distinguish a basic Past and Remote Past, but the other members of the Wintun family do not. Directly to the south of Nisenan, Northern Sierra Miwok distinguishes a basic Past, Immediate Past, Recent Past, and Remote Past. Both its sister language immediately to the west, Plains Miwok, and its sister to the south, Central Sierra Miwok, distinguish basic and Recent Past, but here the Recent Past constructions are based on nominal stems with a nominal past suffix 'former'. A related language still further to the west, Lake Miwok, has no past tense morphology at all; time is indicated just with particles. South of the Sierra Miwok languages are languages of the Yokuts family. Just one of these languages, Chukchansi, distinguishes Simple, Recent, and Remote Past. Chukchansi territory is immediately adjacent to the Miwok territory. Here, too, similar distinctions are made throughout the area, but the forms of the markers do not match.

At the peripheries of these areas, the inventories are smaller, and beyond those no distinctions are found. On the basis of the current locations of the communi-

ties it is not entirely clear whether we might be dealing with one general contact area in Northern California, or two, the first perhaps encompassing Shasta, Chimariko, Achumawi, Atsugewi, and Yana, and the second Washo, Nisenan, Konkow, Patwin, Southern Patwin, Northern Sierra Miwok, Central Sierra Plains Miwok, and Chukchansi Yokuts. It should be noted that this second area contains a mixture of languages once hypothesized to be part of a “Hokan” stock (Washo, the Miwok languages) and languages once hypothesized to be part of a “Penutian” stock (the Maidun languages Nisenan and Konkow, the Wintun languages Patwin and Southern Patwin, and Chukchansi Yokuts). Konkow territory actually borders Yana territory to the north and Nisenan territory to the south.

The distribution of the distinctions strongly suggests contact effects, in which semantic distinctions were replicated across languages without substance. A reasonable pathway of development can be hypothesized. Where language mixing is traditionally avoided, bilingual speakers accustomed to making certain distinctions in one of their languages may seek to replicate those distinctions in their other language using material from that other language. They might use full lexical items, such as adverbials or various particles, or they might extend grammatical markers of that language semantically. Over a long period, the heightened frequency of use could result in the grammaticalization of new tense distinctions. The fact that Karuk, at the periphery of the first possible area, has developed enclitics to mark recent and remote pasts, and that Yurok, still further away, uses particles, would be in keeping with such a scenario. The fact that Central Sierra Miwok, further from the center of the second area, has formed a Remote Past marker from nominalized verb forms with a nominal Former Past marker is similarly suggestive.

Supporting this scenario is the fact that no tense distinctions are reconstructed for the ancestors of languages which have developed them. There are parallel developments among neighboring languages rather than genealogically related ones. No tense distinctions are reconstructed for Proto-Maiduan. The Maiduan language Nisenan, spoken in an area adjacent to Washo, shows elaboration of its past distinctions, but its relative Maidu does not. No tense distinctions are reconstructed for Proto-Yokuts. Chukchansi Yokuts, spoken in an area adjacent to Nisenan shows elaboration, but no other Yokuts languages do. No tense distinctions are reconstructed for Proto-Wintun, but the Wintun languages Patwin and Southern Patwin, also spoken in areas adjacent to Nisenan, do. Their Northern Wintun relatives do not. No tense distinctions are reconstructed for Proto-Miwok, but Northern Sierra Miwok, Central Sierra Miwok, and Plains Miwok, also spoken in areas near Nisenan and Paatwin, show elaboration, while Lake Miwok, further to the west, does not.

Further suggestive of such a scenario is the fact that languages indigenous to the California linguistic area show additional extensive structural effects without transferred substance. A large proportion of them, for example, contain sets

of means/manner prefixes and locative/directional suffixes (Mithun 2007). The forms of the markers are not the same across the languages, and the inventories of markers vary as well. The prefixes and suffixes in languages more central to the area, presumably the origin of the patterns, are in general shorter, often just a single consonant, indicative of greater age, while those at the periphery are more substantial, and, in some cases, can be related to noun or verb roots that still survive in the languages.

The hypothesis of the development of graded tense systems via contact does face certain challenges. The first is the matter of chance. We do not know for certain how likely languages are to develop additional tense distinctions spontaneously, on their own. Second is the fact that the languages here have been in place for millennia. Details concerning the nature and intensity of contact among their speakers are of course undocumented. Finally, the majority of the languages are no longer spoken. Our understanding of the grammatical categories of each language is necessarily dependent on the existing records of them. In many cases documentation of connected speech is limited to elicited translations of sentences from English or Spanish, or, at best, narrative texts, most often myths and legends. We are fortunate that these do exist. Elicited sentences of course can tend to replicate the categories of the contact language; basic past tenses might predominate, and special recent past or remote past constructions might not appear at all. In myths and legends, remote past forms might predominate. In her work with Nisenan texts for example, Anderson (2024) noted that Distant Past forms dominate the corpus, occurring more than 3700 times, while the Recent and Intermediate Past tenses occur only in direct quotes from characters, with 22 Recent Pasts and 10 Intermediate Pasts.

We may never know for certain just which structures have been shaped by language contact, but as we learn more about more languages, and the situations in which they are and have been used, we should be able to sharpen our understanding of the possibilities.

References

- Anderson, Skye. 2024. Revitalizing the graded past tense system of Southern Hill Nisenan. Paper read at the meeting of the Society for the Study of Indigenous Languages of the Americas, New York City.
- de Angulo, Jaime. 1930. The Achumawi language, with L.S. Freeland. *International Journal of American Linguistics* 6. 77–120.
- Bright, William. 1957. *The Karok language*. (University of California Publications in Linguistics 13). Berkeley: University of California Press.

- Broadbent, Sylvia M. 1964. *The Southern Sierra Miwok language*. (University of California Publications in Linguistics 38). Berkeley: University of California Press.
- Callaghan, Catherine. 1963. *A grammar of the Lake Miwok language*. Berkeley: University of California Ph.D. dissertation.
- Callaghan, Catherine. 1984. *Plains Miwok dictionary*. (University of California Publications in Linguistics 105). Berkeley: University of California Press.
- Callaghan, Catherine A. 1987. *Northern Sierra Miwok dictionary*. (University of California Publications in Linguistics 110). Berkeley: University of California Press.
- Collord, Thomas L. 1968. *Yokuts grammar: Chukchansi*. Berkeley: University of California Ph.D. dissertation.
- Freeland, L.S. 1951. *Language of the Sierra Miwok*. Indiana University Publications in Anthropology and Linguistics Memoir 6 of the *International Journal of American Linguistics* 17(1).
- Golla, Victor. 2011. *California Indian languages*. Berkeley: University of California Press.
- Harold, Laura, Jelmer Eerkens & Candice Ralston. 2016. Patrilocal post-marital residence and bride service in the Early Period. In Alexandra M. Greenwald & Gregory R. Burns (eds.), *Reconstructing lifeways in ancient California*, 33–44. Davis, CA: Center for Archaeological Research.
- Heizer, Robert F. (ed.). 1978. *Handbook of North American Indians: California*, vol 8. Washington, D.C.: Smithsonian Institution.
- Jacobsen, William H. 1964. *A grammar of the Washo language*. Berkeley: University of California Ph.D. dissertation.
- Jany, Carmen. 2009. *Chimariko grammar: Areal and typological perspectives*. (University of California Publications in Linguistics 142). Berkeley: University of California Press.
- Kniffen, Fred B. 1928. Achomawi geography. *University of California Publications in American Archaeology and Ethnology* 23(5). 297–332.
- Kroeber, Alfred. 1925. *Handbook of the Indians of California*. (Bureau of American Ethnology Bulletin 78). Washington, D.C.: Government Printing Office.
- Lawyer, Lewis. 2015. *A Grammar of Patwin*. Davis: University of California Ph.D. dissertation.
- Mithun, Marianne. Grammar, contact, and time. *Journal of Language Contact*. <https://brill.com/view/journals/jlc/1/1/jlc.1.issue-1.xml>
- Nevin, Bruce. 2019. Why Proto-Palaihnian is neither. [manuscript] DOI: 10.13140/RG.2.2.33917.20966
- Newman, Stanley S. 1944. *Yokuts language of California*. (Viking Fund Publications in Anthropology 2). New York: Viking Fund.
- Pitkin, Harvey. 1984. *Wintu grammar*. University of California Publications in Linguistics 94. Berkeley: University of California Press.
- Powers, Stephen. 1877. *Tribes of California*. Contributions to North American Ethnology 3. Washington, D.C.: U.S. Geographical and Geological Survey of the Rocky Mountain Region.
- Robins, R. H. 1958. *The Yurok language: Grammar, texts, lexicon*. (University of California Publications in Linguistics 15). Berkeley: University of California Press.
- Sapir, Edward. 1922. The fundamental elements of Northern Yana. *University of California Publications in American Archaeology and Ethnology* 13(6). 215–234.
- Shepherd, Alice. 2005. *Proto-Wintun*. Berkeley: University of California Press.
- Shipley, William F. 1964. *Maidu grammar*. (University of California Publications in Linguistics 41). Berkeley: University of California Press.
- Silver, Shirley. 1966. *The Shasta language*. Berkeley: University of California Ph.D. dissertation.
- Stewart, Omer C. 1943. Notes on Pomo ethnogeography. *University of California Publications in American Archaeology and Ethnology* 40(2). 29–62.

- Stolz, Thomas. 2002. General linguistic aspects of Spanish-Indigenous language contacts with special focus on Austronesia. *Bulletin of Hispanic Studies* 79. 133–158.
- Stolz, Thomas. 2005. Italianisierung in den alloglotten Sprachen Italiens. In Ermenegildo Bidese, James R. Dow & Thomas Stolz (eds.), *Das Zimbrische zwischen Germanisch und Romanisch*, 43–68. Bochum: Universitätsverlag Brockmeyer.
- Stolz, Thomas. 2006. Contact-induced typological change. In Dieter Stern & Christian Voss (eds.), *Marginal linguistic identities: Studies in Slavic contact and borderland varieties*, 13–30. Wiesbaden: Harrassowitz.
- Stolz, Thomas. 2008. Romancisation worldwide. In Thomas Stolz, Dik Bakker & Rosa Salas Palomo (eds.), *Aspects of language contact: New theoretical, methodological and empirical findings with special focus on romancisation processes*, 1–42. Berlin/ New York: Mouton de Gruyter.
- Stolz, Thomas. 2010. Don't mess with ergatives!: How the borrowing of the Spanish indefinite article affects the split-ergative system of Chamorro. *Language Typology and Universals – STUF* 63(1). 79–95.
- Stolz, Thomas. 2012. Survival in a niche: On gender-copy in Chamorro (and sundry languages). In Martine Vanhove, Thomas Stolz, Aina Urdze & Hitomi Otsuka (eds.), *Morphologies in contact*, 93–140. Berlin/Boston: De Gruyter Mouton.
- Stolz, Thomas. 2015. Adjective-noun agreement in language contact: Loss, realignment, and innovation. In Francesco Gardani, Peter Arkadiev & Nino Amiridze (eds.), *Borrowed Morphology*, 269–301. Berlin/Boston: De Gruyter Mouton.
- Uldall, Hans Jörgen & William Shipley. 1966. *Nisenan texts and dictionary*. University of California Publications in Linguistics 46. Berkeley: University of California Press.
- Ultan, Russell. 1967. *Konkow grammar*. Berkeley: University of California Ph.D. dissertation.

