
Nos. 02-35996
(District Court No. 96-1481JE (D.Or))

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

ROBSON BONNICHSEN, ET AL.,
Plaintiffs-Appellees

v.

UNITED STATES OF AMERICA, ET AL.,
Defendants-Appellants

and

CONFEDERATED TRIBES OF THE COLVILLE RESERVATION,
ET AL.,
Defendants-Intervenors-Appellants

On Appeal from the United States District Court
For the District of Oregon
Honorable John Jeldricks

BRIEF OF AMICUS CURIAE
(In support of the Plaintiff-Appellees)

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INTEREST OF AMICI CURIAE

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William Shipley is Professor Emeritus of Linguistics at the University of California, Santa Cruz and author of articles on the descriptive and comparative linguistics of Native California languages, as well as texts, a dictionary and a grammar of the Maidu language. He has also written various papers on the issue of proto- Penutian, a controversy that plays an important role in the case of Kennewick man now before the Court of Appeals. The *amici* are concerned about the way linguistic evidence has been employed in determining cultural affiliation under the Native American Graves Protection and Repatriation Act (NAGPRA) and the precedence this misuse of evidence might have on future cases. They are also concerned that if NAGPRA is interpreted in such a way as to extend its reach

to the remote past, not now a provision of the law, that access to the past will be lost to science in the attempt to explore our common human patrimony to the detriment of the public not only in the United States, but worldwide.

SUMMARY OF ARGUMENT

In his report on cultural affiliation in the case of Kennewick Man Dr. Eugene Hunn failed to apply the appropriate principles of linguistic analysis and reached conclusions that are not warranted by the data when he said that the ancestors of the Sahaptin-speakers, a subset of the Tribal Claimants, have lived in the area for at least 2,000 years. DOI 10069, 10309-10, 10315-17, 10326. That conclusion is pure speculation. Sahaptian is a language family comprising the numerous dialects of the Sahaptin and the closely related Nez Perce language. While acknowledging that the time of residency there could have been shorter Hunn believes that scenario is unlikely. DOI 10317, 10326. He cites no convincing evidence for that conclusion. Hunn also writes, “proto-Sahaptian or some immediate genetic predecessor was spoken throughout the Columbia Plateau approximately 4,000 years ago.” DOI 10310, 10322, and that the ancestral form of those languages, “proto-Penutian” was spoken in the area at least 8,000-9,000 years ago. He also claims “that Kennewick Man spoke a proto-Penutian dialect”. DOI 10310-11, 10323, 10326. Hunn did acknowledge that Kennewick man’s

group may have spoken another language and that the ancestors of the Tribal Claimants “either displaced this earlier group or arrived after that group had moved elsewhere or had died out”. However, Hunn saw “no evidence to suggest such an alternative” DOI 10326. Those conclusions are not supported by the available data.

The trial judge found that, “Given the limited information available regarding the Kennewick Man and his era, linguists cannot tell us what language the Kennewick Man spoke, what group he was affiliated with, who else was in the region, or whether the Tribal Claimants are related to the Kennewick Man’s group.” OPINION at 50. The following will demonstrate the soundness of the trial judge’s decision first by briefly describing what historical linguistics is, especially as applied in native North America. Even if Kennewick man has any living descendants, the inevitable changes that would have occurred in his language over the past 8,000 to 9,000 years make it impossible to recognize a shared group identity between his group and the Tribal Claimants based on language.

ARGUMENT

LANGUAGE CHANGE

One of the founders of modern structural linguistics noted that “there is no such thing as absolute immobility” in language. “Every part of language is subject

to change... The stream of language flows without interruption” (Saussure, COURSE IN GENERAL LINGUISTICS, p. 140, 1966). Edward Sapir, another pioneer linguist and anthropologist, described language as moving “down a current of time away from any assignable norm developing new features unceasingly and gradually transforming itself into a language so different from its starting point as to be in effect a new language” (Edward Sapir, LANGUAGE, p. 150, 1921).

Anyone with even a passing acquaintance with the history of English knows what Sapir means. English as written 800 years ago is so different from the English we speak today that it cannot be recognized as the same language, even though there is no break in continuity from that time to the present.

The constant process of linguistic change is the result of many factors both inside a language system and arising externally from the communication needs of on-going communities of speakers. When external factors, such as geographic distance or social and cultural forces, weaken the density of communication within a language territory, the speech norms of different regions or social groups will diverge in different directions, and such divergence will result in the formation of different dialects of the same language. Thus English is spoken in different dialects in England and in the United States, and American English is spoken differently in New York, Mississippi, etc. Dialect divergence is thus a part of language change.

Dialectology and historical linguistics are intimately connected fields of linguistic science.

If the process of divergence continues over a long enough period of time with little or no contact among the different parts of the original speech community, dialects will eventually differ so much from one another that they will become mutually unintelligible yet related languages. This is what happened to Latin, the common language of the Roman Empire when the social, political and economic bonds gave way and different parts of the empire no longer formed parts of an integrated whole. The Latin dialects spoken in Spain drifted so far away from those spoken in Italy, for example, that eventually different languages emerged, Spanish and Italian, with Latin as their common ancestor.

Another way that languages diverge from one another is through migration, where one portion of a speech community moves away from the main body thus losing connection with the original group so that two or more mutually unintelligible languages arise in very different parts of the continent. One example is what happened with the Athabaskan languages that are widely distributed from Alaska to the Southwest. Another example is the Algonquian family of languages spoken in northeastern North America, but also in parts of the Midwest and the Great Plains, with distantly related outliers as far away as the coast of northern California.

HISTORICAL LINGUISTICS

Written records give us direct access in some cases to the different stages of language as spoken in the past. Yet writing goes back only about 5,000 years and then only in a few languages. In most literate languages the written record reaches back only a few centuries. The majority of the languages of the world have no written records at all. Despite the lack of documentation linguists have been able to devise ways of reaching back into prehistory to reconstruct earlier stages of languages and thereby demonstrating the genetic relationship among them. This is done by means of the comparative method, a technique of linguistic reconstruction that has been applied to languages all over the world.

The linguist begins by examining correspondences found in two related languages. Such correspondences represent what remains in the present structures of related languages of the forms and patterns left over from their common ancestor. By systematically comparing those correspondences the linguist can reconstruct their common ancestral language and the sequences of historical changes that have produced its divergent descendants. Once all the languages of one family have been compared, for example Spanish, Portuguese, Italian, French and Romanian, their common ancestral form can be established. In this case the ancestral form is reconstructed as proto-Romance (corresponding to written Latin),

and the family that has been identified in the analysis is the Romance family of languages.

The process can be repeated with the proto-languages of other families if they show enough correspondences to indicate that they have descended from an even more remote ancestral language. Thus proto-Slavic, proto-Celtic, proto-Germanic (from which English has descended), etc. have been compared in order to reach the distant ancestral form from which they have all diverged.

It is necessary to note at this point that not all languages can be shown to have a genetic relationship with others. For example, the Basque language spoken in the Pyrenees Mountains has no living relative and is thus considered a language isolate. There are many such languages in Native North America as elsewhere around the world representing what may be the last remaining branch of a language family whose other members have become extinct. There is no way to know how many languages have come and gone over the millennia, for “language death”, as linguists call it, is a natural part of language history. The vast majority of those languages that are now extinct have entirely disappeared without leaving a trace in any historical record or in the speech of living communities. We do, however, know of dozens of Indo-European and non-Indo-European languages in the Mediterranean Area that have given way to Greek and Latin by Late Antiquity, such as Etruscan, Lydian, Illyrian, Thracian, Phrygian, Lycian, Hittite, etc. (Harald

Haarman, LEXIKON DER UNTERGEGANGENEN SPRACHEN, 2002), as well as the large number of American Indian languages that have disappeared since European contact. There is no reason to believe that the group to which Kennewick man belonged was in any way exempt from the process of language death, and the language they spoke 9,000 years ago may have died out without leaving a trace.

One scholar, assuming less linguistic diversity in earlier times than later and accepting many deep relationships, estimated that 85% to 95% of the languages spoken in North America 6,000 to 7,000 years ago have no documented descendants (Sydney M. Lamb, “Linguistic Diversification and Extinction in North America”, 1964). This percentage increases if the starting point is 8,000 or 9,000 years ago, and if more deep-level relationships like Penutian are postulated, since reducing the number of stocks is tantamount to reducing the number of survivors.

In the eighteenth century scholars noticed a striking resemblance between Greek and Latin, the classical languages of Europe, and Sanskrit, the classical language of India. Also languages across Iran, Afghanistan, northern Iraq and Turkey and in the Caucasus showed a family resemblance to the languages of Northern India and Europe. Over the nineteenth century the comparative method and the historical record permitted scholars to reconstruct the parent language of all of them, known as proto-Indo-European, with an estimated time depth of 5,000 to 6,000 years. The same methods have been used with other language groupings

across the Middle East, Asia, Africa, the Pacific Islands and the Americas to give us a clearer picture of the relationship among the languages of the world.

LEXICAL BORROWING AND GEOGRAPHIC DIFFUSION

Linguists begin their work by finding and examining resemblances between two or more languages thought to be related. The assumption here is that certain parts of the vocabulary of any language, its basic vocabulary, are less subject to change than others. The words of the basic vocabulary thus most readily reveal the kind of regularities of sound change that have brought related languages from their common ancestor to their present form. One problem historical linguists encounter in identifying basic vocabulary is that all languages borrow words from one another in varying degrees depending on the varying conditions of contact and interaction among their respective speakers.

For example, Roman influence in Europe meant that a large number of Latin words were diffused into the Germanic languages, and after the Norman conquest of England in 1066 a large number of French words were incorporated into English. Many words we think of as English have actually replaced Anglo-Saxon words that have either dropped out of the language or have become restricted in their meanings. For example the Anglo-Saxon ancestor of the word “doom” was *dom* (circa 725), originally meaning “law, judgment, trial, sentence,

condemnation”. A judge was a *domes-man* (Mayhew and Skeat, A CONCISE DICTIONARY OF MIDDLE ENGLISH FROM 1150 TO 1500, 1938). This Anglo-Saxon form was subsequently replaced in the domain of jurisprudence by the word “judge”, a word that entered the language from Anglo-French probably before 1200 (Robert Barnhart, THE BARNHART DICTIONARY OF ETYMOLOGY, 1988). Linguists must therefore pay close attention to the possibility of borrowing when isolating that part of the vocabulary that represents the lexical residue from the ancestral language.

Another difficulty encountered by linguists is that in some regions resemblances among languages arose not from genetic factors but rather from geographical circumstances. In such regions, known as convergence zones or language areas, not only lexical but also phonological and grammatical features have diffused across the boundaries of languages to become integral parts of the structures of languages that are sometimes from different genetic stocks. Such areas must be taken into account in order to determine linguistic history. With this in mind, Franz Boas, the founder of American anthropology and a pioneer in the field of linguistics, was skeptical about placing too much reliance on the comparative method in retrieving the linguistic history of the pre-literate languages of Native North America. “Languages may influence one another”, he wrote in 1917, “to such an extent, that, beyond a certain point, the genealogical question has

no meaning” (Boas, RACE, LANGUAGE AND CULTURE, p. 202, 1917). When dealing with questions of linguistic affiliation over a 9,000 year span, as in the case of Kennewick man, Boas’ words are of particular significance.

THE RELIABILITY OF LINGUISTIC RECONSTRUCTION

If adequate information is available, if problems of diffusion and other factors are properly taken into account and if the comparison is carefully done, the proto-language of two or more genetically related languages can to a degree be reliably reconstructed, depending on a number of factors. This reliability has been substantiated by two well known cases, one for the Algonquian family and the other for Indo-European. The comparative method indicated that a certain sound unit should be present in proto-Algonquian yet that particular sound was found in none of the daughter languages. Then a hitherto unrecorded language of that family, Swampy Cree, was described in which the missing sound unit was discovered, thus validating the reconstruction. A similar incident occurred with proto-Indo-European with the discovery in Turkey and the decipherment of the Hittite royal archive from the second millennium B.C.

Reconstructions, however, are only formulas that tell us about the identities or systematic correspondences of the daughter languages, since some features will have disappeared from the related languages, or will have survived in so few of

them or in such altered form as to be unrecognizable as ancient.

TIME DEPTH IN HISTORICAL RECONSTRUCTION

The comparative method can take us back only so far and just how far is not known in absolute terms. For example, Lithuanian is more similar to the Indo-European proto-language than is Swedish, thus indicating different rates of change in those two genetically related and geographically and culturally proximate languages. Even though linguists believe that the present Indo-European languages go back perhaps 6,000 years, R. M. W. Dixon (THE RISE AND FALL OF LANGUAGES, p. 47, 1997) correctly observes that “There is no way of knowing how long it took to go from the presumed homogeneity of proto-Indo-European to the linguistic diversity of proto-Indo-Iranian, proto-Celtic, proto-Germanic, etc. The changes could have been rapid ... or slow. We simply do not know”. The same can be said about the languages in Native North America where there are no written records for any time depth at all.

DISTANT GENETIC RELATIONSHIPS

Despite the difficulties of determining relationships among languages for remote antiquity some linguists have attempted to establish what are called

superstocks or phyla by examining resemblances in the proto-languages of different stocks, for example by comparing Uralic, which includes Finnish, and Altaic, which includes Turkish, to posit the phylum Ural-Altaic. The term phylum, however, is usually understood to imply “that the genetic relationship has not been fully demonstrated, and that it is therefore impossible to speak in terms of a common ancestral language” (M. E. Kropp Dakubu, “Genetic Classification”, INTERNATIONAL ENCYCLOPEDIA OF LINGUISTICS, Vol. 2, p. 55, 1992).

The reason for uncertainty in determining genetic relationship is that as time increases genetically related resemblances become fainter and harder to recognize. In fact some resemblances may be due to the effects of areal diffusion, described above, or even universal tendencies in language. Random chance also accounts for about 5% to 6% of the resemblances even in the vocabularies of two languages presumed to be genetically related. A host of other factors can also complicate the problem of determining genetic relationships among language. Among those problems are, difficulty in identifying basic vocabulary, undetected borrowings, sound symbolism, onomatopoeia, erroneous reconstructions, chance similarities, neglect of known history, spurious forms, philological errors, comparison of non-cognate forms, etc. Lyle Campbell lists such problems in his AMERICAN

INDIAN LANGUAGES and reviews how linguists have tried to deal with them (pp. 206-259, 1997). *

SPECIFIC PROBLEMS OF GENETIC CLASSIFICATION IN AMERICAN INDIAN LINGUISTICS

From an early date anthropologists and linguists have tried to reduce the great linguistic diversity of Native North America into more manageable genetic units. Some of those attempts were intended only as hypotheses for later proof. Many such tentative schemes, however, although still awaiting conclusive tests against empirical data, were simply accepted as proper classifications and found their way into conventional thinking. Also different methods have been used in attempting to establish genetic relationship. One such method, multilateral comparison devised by anthropological linguist Joseph Greenberg, has been influential yet heavily criticized and rejected by almost all linguists working in the field (Campbell, AMERICAN INDIAN LANGUAGES, pp. 209-213). Thus

* Lyle Campbell's AMERICAN INDIAN LANGUAGES, 1997 won the Leonard Bloomfield Book Award in 2000, which is presented by the Linguistic Society of America every two years "to recognize the volume that makes the most outstanding contribution to the development of our understanding of language and linguistics" (quoted from the website www.lsadc.org).

general problems inherent in establishing genetic relationships and the different methods employed, have created systems of classification ranging from well established to farfetched. Campbell says that such schemes can be evaluated along a continuum from established and non-controversial relationships, to more distant but still solidly supported relationships, to plausible but inconclusive proposals, to doubtful but not implausible proposals, to implausible proposals such as the relationship of Turkish and Quechua, the Inca language still spoken in the Andes of South America. Among the “plausible but inconclusive proposals” is the superstock or phylum known as Penutian, a hypothesis that plays a major part in the Tribal Coalition’s claim of linguistic continuity and thus cultural affiliation with Kennewick Man.

THE PENUTIAN HYPOTHESIS AND KENNEWICK MAN

The Penutian phylum was first proposed in 1913 by Roland Dixon and Alfred Kroeber and posited only for California Penutian; later other proposals for additions were made, many or most by Edward Sapir, who accepted Dixon and Kroeber’s hypothesis in 1929. Sapir was one of the most respected linguists of the time. Lyle Campbell and Marianne Mithun say that he “was a recognized genius; it is said that his hunches were better than others’ proofs”, thus his overall schema for the classification of American Indian languages was given wide credence

although Sapir himself said that it “must not be taken too literally. It is offered merely as a first step toward defining the issue, and it goes without saying that the status of several of these languages may have to be entirely restated” (Edward Sapir, “The Hokan Affinity of Subtiaba”, *AMERICAN ANTHROPOLOGIST*, vol. 27, p. 526, 1925). This, caveat, however, was forgotten and “the schema was accepted literally. It was assumed to have been established by valid linguistic methods and froze into accepted doctrine” (Campbell and Mithun “Introduction: North American Indian Historical Linguistics in Current Perspective”, In. Campbell and Mithun (eds), *THE LANGUAGES OF NORTH AMERICA: HISTORICAL AND COMPARATIVE ASSESSMENT*. 1979, p. 29). Penutian was one of the phyla included in this schema.

As time went on more and more languages were assigned to the Penutian phylum. The phylum thus shows “tremendous linguistic diversity, equaling perhaps that of the entire continent” (Michael Silverstein, “Penutian: An Assessment”, In. Campbell and Mithun, *THE LANGUAGES OF NORTH AMERICA*, p. 651). Claims for membership have also been made for languages as far south as Bolivia and Chile. The Penutian, hypothesis, however, has always been controversial. Even Kroeber who was one of the anthropologists who made the first proposal came to doubt its validity after a while.

After many years of trying to establish the proper correspondences to support the claim for a Penutian phylum William Shipley finally came to the conclusion that “the term Penutian has no genetic definition at all. The very use of the term”, he writes,

prejudges the case and sets us off to working from a kind of axiomatic entity which we have not defined ... If we ever find real genetic connections somewhere among [any of] of these languages, then the term Penutian might be all right to use again, although it is pretty shopworn. I think we should stop misleading everybody and drop the term out of our working vocabulary even though it might produce an identity crisis in some of us. It is not that I feel that there are no genetic connections to be found - I just don't want to name something until I have something to name (W. Shipley, BERKELEY LINGUISTIC SOCIETY, vol. 6, p. 440, 1980).

Campbell agrees. “There is certainly enough solid material to encourage an open-minded linguist to be sympathetic to the possibility of genetic relationship(s)”, he writes about Penutian, “but the evidence is excessively messy and at present is not convincing” (Campbell, p. 317). The controversy over Penutian illustrates some of the problems linguists encounter when dealing with remote genetic relationships and some of the problems specific to American Indian linguistics. It also shows why proper rules of evidence are essential in order to properly use linguistic evidence in claims of cultural affiliation that arise under NAGPRA.

The Tribal Claimants in this case have based their claim to the remains of Kennewick man partly on the assertion that Kennewick Man spoke a of dialect

proto-Penutian thus culturally linking the remains to the claimants. If there is no consensus among linguists that such a language even existed, then the Tribal Coalitions' claim, as based on linguistic evidence does not pass the test of "reasonable connection" between the living group and the remains of Kennewick man. Even the Secretary of the Interior was not persuaded by the claim of a linguistic connection between Kennewick man and the Tribal Claimants. COE 27; ER 7.

Even if proto-Penutian were a demonstrated ancestral form of the Sahaptian languages, and even if it had been spoken in the place and at the time that Kennewick Man lived, there would still be no merit for the Tribal Coalition's claim of cultural affiliation based on linguistic evidence, for there is no way at all for anyone to know what language Kennewick man's group spoke. This point is clearly illustrated by reference to the known linguistic diversity in the Plateau culture area and the interaction among the languages of that region in historic times.

LINGUISTIC DIVERSITY IN THE PLATEAU CULTURE AREA IN HISTORIC TIMES

There were two large and territorially extensive language groups on the Plateau and six smaller ones, four of which are isolates that is, languages to which

no genetic relations can be assigned. The largest of the Plateau groupings is Salishan with seven languages spoken in the north. The other large grouping is the Sahaptian family, spoken in the south, whose members are the Sahaptin dialects and Nez Perce. Two languages from other territories were also spoken on the Plateau; Nicola Athabaskan, belonging to the Athabaskan family, and Kiksht a language belonging to the Chinookan family (Kinkade et. al. "Languages", HANDBOOK OF NORTH AMERICAN INDIANS: PLATEAU, vol. 12, pp. 49-72, 1998).

A rule of thumb in linguistics is that related languages that are more sharply differentiated over a wide area are more likely to have been in a region for a longer time than closely related languages or minimally differentiated dialects that are found spread over large areas (as in the case of Sahaptian and Sahaptin). There is also evidence of the movement into the area of non-Sahaptian and non-Salishian-speakers. One such group consists of Kiksht-speakers whose language belongs to the Chinookan family, another consists of speakers of Kootenai, a language isolate, who appear to have come from the eastern slopes of the Rockies adjacent to the Great Plains in pre-horse times under pressure from the Blackfoot (Kinkade, et. al. p. 51).

Relations between the Sahaptian peoples and their neighbors, however, especially Chinookian and Salishan speakers, might have resulted in the spread of

the Sahaptian languages at the expense of those languages without involving the movement of populations. In other words the population might have stayed the same while the language moved through the process of linguistic assimilation. We have no proof, however, of either scenario.

We do know, however, that the replacement of one aboriginal language by another has taken place in the Americas and indeed in the Plateau culture area. For example, the people who spoke Nicola Athabaskan intermarried in recent times with speakers of Salishan. Their descendents eventually shifted from Nicola to Okanagan and Thompson Salish dialects (Kinkade et. al, p. 49). Cayuse speakers were similarly linguistically assimilated by a lower Nez Perce dialect, a process well underway and observed by missionaries in the early nineteenth century (Kinkade et. al. pp. 61-62).

WHAT LANGUAGE DID KENNEWICK MAN SPEAK?

The linguistic picture in historic times thus indicates two processes that bear on the question of what language Kennewick Man spoke: migration into the region by speakers of other languages and the replacement of one aboriginal language with another. What kind of linguistic diversity existed in the Plateau culture area at the time that Kennewick Man lived there? Did Kennewick Man speak a language ancestral to Sahaptian, indeed was there such a language in the region at that time?

Or did he speak a language like Cayuse that eventually gave way to another language, disappearing from history in the process? Or did Kennewick Man speak a language whose speakers eventually left the area and whose descendants live today in some far off part of the continent? The answers to these questions are that we simply do not know, nor can we ever know.

The archeological record also suggests that there was movement in the Plateau culture area that would have had an impact on the languages that have been spoken there for the last 9,000 years. For example, the record shows a shift in culture at about the time that Kennewick Man was alive. About 8,800 years ago the Pebble Tool Tradition completely replaced the earlier and far more elaborate Stemmed Point Tradition in the Columbia Basin. Since the break was sharp and since it involved a change from more elaborate to less elaborate technology, archeologist James Chatters and others think the shift likely involved the migration of new people into the area at a time of changing climatic conditions (Chatters, **ANCIENT ENCOUNTERS: KENNEWICK MAN AND THE FIRST AMERICANS**, pp. 148-153). Subsequent cultural discontinuities revealed in the archeological record suggest additional migrations into the region. In fact waterways such as the Columbia River have always invited the movement of people anywhere on earth and it would be anomalous indeed if the Plateau had not been peopled by different groups speaking different languages over the millennia.

Kennewick man died during the transition between two cultural traditions leading archeologists to ask, was the change accompanied by a change of populations, as Chatters and others believe and as suggested by physical differences between Kennewick Man and historic Indian populations, or were the local Stemmed Point makers acculturated by the newcomers? If so, to which tradition did Kennewick Man belong? Kennewick Man may have been a member of a population that became extinct in the encounter or a group that may have been genetically swamped by newcomers in the region.

Other archeologists, however, say that the archeological record does not necessarily demonstrate shifting populations in the region, for people quickly accept new technologies and life styles if they prove adaptive to changing conditions. Innovations and replacement of old technologies with new ones can alter the archeological record in a relatively short time while the living population remains the same. In short, we simply do not know enough about the population dynamics of 8,000 to 9,000 years ago in the Plateau culture area to prove either hypothesis. We do not know if there was continuity of a single population or migration into the region, although the latter is more likely given what we know about other parts of the world and the nature of the area drained by a mighty river and its tributaries.

LANGUAGE, RACE AND CULTURE

Even if the present day native inhabitants of the area are descended from people who lived there 9,000 years ago scholars cannot use language to prove it. In 1911 Franz Boas in *HANDBOOK OF AMERICAN INDIAN LANGUAGES*, a founding document for American Indian language studies, made a common sense observation that was new to many people at the time but that has since become an undisputed fact among anthropologists, namely that language, race and culture follow different trajectories. A population characterized by one physical type can change languages and cultures, and languages and cultures can spread to people of different races. For example, the Hungarian language was spread to races living in the region of present day Hungary from a small band of nomadic intruders from steppes of Central Asia. Also countless aboriginal languages in both North and South America have been replaced and become extinct, some without a trace, by a shift on the part of their speakers to English, Spanish and Portuguese. Immigrants from Asia have also become linguistically assimilated to those languages where different racial types prevail.

CONCLUSIONS

In sum, given what is known of the extensive prehistoric movement of peoples and spread of languages, it is extremely unlikely that any given Native American language is spoken on the same spot where its linguistic ancestor was spoken 8,000 to 9,000 years ago. On any hypothesis of linguistic relationship there is simply no intellectually honest basis for asserting as Hunn does, that any particular language, or indeed any single language, “was spoken throughout the Columbia Plateau approximately 4,000 years ago”, DOI 10310, let alone 8,000 to 9,000 years ago. Everything we know about linguistic diversity in aboriginal North America suggests that there would have been linguistic diversity in aboriginal North America in the past that was as great as in the contact period of the late second millennium.

And even if Kennewick man was an ancestor of modern Native Americans, there is a good possibility that the language he spoke has no descendants. The wide-spread distribution of shallow-level language families in North America forces the conclusion that there were once other languages, which obviously could have been unrelated, that have been displaced in many areas as these newcomer language(s) moved in, whether the new languages arrived by migration and the succession of populations, or by diffusion throughout a population that stayed in place and switched languages.

And finally there is the question of shared group identity as stipulated in NAGPRA. The language of Kennewick man and that spoken by his descendants 9,000 years later, if indeed he has any descendants and if indeed they speak a language remotely related to that ancient group, would be so different in structure from one another and so different in lexical and semantic content that language could never form the basis for shared group identity. Since the Tribal Coalition has claimed that linguistic relationships with a time-depth of more than 8,000 years can be a basis for ascribing cultural affiliation and group identity, the evaluation of the validity of such linguistic evidence is germane to the present case, and prospectively to other cases in the future. We conclude that there is no linguistic basis for the claims of the Tribal Coalition. The *amici curiae*, therefore, urge that the decision of the trial judge be upheld by the appellate court.

Respectfully submitted,

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