

1. INTRODUCTION

1.1 Ethnographic setting

The Chimariko language was spoken in the nineteenth century in a few small villages in Trinity County, in north-western California. The villages were located along a twenty-mile stretch of the Trinity River and parts of the New River and South Fork River. In 1849, the Chimariko numbered around two hundred and fifty people. They were nearly extinct in 1906, except for a 'toothless old woman and a crazy old man', as well as 'a few mixed bloods' (Kroeber 1925:109). The 'toothless old woman' Kroeber refers to was most likely Polly Dyer and the 'crazy old man' Dr. Tom, also identified by Dixon (1910:295) as a 'half-crazy old man'. The last speaker probably died in the 1940s.

First contact with European explorers occurred early in the nineteenth century, in the 1820s or 1830s, when fur trappers came to the region. However, the tribe was left largely unaffected by this encounter (Dixon 1910:297). During the Gold Rush in the 1850s the Chimariko territory was overrun by gold seekers. Continuous gold mining activities in the region threatened the salmon supply, the main food source of the tribe, and led to a bitter conflict in the 1860s (Silver 1978a:205). The fights between European miners and the tribe resulted in the near annihilation of the Chimariko in the 1860s. The few survivors took refuge with the neighboring Shasta on the upper Salmon River or in Scott Valley or with the Hupa to the northwest (Dixon 1910:297). Once the gold was gone and the miners left the region, the survivors returned to their homes after years in exile (Silver 1978a:205).

The exact boundaries of the Chimariko territory are uncertain, as systematic ethnographic investigations started many years after the tribe's near extinction in the 1860s (Bauman 1980:12). While it remains undisputed that the Chimariko lived along a twenty-mile stretch of the Trinity River roughly from the mouth of South Fork to French Creek, the extensions of their territory to stretches along the South Fork River and the New River have been questioned. Bauman (1980) provides a detailed account of their territory by examining place names and information obtained from Chimariko and other consultants. He concludes that the Chimariko originally extended along the lower New River, the Trinity River, the South Fork River, and the Hayfork River (1980:24). Dixon (1910:297) and Silver (1978a:205) mention six known villages along the Trinity River: Cedar Flat *hotinakčohota*, Hawkin's Bar *'amaitace*, Taylor's Flat *č'h'ič'anma*, Big Bar *šitimače*, Salyer *mamsu'če*, and Burnt Ranch *čutamtače*, the latter being the largest. In addition, the Chimariko had temporary hunting camps on the New River and in other foreign territory (Dixon 1910:297; Silver 1978a:205).

The neighbors of the Chimariko to the north on the lower New River were the Chimalakwe. It remains unclear whether the Chimalakwe were part of the Chimariko tribe or identical with it. Powers (1877:92) asserts that the two groups spoke the same language. Dixon (1910:296) points out that their name is unquestionably derived from the same stem *č'imar* or *č'imal*. Merriam (1930) considered the Chimalakwe and the New River Shasta living on the New River together to form a distinct group based on thirty-five words he secured from Saxey Kidd (see 1.3). Dixon (1931), however, presents evidence against this hypothesis. By the time European explorers entered the region, the Chimalakwe were being conquered and absorbed by the Hupa. Only about

twenty-five speakers were left (Silver 1978a:205). The Chimalakwe were extinct by 1872 (Silver 1978a:205).

Two other small tribes were also neighbors to the north: the New River Shasta on the upper New River and the Konomihu on the Salmon River. Both spoke Shastan languages. The Shastan people include four groups: Shasta, Konomihu, Okwanuchu, and New River Shasta (Silver 1978b:211). Dixon (1910:306) believes the Chimariko to be culturally and linguistically related most closely to the Shastan people. This may result from the fact that the Chimariko spent years in exile with the Shasta before becoming Dixon's consultants. Consequently, they had been culturally and linguistically in closest contact with that group.

The Wintu were neighbors to the south and east of the Chimariko. The Wintu, Nomlaki, and Patwin languages comprise the Wintuan family, a family included in the hypothesized Penutian stock. The Wintu suffered a fate similar to that of the Chimariko during the Gold Rush in the 1850s. Yet, as they numbered over three thousand in 1852 (LaPena 1978:324), the Wintu have managed to escape extinction. At the time of contact with European explorers, the Chimariko were on friendly terms with the Wintu. At an earlier time, they may have lost some of their territory to the Wintu (Silver 1978a:205). Kroeber (1925) and Dixon (1910) noted cultural similarities between the two groups, suggesting a close contact. The Chimariko, for instance, followed the Wintu in the manner of playing the guessing game (Kroeber 1925:111). The import of red and black obsidian from the Wintu is evidence of a trading relationship.

To the west and northwest of the Chimariko were the Hupa and the Whilkut or Redwood Creek Indians (Silver 1978a:205). They spoke different Hupa dialects. Hupa is an Athapaskan language of the Pacific Coast branch. The Hupa numbered only about a thousand in 1850 and shared a distinctive way of life with the neighboring Yurok and Karuk (Wallace 1978:164). The Chimariko feared the Hupa and fought against them (Dixon 191:305). According to Powers (1977:92), the Chimariko living on New River paid the Hupa a yearly tribute of an average of one deer-skin per capita. Nevertheless, intermarriage indicates some friendly interaction between the two tribes (Silver 1978a:205). Trading and social relationships existed in particular with the South Fork Hupa who inhabited the South Fork of the Trinity River (Wallace 1978: 177). Kroeber (1925:111) states that the Chimariko followed the Hupa in some of their customs, such as refusing to eat grasshoppers and angleworms, which were considered sufficiently nutritious by the Wintu. Equally, their form of tattooing was more similar to that of the Hupa than to that of the Wintu (Dixon 1910: 295).

Culturally, the Chimariko shared many traits with their neighbors and other Northern California tribes. In terms of social organization, the largest units were village communities, each having a chief. The social status of each person was determined by wealth and birth, as with the Hupa. Yet the Chimariko did not seem to have practiced slavery as the Hupa did. Each Chimariko village had dwelling houses (*awa*?) accommodating two or more families and a sweat house (*ma'tta*) where the men sweated and gambled. The houses were similar to those of the Hupa, but simpler. Chimariko clothing showed aspects of both Wintu and Hupa culture. Body ornaments were more restricted than among the Hupa. Tattooing was less elaborate than among the Wintu.

In general, the Chimariko were monogamous (Dixon 1910:301). A wife was usually bought from her parents, and marriage took place within a local group. After giving birth, a mother had to remain in seclusion for a few weeks and was subject to food restrictions (Dixon 1910:302). Seclusion and food restrictions were also part of the puberty ritual. An illness was cured either by a doctor sucking out the object and making it disappear or by a herb doctor who recited formulas and gave medicine internally. The dead were buried, and widows cut their hair short. More information on customs related to marriage, birth, puberty rituals, curing, and funerals can be found in Silver (1978a). The Chimariko practiced four kinds of ceremonies: a doctor-making ceremony, a girl's puberty ritual, a sweat-dance, and an annual summer dance. Dixon (1910:303) affirms that their ceremonies were more like those of the Shasta than like any of their other neighbors' ceremonies. They did not practice the first-salmon rite, the first-acorn rite, or the Deerskin Dance, all typical Hupa ceremonies. Chimariko men engaged in a variety of games, such as the 'guessing game' or the 'grass-game'.

The main food supply of the Chimariko was the salmon of the Trinity River. Eels were also an important source of food. In addition, the Chimariko ate deer, elk, bear, and other animals. Acorns were their main vegetable food. The men were responsible for hunting, using a variety of techniques for fishing and hunting: nets, traps, spears, baskets, and others. The Chimariko did not make canoes. They crossed the rivers by swimming or on simple rafts (Dixon 1910:300).

Little is known of Chimariko mythology. Regarding the creation, Dog was the most powerful being. He foretold the flood. When the flood came, only Frog, Mink, Otter, and one man survived. After the flood subsided, the man found a bone fragment which later came to life as a girl. The man married her, and the Chimariko descended from this union. Coyote also appears in some tales. The tales do not bear any close resemblance to those of the Hupa. There are some similarities to Wintu stories and even more similarities to Shasta narratives (Dixon 1910:305).

Overall, the Chimariko were a very small tribe prior to European contact. They were in close contact with their immediate neighbors, the Shasta, the Wintu, and the Hupa, through intermarriage and trade, suggesting a certain level of multilingualism. They also shared many cultural traits with their neighbors and with other Californian tribes.

1.2 Genetic and areal relationships

The Chimariko language has been genetically and areally linked to various neighboring languages. Genetically, it is considered by some linguists to be a Hokan language, along with its northern neighbor Shasta. Hokan is a linguistic stock based on a series of hypotheses about a distant genetic relationship among several languages of California and others. However, the long history of language contact, multilingualism, and intermarriage in California makes it difficult to distinguish distant genetic relationship from ancient language contact. Furthermore, the time depth of Hokan complicates the process of finding evidence of a relationship. Therefore, Chimariko is viewed as an isolate by linguists not yet convinced of the Hokan hypotheses. Areally, Chimariko is situated within the Northern California linguistic area along with its neighbors, the Hupa, Shasta, and Wintu, and with others. The well-established California culture area

(Driver 1962) consists of at least three linguistic areas: Northern California, Central or Northern-central California, and Southern California (Sherzer 1976b). The Northern California area is characterized by great genetic diversity. Regardless of whether Chimariko is genetically or areally linked to its neighbors, similarities and shared features are expected to occur due to the intimate and extended contact for centuries.

The possibility of a Hokan linguistic stock has generated wide interest ever since it was put forward. It has also been grounds for many discussions, due to the difficulties in finding supporting evidence. The Hokan stock was first proposed by Dixon and Kroeber (1913) who hypothesized a genetic relationship among five languages spoken in Northern California: Chimariko, Shasta, Karuk, Yana, and a Pomoan language. Their hypothesis was based mainly on five presumed cognate sets for 'eye', 'tongue', 'water', 'stone', and 'sleep'. In addition to the cognate sets, Dixon and Kroeber (1913) observed structural characteristics shared among the Hokan languages, such as the absence of a plural in most nouns, verb suffixes indicating plurality, instrumental verb prefixes and local suffixes, as well as affixed pronominal elements. Later, Dixon, Kroeber, Sapir, and others expanded the stock. By 1929, a total of thirteen languages or language families formed part of the Hokan stock: Karuk, Chimariko, Shastan, Achumawi-Atsugewi, Yana, Pomo, Washo, Esselen, Yuman, Salinan, Chumash, Seri, and Chontal, extending from Northern California to Mexico. Opinions on which languages should be included vary greatly. Based largely on lexical evidence, Kaufman (1988) came out in favor of a wide Hokan stock including Cochimi, Coahuilteco, Comecrudan, and Jicaquean, among others. The five languages and language families first defined by Dixon and Kroeber were subgrouped as Northern Hokan and further subdivided into Northern Hokan (a): Karuk, Chimariko, and Shasta, (b) Yana, and (c) Pomoan (Bright 1954). Following this subdivision, Chimariko is expected to be more closely related to Shasta and Karuk than to the other languages within the Hokan stock. Shasta, however, is also an immediate neighbor of Chimariko, and effects of language contact can be expected.

In addition to time depth, the Hokan hypotheses are problematic due to the close and extensive contact among these languages for centuries, making it very difficult to distinguish areal from genetic characteristics. It is almost impossible to apply the comparative method successfully to these languages, as evidence of a relationship decreases over time, and ideally there would be no contact among related languages after their split from a proto-language. Furthermore, poorly recorded materials, inconsistencies in spelling, and lack of materials for some of the languages weaken the Hokan proposals. Nevertheless, many linguists (Bright 1954, Crawford 1976, Haas 1954, 1963, 1964, Kaufmann 1988, McLendon 1974, Olmsted, 1956, 1957, 1959, 1965, Silver 1964, 1976, 1980) have tried to find more evidence for the Hokan stock since 1913, studying sound correspondences and reconstructing the proto-language through binary comparisons. Bright (1954) attempted to establish sound correspondences for the Northern Hokan languages. Crawford (1976) compared several cognate sets for Chimariko and Yuman, finding sound correspondences for vowels and consonants. As a result, he hypothesized a new subgrouping within Hokan connecting Chimariko and Yuman more closely. Despite all efforts and some encouraging results, only very limited details based on a few questionable cognates constitute the evidence available for a Hokan stock. Observed similarities are often unsystematic and occur only in small numbers of words. In view of the problematic issues connected to Hokan and outlined

here, this work is not intended to prove or disprove a genetic relationship. Even so, this grammatical description of Chimariko, based on phonemically accurate materials and outlining similarities to neighboring languages, may serve as a basis for future Hokan studies which should also consider language contact phenomena.

Northern California is characterized by great genetic diversity with five major linguistic stocks and over twenty language families represented. Many of the languages were spoken by small groups, and there is a long history of contact. As a result, the languages share traits with their genetically unrelated neighbors. These traits have been studied by many linguists. Haas (1976) examined phonological features, numeral systems, and consonant symbolism, i.e. the substitution of one class of consonant by another related class for the purpose of expressing the diminutive or augmentative or to characterize the speech of myth characters. She concluded that 'most languages bear more resemblance to their adjacent unrelated neighbors than they do to their congeners' (1976:353). Sherzer (1976) provides a detailed list of areal features found in California. He asserts that the California culture area is best viewed as consisting of three linguistic areas: Northern California, Central or North-Central California, and Southern California. His Northern California traits include: lateral fricatives (which are not found in Chimariko), possessive prefixes (possessive prefixes are found on body parts in Chimariko), and tense-aspect prefixes (tense-aspect markers are suffixed in Chimariko). In addition to the features found in Northern California, Chimariko shows North-Central traits identified by Sherzer, such as retroflex apical sounds. This indicates that Sherzer's areas overlap. Conathan (2004) examined the linguistic effects and sociolinguistic context of language contact in Northwestern California. Among the language contact features she studied are diminutive consonant symbolism, similarities in numeral systems and in directional terminology, reduplication marking repetitive aspect, second person prominence in argument marking, the presence of numeral classifiers, preverbal particles marking tense, aspect and mood, verb initial word order, frequent loan translations, and shared euphemisms. Conathan suggests that the effects of language contact can be observed at the level of morphosyntax, but not in lexical borrowing or as local phonological convergence. According to Conathan, the contact phenomena in Northern California show a 'functional convergence', i.e. they involve an increasing similarity in the semantic and pragmatic categories expressed, but not in surface syntax. Analyzing spatial and temporal dimensions in Northwestern California, O'Neill (2001) found that while there is a common geographical orientation with mountains and rivers as primary points of reference, as well as a common orientation to the world of time, the languages of the area differ in how they express these concepts in their grammars. Mithun (in press) examined the diffusion patterns of core argument marking in Northern California and demonstrated how person hierarchies have resulted from language contact. Following Mithun, hierarchical systems did not develop through the direct transfer of grammatical structure; rather they resulted from an increased tendency of choosing one stylistic option, whereby low-ranked agents are eliminated through passivization, over another. Chimariko, one of the languages Mithun studied, has a hierarchical system favoring speech act participants, i.e. first and second person, over third persons. In another study, Mithun (2008) showed how agentive core argument systems could have developed through the reanalysis of nominative-accusative patterns in situations where third person pronominal markers

are omitted and where there is no overt marking of transitivity. Agentive systems are rare cross-linguistically but there is a strong areal distribution in North America. They are found in two areas of Northern California: on the Northwest Coast and in the Southeast (Mithun 2008). Chimariko distinguishes between agents and patients for first persons. Apart from Chimariko, agentive systems are found in Karuk, Yuki, and Pomoan languages in Northern California. Overall, California is characterized by much linguistic diversity in a relatively small area where many linguistic traits have distributions which cut across genetic boundaries. Many of these areal traits and some diffusion processes have been described in previous literature.

In addition to the linguistic outcomes of language contact, some scholars (Bright 1976; Sherzer 1976) have examined the sociolinguistic conditions characterizing the particular language contact situation found in California. California had a great population density prior to European contact. There were many small communities, all speaking different languages. Neighboring groups had good relationships with one another, and there was a considerable amount of trade, intermarriage, and bilingualism (Sherzer 1976). While the relationships with immediate neighbors were intimate, contact with distant groups was practically nonexistent (Sherzer 1976). This suggests that shared features due to language contact are more likely to be found in languages of adjacent groups. Bright (1976) studied the processes and effects of bilingualism and linguistic acculturation between native languages and between native and European languages. Following Bright, the outcomes of these two language contact situations differ greatly. Contrary to contact between native languages, contact between native and European languages resulted in little phonological borrowing and almost no grammatical borrowing. The amount and type of borrowing is determined by sociocultural rather than by linguistic facts (Bright 1976). Hence, little influence from European languages (i.e. English and Spanish) is expected in the Chimariko data, while borrowing from neighboring languages may be pervasive. Sherzer (1976) suggests that the intimate contact between immediate neighbors may result in the borrowing of folktales, expressive behaviour, and most aspects of language. Therefore, Chimariko is compared in detail to its close neighbors, the Wintu, Hupa, and Shasta in this work.

Linguistic areas must be internally coherent and distinctive with respect to languages outside of the area. Rather than finding proof for the Northern California linguistic area, this work intends to identify similarities between Chimariko and its neighboring languages and to describe possible patterns of diffusion. Such similarities may appear in categories, constructions, meanings, or in the actual forms used to express them. There are many different types of linguistic borrowing, such as the borrowing of a grammatical system, of linguistic processes, syntactic constructions, semantic patterns, or pragmatic patterns, among others. While the diffusion of forms is unsystematic and may be used for gap filling, the borrowing of patterns tends to be systematic, may serve to minimize syntactic differences, and is often difficult to distinguish from independent development (Aikhenvald 2005). In this work, Chimariko forms and patterns are compared to those of neighboring languages. Contact-induced changes can depend on the structure of the languages involved and on the kind of contact and the sociolinguistic environment (Aikhenvald 2005). With respect to the Chimariko sociolinguistic environment, it is worth noting that at the time of European contact the Chimariko were tributary to the larger and more powerful Hupa, as were

many other tribes of the area. This relationship may be reflected in the outcome of this particular language contact situation. Chimariko may have adopted more Hupa features than the reverse. To conclude, this grammatical description lays the ground for future genetic and areal studies involving Chimariko, rather than offering an analysis of the Hokan linguistic stock or of the Northern California linguistic area.

1.3 Fieldworkers and speakers

Fieldwork on Chimariko was conducted in the late nineteenth and early twentieth century when only a few speakers of limited fluency were left. The first known data collection consisting of about two hundred words is found in Powers' 'Tribes of California' (1877:474-7). In 1889, Curtin compiled a Chimariko vocabulary from 'Old Tom' while working on Hupa (Curtin 1940). 'Old Tom', also called Dr. Tom, later served as a consultant for Kroeber (Dixon 1910:363). Systematic fieldwork on Chimariko began with Kroeber in 1901 and 1902 (Bauman 1980:13). Around the same time Goddard obtained data from another speaker, Sally Noble. The materials collected by Powers, Kroeber, and Goddard were later incorporated into Dixon's 'The Chimariko Indians and Language' (1910). Dixon worked in 1906 for two months with Polly Dyer and with Friday, who had also worked with Kroeber. He recorded vocabulary items, phrases, and narratives for a grammatical sketch. Several years later, in 1920 and 1921, Merriam recorded a short wordlist from Sally Noble, Lucy Montgomery, and Abe L. Bush. Some of his notes are published (Merriam 1979). The most extensive fieldwork was carried out by Harrington in 1921 with Sally Noble. Although Merriam and Harrington had planned joint work on Chimariko in 1921, the two researchers travelled to the region at different times and worked separately. Harrington later returned to collect additional data from Lucy Montgomery and others. He never published any of his materials, but his handwritten notes are available on microfilm (Mills 1985). In 1927, Sapir worked for a few days on Chimariko during a field trip to the Hupa. The data collected by Sapir have been edited by Berman and published in Golla and O'Neill (2001). The various fieldworkers and their consultants are summarized in Table 1. More details on the collected data can be found in 1.5.

Table 1: Chimariko fieldwork in chronological order

Year	Fieldworker	Consultants
1875	Stephen Powers	A woman from Martin's Ferry, Trinity River
1889	Jeremiah Curtin	Old Tom
1901-1902	Alfred L. Kroeber	Dr. Tom, Friday
1902	Pliny E. Goddard	Sally Noble
1906	Roland B. Dixon	Polly Dyer, Friday
1920-1921	C. Hart Merriam	Abe L. Bush, Sally Noble, Lucy Montgomery
1921	John Peabody Harrington	Sally Noble
1926	John Peabody Harrington	Lucy Montgomery
1927	Edward Sapir	Saxey Kidd, Abe Bush, Martha Ziegler
1928	John Peabody Harrington	Abe Bush, Lucy Montgomery, Saxey Kidd

In general, the fieldworkers were familiar with previously recorded data, and often re-elicited or incorporated these materials. The largest amount of linguistic data was collected by Dixon and Harrington. Dixon included the vocabularies recorded by Powers, Kroeber, and Goddard in his description, whereas Harrington re-elicited the materials published by Dixon.

Dixon was an anthropologist who published in the fields of ethnography, ethnology, archaeology, linguistics, and folklore (Tozzer and Kroeber 1947). He conducted extensive fieldwork with different tribes in northern California. As a result, his description of Chimariko contains valuable ethnographic data, in addition to the grammatical sketch. Nevertheless, Dixon was not a trained linguist, nor was he rigorously grounded in phonetics. Given this, and the fact that his consultant Polly Dyer was lacking teeth, his data are phonetically flawed.

Harrington documented numerous Native American languages under the auspices of the Bureau of American Ethnology for nearly half a century. He had a good ear for phonetics and left behind many accurate notes on languages now extinct. He first became interested in California Indian languages under the influence of Kroeber and Goddard (Stirling 1963:371), both also Chimariko fieldworkers. During his lifetime, Harrington collected close to a million pages of notes on more than a hundred and twenty-five separate languages of California, as well as many sound recordings. His Chimariko notes, comprising several thousand pages are of great value, as they represent the largest data collection on the language. Details about his Chimariko data are provided in 1.5. More information on Harrington can be found in Golla (1991) and Klar (2002).

The various fieldworkers often used the same consultants, some of whom were related. Sally Noble and Martha Ziegler were half-sisters. They were Polly Dyer's daughters from different marriages. Lucy Montgomery was a cousin of Sally Noble. Abe Bush's mother was a cousin of Polly Dyer. The consultants had varying degrees of fluency in Chimariko, and some had only a passive knowledge. Many were fluent in at least Hupa, Wintu, or Shasta. Following is a detailed description of each consultant's linguistic background and family history where known.

Dr. Tom was a full-blood Chimariko. He was from Burnt Ranch at least on his father's side and maybe on his mother's side as well. Yet, he lived until middle life on the New River (Bauman 1980:14). It seems that after he had worked with Curtin and Kroeber, he suffered some mental deterioration. Dixon (1910:295) described him as a 'half-crazy old man'. At the time of data collection he was living with the Hupa. Curtin (1940) noted that Tom was 'the only Chimariko at Hoopa'.

According to Dixon (1910:307), Friday was not a Chimariko but spoke the language fluently because he had lived with the tribe for much of his life. He was half Hupa and half Wintu by birth (1910:295). Bauman (1980:27) claims that Friday was Chimariko on his father's side and notes that Dixon's erroneous comment came from a misinterpretation by Kroeber. Kroeber seems to have associated Friday's statement that his father was half Hyampom and half Burnt Ranch with Wintu parentage, based on the conception that Hyampom was a Wintu speaking area. However, both Wintu and Chimariko consultants agreed that someone from Hyampom was typically Chimariko (Bauman 1980:27). In any case, Friday was raised primarily as a Hupa speaker by his mother. He spoke very little Chimariko and also knew some Wintu (Bauman 1980:27).

Polly Dyer was a full-blood Chimariko born and raised at Taylor's Flat on the Trinity River. When Dixon recorded his data from her she was a 'failing old woman of about eighty years of age, living on lower New River' (Dixon 1910:295) who was lacking teeth.

Sally Noble was Polly Dyer's daughter. She was probably born at North Fork and raised elsewhere. Apparently she was classified as White, which indicates that her knowledge of Chimariko must have originated with her mother (Bauman 1980:14). When Harrington collected data from Sally Noble, she was living on the New River. Harrington described her as having an almost exhaustive knowledge of Chimariko. She also had some familiarity with Hupa, and she knew some Wintu terms (Mills 1985:49). Sally Noble died shortly after Harrington left in 1922.

Lucy Montgomery was a cousin of Sally Noble. She lived at Stone Lagoon when the data were recorded from her by Merriam and later by Harrington. She had stopped speaking Chimariko at age eleven and had only a passive knowledge.

Abe Bush was born at Hayfork and came to Hyampom when he was four years old. His mother was a full-blood Chimariko raised at Taylor's Flat. She was a cousin of Polly Dyer. When Sapir recorded the data from Abe Bush in 1927 he was about seventy years old and lived at Oak Flat, Hyampom. At that time, he had not heard Chimariko for fifty years. Abe Bush never spoke Chimariko thoroughly, but understood it (Berman 2001:1040). Contrary to Berman, Bauman (1980:16) indicates that Abe Bush had not spoken Chimariko in fifty years when Sapir worked with him, but that he 'undoubtedly heard it spoken until at least 1906 when his mother died'. Abe Bush used Wintu to communicate with other Indian elders in the area. He died in the 1930s.

Remarks about Saxey ('Saxy' in Bauman 1980) Kidd's background are somewhat inconsistent. Bauman (1980:14) describes him as half Hupa and half Chimariko. Berman (2001:1040) provides the most details indicating that Saxey Kidd was born a New River Shasta, was raised among the Hupa after his parents were killed by gold miners, and also lived with the Chimariko. As a result, he was fluent in Hupa, knew only a few words of New River Shasta, and spoke a little Chimariko. Sapir noted that the little Chimariko he knew was 'distorted by his Hupa phonetics' (Golla and O'Neill 2001:1090). Merriam identified Saxey Kidd as a full-blood New River Indian raised among the Hupa. According to Merriam (1930:280), Saxey Kidd had also lived with the Chimariko and spoke their language. At the time of Sapir's fieldwork he lived in Salyer.

Martha Ziegler was Polly Dyer's daughter and Sally Noble's half sister. Her maiden name was Dyer (Berman 2001:1040). As with Sally Noble, apparently she was White, which indicates that her knowledge of Chimariko must have originated with her mother (Bauman 1980:14). Her name has been spelled in various ways: Ziglar (Sapir's fieldnotes), Ziegler (Sapir's letter to Harrington), or Zieglar (Mills 1985:54).

Fieldwork on Chimariko was done after the tribe's near extinction in the 1860s with some of the few survivors. Only two of them, Polly Dyer and Dr. Tom, seem to have been full-blood Chimariko. By the time of the data collection, many of the consultants had not actively spoken the language in years or decades, and they were fluent in other indigenous languages of the area. As a result, the collected data needs to be viewed with caution, given that influence from other indigenous languages such as Hupa, Wintu, and Shasta seems likely due to intense language contact and multilingualism at the time of data collection and prior to it.

1.4 Possible dialectal variation

According to Langdon (1974:18) and based on Powell (1891), there were two different dialects. One was spoken by the Chimariko who lived on the Trinity River, the other by the Chimalakwe on the New River, a branch of the Trinity River. For more information on the Chimalakwe see 1.1.

Possible dialectal variation was also noted by Dixon (1910:309), but he stated that the opportunity for determining it with any certainty was lacking, as one of his consultants did not have any teeth and the other was not a native Chimariko. Dixon mainly observed the confusion between the [l] and [r] sounds. Phonetic differences between the various consultants were also noted by Sapir. They are described in detail in Berman (2001:1040-46).

Sapir was interested in finding evidence for dialectal differences in Chimariko and said in a letter to Harrington that Friday's dialect was 'not quite the same as that of Mrs. Dyer, Dr. Tom, and presumably Mrs. Noble', but that Friday's material 'seems to agree better' with what he collected from Abe Bush (Golla and O'Neill 2001:1092). Sapir concluded that this was a hint of a Trinity River dialect and New River dialect different from a South Fork dialect. However, Sapir used Dixon's phonetically poor data for comparison. Harrington followed up on Sapir's hint and suggested that 'dialects there must have been, at least to some very limited extent', but that they could not 'make much out of them at this late day'. He also mentioned that Mrs. Noble called Friday 'uncle' and used to quote him, and that these quotes sounded exactly the same as her speech, hence contradicting Sapir's hint. Harrington concluded that as Friday and Abe Bush's mother used to 'hang out around the Dyer outfit all the time', they all 'talked exactly the same'.

Kroeber recorded data from Dr. Tom, who affirmed that his language was spoken up to the New River, and that it was different from the speech of Burnt Ranch (Bauman 1980:14). Nevertheless, the scarcity of data available and the limited fluency of the consultants at the time the linguistic materials were collected, given that Chimariko was no longer actively spoken in a community at that period, leave the possibility of dialectal variation uncertain. Recorded differences could also be attributed to possible interference from other languages.

1.5 Sources and publications

A very limited number of publications have resulted from the fieldwork on Chimariko. The only grammatical description is found in Dixon (1910). The grammar treats phonetics, word formation processes, pronouns, verbal and nominal stems and affixes, adjectives, numerals, and word order. Rather than providing linguistic analyses, Dixon often just lists words or affixes in a section of his grammar. Furthermore, the grammar is sketchy and does not treat all grammatical topics. Clause combining, for example, is not described. In addition, Dixon's data are phonemically flawed, as noted by Sapir and others. Due to Dixon's phonemic inaccuracies, his data are used solely in a supplementary way for this work. Nonetheless, Dixon's grammar includes a vocabulary and glossed narratives, which have proven useful. Dixon also examines Chimariko

culture and compares it to neighboring tribes. He notes that the Chimariko shared many cultural traits with their neighbors and other Northern California tribes. Berman (2001) describes the Chimariko data collected by Sapir. He mentions phonetic interspeaker variation and provides lists of pronominal, instrumental, and other verbal affixes. These materials have likewise been used in a complementary manner.

The main materials for this work come from Harrington's field notes, thousands of handwritten pages available on microfilm. Harrington worked for five months with Sally Noble in 1921 and later returned in 1926 and 1928 to continue his documentation with other speakers (see 1.3). The field notes from Sally Noble are most valuable and consist of vocabulary items, elicited sentences and verb forms, and textual material with free translations. In addition to that, there are grammatical analyses. Harrington's Chimariko data, 3500 pages on five microfilm reels, are the most extensive and reliable source for the language. The first microfilm reel with data from Sally Noble contains 1168 pages with mainly lexical items and sentences with translations. Much of this information was elicited by Harrington using Dixon's grammatical sketch (Dixon 1910). Also included are grammatical analyses in the form of charts, in particular verbal affixes and pronominal elements. The second reel, with 539 pages, also containing data collected from Sally Noble, consists of a series of texts, some with interlinear free translations. Some of these texts were re-elicited from Dixon's grammatical sketch. The third reel comprises mainly single vocabulary items with translations. The fourth reel, with 1175, pages contains a rehearing of the notes from the first reel with a different and less fluent speaker, Lucy Montgomery. The fifth reel has ethnographic notes and short interviews. For this work, the first two microfilm reels represent the main source. A few of the narratives on the second reel, where provided with interlinear translations by Harrington, have been glossed to the extent possible using all available sources, including the vocabularies and lists of affixes in Dixon (1910) and Berman (2001) (see appendices).

Only a few linguists have studied Chimariko, most using Dixon's grammatical sketch as their source of data. One linguist working with the Harrington data was George Grekoff, who examined Chimariko continuously from the 1950s until his death in 1999. He left a large number of notes, housed today at the Survey of California and other American Indigenous languages at Berkeley. Grekoff meticulously studied Harrington's data and incorporated materials from all other available sources. In addition to Harrington's extensive corpus, Grekoff's unpublished notes, in particular a draft of an unfinished chapter on phonology, have been a valuable source for this work.

Apart from the written materials, there are two short Chimariko sound recordings. One contains a song performed by a Wintu speaker, and the other consists of words elicited from Martha Ziegler (see 1.3). At the time of the recording Martha Ziegler was an elderly woman struggling to remember a few words. Some of the words were re-elicited during the recording, which lasts about 13 minutes (see appendices). Unfortunately, the quality of the sound recording is too poor for detailed phonetic analysis.

The published sources and unpublished handwritten materials available on Chimariko are sometimes problematic. The lack of phonemic consistency across sources and the lack of systematic organization and presentation make it difficult to use them as reference. The incorporation of examples from diverse sources is often

complicated by the fact that there has been no accord as to how Chimariko should be written. Each source uses different symbols, and no standard orthography has been established so far. Table 2 summarizes the symbols used in different sources and indicates the symbols adopted here. Apart from the affricates and the retroflex stops mostly IPA symbols are used in this work.

Table 2: Different symbols used in Chimariko materials

This work	IPA	Harrington ¹	Greko ²	Sapir ³	Dixon
p	p	p	p	p	p
p'	p'	p'	p̣	p'	-
p ^h	p ^h	p'	ph/p ^h	p'	p'
t	t	t	t	t	t
t'	t'	t'	ṭ	t'	-
t ^h	t ^h	t'	th/t ^h	t'	t'
ṭ	ṭ	tr	ṭ	tr/t ^y	tr
ṭ'	ṭ'	tr'	ṭ	tr'/t ^y	-
ṭ ^h	ṭ ^h	tr'/trh	ṭh/ṭ ^h	tr'/t ^y	-
k	k	k	k	k	k
k'	k'	k'	ḳ	k'	-
k ^h	k ^h	k'	kh/k ^h	k'	k'
q	q	K	ḳ/q	q	q
q'	q'	K'	ḳ'/q'	q'	-
q ^h	q ^h	K'	ḳh/q ^h	q'	q'
ʔ	ʔ	' (# __, V __)	ʔ	ʔ	'
c	ts	ts	-	ts	ts
c'	ts'	ts'	č	t's	-
c ^h	ts ^h	ts'	-	ts'	-
č	tʃ	tʃ/tc (Berman)	č	tc	tc
č'	tʃ'	tʃ'/tc' (Berman)	č'	t'c	-
č ^h	tʃ ^h	tʃ ^h /tʃh/tc' (Berman)	čh/č ^h	tc'	tc'
s	s	s	s	s	s
š	ʃ	ʃ/c (Berman)	š	c	c
x	x	q	x	x	x
x̣	χ	R/χ	x̣	x̣	x/r
h	h	h/'	h	h (__V) / ' (__C, __#)	h

¹ See also Crawford (1976:177-8)

² See Greko's phoneme inventory in Greko 009.004

³ The symbols are based on Berman (2001). See also Abe Bush's phoneme inventory (Berman 2001:1041)

As can be seen in Table 2, the sound inventories represented in the different sources vary. Dixon's inventory is less elaborate than the others. He does not distinguish a separate set of glottalized consonants, which makes his data phonemically inaccurate. Greko does not list the plain and the aspirated alveolar affricate in his phoneme

inventory, most likely due to the absence of sufficient proof for these two phonemes. Overall, the main difference between the sources lies in the representation of the apical sounds and the affricates.

1.6 Grammatical sketch

Chimariko is a head-marking language. Core arguments are obligatorily marked on the verb and possession is marked on the possessed. Case-marking occurs only with instruments and companions. Other nominal syntactic relations are unmarked. With regard to fusion, Chimariko appears to be mostly agglutinating. In general, word-internal morpheme boundaries are easily recognizable. Roots and affixes are clearly separable with one exception: most verb roots have an initial vowel which sometimes fuses with certain prefixes. However, fusion may be harder to detect given the limited nature of the data. It could occur in the tense-aspect marking which is not fully understood. Chimariko is mainly suffixing, but personal pronouns and possessors are either prefixed or suffixed. In terms of synthesis, Chimariko is synthetic to polysynthetic. There are many different verbal affixes, and verbs are often composed of three or more morphemes. Yet, sometimes only two or three morphemes occur in one verb, and there are numerous mono-morphemic words. As for basic word order, Chimariko seems to be verb final, though the limited amount and kind of data does not yield a clear picture. With regard to the order of nominal elements within a noun phrase, the modifier either precedes or follows the modified with no apparent preference or restrictions.

Chimariko exhibits a number of interesting typological features. A typologically uncommon feature is the complex system of argument marking based on agents and patients, as well as a hierarchy favoring speech act participants over third persons. Both, agentive and hierarchical argument systems have strong areal distributions (Mithun 2008, Mithun in press) and are found in other Northern California languages. Chimariko also shares a large consonant inventory, mainly consisting of obstruents, with other languages in the area. Interesting is the absence of a voicing distinction for obstruents, also lacking in many other North American languages. Other areal features found in Chimariko include: a distinction between alienable and inalienable possession, reduplication, noun incorporation, and locative, directional, and instrumental affixes on verbs.

Larger structures and clause combining strategies also show some typologically striking properties. Argument structure alternations, comparable to passives in other languages, shape core argument structure only semantically. They are achieved through verbal derivational affixes. Grammatical structures indicating clause combining surface only minimally. They occur with relative clauses and with adverbial clauses. Relative clauses are internally headed or headless and show a special verb form with a nominalizing suffix. In general, there is no morphosyntactic complementation in Chimariko. The semantic concepts expressed as complements in some languages are coded using one of four different strategies: (1) separate sentences with no linking morphology, (2) verbal morphology, (3) attitude words, and (4) *imi'na* 'to want' with a complement clause. The textual material studied exhibits a special style with many

word and clausal repetitions, whereby a basic statement is followed by successive elaborations. It seems likely that such elaborations were linked intonationally to the basic clause. However, while intonation may have played a role in discourse structure, clause combining, and elsewhere in the language, it can not be examined here due to the lack of textual sound recordings.

1.7 Organization of this work

The Chimariko grammar is divided into twelve main sections: phonetics and phonology, morphophonemic alternations, word classes, noun morphology, pronoun morphology, adjective morphology, verb morphology, simple sentences, questions, negation, complex sentences, and discourse structure. Given the complex morphology of Chimariko, many different sections of the grammar are dedicated to the functions and forms of morphemes. While there are certainly enough data available for a grammatical description of Chimariko, some topics, such as phonetics, are treated in less detail due to the nature and limited amount of data.

A comparison of Chimariko to neighboring languages, in particular Wintu, Hupa, and Shasta, is conducted for each grammatical topic. This is summarized in a separate section after each of the twelve main parts of the grammar. Similarities between Chimariko and its neighboring languages, as well as the main typological characteristics, are discussed in the final section of this work.

The examples used in this grammar are based on three sources of data: (1) Harrington (1921, 1926, 1928), (2) Grekoff (1950-1999), and (3) Dixon (1910). The source is indicated for each example. The orthography and translations of the examples are kept the same as in the respective source to avoid any misrepresentations, except for the Harrington data where the symbols have been adapted (see Table 2). Incomplete translations, sometimes found in the Harrington data, are complemented with information in brackets. Given that the orthography of the examples is carried over from the source, some examples do not reflect a phonemic writing system; in particular allophonic voiced stops are found frequently in the data (see 2.1.1.7). The glossing of the examples is provided by the author and is consistent throughout the grammar. A number of morphemes cannot be analyzed due to the nature and limited amount of data. These morphemes are glossed with question marks.