

The Methodological Background to the Na-Dene Controversy

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1. Introduction

The genetic classification of North American languages was a major – if not the major – issue during the pioneer phase of American linguistics, which began in the waning years of the 19th century and spanned the first third of the 20th. Genetic classification at this time was far less a matter of determining hierarchies of relationship, such as had been worked out in painstaking detail for the Indo-European languages, than it was of establishing the existence of inherited relationships at all. Perceived resemblances between languages, primarily in the lexical and morphological areas, but also in the realm of typology, often sufficed for the inclusion of the languages concerned in a common, but all too often amorphous, language family. In no small number of instances, such language families were then grouped variously in larger superfamilies, or phyla, on primarily typological grounds. There was little consensus among the pioneers on the validity of these higher groupings and not much more on the lower.

Critics of attempts at genetic classification were quick to draw attention to their speculative and impressionistic nature and, as more data became available, the inadequacy of many pioneer analyses became painfully evident, allowing holes to be picked in much of the proffered evidence and in the arguments based on them. In this manner a reactionary climate of overriding skepticism towards larger linguistic groupings was created that has, by and large, continued to hover over American linguistics to the present day. As Hymes (1987: 661–662) has put it with regard to the furore surrounding one leading – but admittedly radical – classificationist of today:

I very much share Greenberg's assessment of the climate of opinion in American Indian linguistics and his rejection of its negativism toward extended comparison and remote relationships. [...] Incredible strictures on possible comparisons and cognates have been declared.

From a methodological point of view this conservative reaction against higher-level groupings is problematical in several respects. All too often, the demands placed on evidence produced via the comparative method in the Western Hemisphere fly in the face of the realities of Americanist linguistics. The

comparative method, which was developed, tested, and refined overwhelmingly with reference to Indo-European languages, has, in its Indo-Europeanist application, benefited immeasurably from a quality and quantity of historical and textual evidence unrivaled by any other language or language family, with the possible exception of Semitic. Since the retrieval and comparative analysis of a body of North American textual data – however fragmentary – is out of the question for any period beyond the last five hundred years, it is unrealistic and inappropriate to expect a level of precision in analysis and of transparency in sound change equivalent to what is attainable in areas with comparatively rich historical documentation. In the view of linguistic geneticists, comparative linguistics and genetic analysis should not grind to a halt or be overly constrained merely because the available evidence is by necessity of a quality inferior to that linguists are accustomed to in Europe and the Middle East.

The results of comparative analysis are inevitably less exact at a time-depth several thousand years prior to the first historical documentation of the languages in question. This holds true as much in the Old World as it does in the New, and consequently attempts at reconstructing linguistic relationships of such depth must involve an enlightened mixture of, on the one hand, extensive comparative data that are generally consistent in quality and, on the other, of reasoned argumentation that addresses and weighs all the evidence in presenting the linguistically most probable conclusions as to the nature of the purposed relationship.

Since the time of Boas the reaction against what was seen as excessive and unfounded linguistic speculation has been characterized by a tendency to explain structural and lexical patterns of resemblance between language families as the result of a sprachbund situation, in which lengthy and intimate cultural contacts between the societies representing these families led to a gradual convergence of key linguistic features that originally distinguished them. In cases where lexical resemblances are surprisingly strong, outright borrowing is generally the preferred explanation.

There is a broad consensus of opinion among linguists that sprachbund phenomena have been cogent forces in the prehistory of American languages. The interaction of Algonquian languages with Iroquoian and Siouan provides well-known examples of these phenomena at work. Sprachbund research, like the study of genetic links between languages, is an important area of investigation in the reconstruction of linguistic relationships. Nonetheless, it must be regarded as methodologically and theoretically unsound to embrace the former as the explanatory model of choice to the neglect of the latter in seeking to unravel the complex relationships among languages.

Nowhere has this imbalance been more detrimental to scientific progress than in the history of Na-Dene research, in which unrealistic Indo-Europeanist

standards and expectations with regard to the application of the comparative method have repeatedly retarded, if not blocked, a serious resolution of the phylum issue [for a brief history of Na-Dene research see Dürr and Renner, this volume; some metatheoretical aspects of the Na-Dene controversy are discussed in the preceding article by Renner].

2. Pinnow's positions in the Na-Dene controversy

The difficulties involved in determining the precise nature of features shared, or seen to be shared, by the languages of the proposed Na-Dene phylum have not diminished since the days of Sapir. While it is surely true that all phylum hypotheses suffer from the fact that the relative time-depth of the period of alleged unity precedes the existence, and thus precludes the utilization, of written records, it is equally clear that a variety of factors influences the degree to which comparative analysis of such languages may be productive. These include the level of precision attained in reconstructing the proto-languages of the families constituting the phylum in question; the relative age and thoroughness of textual documentation of the individual languages compared; the degree to which cognates can be identified and phonological rules of correspondence formulated; and the interplay of typology, morphology, and morphophonemics.

Like Sapir, Pinnow brought to the Na-Dene question analytical skills honed in the study and reconstruction of other language families. In Pinnow's case, these included Austroasiatic, in particular Munda (Pinnow 1959, 1963, 1965, 1966a), the original unity of which he succeeded in proving, and Algonquian, the pronominal affixation of which he attempted to reconstruct, albeit with mixed results, via the internal analysis of Cree (Pinnow 1985c). Na-Dene posed a far more daunting challenge, one that demanded a multifaceted approach not simply limited to the drawing up of cognate lists and phonological rules. Pinnow's success in establishing the validity of the relationship between Tlingit and Athapaskan, now generally acknowledged, derives from this approach.

The Na-Dene hypothesis was proposed by Edward Sapir under the impression of obvious grammatical and lexical similarities shared by Haida, Tlingit and Athapaskan. The opponents of Na-Dene concede the existence of similarities, although to a lesser degree, but argue that there are too few cognates tied to regular sound correspondences to establish Na-Dene as a genetic grouping.

The linkage of Eyak and Athapaskan is supported beyond doubt by the partial reconstruction of the proto-language, but no reconstruction has been achieved for the higher strata of Na-Dene. Tlingit, after a long period of non-acceptance, is now considered a Na-Dene language since phonological features of the conservative variety of Tongass Tlingit have permitted the connection of Tlingit with Eyak-Athapaskan.

In the case of Haida comparative efforts – other than Pinnow's – seem to have failed. For the opponents of Na-Dene, Haida, at least, cannot be proven to be related to Tlingit-Eyak-Athapaskan and therefore has to be treated as an isolate. Seeking an alternative explanation for the similarities, they refer vaguely to a kind of hybridization and reject the genetic connection. Krauss characterizes this position – which was held for Tlingit, too, right up to the point of its recognition as Na-Dene – as a “strong claim” (Krauss 1973: 961):

Krauss is thus himself making a strong claim, that there is this incongruence and that such is not entirely ‘normal’ or ‘ordinary’ in relationships between (e.g. Indo-European) languages, and that some sort of historical explanation involving some kind of intimate borrowing, language-mixture, or creolization is required. Pinnow rejects the creolization theory, and minimizes the incongruence.

Pinnow, from the beginning, argues against borrowing, relying on the data connecting the Na-Dene languages genetically: “In other semantic spheres there are also numerous clear parallels in which the phonemic agreement is no less striking than in the words which have been considered loans (animal names, etc.)” (Pinnow 1968: 204). Ignoring some of the strictures of the comparative method as applied by his American opponents, he succeeds in proposing a considerable number of etymologies for Na-Dene. He approaches Na-Dene on the root level, tracing monosyllabic lexical roots within word families, and is less rigid with regard to what may constitute an admissible comparison. He does not reconstruct Proto-Na-Dene forms in the strict sense but emphasizes the provisional nature of his etymologies, which are “rein technische Hilfskonstruktionen” (1985b: I, 32). Pinnow relies on the validity of the majority of the etymologies presented and prefers to accumulate all potential evidence, readily acknowledging that a certain percentage of false matching is unavoidable (1985b: I, 36–37). In his presentation of data Pinnow scrupulously distinguishes between probable and less probable etymologies and is fully aware of the limitations of his method. Nevertheless, by presenting a certain amount of somewhat less than fully reliable data, Pinnow's method exposes him to criticism. The latter, however, was formulated on the basis of a highly restricted application of the comparative method, most notably by Krauss (1973: 958), by Leer (1990: 73, note 3), referring back to Krauss' earlier statement, and, in the baldest form, by Levine: “the lexical comparisons made by Sapir and Pinnow, which violate the most basic strictures of careful phonological reconstruction in a variety of ways, erode the concept of cognacy into meaninglessness” (1979: 170).

The varying comparative approaches are accompanied by differences in the interpretation of data. Referring in several instances to the same phenomena, Krauss and his adherents present data as evidence for keeping languages separate that Pinnow musters for linking them genetically. Another major point

of controversy is the importance of similarities in the positional system of verb morphology, which for Hymes and Pinnow are so great as to leave no alternative to the acceptance of a genetic relationship. Thus, while the arguments in favor of Na-Dene rely on a cumulation of circumstantial evidence, Krauss and other opponents of the phylum hypothesis require proof in the strict sense, i.e., the reconstruction of a considerable part of Proto-Na-Dene in full agreement with the comparative method as applied by them. As long as such proof is lacking, the languages have to be treated according to them as genetically unrelated. The hybrid hypothesis which they brought forward as an alternative to genetic relationship even goes so far as to imply that the genetic model of relationship as such is invalid in the case under consideration.

In the following sections we will review the methodological character and problems of the opposing positions by discussing in sequence: the hybrid hypothesis of Krauss; the morphological argumentation of Hymes and Pinnow based on positional analysis; and, finally, the comparative method as applied by Pinnow, which integrates internal reconstruction.

3. Tlingit and Haida as hybrid languages

According to Krauss (1973), Athapaskan-Eyak, Tlingit and Haida share numerous lexical similarities which seem to be restricted to well-defined categories, primarily material culture and fauna-flora, whereas the vocabulary outside of these domains gives the impression of being distinct. Moreover, the unrelated neighboring language Tsimshian shows a considerable number of parallels in these lexical fields which he considers most likely to be due to borrowing. Therefore, Krauss explains the similarities shared by Athapaskan-Eyak, Tlingit and Haida by means of borrowing or areal diffusion. His implicitly circular argumentation, in somewhat reduced form, runs as follows:

1. There is no apparent lexical evidence for Na-Dene.
2. Therefore, there is no genetic relationship.
3. Therefore, lexical parallels are due to borrowing.
(If parallels are due to borrowing, of course, there is no lexical evidence for Na-Dene. *Quod erat demonstrandum?*)

Nevertheless, Krauss, accepts a number of grammatical similarities which cannot be explained by lexical borrowing alone. In defense of his reservations regarding a genetic connection, he has alluded several times to the possibility “of Tlingit being a ‘hybrid’ between Athapaskan-Eyak and an unrelated stock” (Krauss and Golla 1981: 67). The vague hint of hybridization was considered sufficient to reject a genetic relationship or, at best, to regard it as an open, in many respects unanswerable, question.

In the case of Tlingit, the conservative phonology of Tongass Tlingit supplied the link between Tlingit and Eyak-Athapaskan and led at last to the acceptance of the genetic relationship despite the fact that “There are too many potential sound correspondences between Tlingit and Eyak-Athapaskan, and the number of lexical items adducible for many of these does not suffice to establish regular sound correspondences for Proto-Na-Dene” (Leer 1990: 74). Leer (1990) tries to explain this situation by modifying and, for the first time, elaborating on Krauss’ hybrid hypothesis. Leer assumes a considerable percentage of endoborrowings, that is borrowings from different varieties of Tlingit, with the result that possible sound correspondences are multiplied. The potentiality of endoborrowing in Na-Dene was first mentioned by Pinnow, who characterized the presumed borrowings as “a matter of loans *within* the same linguistic stock” (1968: 210). It is a well-documented phenomenon in the Germanic family. In these languages, vocabulary has been borrowed extensively from related languages, as seen, e.g., in English *shirt* vs. *skirt* or *ship* vs. *skipper*, where the regular reflex /š/ of Germanic /sk/ is obscured by doublets borrowed from Dutch or from Scandinavian that retain /sk/. This variant of the hybrid hypothesis, of course, implies and corroborates the genetic relationship between Tlingit and Eyak-Athapaskan.

In the case of Haida, the dismissal of a genetic relationship was almost total following Levine’s critical paper (1979), in which he denied the existence of a considerable number of lexical and grammatical similarities shared by Haida and Tlingit-Eyak-Athapaskan. This, notwithstanding, hybridization has been put forward repeatedly by Krauss and others as an explanation of whatever similarities are perceived to be shared by Haida and Tlingit-Eyak-Athapaskan, most recently by Leer (1990: 73):

The Na-Dene phylum, as defined here, is composed of the Athabaskan family and the Eyak and Tlingit languages. I exclude Haida, since the evidence for including it is inconclusive. Most of the comparable lexical items could well be borrowings, and the residue is too small to be considered proof of genetic relationship. The grammatical resemblances could be attributed to areal-typological influence and a long – perhaps intermittent – history of Tlingit-Haida bilingualism.

The suggestion of hybridization as an explanation for the considerable lexical and grammatical similarities shared by Haida and Tlingit-Eyak-Athapaskan and its implications have to be examined in the light of our knowledge of language contact situations. The general applicability of the comparative method has been called into question with respect to cases of obvious language mixture ever since Schuchardt’s critique of the Neogrammarians in the 1880s. Such heavily mixed languages are considered inappropriate for genetic classification and not reconstructable by the comparative method: “mixed languages

do not fit within the genetic model and therefore cannot be classified genetically at all" (Thomason and Kaufman 1988: 3).

The validity of the comparative method, moreover, has been challenged with regard to languages that are spoken only in small speech communities and that lack a written tradition. In most of these cases, linguistic change has taken place in a multiethnic and multilingual context that facilitates borrowing and the areal diffusion of various traits. In some instances, in addition, complex avoidance systems that concern vocabulary, e.g. death taboos, or the use of everyday language with particular relatives, have been reported in which lexical items are systematically replaced by others. Abrupt lexical replacements seem to occur frequently under such circumstances, whereas gradual lexical change based on regular sound correspondences can hardly be detected (see, e.g., Boretzky (1981, 1984) on the Arandic languages of Australia). Extensive borrowing and a high degree of areal diffusion among unrelated languages that went through a prolonged period of contact can hardly be distinguished from genetic relationship, so there will be instances in which a decision is very difficult to reach. Thomason and Kaufman claim "that languages arising outside of normal transmission are not related (in the genetic sense) to any antecedent systems" (1988: 10). Unfortunately, in many of these cases the data themselves are also problematical: some of the examples presented must be viewed as coming from language death situations with all their decomposing effects, and moreover, many of the languages under consideration have been insufficiently documented.

According to Thomason and Kaufman, who present the first systematic and exhaustive investigation of the problem, the discussion of language contact and contact-induced language change is characterized by a number of shortcomings (Thomason and Kaufman 1988: 3):

In fact, the entire literature on this subject lacks a unified framework for the discussion, a framework that is based on the substantive claims underlying the metaphors of genetic linguistics and on a systematic historical investigation of pidgins, creoles, and all kinds and degrees of contact-induced language change.

Considerable misunderstandings growing out of the absence of a common framework led to extreme arguments for, or extreme arguments against, hypotheses of language mixture: "The former reflect an underdifferentiation of the linguistic results of contact; the latter suffer from a confusion about the nature of genetic relationship as a historical hypothesis" (Thomason and Kaufman 1988: 3). The hybrid hypothesis of Krauss (1973) and, indeed, also some of Pinnow's arguments (1968, 1969) are examples of such oversimplified views and a study of both sides of the discussion taken as a whole will reveal a considerable number of misunderstandings (see Renner, preceding article in this volume).

Another important shortcoming is that the diversity of contact-induced language change has been underestimated. This consists of three basic types (Thomason and Kaufman 1988: 211):

[...] languages that have borrowed so massively from some other language that genetic continuity has been destroyed for some or all grammatical subsystems (though the basic vocabulary remains largely intact); abrupt creoles, that is, languages that arose in (primarily) multilingual situations in which speakers who shared no common language shifted rapidly away from their several native languages but learned only the vocabulary – not the bulk of the grammatical structures – of the target language; and pidgins, which also arose in multilingual situations [...] and which did not (at first) involve language shift, but rather the creation of a linguistically restricted contact language [...]

Where solid historical documentation is lacking, a comparison of the language under investigation with languages thought to be related to it will usually shed light on the situation, if the time-depth involved is shallow (Thomason and Kaufman 1988: 211–212):

[...] there will be, as Boas predicted in 1917, a lack of agreement between lexical and some or all grammatical subsystems [...] A language that has undergone massive grammatical replacement through borrowing will have grammatical structures that match those of some other particular language [...]; creoles of both types will not have the bulk of their grammatical structures derived from a single source language. Most languages of all three nongenetic types will derive most of their basic vocabulary from a single source.

One must be cautious with premature generalizations at the present stage of discussion. Creolization is mostly accompanied by a more or less significant reduction of morphology, whereas in areal diffusion isolated traits are affected that may trigger a partial restructuring of grammar according to the diffused model. In this context, the great structural similarity of the highly complex verbs of the languages under consideration is crucial, for there is no known instance of a highly complex morphological system being borrowed with but minor changes. Taking into account such languages as Japanese or Korean, both characterized by an extremely high percentage of Chinese loans, the reverse assumption – a Na-Dene language borrowing heavily from an unknown source – seems less unlikely. This ties in with known cases of languages such as Mitchif, the Cree base of which absorbed a considerable percentage of French nouns without significantly altering the highly complex Algonquian verbal morphology. Of course, such mixed languages approach the point where the genetic model becomes senseless, even if one of the subsystems can be traced to a specific ancestral language (Thomason and Kaufman 1988: 8):

[...] given the possibility of diffused linguistic features of all sorts (and, by implication, to all degrees), no single subsystem is criterial for establishing genetic relationship. In fact, genetic relationship in the traditional sense of one parent per language can only be posited when systematic correspondences can be found in all linguistic subsystems [...]

Thus, if a hypothesis of hybridization is claimed to provide the solution with respect to Na-Dene, the kind of hybridization involved in this particular instance has to be specified. But hybridization is not the only possible explanation in the light of present evidence and comparative data. The genetic hypothesis has to be evaluated as an equally valid alternative, and only after the comparative efforts to explain structural and lexical similarities as genetic have failed, can hybridization be judged the most probable explanation in the case in question.

4. The structural evidence from verb morphology

In a paper on the positional analysis of categories Hymes (1956) argued that not only lexical evidence but also grammatical evidence may be crucial for the establishment of genetic relationship. Comparing the positional order in the Haida, Tlingit and Athapaskan verb, he found them so similar that the morphological parallels could not be explained except in terms of a genetic relationship of these languages. Pinnow followed this line of argumentation although Levine (1979) heavily attacked the empirical evidence of the similarities as such and Thomason (1980) objected to the general conclusion that morphological similarities alone, that is, without sufficient lexical evidence, can prove a genetic relationship (Thomason 1980: 367–368):

[...] can the precise morphological congruence in the elaborate Na-Déné verb complex constitute, all by itself, sufficient evidence of a genetic relationship of Athapaskan–Eyak and Tlingit? (Not Haida; see note 3.) The answer, I think, is no. [...] All the evidence available from well-documented language families indicates that morphological diversification goes along with diversification elsewhere in the grammar [...] In other words, the Na-Déné positional correspondences are too exact, in the absence of a comparable number of lexical correspondences, to be the only relic of a distant genetic relationship [...] But if the order of affixes in Na-Déné verb forms is not due to direct genetic inheritance, how can we account for the spectacular agreement in the various languages? Chance is out of the question; what remains is convergence through contact-induced language change.

With access to far more exhaustive and reliable data than his predecessors, Pinnow (1985b) was able to submit a detailed comparative study of the verbal systems of Haida, Tlingit and Eyak-Athapaskan. He was able to confirm Hymes' positional comparison, to present a great number of etymologies for the grammatical morphemes of the languages under consideration, and, to show that Levine's criticism was unjustified, relying as it did on several false assumptions (Pinnow 1985b: IV, 68–71). Pinnow concludes (1985b: I, 41):

Wesentlich beweiskräftiger werden die Fakten natürlich dann, wenn nicht nur die *Kategorien* als solche übereinstimmen, sondern auch ihre *Stellung* im Verbsystem und/oder die entsprechenden verwendeten Morpheme. Und dies ist durchaus oft genug der Fall, [...]

The number of categories compared was 48, which, after eliminating those

counted twice due to a change in position, becomes 44. Of these, 12 have been excluded from comparison. These seem to be unique and secondary developments within a language or family and do not permit the separation of Haida from Tlingit-Eyak-Athapaskan. The result of the items compared is that 25 of 32 categories correspond, whereas only 7 items differ.¹

total number of categories:	44
categories excluded	12
categories remaining	32
Na-Dene correspondences:	25
HTAE or HTE or HTA	18
HTAE (with change of position)	3 (4)
HT	5
HAE or HE or HA	0
lack of correspondence:	7
H only	3
TEA only	4

There are a considerable number of similarities between the verb systems of the languages under consideration. They are neither totally different, as Levine (1979) suggests, nor almost identical, as in Thomason's assessment (1980) of Hymes' arguments (1959). Pinnow confirms the general impression of strong matching but also traces several changes that reveal a diversification and partial restructuring of the systems possibly due to "natural" evolution from a common ancestral model (Pinnow 1985b: I, 44):

Reine Suffix- oder reine Präfixsprachen sind die Na-Dene-Sprachen sicher nie gewesen, sondern sie haben wohl von Beginn an von beiden Mitteln Gebrauch gemacht; nur das Gewicht ist verschoben worden. Das Haida zeigt hier den altertümlichsten Stand; Tlingit und Eyak stehen in der Mitte und das Athapaskische hat sich hier allem Anschein nach am meisten von der ursprünglichen Situation entfernt; es steht am anderen Ende der Skala, also genau entsprechend dem angesetzten Stammbaum H--T--E-A.

In the various languages, most categories have the same position and many affixes filling a particular category have an etymology, although in no case as a corresponding grammatical morpheme (Pinnow 1985b: I, 41):

¹ For details, see the elaborate comparative charts in Pinnow (1985b, IV, 54–65; summary charts: IV, 66 and 69); H = Haida, T = Tlingit, E = Eyak, A = Athapaskan.

Hierbei ist zu erwähnen, daß die Morpheme nicht unbedingt zur selben Kategorie zählen müssen; so kann z.B. in einer Sprache ein Affix in einer bestimmten Kategorie vorliegen, das etymologisch etwa mit einem Verb oder auch Nomen der anderen Sprache verwandt ist. Nehmen wir beispielsweise die eben klassifikatorischen Präfixe, so zeigt sich, daß sie durchaus Parallelen haben, wenn auch nicht immer als klassifikatorische Präfixe; [...]

There are semantic domains which at first glance seem very different, e.g. classification (Krauss 1968: 203):

Haida exhibits a [...] system of noun classification in one prefix position of the verb. This Haida system does not seem to bear any great resemblance to either of the (differing) Tlingit or Athapaskan-Eyak (double) systems, as far as can be seen with the presently available Haida materials; [...]

Pinnow, however, is able to explain many apparent differences (1985b: I, 41):

Haida hat den alten Standpunkt bezüglich der klassifikatorischen Präfixe am stärksten bewahrt, dafür den Unterschied bei den klassifikatorischen Verben abgebaut; im Athapaskischen war es umgekehrt: Hier blieben die klassifikatorischen Verben mehr oder weniger intakt, dafür gingen die klassifikatorischen Präfixe bis auf Reste verloren. Eyak und Tlingit stehen in der Mitte: Eyak neigt in dieser Hinsicht mehr zum Haida, Tlingit zum Athapaskischen.

Thus, Pinnow's in-depth studies demonstrate that the verb morphologies of the Na-Dene languages are not almost identical and borrowed, as suggested by Thomason (1980: 369):

The question as to their ultimate genetic affiliation remains open. They may be genetically related [...] Whatever the answer to the genetic question might be, the extensive current morphological similarities in the Na-Déné languages are most likely to be due to contact-induced changes in systems that started out with a high level of agreement in morphological categories, and least likely to be due to direct genetic inheritance of the morphological categories in their present ordering relations.

Nor are they totally different, as suggested by Levine and Krauss, but there are considerable similarities that can be traced back to a common ancestral language as well as differences that can be explained as the result of changes in the languages under consideration, in which the underlying system of the common ancestral language has been modified over the course of time. There are striking parallels such as, for example, the existence of suffixes that induce contrastive tone in Haida and Tlingit (Pinnow 1985: 39), whereas crucial points contributing to the impression of difference, such as the less developed morphophonemic fusion of Haida may be secondary developments (Pinnow 1985: 38):

Ein Punkt, in dem das H augenfällig vom TEA abweicht, ist die wesentlich schwächer ausgeprägte Tendenz, die ursprünglichen Morpheme und Morphemfolgen durch morphophonemische Veränderungen zu verschleiern. [...] Indes sind auch bei den anderen Na-Dene-Sprachen die morphophonemischen Gesetze recht unterschiedlich an Zahl und Schwierigkeitsgrad; besonders T ist in dieser Hinsicht recht gemässigt. Andererseits

lässt sich auch für H nachweisen, dass mitunter beträchtliche Verkürzungen u. dgl. stattgefunden haben, wenn man die Dialekte vergleicht, z.B. HS *dawganga=lang* 'jüngere Geschwister', HK *dúun=lang* oder *dúu'an=lang*, entstanden aus älterem (belegtem) *dúu'ang= 'lang* (vgl. LL 40).

Pinnow's study of the noun (1985) also reveals considerable parallels in the nominal morphology of the Na-Dene languages. Given the lesser morphological complexity of nouns, the evidence is not as conclusive in proving a genetic relationship than that from verbs (1985: 73):

Auf dem Gebiet der Morphologie des Nomens, Pronomens (und der Numeralia) gibt es im H keinerlei Erscheinungen, die so stark von denen des TEA divergieren, dass sie einer Eingliederung des Haida in das Na-Dene entgegenstehen. [...] Es existieren vielmehr, wie zu zeigen versucht wurde, in der Morphologie des Nomens, Pronomens usw. zwischen Haida auf der einen und dem Tlingit, Eyak und Athapaskischen auf der anderen Seite zahlreiche beachtliche Parallelen – sowohl was die entsprechenden Kategorien (Possessiva, Demonstrativa, Plural usw.) und die Stellung der Elemente als auch die Morpheme selbst betrifft.

Among the Na-Dene languages, a fundamental unity in the structure of the pronominal system can easily be discerned, despite surface variation due to affixation and compounding. In particular, the possessive forms of Haida as well as of Tlingit and of Eyak-Athapaskan are the same as those of verbal object pronominals, whereas subject pronominals in both intransitive and transitive forms are different, a typological feature not to be found elsewhere in the Northwest. The sequence of bound forms is object – subject – verb, that of free forms subject + object + verb. These points have been well demonstrated by Pinnow (1985: 51–55) and present a further solid case for the essentially Na-Dene nature of Haida morphology.

The morphological systems of the languages under consideration thus clearly hint at a direct relationship. But the question remains as to whether the languages can be classified as genetically related or not. So long as the lexicon cannot be related – the positive evidence of morphology notwithstanding – the genetic model of relationship seems inappropriate: "a claim of genetic relationship entails systematic correspondences in all parts of the language because that is what results from normal transmission: what is transmitted is an entire language" (Thomason and Kaufman 1988: 11). Unfortunately, regular and broad patterns of correspondence between Haida on the one hand and Tlingit, Eyak, and Athapaskan on the other cannot as yet be demonstrated in sufficient quality and quantity as to be conclusive. Pinnow alone appears to offer comparative data extensive enough to lay the necessary foundation for a future reconstruction of Proto-Na-Dene. Let us now examine the theoretical orientation of his method.

5. Pinnow's methodological approach

Obscuring any regular pattern of correspondence between Haida on the one hand and Tlingit, Eyak and Athapaskan on the other, and to a somewhat lesser extent among the latter three, are the complex morphophonemics of these languages. All too frequently, irregularities in alleged cognates have tended to weaken arguments for their relationship and, accumulatively, to be used to refute the Na-Dene hypothesis itself. This problem derives in no small part from the limitations and generalizations imposed on the cognate question in Na-Dene research. As Pinnow remarks (1985b: I, 29):

Die fast ausschließliche Heranziehung von Einzelwörtern (um diesen Begriff zu gebrauchen) zu etymologischen Vergleichen auf dem Gebiet der Na-Dene-Sprachen hat bisher den Weg zum Weiterkommen [...] versperrt, obwohl es an sich naheliegend gewesen wäre, die Wörter nicht isoliert, sondern in ihrer Einbettung in größeren Wortfamilien, Wortsippen, Wortfeldern oder Wortgruppen zu betrachten und entsprechende Wortsippen in den zu vergleichenden Sprachen entgegenzustellen.

The traditional Indo-Europeanist manner in which cognate studies have been conducted, characterized by a discrete root-and-stem orientation that concentrates on whole words in isolation, has been productive in Algonquian and Uto-Aztecian etymological research for structural (typological) reasons pertaining to these languages. In recent decades, however, this narrow approach has come increasingly under criticism, even in Indo-Europeanist circles, as the bearing of typological factors on the ability to reconstruct linguistic relationships came to be recognized. According to Hoenigswald (1992: 130):

Comparative work in some families or alleged families has not invariably gone well, [...] This should prompt us to put our finger on possible characteristics of the Indo-European family that could have been particularly, or even exceptionally, propitious for historical treatment [...] Such characteristics probably exist: a fairly elaborate morphology, both inflectional and derivational, which (among other things) generates 'words' of fair length – an important consideration for etymological matching; and a phonological structure, or simply a typological propensity, which favored and still favors conditioned sound changes [...] Such features could indeed make all the difference.

Recognizing the pitfalls in the traditional Indo-Europeanist methodology, Pinnow set about investigating the nature of lexical and phonological correspondences with reference to the morphophonemic patterns exhibited, not by single words in comparison, but on a collective level by word families. This approach had already been employed extensively in the analysis of the Sino-Tibetan phylum (Norman 1988). Lexemes in the languages and families of this grouping are characterized by word-bases (roots) with a monosyllabic morpheme structure, modified by syllabic and non-syllabic affixes that may, as in Old Chinese and Tibetan, merge with root initials and finals. Such modifications re-

sulted, for example, in the development of voiced and palatalized initials and in tones developing from interaction with (subsequently lost) finals as in Chinese and even the unrelated Vietnamese member of Mon-Khmer (Whittaker 1990).

In several important studies, Pinnow has demonstrated the necessity of examining alleged Na-Dene languages along the same lines. His analyses reveal a similar pattern of early root modification through affixation and of unstable disyllabic composita that are frequently reduced in the course of time. As in Sino-Tibetan, with which Pinnow is well acquainted, the analysis of word-families reveals, below the divergent surface structure of individual words, the unity of the underlying pattern. The surface irregularities in the individual terms across languages can now be seen to derive from the varying affixation employed by each language. In Sino-Tibetan the varying terms for 'three' and 'six' serve to illustrate this phenomenon (Norman 1988: 13):

	Middle Chinese	Written Tibetan	Written Burmese	Trung	Bodo	Limbu
'three'	<i>sam</i>	<i>gsum</i>	<i>sûm</i>	<i>ǎ-sàm</i>	<i>tam</i>	<i>sum-si</i>
'six'	<i>ljuk</i>	<i>drug</i>	<i>khrok</i>	<i>khlu</i>	—	<i>thuk-si</i>

Pinnow's approach is based on the view that polysyllabic lexemes in Na-Dene are as a rule made up of monosyllabic morphemes, that is, they are either a compound of several lexical morphemes or concatenations of a single lexical morpheme and one or more affixes. The underlying principle is clearly delineated in his introduction to the polysyllabic verbs of Haida, which at first glance seem quite distinct from the monosyllabic verbal stems of the Athapaskan languages and Tlingit (Pinnow 1985b: I, 30):

Gehen wir zum Haida über, so ergibt sich, daß die Berücksichtigung der Verbfamilien hier zum Weiterkommen sowohl bei der Sprachanalyse als auch der etymologischen Forschung direkt eine *conditio sine qua non* ist. Das liegt daran, daß es im Haida anscheinend – oder vielleicht nur scheinbar – zahlreiche zwei- und sogar dreisilbige Verbstämme gibt, die sich einer weiteren Segmentierung – zumindest zunächst – widersetzen, z.B. HS k'ud=ʷl, HA k'ut'al 'to die' (16.8.4), HA dsuuláang 'revolve, turn over' (10.4.3), HA skínaà 'to wake up' (15.4), HA ldanúu 'to eat' (3.2.3), HA lɣugiigáá 'to be fear-some' (19.14.2), HA saɣdúâ 'to barbecue' (13.5.2). Der erste Eindruck ist klar der, daß hier ein ganz anderes Grundprinzip vorzuliegen scheint, als man es vom T und A her gewöhnt ist, wo es zumindest weitgehend nur einsilbige Verbstämme gibt. Nun lassen sich aber viele dieser mehrsilbigen Verben des H durch Zusammenstellung mit entsprechend anderen, meist verwandten Wörtern durchaus analysieren, wobei natürlich auch die Dialektvarianten hilfreich sein können.

A significant proportion of the lexicon of Na-Dene languages can be derived in this manner from a common inventory of base morphemes + affixes. The roots frequently underwent a phonetic transformation in accordance with morphophonemic rules that often obscured their original form. Nonetheless, traces of

these modifications can still be found in fossilized form today in the modern languages – a good argument for a genetic relationship between them. While some of the compounds appear to go back to Proto-Na-Dene, others are constructs of undetermined age. In the case of ancient compounds, there are some instances in which the individual elements were sequentially reversed in one of the languages or in which one of the elements was dropped or replaced. There is now considerable evidence for polymorphemic lexemes in Na-Dene and in many instances the individual morphemes, if not the actual compounds, can be reconstructed for the proto-language. This means that old Na-Dene material was recombined in different ways from language to language. Even Indo-European provides more evidence of this nature than it does of one-to-one lexemic correspondences.

Beside the comparative method, Pinnow's approach is characterized by two features that are more or less controversial among historical linguists. The first is his general acceptance of root etymologies. The understandable reservations that have been voiced with respect to such etymologies concern isolated etymologies for which there is no supporting evidence. In the case of Na-Dene, these reservations do not apply if word families can be identified, increasing the plausibility of the individual etymologies of which they are constituted. Nevertheless, difficulties remain with regard to individual etymologies due to the weak phonetic differentiation of the primary roots themselves and the not insignificant level of abstractness of the corresponding concepts, as Pinnow himself has noted (1985b: I, 32).

The second dominant feature in Pinnow's approach is the importance he attributes to internal reconstruction, a method summed up by Hoenigswald in the following manner (1992: 129):

Thus the comparative method may be seen as foundational for the establishment, not only of language families and their ancestors and sub-ancestors, but of the line of descent itself. But it has its limitations, [...] In the more successful areas like Indo-European, it has always been combined with procedures characterized by various quite different kinds of logic, known collectively as **internal reconstruction** [*q.v.*]. Our understanding of these methods is uneven, and there is doubt about their generality – mainly because typological preconceptions play a part, in the operations of what are essentially rules of thumb, which is even more difficult to judge here than elsewhere.

The identification of word families, which provide a network of support for reconstructed Na-Dene morphemes, and of patterns of sound change and correspondence detected along the lines of internal reconstruction, a formidable task given the morphophonemic complexities of Na-Dene, is essential for establishing the plausibility of individual etymologies. Similar considerations with regard to internal reconstruction have given rise to alternative explanations to Leer's hybrid theory (Campbell and Goddard 1990: 28):

Other potential explanations in addition to Leer's proposed dialect mixture for the Tlingit circumstances were also raised [...], e.g., conditioned changes internal to Tlingit for which the conditioning factors are now lost, with general agreement that in any case the assumption of regular sound change allows us to recognize such special situations.

Typology influences the methodology of comparison and reconstruction. Polysyllabic morphemes are as a whole easier to identify and reconstruct than monosyllabic. Root etymologies are by their very nature problematical, but in the case of monosyllabic languages there is no viable alternative to working at the syllabic level. This is a familiar problem in Tibeto-Burman studies, where the identification of word families strengthens and adds credence to otherwise uncertain etymologies. This is a standard procedure in Sino-Tibetan linguistics (cf. Matisoff 1978). With reference to clusters DeLancey (1989: 804–805) writes:

These are probably all etymologically bimorphemic, but it is likely that fossilised, synchronically unanalysable clusters existed in Proto-Tibeto-Burman, if not Proto-Sino-Tibetan. It is, however, extremely common to find the same etymon occurring in different languages with different prefixes, as for example Written Tibetan *rna*, Balti Tibetan *sna*, Tangkhul *khana* > **g-na* 'ear', or Balti Tibetan *gwa*, Written Burmese *swa* 'go'. Some such cases may represent lexical alternants at the Proto-Tibetan-Burman level, but others reflect independent secondary compounding in the daughter languages. For example, Balti *gwa* and Burmese *swa* represent independently developed compounds of a Proto-Sino-Tibetan root **wa* 'go' with other motion verbs **ga* and **sa*.

A restructuring of the lexicon caused by the formation of compounds that are subsequently shortened and eroded morphophonemically has been well documented for Tibeto-Burman (Matisoff 1978). In Americanist linguistics similar phenomena have been identified and discussed with regard to the Mixtecan languages, which have been well documented since the 16th century. These languages are characterized by a canonical bisyllabic morpheme pattern. Bimorphemic compounds tend to be reduced to trisyllabic forms, which in turn may be further reduced to bisyllabic ones. Moreover, in many cases compounding is unstable, with either the nucleus or the modifying part differing in one of the dialects. To give just one example: in colonial Mixtec *kati θini* 'hat', modern dialects *kačini*, *yo-šini*, *yu-šini*, *šini*, *šini?*, *koto šiñi*, where the nuclei are *kati* 'shadow', *yu?u* 'mouth, edge', *yoo* 'to be on top of' and *koto* (from Spanish *cotón*) 'clothing', the modifier goes back in all cases to **sini?* 'head'. The forms *šini* and *šini?* 'hat' differ in tone as a result of conditioned change due to a lost nucleus from the respective dialectal word for 'head' (tones not indicated; Dürr 1984, 1987).

From a typological viewpoint it may be argued that similar problems are to be expected with regard to polysynthetic languages, in which the frequently monosyllabic character of the base morpheme or lexeme can be disguised by the interplay of a complex morphology and equally complex morphophonemic

system. Let us consider the possible fate of bimorphemic forms in situations in which morphophonemic rules work:

$$\begin{array}{lcl} C_1VC_2 + C_3VC_4 & \rightarrow & C_mC_mVC_4 \rightarrow C_mVC_4 \\ C_1VC_2 + C_3VC_4 & \rightarrow & C_1VC_mC_m \rightarrow C_1VC_m \\ C_m & = & \text{consonant determined by morphophonemic rules} \end{array}$$

The outcome is even less predictable if one of the elements changes through time or in variety, e.g. $C_1VC_2 \sim C_3VC_4 + C_5VC_6 \rightarrow \dots$ or $C_1VC_2 + C_3VC_4 \sim C_5VC_6 \rightarrow \dots$ respectively. If there are more complex mapping rules, as may be the case among other things for suprasegmentals (e.g. tone in Mixtecan) or for diphthongs (in Na-Dene), the situation may be even more complicated. Further complicating factors are secondary elements such as labialization, palatalization or glottalization of consonants due to cluster reduction and fronting or rounding effects on vowels. The latter can be seen in the origin of the umlauts in German plurals, where the conditioning factor was often subsequently lost. Of course, in such situations where highly probable conditioned changes are involved – which are sufficiently documented synchronically not only in Na-Dene but also throughout the world to be acknowledged as concrete linguistic problems – the heavily disturbed patterns of sound correspondences can only be detected and unraveled via thorough and painstaking analyses of word families such as Pinnow has attempted, in full awareness of the fact that a not inconsiderable amount of material may have to be excluded at a later step.

Criticism of Pinnow's positive evidence relies on a narrow application of the comparative method which explicitly rejects internal reconstruction, as can best be seen in Levine (1979). Levine claims that sets which differ in some respect, such as CV : CVC or $CVC_1 : CVC_2$, or, in the case of Haida, in having initial clusters of the form $s/t + CV(C)$, are inadmissible. However, within the suggested framework of words constructed of several monosyllabic morphemes, "irregularities" may in many cases have been conditioned changes for which the conditioning factors are now lost. Thus, Levine's insistence on CVC correspondences must be viewed as unrealistic. Such factors as ablaut resulting from old diphthongs, morphophonemic reduction of consonant clusters, and internal sound change do not lend themselves to simplistic CVC equations. On the other hand, Levine rejects almost identical forms because of overresemblance "given the divergence implied by relative rareness of Haida cognates" (1979: 163). Levine picks out a few examples from Sapir and Pinnow for criticism, ignoring, or ignorant of, the fact that there may be almost identical forms in remotely related language if the sounds of the proto-language remained unchanged (as illustrated by Late Proto-Indo-European, **mūs* 'mouse' and **lūs* 'louse', preserved unchanged in the Scots English of today) and that in the case of different sound

systems loan words may differ considerably from the form of the source language (cf. Campbell's review of Greenberg, 1988: 599, footnote 4).

6. Conclusion

Attempts to dismiss Haida parallels as sprachbund phenomena run counter to the weight of the evidence amassed by Pinnow. Given the many and basic points of resemblance between Haida and Tlingit-Eyak-Athapaskan, not only in morphology, but also in the lexicon, as has been thoroughly documented by Pinnow in his analyses, it would be unwise to dismiss the genetic hypothesis in favor of the statistically far less likely, though of course possible, case for a sprachbund relationship.

In lieu of the quality and kind of evidence Indo-Europeanists are accustomed to dealing with, North Americanists must inevitably come down on the side of the statistically greater probability. Absolute truths, as Pinnow is well aware, are simply unattainable at such time-depths. For this reason, all the tools of the linguistic trade should be used in approaching the history of the languages of the Americas, even if, by necessity, some doubts will remain as to the results achieved. An improvement in our knowledge will be attained not by restricting ourselves methodologically but by evaluating carefully and cautiously the applicability of all possible methods. The quality of analysis offered by Pinnow in his studies of the phonology, morphology and lexicon of the hypothesized Na-Dene languages sets a standard yet to be surpassed in this field.

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References

- Baldi, Philip (1990). "Introduction: The comparative method." In: Philip Baldi (ed.), *Linguistic Change and Reconstruction Methodology*, pp. 1–13. Berlin: Mouton de Gruyter.
- Berman, Howard (1980). "Review of: The Languages of Native America ed. by Lyle Campbell and Marianne Mithun. Austin: University of Texas Press, 1979." *International Journal of American Linguistics* 46: 248–262.
- Boretzky, Norbert (1981). "Das Indogermanistische Sprachwandelmodell und Wandel in exotischen Sprachen." *Zeitschrift für vergleichende Sprachwissenschaft* 95: 49–80.
- (1984). "The Indo-Europeanist model of sound change and genetic affinity and its application to exotic languages." *Diachronica* 1: 1–51.
[English translation of the previous paper]

- Campbell, Lyle (1988). "Review article of: Language in the Americas by Joseph H. Greenberg." *Language* 64: 591–615.
- , and Ives Goddard (1990). "Summary report: American Indian languages and principles of language change." In: Philip Baldi (ed.), *Linguistic Change and Reconstruction Methodology*, pp. 17–32. Berlin: Mouton de Gruyter.
- Cook, Eung-Do, and Keren D. Rice (1989). "Introduction." In: Eung-Do Cook and Keren D. Rice (eds.), *Athapaskan Linguistics. Current Perspectives on a Language Family*, pp. 1–61. Berlin: Mouton de Gruyter.
- DeLancey, Scott (1989). "Sino-Tibetan Languages." In: Bernard Comrie (ed.), *The World's Major Languages*, pp. 797–810. 2nd ed. London: Routledge.
- Dürr, Michael (1984). "Die Etymologisierung von Komposita im Mixteki-schen." *Indiana* 9 (Gedenkschrift Gerdt Kutscher, Teil 1): 189–206.
- (1987). "A preliminary reconstruction of the Proto-Mixtec tonal system." *Indiana* 11 (1987): 19–61.
- Foley, William A. (1986). *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- Goddard, Pliny Earle (1920). "Has Tlingit a genetic relation to Athapaskan?" *International Journal of American Linguistics* 1: 266–279.
- Golla, Victor (1987). "Review of: Language in the Americas by Joseph H. Greenberg." *Current Anthropology* 28: 657–659.
- Greenberg, Joseph H. (1987). *Language in the Americas*. Stanford: Stanford University Press.
- (1987a). "Author's Précis to: Language in the Americas by Joseph H. Greenberg." *Current Anthropology* 28: 647–652.
- Hoenigswald, Henry M. (1992). "Historical linguistics: Ancestry and descent." In: William Bright (ed.), *International Encyclopedia of Linguistics*, vol. 2, pp. 127–131. Oxford: Oxford University Press.
- Hymes, Dell (1956). "Na-Déné and positional analysis of categories." *American Anthropologist* 58: 624–638.
- (1959). "Genetic classification: Retrospect and prospect." *Anthropological Linguistics* 1, 2: 50–66.
- (1987). "Review of: Language in the Americas by Joseph H. Greenberg." *Current Anthropology* 28: 659–662.
- Krauss, Michael E. (1973). "Na-Dene." In: Thomas A. Sebeok (ed.), *Current Trends in Linguistics, vol. 10: Linguistics in North America II*, pp. 903–978. The Hague: Mouton. [Reprinted 1976 in: Thomas A. Sebeok (ed.), *Native Languages of the Americas*, vol. 1, pp. 283–358. New York: Plenum Press.]
- (1979). "Na-Dene and Eskimo-Aleut." In: Lyle Campbell and Marianne Mithun (eds.), *The Languages of Native America: Historical and Comparative Assessment*, pp. 803–901. Austin: University of Texas Press.

- Krauss, Michael E. (1988). "Many tongues – ancient tales." In: William W. Fitzhugh and Aron Crowell (eds.), *Crossroads of Continents: Cultures of Siberia and Alaska*, pp. 144–150. Washington, D.C.: Smithsonian Institution Press.
- , and Victor Golla (1981). "Northern Athapaskan languages." In: William C. Sturtevant (ed.), *Handbook of North American Indians*, vol. 6: June Helm (ed.), *Subarctic*, pp. 67–85. Washington, D.C.: Smithsonian Institution.
- Leer, Jeff (1989). "Directional systems in Athapaskan and Na-Dene." In: Eung-Do Cook and Keren D. Rice (eds.), *Athapaskan Linguistics. Current Perspectives on a Language Family*, pp. 575–622. Berlin: Mouton de Gruyter.
- (1990). "Tlingit: A portmanteau language family?" In: Philip Baldi (ed.), *Linguistic Change and Reconstruction Methodology*, pp. 73–98. Berlin: Mouton de Gruyter.
- Levine, Robert D. (1979). "Haida and Na-Dene: A new look at the evidence." *International Journal of American Linguistics* 45: 157–170.
- Matisoff, James A. (1978). *Variational semantics in Tibeto-Burman. the "organic" approach to linguistic comparison*. Philadelphia: Institute for the Study of Human Issues. (Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics, vol. 6)
- Norman, Jerry (1988). *Chinese*. Cambridge: Cambridge University Press.
- Pinnow, Heinz-Jürgen (1959). *Versuch einer historischen Lautlehre der Kharia-Sprache*. Wiesbaden: Harrassowitz.
- (1963). "The position of the Munda languages within the Austroasiatic language family." In: H.L.Shorto (ed.), *Linguistic Comparison in South East Asia and the Pacific*, pp. 140–152. London: School of Oriental and African Studies.
- (1964). "On the historical position of Tlingit." *International Journal of American Linguistics* 30: 155–168.
- (1965). "Personal pronouns in the Austroasiatic languages: a historical study." In: G.B.Milner and E.J.A.Henderson (eds.), *Indo Pacific Linguistic Studies. Part I: Historical Linguistics*, pp. 3–42. Amsterdam: North-Holland. (Lingua 14)
- (1966). *Grundzüge einer historischen Lautlehre des Tlingit, ein Versuch*. Wiesbaden: Harrassowitz.
- (1966a). "A comparative study of the verb in the Munda languages." In: N.H.Zide (ed.), *Studies in Comparative Austroasiatic Linguistics*, pp. 96–193. The Hague: Mouton. (Indo-Iranian Monographs 5)
- (1968). "Genetic relationship vs. borrowing in Na-Dene." *International Journal of American Linguistics* 34: 204–211.

- Pinnow, Heinz-Jürgen (1968a). "Sprachhistorische Studie zur Verbstammvariation im Tlingit." *Orbis* 17: 509–531.
- (1970). "Notes on the classifiers in the Na-Dene languages." *International Journal of American Linguistics* 36: 63–67.
- (1976). *Geschichte der Na-Dene-Forschung*. Berlin: Gebrüder Mann. (Indiana, Supplement 5)
- (1985). "Sprachhistorische Untersuchung zur Stellung des Haida." *Indiana* 10 (Gedenkschrift Gerdt Kutscher, Teil 2): 25–76.
- (1985a). *Sprachhistorische Untersuchung einiger Tiernamen im Haida (Fische, Stachelhäuter, Weichtiere, Gliederfüßer, u.a.)*. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Heft 39)
- (1985b). *Das Haida als Na-Dene-Sprache*. In vier Teilen. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Hefte 43–46)
- (1985c). "Die Anfangsgründe des Cree." *Anthropos* 80: 664–676.
- (1986). *Die Zahlwörter des Haida in sprachvergleichender Sicht*. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Heft 47)
- (1986a). *Säugetiernamen des Haida und Tlingit: Materialien zu ihrer historischen Erforschung*. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Heft 50)
- (1988). *Verwandschafts- und andere Personenbezeichnungen im Tlingit und Haida: Versuch ihrer sprachhistorischen Deutung*. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Heft 62)
- (1990). *Die Na-Dene-Sprachen im Lichte der Greenberg-Klassifikation*. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Heft 64)
- (1990a). *Vogelnamen des Tlingit und Haida. Materialien zu ihrer sprachhistorischen Erforschung sowie Auflistung der Vogelarten von Alaska*. In zwei Teilen. Nortorf: Völkerkundliche Arbeitsgemeinschaft. (Abhandlungen, Hefte 67–68)
- Sapir, Edward (1915). "The Na-Dene languages, a preliminary report." *American Anthropologist* (new series) 17: 534–558.
- Shibatani, Masayoshi (1990). *The Languages of Japan*. Cambridge: Cambridge University Press.
- Thomason, Sarah G. (1980). "Morphological instability, with and without language contact." In: Jacek Fisiak (ed.), *Historical Morphology*, pp. 359–372. The Hague: Mouton. (Trends in Linguistics, Studies and Monographs; 17)
- , and Terrence Kaufman (1988). *Language Contact, Creolization, and Genetic Linguistics*. Berkeley: University of California Press.
- Whittaker, Gordon (1990). *Calendar and Script in Protohistorical China and Mesoamerica*. Bonn: Holos.

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