

# A NEW THEORY ON THE ORIGIN OF CHINESE

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## ABSTRACT

*The first four sections of this paper provide an abridged historical synopsis of the main developments in linguistic thinking about the genetic relationships of Chinese and other languages of eastern Eurasia. The fifth and last section relates recent insights in Tibeto-Burman phylogeny to the discoveries of archaeologists in China and neighbouring countries. The dispersal of Neolithic cultural complexes is shown to correspond to the present-day distribution of Tibeto-Burman language communities when viewed in light of the new informed phylogeny.*

## LANGUAGE FAMILIES AND ORPHANS

The family tree of a language phylum can be represented in several ways. The traditional way is a straightforward pictorial representation of the metaphor, with the family's upright trunk firmly rooted in the common proto-language and the branches of the individual daughter languages reaching skyward in all directions. An alternative, more modern type of depiction shows the ancestral tongue hovering overhead with drooping tendrils branching off and tracing the pathways by which the daughter languages derive from the proto-language. In either representation, the earlier a branch splits off from the main trunk, the greater the time depth of the split. An early split may be deduced on the basis of grammatical study of a dead language documented in the ancient past in combination with detailed knowledge about historical phonology and grammar of the language family as a whole, as is the case with the split between Hittite and the other Indo-European languages. Sometimes, however, the depth of a time split is simply an admission of ignorance about the historical grammar and phonology of the language group in question.

This has been true for Indo-European, Altaic and Uralic and applies *a fortiori* to language families that have

been less well-studied, like Tibeto-Burman. The history of comparative linguistics is littered with cases in point. The historical grammar and phonology of Albanian was so poorly understood that it was not even recognized as an Indo-European language until the time of Rasmus Rask (1834) and Joseph Ritter von Xylander (1835), and this identification continued to be disputed throughout the nineteenth century, e.g. Pott (1887). More obvious cases can be found in the study of Oriental languages. In the second half of the nineteenth century, Max Friedrich Müller championed a theory of genetic relationship which divided the languages of the Old World into an "Aryan", a "Semitic" and a "Turanian" language family, whereby Turanian encompassed all Old World languages which were not Aryan or Semitic. Turanian was named after Tūrān, the Persian name for Transoxiana, most particularly Turkmenistan, once ruled over by King Tūr, the heir of Farīdūn, a legendary monarch of an ancient people who were the Persians' foes. Later in life Müller changed his mind and abandoned his Turanian idea, but the theory, which had particularly been popular in Britain, remained influential even after Müller's death. Yet even in Müller's day, there were scholars more knowledgeable about the genetic relationships between languages and language groups, and just as today, these scholars are not necessarily the ones most heeded. After careful scrutiny of the evidence, Julius Heinrich Klaproth, for example, noted that Tibetan and Chinese were closely related, whereas neither Vietnamese nor Thai were manifestly genetically related to Chinese (1823). It is only now at the end of the twentieth century that the consensus of linguistically informed opinion has come around firmly to Klaproth's side.

A language does not necessarily occupy a place of honour when it is put down near the base of a traditional family tree, or high up in an inverted modern tree. Even scholars of Hittite such as Jaan Puhvel (1994) object to the term Indo-Hittite, although it is generally agreed that the Anatolian branch of languages to which Hittite belongs was perhaps the earliest to split off from the rest of the

family. In the absence of detailed comparative knowledge, putting a language down on a large limb by itself only makes it an orphan. Chinese is such a language. Even Müller entertained doubts about whether Chinese was really Turanian. In later family trees of the nineteenth and twentieth centuries, Chinese used to be placed out on a limb by itself. The language family was first called "Indo-Chinese" and later "Sino-Tibetan".

In a sense, this was like calling the Indo-European language family "Anglo-Hittite". English may very well be the globally most prominent and economically most important Indo-European language today. Yet it would bode ill for English language scholarship if we were to know so little about the history and genetic affinities of the English language that we should feel compelled to relegate it to a separate main branch of the language family and name the entire language family "Anglo-Hittite". Yet this was to be the fate of Chinese for a considerable stretch of time, and this gives outsiders a pretty accurate idea of how little used to be known about the historical phonology and grammar of Chinese, one of the world's most important languages. The change in thinking about the genetic position of Chinese results from two complementary developments. On one hand, great progress had been made in the historical study of Chinese itself. On the other hand, major advances in Tibeto-Burman grammatical and lexical comparison became possible through the availability of new detailed lexical documentation and grammatical analyses of many hitherto undescribed Tibeto-Burman languages.

The nature of the Chinese writing system makes the historical phonology and grammar of Chinese a highly complex science demanding the mastery of a vast corpus of material as well as highly specialized linguistic and philological knowledge. The nature of the Chinese writing system inspires the popular view that Chinese has remained typologically unchanged for four millennia and that — in the words of John Chalmers — "the ancestors of the Chinese were without any system of writing, and spoke at that time a language made up, as a rule, of distinct monosyllabic roots, — without *inflection*, without *agglutination*..." (1866:6). This naïve view persists to the present day among laymen and even among sinologists not specialized in historical linguistics. Chinese historical linguists have naturally held a more informed view. Lepsius already recognized that the loss of finals and loss of syllables were mechanisms which had given rise to phonological tone in Chinese, that many modern monosyllabic forms in Chinese derive from polysyllabic, morphologically complex forms, and that this process was the result of Draconian restrictions on syllable structure and of concomitant phonological and grammatical changes (1861). Wilhelm Grube also realized that modern Chinese monosyllables historically incorporated morphological elements which had once been discrete affixes (1881).

The many regular developments which changed the face of Chinese were played out across a time span of four millennia, and so these changes were not more dramatic *per se* than the processes of language change by gradual evolution which are seen elsewhere.

The Swedish sinologist Bernhard Karlgren was the great pioneer in the historical comparison of the Chinese dialects (1920, 1923, 1933, 1957). He devised the first systematic phonological reconstruction of Middle Chinese, the language of the Suí and Táng dynasties spoken from the late sixth to the early tenth century AD, and of Old Chinese, the stage of the language spoken from the eleventh to the seventh centuries BC during the early and mid Zhōu dynasty. Recent work on Middle, Early Middle and Old Chinese by scholars like Sergej Evgenievič Jaxontov (1959, 1965), Edwin George Pulleyblank (1962, 1973a, 1973b, 1984, 1991), Lǐ Fāngguì (1974, 1983), Weldon South Coblin (1986), Axel Schüssler (1987), Sergej Anatol'evič Starostin (1989) and William Hubbard Baxter (1992, 1995) have all made Chinese look less outlandish from the Tibeto-Burman point of view. Moreover, the various competing reconstructed models of Old Chinese phonology have increasingly converged as they have become more philologically refined and more methodologically rigorous.

Today, therefore, we have a far better idea of Old Chinese than in the days of Bernhard Karlgren, and current reconstructions serve as valid entities for the purposes of Tibeto-Burman historical comparison. Meanwhile, there has been much progress in Tibeto-Burman linguistics. The superordinate status assigned to Chinese for years reflected our ignorance about Old Chinese phonology as much as it did the pioneering state of the art in Tibeto-Burman historical comparison.

#### THE RACE BETWEEN INDO-CHINESE AND TIBETO-BURMAN

The Indo-Chinese language family of the late eighteenth and early nineteenth centuries was defined by Leyden as comprising all the languages spoken by "the inhabitants of the regions which lie between India and China, and the greater part of the islanders in the eastern sea", for it was believed that all the languages from the Great Wall of China to the Andamans and from Pamir to Papua New Guinea and Japan shared a "common mixed origin" (1808). In the middle of the nineteenth century, Friedrich Max Müller's equally expansive Turanian theory, discussed in the preceding section, was to give the Indo-Chinese theory a run for its money, particularly in Great Britain. For most scholars, Indo-Chinese was distinct from Dravidian and Altaic, but there was never a consensus on the precise girth of the family.

The Tibeto-Burman hypothesis is as old as the Indo-Chinese and Turanian theories, but whereas the Indo-Chinese and Turanian theories were based on conjecture

about relationships between languages about which little to nothing was known at the time, the Tibeto-Burman hypothesis by contrast has proved to be a well-informed and robust hypothesis about a genetic relationship involving Tibetan and Burmese and all other languages demonstrably related to these two languages. Turanian was quickly laid to rest toward the end of the nineteenth century, but Tibeto-Burman is alive and well today. Various incarnations of the now defunct Indo-Chinese theory have meanwhile continued to influence thinking on genetic relationships between Asian languages and language groups.

Wilhelm Schott pointed out that the term Indo-Chinese was an unfitting name with solely geographical meaning in that the languages thus designated only happen to share the trait of having existed from time immemorial somewhere within the vast expanse of territory extending from South Asia to southern China, and that it was still unknown exactly how many distinct phyla these languages represented (1856: 161). John Logan, a scholar often given to bewildered ruminations, entertained the Turanian hypothesis on a grand scale, but Logan used the term Tibeto-Burman for a family in which he rightly included Karen and excluded the "Mon-Anam" languages (1858, 1859). Indeed, four years earlier in his comparative Karen vocabulary, Nathan Brown had already shown the genetic affinity of Karen with Tibetan, Burmese, Jinghpaw, the "Bhutia" language of Bhutan, Limbu, "Murmi" (i.e. Tamang), "Milchan" and "Thebarskad" of Kumaon, four Naga languages, Manipuri, Mikir, Miri, Garo, Kachari and Dhimal (1854).

Charles Forbes (1878, 1882) adopted the term Tibeto-Burman only with the greatest reluctance, and then wrongly excluded Karen from it, despite the availability of early descriptions of Karen by Nathan Brown (1854), Francis Mason (1858, 1860) and others. Forbes also retained the all-encompassing Indo-Chinese and divided this family into the four branches Tibeto-Burman, Karen, "Shan or Tai", and the languages of "the Mon-Anam race". Sten Konow objected to Forbes' version of the Indo-Chinese family and proclaimed that "the reasons for a relationship between all Indo-Chinese languages have thus proved invalid, and it has been possible to distinguish, instead of one, two linguistic families, the one known as the Mōn-Khmeṛ family, and the other comprising Chinese, the Tai languages, and the Tibeto-Burman family" (Grierson 1909, III (I): 1).

Konow was right, of course, about Forbes' interpretation of Indo-Chinese, but his insights were not novel. For a quarter of a century scholars such as Emile Forchhammer (1882) and Ernst Kuhn (1883) had already been using the term "Indo-Chinese" selectively in the more restricted sense to designate the configuration of languages comprising Chinese, Tibetan, Burmese, Tai and Shan as opposed to languages of the "Mon-Anam" group.

In 1889, Ernst Kuhn had already demonstrated that Austroasiatic languages such as Mon, Khmer, Khasi, Suk, Stieng, Bahnar, Khmu, Palaung, Nicobarese, Vietnamese (i.e. the "Mon-Annam-Familie") constituted a language stock altogether distinct from Indo-Chinese (i.e. "Tibetisch-Barmanisch" plus "Chinesisch-Siamesisch"). In America, John Avery (1885) had followed John Logan in avoiding the term Indo-Chinese altogether because of its various interpretations and instead used the term "Tibeto-Burman" for the same language family.

A yet more differentiated view had been propounded even earlier by a cautious and rather well informed British scholar. Robert Cust treated the "Tibeto-Burman Family", including Karen, as a truly independent linguistic stock distinct from both the "Tai Family" and the "Mon-Anam Family". Moreover, Cust remained scrupulously tacit on the genetic affiliation of Chinese, wisely holding in abeyance any judgement on its precise genetic affinity. His proviso about Tibeto-Burman still rings as true today as it did on the day he wrote it: "I approach the Tibeto-Burman family with some misgivings, for the field is imperfectly explored, it is unusually extensive, and the classification is new" (1878: 87).

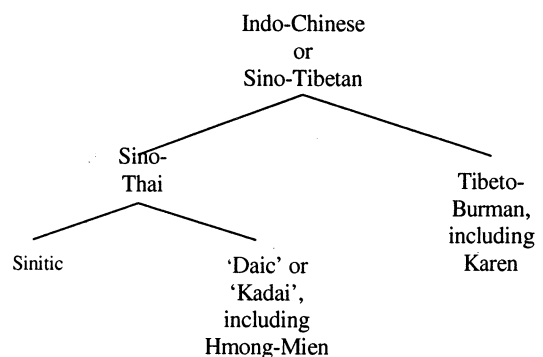


DIAGRAM 1: The Indo-Chinese or Sino-Tibetan hypothesis according to Forchhammer (1882), Kuhn (1883), Conrady (1896), Przulski (1924) and Shafer (1974)

Robert Cust's perceptions, just like the clear view of Julius Klaproth more than half a century before him, were to remain largely ignored. Instead, the Indo-Chinese of Emile Forchhammer and Ernst Kuhn was adopted by August Conrady (1896), who adduced grammatical arguments in support of the genetic unity of this family of languages comprising Tibeto-Burman, Chinese and Kadai. Jean Przulski (1924) accepted these arguments and translated the term "Indo-Chinese" or "Indo-Chinesisch", found in the English and German literature, into French as "Sino-tibétain" for the compendium on *Les Langues du Monde* edited by Antoine Meillet and Marcel Cohen. Przulski also boldly included the Hmong-Mien or Miáo-Yáo languages within the Daic or Kadai branch of "Sino-

tibétain". The French term entered English in 1931 when Jean Przyluski and Gordon Luce together wrote an etymological note on the "Sino-Tibetan" root for the numeral one hundred. Although on the face of things, it appeared as if a new modern linguistic concept had been found, Sino-Tibetan was in fact the same old Indo-Chinese wine in a newly labelled bottle. Robert Shafer continued to use the term Sino-Tibetan in its original meaning well into the 1970s, and the hypothetical all-encompassing language phylum denoted by the Mandarin term *Hàn-Zàng*, to which some Chinese scholars subscribe to this day, is none other than Forchhammer's, Kuhn's and Conrady's obsolete Indo-Chinese language family.

The informed observations of Klaproth and Cust had largely been consigned to oblivion, and Indo-Chinese, though an antiquated and ill-formed construct, continued to thrive. Siamese or Thai therefore continued to enjoy full-fledged membership in the Indo-Chinese or Sino-Tibetan family. Thai was even widely held to be the closest linguistic relative of Chinese. At Leiden, however, the orientalist Gustave Schlegel first proposed in 1901 that Siamese was genetically a language of Malayo-Polynesian stock which had undergone heavy influence, first from Chinese and later from Indian tongues. In 1942, Paul Benedict likewise evicted Daic — or "Kadai", as he later named the entire phylum of Thai-related languages — from Indo-Chinese or Sino-Tibetan, and even adopted Gustave Schelegel's original hypothesis about a genetic relationship between Austronesian and Daic or "Kadai" under the new banner "Austro-Tai". The comparative work of Li Fāngguì (1977) and others has been seen as supporting Schlegel's and Benedict's view of Daic or Kadai as a language stock distinct from Tibeto-Burman, including Chinese, because the mooted similarities between Thai and Chinese were either merely typological, i.e. superficial and phylogenetically meaningless, or demonstrably attributable to borrowing, just as Julius Klaproth had observed in 1823. Paul Benedict originally envisaged his redefined Sino-Tibetan as consisting of Sinitic and a grouping which he called "Tibeto-Karen", the latter consisting of Karen and Tibeto-Burman (1972). Later, Benedict revised this view and, more conventionally, put Karen back inside Tibeto-Burman (1976).

#### CHINESE AND BODIC

Although the new consensus finally clarified the genetic position of Daic or Kadai, it still left Chinese out on a limb. The story of Chinese teaches us that there is more than just a grain of truth to the comparativist's adage that the less we know about a language or language grouping, the greater the time depth we are inclined to attribute to it.

In 1823, Julius Klaproth had already observed that an obvious genetic relationship obtained between Chinese and Tibetan, and Lepsius, who in 1861 first proposed that

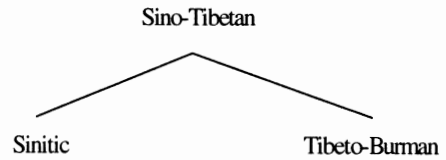


DIAGRAM 2: Paul Benedict's revised Sino-Tibetan (1976)

sound change involving tonogenesis underlay the apparent differences between Chinese and Tibetan, also first investigated phonological correspondences between the two languages. In looking for cognates of Chinese etyma it proved most fruitful to look to Tibetan and to the so-called Bodish languages most immediately related to Tibetan. Walter Simon (1929) and later Forrest (1956), Benedict (1972), Bodman (1980), Coblin (1986) and others assembled an impressive inventory of possible Tibetan-Chinese cognates, many of which are still held to be cognate etyma today. Robert Shafer, though still confused about the status of Daic, i.e. the phylum of Thai-related languages which Paul Benedict would later rename "Kadai", clearly saw the implications of these many correspondences, stating that "Bodish is genetically closer to Chinese than it is to Burmese. To anyone not led by the exotic appearance of Chinese characters to regard the language as a thing apart, this conclusion should not come as a surprise in view of geography and history" (1955: 97).

Meanwhile, the historical and comparative study of Chinese dialects inaugurated by Bernhard Karlgren continued to undergo dramatic advances and refinements, and through the work of later scholars such as Jaxontov, Pulleyblank, Li, Coblin, Schüssler, Starostin and Baxter, a much clearer picture began to emerge of the ancestral Chinese language spoken from the eleventh to the seventh centuries BC during the early and mid Zhōu dynasty. Today the various reconstructed models of Old Chinese resemble each other ever more closely, and the reconstructed language has begun to look like a natural human language rather than an inventory of phonetic formulae as it still seemed in Karlgren's pioneering work. In fact, the "new" Old Chinese has turned out to look rather like just another Tibeto-Burman language.

At the same time, much new analysed grammatical and lexical data became available on various Tibeto-Burman languages, including grammars of languages spoken in the Himalayas, such as Thulung, Gurung, Hayu, Limbu, Dumi, Lohorung, Thakali and Yamphu. Scholars in different quarters began to make quite similar observations. The awkward position of Chinese as one of the two main trunks in a bifurcated family tree came under scrutiny as more became known about Chinese historical phonology. Since the time of Lepsius, the polyphonic read-

ings of Chinese words, such as those recorded by Maurice Courant (1903), were suspected to reflect older, now defunct grammatical processes in the language. Paul Benedict noted a specific parallel to flexional processes in Kiranti languages of eastern Nepal and maintained that Chinese “alternations of this type were the result of assimilation to verbal suffixes which had later been dropped (note the parallelism with verb paradigms in Bahing and many other Tibeto-Burman languages)” (1972: 156-157). Nicholas Bodman and Sergej Starostin each went so far as to propose major revisions of the family tree.

Just as Robert Shafer had seen that Bodish was genetically closer to Chinese than to Burmese, Nicholas Bodman too came to appreciate “that the group comprising Tibetan and its relatives is closer to Chinese than are many other groups of the Tibeto-Burman languages” (1973: 386). Later Bodman speculated that the numerous correspondences between Chinese and Tibetan might be attributable to “widespread borrowings from a Pre-Tibetan source” (1980: 40). As an alternative to this hypothesis of similarity through shared substrate influence, Bodman also still entertained his older 1973 hypothesis, his original “tentative new view”, whereby a closer genetic relationship obtained between Tibetan and Chinese. Bodman’s original hypothesis is increasingly supported by the evidence today.

In presenting his view, however, Bodman introduced some terminologically infelicitous coinages. He envisaged the language family as splitting into two main trunks (Diagram 3). The trunk not containing Tibetan he named “Tibeto-Burman” or “Himalayan”, and so ended up renaming the family as a whole “Sino-Himalayan”. Although Bodman cautioned that “much more comparative work remains to be done before one can be confident about the particular languages which form a subgroup with Tibetan” (1980: 39), scholars of Tibeto-Burman have for some time had at least a fairly good idea about which languages constituted Bodish and Bodic languages. *Bod* is, of course, the Tibetan word for “Tibet”, and Bodic languages are those languages which form a large subgroup with Tibetan. Bodish languages are those languages within Bodic which are most closely related to Tibetan. In fact, the other languages from which Bodman himself adduces examples of specifically “Sino-Tibetan” isoglosses all happened to be geographically Himalayan and genetically Bodic, viz. Lepcha, Manang and Thulung. Fortunately no one has adopted Bodman’s misleading use of the terms “Tibeto-Burman” and “Himalayan”. Yet the evidence adduced by Bodman supported his “tentative new view” and corroborated the insights of his predecessors Klaproth, Cust, Simon and Shafer.

An even stronger version of this hypothesis was introduced in 1994 in Paris when Russian scholar Sergej Starostin proposed the Sino-Kiranti hypothesis, which

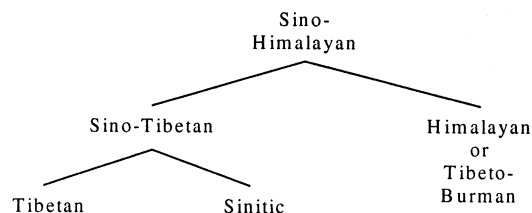


DIAGRAM 3: Nicholas Bodman’s Sino-Himalayan (1980)

entails a close genetic relationship between Sinitic and a specific subgroup of Bodic languages, viz. the Kiranti languages of eastern Nepal. According to Starostin’s hypothesis, the language family either bifurcated into a Sino-Kiranti branch and a Tibeto-Burman branch, or there was an early trifurcation of the language family into three coordinate branches, viz. Proto-Kiranti, Proto-Chinese and Proto-Tibeto-Burman. In the latter version of the theory, the entire language family is renamed Sino-Kiranti.

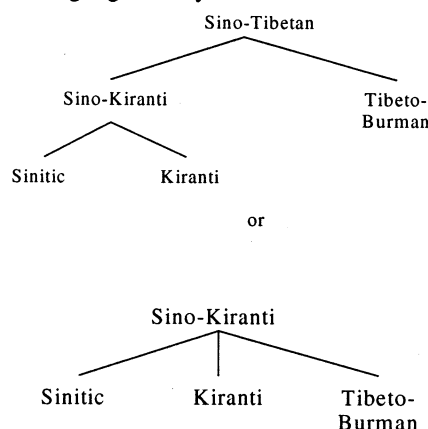


DIAGRAM 4: Sergej Starostin’s Sino-Kiranti (1994) in both alternative versions

Starostin’s Sino-Kiranti hypothesis (Diagram 4) is a boldly formulated conjecture. In Leiden and Moscow an increasing number of specific cognates are being found between Kiranti languages such as Limbu, Dumi and Lohorong and the reconstructed Old Chinese forms of Starostin (1989) and William Baxter (1992). The matches are, of course, between Old Chinese and the putative Proto-Kiranti forms, which can in many cases be deduced straightforwardly by reverse application of Shafer’s (1974), van Driem’s (1990b) and Michailovsky’s (1994) sound laws. But the evidence extends beyond the realm of lexical isoglosses alone.

The descriptive and comparative study of the Tibeto-Burman languages of the Kiranti in the eastern Himalayas has led to major advances in our understanding of Proto-Tibeto-Burman verbal flexion, the fragmented reflexes of which in languages spoken outside of the Kiranti can now be identified as the vestiges of a once elaborate conjugational morphology (van Driem 1990a, 1991a, 1991b, 1992, 1993a, 1993b, 1993c, 1994a, 1994b, 1995, 1997). In fact, the same patterns of paradigmatically conditioned stem alternation can be recognized in Middle Chinese verbs as preserved in the polyphonic readings of characters, recorded in sources such as the eighth century *Táng-yùn* and the *Guǎngyùn*, a Sòng dynasty version of the *Qiyùn* compiled in the late tenth and early eleventh century. Middle Chinese verbs were seen to exhibit morphological alternations in their stem finals of precisely the same type as manifested by the classes of verb stem in Kiranti languages such as Limbu and Dumi. Anticipating the evidence which was to accumulate, Paul Benedict had already seen years earlier that the verb stem alternations preserved in the Chinese philological tradition reflected the same alternations observed in the verbal paradigms of Kiranti languages.

Though Starostin's hypothesis might charm anyone partial to Kiranti languages such as myself, the accumulated evidence at present manifestly supports the thesis that the intimate genetic relationship is between Sinitic and Bodic as a whole, and not just between Sinitic and Kiranti. Just as the striking similarity between, say, the present tense verbal agreement suffixes in Russian and Nepali cannot obscure the fact that the closest relatives of Russian are Slavic languages and those of Nepali are Indo-Aryan languages, so too the highly conservative nature of Kiranti phonology and verbal morphology should not obscure the close affiliation of Kiranti with other Bodic groups. The cumulative evidence adduced by scholars in the course of the past century points to a special relationship between Bodish and Sinitic. Moreover, in recent years lexical data and grammatical analyses relevant to this question have become available for languages of Bhutan, Nepal and northeast India, such as Barám, Magar, Yamphu, Sunwar, Thangmi, Ombule, Chulung, Dzongkha, Bumthang, Gongduk, Toto, Kulung, Dhimal, Rabha and Sampang, to name but a few.

#### SINO-BODIC AND EASTERN TIBETO-BURMAN

The Sino-Bodic hypothesis posits that the Bodic languages together with Chinese made up a genetic grouping named Sino-Bodic which existed as a unified dialect continuum at some period after the initial break-up of the greater Tibeto-Burman language family (van Driem 1995). Sino-Bodic has left traces in the form of lexical isoglosses, the Kiranti-like morphophonological alternations of Old Chinese verbs, the nature of the Old Chinese pronominal system and traces of affixal morphology dis-

cernible through the veil of the writing system. The obsolete hypothesis that Chinese, originally together with Daic or Kadai, constituted a primary node coordinate with Tibeto-Burman was the very reason why the Indo-Chinese family was named "Sino-Tibetan". With the realization that Sinitic together with Bodic makes up a subsidiary Sino-Bodic branch of Tibeto-Burman, the name Sino-Tibetan became what Benedict (1991) jocularly called an "extinct proto-language", and the old and more robust Tibeto-Burman hypothesis finally replaced Indo-Chinese.

Meanwhile, another realization began to change the shape of the language family. It has become increasingly clear that the many Tibeto-Burman language groups in northeastern India cannot be subsumed under a single branch of the language family, but represent a collection of primary branches, collectively called "Western Tibeto-Burman". From a phylogenetic perspective, Western Tibeto-Burman is analogous to the Formosan language groups within Austronesian. Like Formosan, Western Tibeto-Burman is not a taxon, but a collection of primary taxa within the family. Rather, it is the remaining branch, Eastern Tibeto-Burman, which constitutes a possible genetic unit, just as Malayo-Polynesian is a single primary branch within Austronesian. It is therefore more fitting to speak of an Eastern than of a Western Tibeto-Burman hypothesis.

Western Tibeto-Burman encompasses most Tibeto-Burman languages in the northeast of the Subcontinent, a constellation of taxa or primary branches which split off at an early stage and left the Tibeto-Burman proto-homeland in Sichuān. The rest of the family which remained behind by consequence goes by the name of Eastern Tibeto-Burman. The heterogeneity of Western Tibeto-Burman therefore reflects divisions which are chronologically as fundamental as the division between Eastern Tibeto-Burman and any major Western Tibeto-Burman taxon. The revised Tibeto-Burman family tree embodying both the Sino-Bodic and the Eastern Tibeto-Burman hypotheses is reproduced in Diagram 5.

The names of the branches of the family refer explicitly to the relative geographical positions of the groups at the time of their branching. Precisely because there have been migrations of peoples speaking Tibeto-Burman languages subsequent to the initial break-ups, these names do not correspond completely to the present-day geographical distribution of the groups thus labelled. Population movements do not usually carry on in the same direction indefinitely. This has led to the situation that the present geographical range of Bodic language communities, which is ultimately a branch of Eastern Tibeto-Burman, lies, for the most part, far to the west of Western Tibeto-Burman. Analogous situations exist in other language families. The East Iranian language Ossetian, for example, is spoken in an area which lies decidedly to the west of most West Iranian language communities.

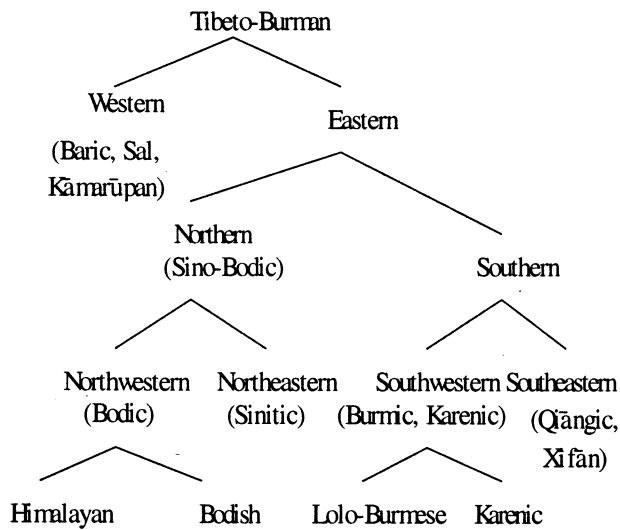


DIAGRAM 5: The Tibeto-Burman language family tree, reflecting the Sino-Bodic and Eastern Tibeto-Burman hypotheses

In addition to reflecting new insights into the genetic relationships which obtain between Tibeto-Burman language groups, the revised Tibeto-Burman family tree also has the advantage of being able to make good sense of the findings of archaeologists in the areas where Tibeto-Burman languages are and have been spoken. The pattern of dispersal of well-defined neolithic cultural complexes in the Tibeto-Burman area matches the present-day distribution of Tibeto-Burman language communities when viewed in light of the new Tibeto-Burman phylogeny. In the next section, I provide a synoptic account of my speculations on the ethnolinguistic identities behind certain well-defined cultural complexes in the archaeological record. First, I shall conclude this section with a few observations about Western Tibeto-Burman.

The genetic heterogeneity of Western Tibeto-Burman has been known to researchers in northeastern India for a long time. Western Tibeto-Burman encompasses the languages which Robert Shafer classified as "Baric" as well as a number of groups which Shafer was reluctant to classify. One of the groups contained within Western are the languages which Robbins Burling identified as "Sal" languages because they reflect a diagnostic set of etyma, including the root \*sal for "sun" (1983). Burling's Sal comprises the Northern Naga languages, Jinghpaw, Luish and the Bodo-Koch languages, including "the Hill Tippera language", i.e. Kokborok. Western also comprises four out of the "seven primary divisions or nuclei" into which Paul Benedict divided Tibeto-Burman in

his 1972 family tree. It is important to emphasize in this context that Western Tibeto-Burman includes languages like Jinghpaw and therefore extends beyond the current political frontiers of that artefact of British colonialism which is India, as Jinghpaw and other Western Tibeto-Burman groups are also found in Yúnnán province in China, in Burma and Tibet.

Robbins Burling first provided evidence suggesting a closer affinity between Jinghpaw, to which various studies have been devoted since the late nineteenth century, and the languages of the Bodo-Koch and Konyak groups in 1971. In 1972, Benedict wrote that Jinghpaw or Kachin "stands at the linguistic 'crossroads' of Tibeto-Burman", occupying a position "at the linguistic center of diversification". Following Burling, Benedict later maintained that "Garo also represents an early split from the parent Tibeto-Burman group but one that also included Kachin" (1976: 177). Of course, to say that Jinghpaw is at the linguistic crossroads of the family is tantamount to saying that its location is close to the language family's center of gravity. To say that Jinghpaw is at the linguistic center of diversification is meaningful in the sense that Jinghpaw, in terms of its phonological typology, has undergone many of the same Southeast Asian areal developments as Lolo-Burmese languages, whereas Jinghpaw is more immediately genetically affiliated with the Bodo-Koch and Konyak languages. Benedict's ideas about Jinghpaw and Bodo-Koch subsequently took on an even clearer shape, and in a letter which he wrote to me on June 7th, 1992, he observed that Jinghpaw, Konyak and Bodo together make up a coherent branch of the family which was "perhaps even the earliest to split off of common Tibeto-Burman", and that Kuki-Naga and Mikir-Meithei constitute a related "supergroup".

Meanwhile, typological similarity in the tone systems had led Matisoff to suspect that Jinghpaw might have undergone common tonogenetic innovations with Lolo-Burmese and that Jinghpaw and Lolo-Burmese therefore might form a coherent subgroup, for which he devised the name "Jiburish... through apocope and aphaeresis from Ji-(nghpaw), -bur-(mish) and (Lolo)-ish" (1982: 154). Matisoff (1968) rebuked Burling for excluding this hypothesis but subsequently found himself seeking for the purported tonogenetic sound laws in vain for two decades, a possible outcome of which he must have been acutely aware from the very outset, since he had playfully devised the name of the possible subgroup to be homophonous with gibberish. None the less, in his recent Tibeto-Burman *Stammbäume* (1991, 1995, 1997) Matisoff still explicitly treats Jinghpaw or "Kachinic" as a separate branch with no special relationship to "Kāmarūpan", a name which Matisoff first coined as a geographic catch-all "for the Tibeto-Burman languages of northeastern India and adjacent areas" (1985: 7) and intended as no more than "a purely geographical rubric" (1991: 480), but which none

the less seems to get pressed into service as a genetic hypothesis in its own right.

In addition to its vagueness, the term Kāmarūpan could be regarded as objectionable. The name is evidently taken from the mediaeval Hindu kingdom Kāmarūpa, which flourished from the fourth to thirteenth century in what today is Assam, with its capital Prāgjyotisapura near present-day Gauhati (Guvāhātī). Although a colourful name, Kāmarūpan is an inappropriate label for two reasons: Most of the languages of the group are spoken outside of the territory of the ancient Hindu kingdom of Kāmarūpa. Secondly, the name alludes neither to the indigenous Tibeto-Burman peoples of the area, nor to their cultures, but celebrates the colonization of the Brahmapūtra fluvial plains by an Aryan élite and their continuing socio-economic, political and cultural domination over the native Tibeto-Burman peoples of the region. A more informed and differentiated view of the languages of northeastern India and surrounding hill tracts has, however, been available for some time. Documentation of languages in the older literature enables the formulation of bold hypotheses which are testable and therefore potentially more insightful than mere heuristic groupings of languages. In a forthcoming article, Robbins Burling provides an overview of the various branches of the language family to which I collectively refer as the Western Tibeto-Burman language groups, and I likewise provide a survey of the Western Tibeto-Burman groups in the northeast of the Subcontinent in the handbook *Languages of the Himalayas*.

#### ETHNOLINGUISTIC IDENTITIES OF CULTURAL ASSEMBLAGES

In considering the population movements which have led to the modern distribution of Tibeto-Burman languages, all the conventional caveats apply. We are dealing with three altogether distinct and independent quantities. Racial affinities may be an indicator of population movements, but languages are lost, and entire nations sometimes adopt a new language unrelated to their original tongue. The spread of a material culture does not necessarily indicate the spread of a population or language. Yet race, material culture and language are none the less related in more than just a probabilistic way because the usual vector of transmission for material culture and language, and the only one for race, is from parent to offspring. Attempts to identify likely archaeological correlates for ancient Tibeto-Burman population movements remain speculative by nature, but the picture presented here seems to me to best fit the linguistic and archaeological data available today. The following is a much abbreviated summary of the account given in an essay, recently published in a volume edited by Matthew Spriggs and Roger Blench (van Driem 1998). A newer and more extensive treatment of the subject is provided in my forthcoming handbook *Lan-*

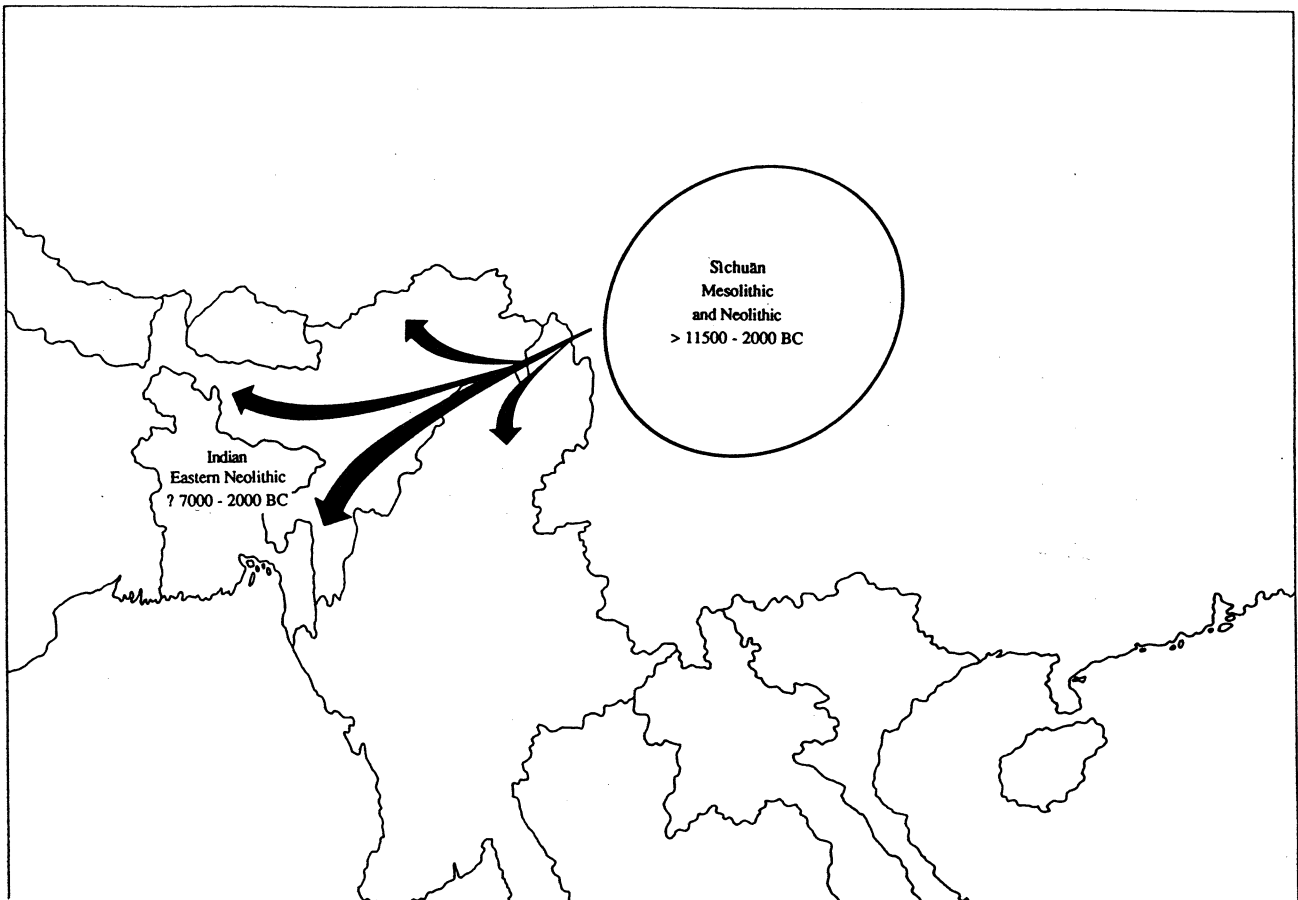
*guages of the Himalayas*, where the detailed argumentation is to be found. Here, in this fleshed-out version of my 1998 presentation in Melaka, just the main story line is outlined.

The first to emerge from the Tibeto-Burman heartland in Sīchuān were ancestral Western Tibeto-Burman groups who introduced neolithic technologies and themselves to the Austroasiatic populations of northeastern India, where they established the Indian Eastern Neolithic probably by the seventh millennium BC (Map 1). It is accepted that the precursors of the Indian Eastern Neolithic lie in Sīchuān, and Indian Eastern Neolithic wedges and tanged axes have parallels in Upper Burma, Yúnnán and Sīchuān. The characteristic artefacts of the Eastern Neolithic assemblage are best represented by finds in Assam and the Cachar Hills, with less perfect copies of the original tools found throughout the Meghalaya and extending into Bengal, Bihar and Orissa. This may suggest a foreign technology introduced into an area where the indigenous, Austroasiatic populations failed to fully master it. Alternatively, this could have been a natural development as a particular technology matured before it fell into disuse, just as Lapita pottery in Oceania is complex in the west and gets simpler further east. Whatever the case may be, the conspicuous racial discrepancy between Munda groups on one hand and Mon-Khmer groups, including Khasi in the Meghalaya, on the other hand will have to be addressed in any study of Austroasiatic ethnolinguistic prehistory. I have set forth my speculations on the latter topic in the handbook and shall therefore not digress here.

At any rate, these developments allow the hypothesis that the Indian Eastern Neolithic was introduced into northeastern India by Western Tibeto-Burmans who, at least at the time that they embarked on their migration, were technologically and economically advantaged in relation to the presumably Austroasiatic populations whom they met up with and with whom they mingled. Indeed, the idea that an Austroasiatic substrate may exist in the Tibeto-Burman languages of this region is not a new one. Paul Benedict likewise held that certain Western Tibeto-Burman groups were "the earliest to split off of common Tibeto-Burman", and the obvious and likely archaeological correlate for this early split is the Indian Eastern Neolithic. After the irruption of Western Tibeto-Burman groups into the jungles of the lower Brahmapūtra plain and the surrounding hill tracts, the branch of the family which can be referred to as Eastern Tibeto-Burman stayed back east in the Tibeto-Burman homeland in Sīchuān.

Subsequently, a group of Tibeto-Burmans broke away from Sīchuān and moved north in the seventh millennium BC to establish the early neolithic agricultural civilisations on the fertile loess plains of the Yellow River. We may call these people Northern Tibeto-Burmans, and those that stayed behind may accordingly be called Southern Tibeto-





Map 1: Lower Brahmapūtra basin and surrounding hill tracts colonized by various Western Tibeto-Burman groups bearing the technologies from Sichuān which were to become known as the Indian Eastern Neolithic, an exodus possibly set in motion before the seventh millennium BC.

Burmans. The advent of Northern Tibeto-Burmans in the Yellow River basin led to the abrupt replacement of microlithic technologies and mesolithic communities by the agricultural Dàdìwān civilisation in Gānsù (ca. 6500-5200 BC, Map 2) and the contemporaneous and related Péilǐgǎng and Císhān civilisations on the North China Plain (ca. 6500-5800 BC and 6000-5600 BC, respectively). Indeed, the precursors for the Dàdìwān and Péilǐgǎng-Císhān civilisations can only have lain in Sichuān, with its uninterrupted record of hominid occupation from Pleistocene times, the long persistence of distinctive native cultural traditions and the evidence for early millet cultivation. By contrast, the diverse microlithic traditions of mesolithic hunter-gatherer communities in Manchuria, Mongolia, Chinese Turkestan and on the North China Plain are unlikely candidates for forerunners to the neolithic agricultural revolution and the sudden flourishing of polished stone technologies and cord-marked pottery in the Yellow River basin at this time. By the same token,

the neolithic traditions of southeastern China were entirely distinct from those in the north, and the people behind the neolithic cultures in southeastern China are, moreover, believed to have been ancestral to modern Kadai and Austronesian linguistic communities. This hypothesis places the split between Northern and Southern Tibeto-Burman in the seventh millennium BC, just before the dawn of the Dàdìwān and Péilǐgǎng-Císhān civilisations.

The Northern Tibeto-Burman cultures developed into advanced civilisations. The Yǎngsháo Neolithic (5500-2700 BC) succeeded the Péilǐgǎng-Císhān civilisation on the North China Plain, and the Mǎjiāyáo Neolithic (3900-1700 BC) succeeded the Dàdìwān culture in eastern Gānsù and adjacent parts of Qíngǎi and Níngxià. The period of transition is reflected by the initial stages of the Bǎnpō and Běishǒulíng Yǎngsháo subtypes, dated about the beginning of the fifth millennium BC (Ān 1979, Yán 1981, Zhāng and Zhōu 1981, Shào 1984). The Yǎngsháo and the Mǎjiāyáo cultures represent a distinctly more ad-

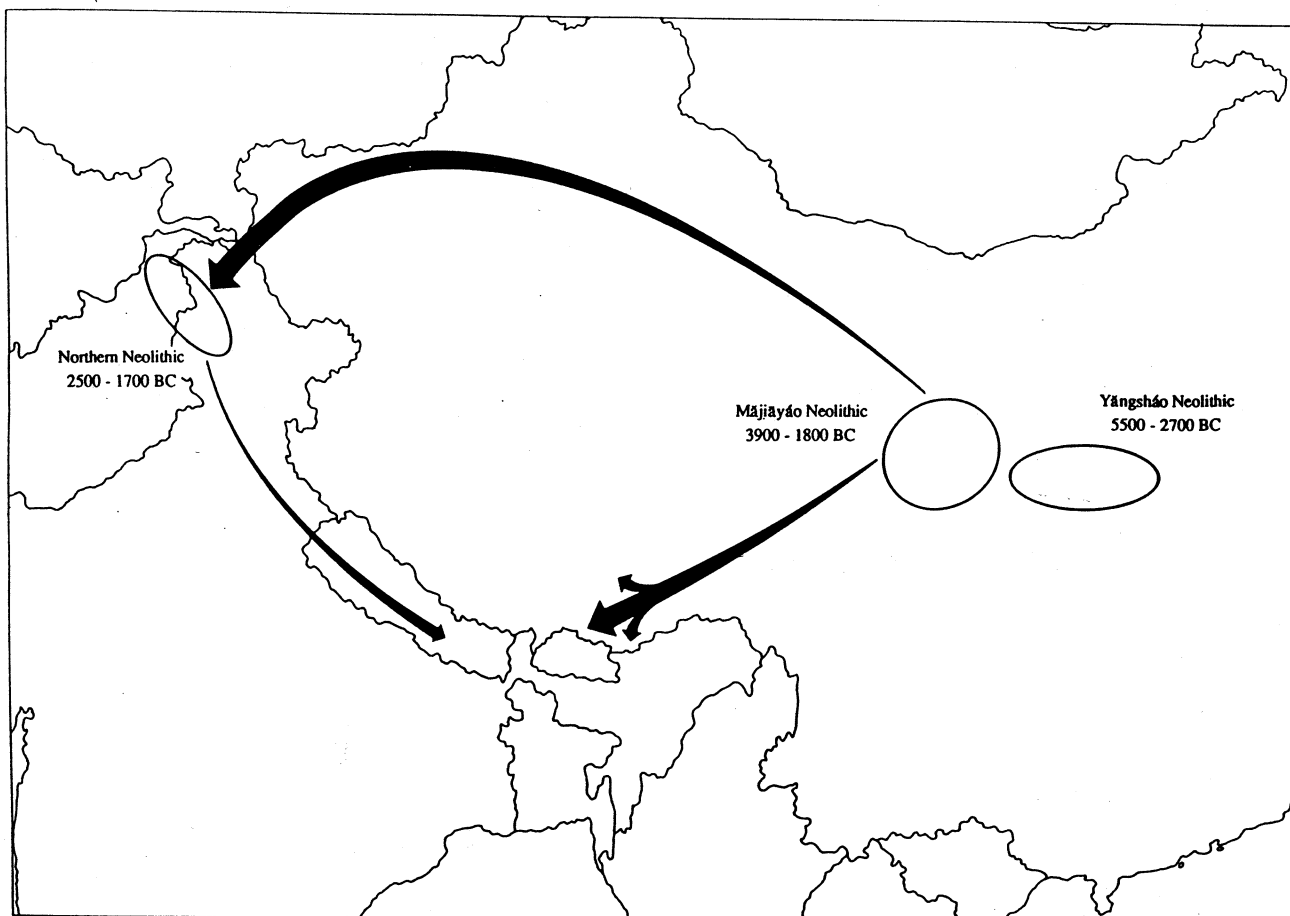


Map 2: The establishment of the early neolithic Péilǐgǎng-Císhān and Dàdīwān civilisations in the Yellow River basin by Northern Tibeto-Burmans before the beginning of the sixth millennium BC.

vanced stage of neolithic civilisation than the relatively smaller sites of the Péilǐgǎng-Císhān and Dàdīwān, but Chinese archaeological sources point out that a continuity of cultural tradition unites these two stages of development (Xià 1977; Ān 1979; Zhāng, Zhāng and Guō 1980). By late neolithic times, Northern Tibeto-Burman or Sino-Bodic had split into a Northeastern (Sinitic) and a Northwestern (Bodic) branch. The Proto-Sinitic Yǎngsháo Neolithic flourished on the fluvial central plains of the Yellow River, whereas the Proto-Bodic centre of gravity lay in eastern Gānsù, the nuclear area of the Mǎjiāyáo Neolithic, formerly known as the “Late” or “Gānsù Yǎngsháo” Neolithic.

The Northwestern Tibeto-Burmans spread from Gānsù, bearing the late neolithic Mǎjiāyáo culture, via two routes into the Himalayan region. One route took the Bodic bearers of the Mǎjiāyáo culture in the late fourth and early third millennia BC through northern Sīchuān and eastern Tibet into Sikkim, where colonial exponents of the Mǎjiāyáo culture bear witness to their presence. The Northern Sikkim Neolithic is characterized by double-per-

forated rectangular harvesters and semi-lunar knives and other distinctive artefacts of the Mǎjiāyáo Neolithic type, and late neolithic sites appertaining to the same cultural assemblage are known from eastern and southeastern Tibet, particularly around Lha-sa and in Nying-khri and Me-tog counties. Most famous of these is the site mKhar-ro “fort”, discovered in 1977, located some 12 km south of Chab-mdo in Khams in eastern Tibet. Chinese sources (e.g. Xizàng etc. 1979, Ān 1992) give the name of this site in the sinicized forms “Kǎrùò”. The site overlooks the rDza Chu, or Mekong, from a high terrace at the latter’s confluence with a small lateral tributary, the name of which is mKhar-chu “fort river”. Tong, Lang and Wang-dui report that the *Panicum* and *Setaria* millets which at that time constituted the staple grains of north and north-western China were also recovered at mKhar-ro and that the site is culturally distinct from the rice-based economies of central and southern China (1982: 81). The mKhar-ro site is most closely affiliated with the Bānshān (2200-1900 BC) and Mǎchǎng (1900-1700 BC) phases or subtypes of



*Map 3: One offshoot of the late neolithic Mǎjiāyáo cultural complex migrates south through northern Sīchūān and eastern Tibet into Sikkim, whereas another offshoot migrates to the southwest across the Himalayas to establish the Northern Neolithic civilisation in Kashmir. Northwestern Tibeto-Burmans peopled the Himalayas, both from the northeast, colonizing Sikkim and Nepal, and from the west, colonizing the western Himalayas and the Tibetan plateau.*

the Mǎjiāyáo culture along the upper reaches of the Yellow River. Through the Chumbi Valley these Proto-Bodic peoples spilt over into Sikkim, whence they spread across the southern flank of the Himalayas in a westward direction.

Via a westerly route another group of ancient Bodic peoples followed the main Inner Asian trade routes and crossed the Karakorum in the middle of the third millennium BC, establishing the colonial exponent of Mǎjiāyáo culture known as the Northern Neolithic of Kashmir and Swāt (2500-1700 BC, Map 3). From Kashmir they later spread eastward along the northern flank of the Himalayas and across the Tibetan Plateau. The two routes of dissemination of this late neolithic culture would appear to account for the modern distribution of two separate subsets of Bodic language groups, i.e. Bodish, Tamangic, Magaric

in the west vs. Mahakiranti and related groups in the east. Circumstantial evidence for an exodus from Gānsù is provided by palaeoclimatological data and by the geographical extent of developmental phases of the Mǎjiāyáo culture. Climatic changes took place in the area of the Mǎjiāyáo Neolithic in late neolithic times. For example, the shores of the Sogō Nūr are strewn with neolithic sites, but its waters are now too saline for human consumption or for use in agriculture. The overall geographical extent of the Bānshān phase or subtype (2200-1900 BC) of the Mǎjiāyáo culture is significantly smaller than that of the Mǎjiāyáo phase or subtype (2700-2300 BC), which preceded it, and represents a contraction of the nuclear area of the culture, which coincides with the conveyance of Mǎjiāyáo Neolithic culture to Kashmir in the west and via mKhar-ro to Sikkim in the east.

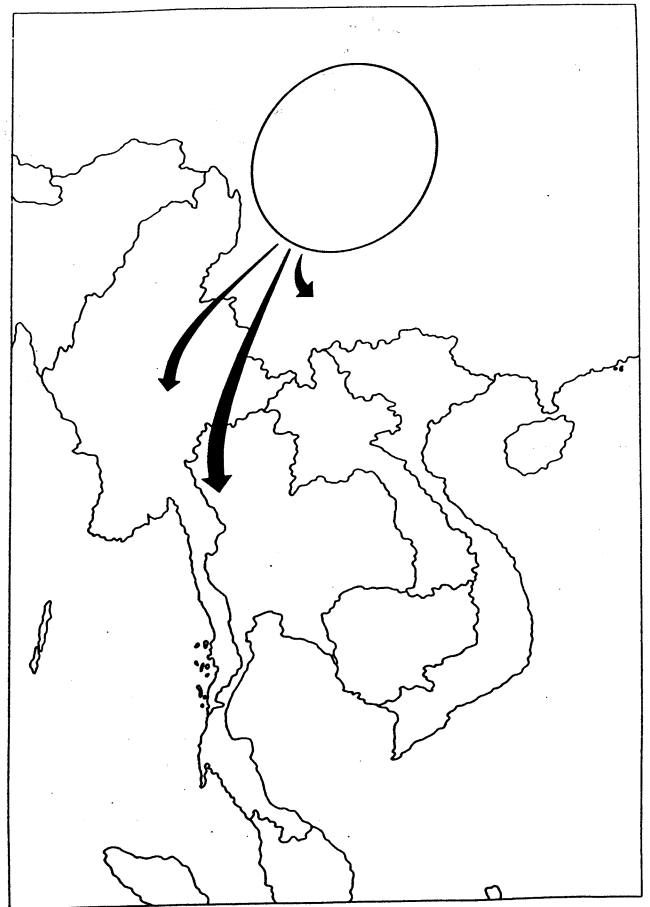
Although the topography did not render the Kiranti linguistic communities absolutely impervious to outside influence after their linguistic ancestors colonized the Himalayas in the third millennium BC, their relative isolation was conducive to greater continuity through time which contrasts strongly with the cultural advances and constant social change which marked the more complex societies on the North China Plain. This accounts for the contrast between the archaic and conservative nature of Kiranti languages and the innovative and much-changed face of Chinese. Language evidently changes more rapidly in rapidly evolving societies. A literate Georgian layman can manage to read a sixth century Georgian translation of the gospels if it is set for him in modern Georgian typeface, although the style of the language will strike him as noticeably old-fashioned. By contrast, a modern Englishman must be forgiven for not recognizing a randomly chosen passage of *Beowulf* as English at all.

Whereas the linguistic forebears of the modern Bodic speaking or Northwestern Tibeto-Burman groups moved across the Tibetan plateau and into the Himalayas, the Northeastern Tibeto-Burmans remained in the Yellow River basin expanding across the North China Plain, where they introduced their language, Proto-Chinese. The oracular inscriptions of the Shāng dynasty (16th to 11th century BC), written most famously on the shoulder blades of cattle and the plastrons of tortoises, but also on other bones, are generally held to represent the oldest recorded form of Chinese. The ideogrammatic script of the Shāng ultimately evolved into the modern Chinese script. Old Chinese is the oldest reconstructible form of Chinese and reflects the language spoken by the early Zhōu (11th to 7th century BC). Old Chinese is based primarily on (1) studies of rhymes in books of that period, mainly the *Shījīng* "Book of Odes", but also the *Shūjīng* "Book of History" and *Yijīng* "Book of Changes", (2) analyses of the phonetic components of Chinese ideograms, most of which are *xiéshēng* characters consisting of a semantic and a phonetic component, and (3) the documented pronunciations and reconstructions of Middle Chinese, the language of the Suí and Táng dynasties. Old Chinese reconstruction involves complex philological arguments relying on other types of evidence.

In neolithic times, Sichuān had yielded the pioneering Western Tibeto-Burman groups who had introduced early neolithic technologies into northeastern India. Later the Northern Tibeto-Burmans left Sichuān to establish the Sino-Bodic early neolithic Péilǐgǎng, Císhān and Dàdìwān agricultural communities in the Yellow River basin in northern China, whereas downstream on the middle Yangtze to the east the probably Kadai neolithic culture of Péngtóushān flourished in southern China. The Tibeto-Burman groups who stayed behind in Sichuān and Yúnnán after the exodus of the Western and Northern groups were the ancient Southern Tibeto-Burmans. It is obvious to suspect that these must have been the people behind the

magnificent Bronze Age cultures dating to the second millennium BC in Yúnnán and Sichuān, such as the Diān culture around Lake Diān and associated lakes in Yúnnán, the spectacular Sānxīngduì culture just north of modern Chéngdū and the Yèláng culture, its name romantically suggestive of a tryst (Guìzhōu etc. 1986, Shěn 1987, Goepfer 1996). These societies were already highly advanced, complex and stratified before contact with Hàn Chinese civilisation (Lee 1996).

Southern Tibeto-Burman came to split into two groups, which may be called Southeastern and Southwestern. Whereas Southeastern groups such as Qiāngcǐ stayed behind in Sichuān, the linguistic ancestors of the Karen migrated in a southwesterly direction and were probably amongst the pioneers who introduced Bronze Age technologies to peninsular Southeast Asia in the second millennium BC (Map 4), where they encountered and shared



Map 4: The exodus of Southwestern Tibeto-Burmans into peninsular Southeast Asia had begun by the first millennium BC, and the process seems never to have completely come to a halt, as Lolo-Burmese groups have continued to trickle into Thailand from Yúnnán in recent history.

these technologies with Austroasiatic peoples who had already colonized most of peninsular Southeast Asia from northeastern India. Karenic includes languages spoken in Karen State and parts of the Tenasserim in eastern Burma as well as in adjacent portions of Thailand, but Southwestern Tibeto-Burman encompasses Lolo-Burmese, which also includes Nàxī or “Moso” in Yúnnán, and the Burmish and Loloish languages. The exodus of Southwestern Tibeto-Burmans into peninsular Southeast Asia may very well already have been slowly set into motion in the second millennium BC by the Karen, but the subsequent migrations of Lolo-Burmese groups into the peninsula was a delayed and gradual process. The Burmese probably only began to move south at the end of the first millennium AD, and Loloish groups have in recent history continued to trickle into Thailand from Yúnnán. The people who stayed behind in the area of the Tibeto-Burman homeland represent the Southeastern branch, which includes languages which were traditionally known by the Chinese as Xifān “Western Barbarian” languages, i.e. the North and South Qiāngic languages spoken in Sichuān, Prinmi (Pǔmǐ), spoken in Sichuān and Yúnnán, Tangut (Xixià) and related languages, and perhaps also Nungish languages such as Rǎwāng and Trung, the latter sometimes sinicized as Dúlóng.

This is a linguist’s interpretation of the archaeological record based on the present state of the art in Tibeto-Burman historical linguistics. The non-random dispersal of unique neolithic cultural assemblages corresponds strikingly to the tortuous branching pattern of Tibeto-Burman phylogeny as suggested by modern comparative linguistic studies. Both the archaeological and linguistic evidence seem to show congruence in suggesting the linguistic intrusions described here. Although, of course, it goes without saying that future research may require the modification or abandonment of any of the subsidiary hypotheses, at this early stage in advancing what is a very new perspective, the point should be stated none the less. Likewise, we should keep our outlook on East Asian archaeology devoid of cultural bias, as archaeologists have often warned laymen in the past. The Chinese archaeologist Chang writes that “the English word *Chinese* has both a geographical-cultural sense and a linguistic sense. In the latter sense, Chinese means the language spoken by the Han Chinese only. In terms of that interpretation one may question the use of the word to describe the prehistoric interaction sphere, because the Han Chinese language and its speakers were in all likelihood a regional, not a spheric, phenomenon” (1986: 242).

The distinction made by Chang is an essential one, for just as archaeologists do not refer to the neolithic barrows of the early Indo-European Kurgan tradition in the Pontic-Caspian steppe in southern Russia as “Russian”, so too should the pitfall be avoided of referring to neolithic assemblages such as the Dàdīwān, Péilǐgǎng, Císhān and Yǎngsháo as “Chinese”. Linguistically speaking, the term

“Chinese” should just continue to be used straightforwardly in its regular English meaning, i.e. to denote the Hàn Chinese languages, people and culture. Prehistoric cultural complexes should likewise continue to be referred to by their conventional archaeological designations, i.e. named after principal sites such as Dàdīwān, Péilǐgǎng, Císhān and Yǎngsháo. A good number of archaeological assemblages in the region known today as China are, in fact, probably not Chinese but may, for example, represent prehistoric Northwestern Tibeto-Burman (Bodic), Northern Tibeto-Burman (Sino-Bodic), Eastern Tibeto-Burman, Kadai, Austronesian or even Austro-Tai civilisations.

#### REFERENCES

- Ān Zhīmǐn. 1979. Péilǐgǎng, Císhān hé Yǎngsháo: shìlùn zhōngyuán xīn shíqī wénhuà de yuānyuán jí fāzhǎn [Péilǐgǎng, Císhān and Yǎngsháo: An exploration of the origin and development of neolithic culture on the Central Plain]. *Káoguǔ* 1979 (4): 335-346 and bottom of p. 334.
- Ān Zhīmǐn. 1992. Neolithic communities in eastern parts of Central Asia. In Masson, A. D. and V. M. Masson (eds) *History of Civilizations of Central Asia* (Vol. I: The dawn of civilization: earliest times to 700 BC), pp. 153-189. Paris: United Nations Educational Scientific and Cultural Organization.
- Avery, J. 1885. The Tibeto-Burman group of languages. *Transactions of the American Philological Association* XVI, Appendix (Morning Session, Wednesday, July 8, 1885, New Haven, Connecticut): xvii-xix.
- Baxter III, W. H. 1992. *A Handbook of Old Chinese Phonology*. Berlin: Mouton de Gruyter.
- . 1995. Ongoing Research: Old Chinese Version 1.1. Paper presented at the Old Chinese Seminar held at Leiden University on July 14th and 17th, 1995.
- Benedict, P.K. 1942. Thai, Kadai, and Indonesia: A new alignment in southeastern Asia. *American Anthropologist* 44: 576-601.
- . 1972. *Sino-Tibetan: a Conspectus*. Cambridge: Cambridge University Press.
- . 1976. Sino-Tibetan: another look. *Journal of the American Oriental Society* 96 (2): 167-197.
- . 1991. Austric: an “extinct” proto-language. In Davidson, J.H. (ed.) *Austroasiatic Languages: Essays in honour of H.L. Shorto*, pp. 7-11. London: School of Oriental and African Studies, University of London.
- Bodman, N.C. 1973. Some Chinese reflexes of Sino-Tibetan s-clusters. *Journal of Chinese Linguistics* 1 (3): 383-396.
- . 1980. Proto-Chinese and Sino-Tibetan: data towards establishing the nature of the relationship. In van Coetsem, F. and L. R. Waugh (eds) *Contributions to Historical Linguistics: Issues and Materials*, pp. 34-199. Leiden: E.J. Brill.

- Brown, N. 1854. Comparative vocabulary of the Sgau and Pwo Karen dialects. *Journal of the American Oriental Society* IV: 317-326.
- Burling, R. 1971. The historical place of Jinghpaw in Tibeto-Burman. In Lehman F.K. (ed.) *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics, Vol. II*, pp. 1-54. Urbana: Department of Linguistics of the University of Illinois.
- . 1983. The Sal languages. *Linguistics of the Tibeto-Burman Area* 7 (2): 1-32.
- . forthcoming. The Tibeto-Burman languages of Northeast India. In Thurgood, G. and R. LaPolla (eds) *The Sino-Tibetan Languages*. Curzon Press.
- Chalmers, J. 1866. *The Origin of the Chinese: An Attempt to Trace the Connection of the Chinese with Western Nations in their Religion, Superstitions, Arts, Language and Traditions*. Hong Kong: De Souza & Co.
- Chang K-C. (= Zhāng Guāngzhí). 1986. *The Archaeology of Ancient China* (4th edition, revised and enlarged). New Haven: Yale University Press.
- Coblin, W.S. 1986. *A Sinologist's Handlist of Sino-Tibetan Lexical Comparisons* (Monumenta Serica Monograph Series XVIII). Nettetal: Steyler Verlag.
- Conrady, A. 1896. *Eine indochinesische Causativ-Denominativ-Bildung und ihr Zusammenhang mit den Tonaccenten: Ein Beitrag zur vergleichenden Grammatik der indochinesischen Sprachen, insonderheit des Tibetischen, Barmanischen, Siamesischen und Chinesischen*. Leipzig: Otto Harrassowitz.
- Courant, M. 1903. Note sur l'existence, pour certains caractères chinois, de deux lectures, distinguées par les finales *k-n*, *t-n*, *p-m*. *Mémoires de la Société de Linguistique de Paris* XII: 67-72.
- Cust, R.N. 1878. *A Sketch of the Modern Languages of East India*. London: Trübner and Company.
- van Driem, G. 1990a. An exploration of Proto-Kiranti verbal morphology. *Acta Linguistica Hafniensia* 22: 27-48.
- . 1990b. The fall and rise of the phoneme /r/ in Eastern Kiranti. *Bulletin of the School of Oriental and African Studies* LIII (1): 83-86.
- . 1991a. Bahing and the Proto-Kiranti verb. *Bulletin of the School of Oriental and African Studies* LIV (2): 336-356.
- . 1991b. Tangut verbal agreement and the patient category in Tibeto-Burman. *Bulletin of the School of Oriental and African Studies* LIV (3): 520-534.
- . 1992. Le proto-kiranti revisité, morphologie verbale du lohörung. *Acta Linguistica Hafniensia* 24: 33-75.
- . 1993a. The Proto-Tibeto-Burman verbal agreement system. *Bulletin of the School of Oriental and African Studies* LVI (2): 292-334.
- . 1993b. The Newar verb in Tibeto-Burman perspective. *Acta Linguistica Hafniensia* 26: 23-43.
- . 1993c. Language change, conjugational morphology and the Sino-Tibetan *Urheimat*. *Acta Linguistica Hafniensia* 26: 45-56.
- . 1994a. East Bodish and Proto-Tibeto-Burman morphosyntax. In Kitamura, H., T. Nishida and Y. Nagano (eds) *Current Issues in Sino-Tibetan Linguistics*, pp. 608-617. Ōsaka: The Organizing Committee of the 26th International Conference on Sino-Tibetan Languages and Linguistics.
- . 1994b. The Yakkha verb: interpretation and analysis of the Omruwa material (a Kiranti language of eastern Nepal). *Bulletin of the School of Oriental and African Studies* LVII (2): 347-355.
- . 1995. Black Mountain conjugational morphology, Proto-Tibeto-Burman morphosyntax, and the linguistic position of Chinese. In Nishi, Y., J.A. Matisoff and Y. Nagano (eds) *New Horizons in Tibeto-Burman Morphosyntax* (Senri Ethnological Studies 41), pp. 229-259. Ōsaka: National Museum of Ethnology.
- . 1997. Sino-Bodic. *Bulletin of the School of Oriental and African Studies* 60 (3): 455-488.
- . 1998. Neolithic correlates of ancient Tibeto-Burman migrations. In Blench R. and M. Spriggs (eds) *Archaeology and Language II*, pp. 67-102. London: Routledge.
- Forbes, C.J.F.S. 1878. On Tibeto-Burman languages. *Journal of the Royal Asiatic Society of Great Britain and Ireland*, New Series X: 210-227.
- . 1882. *Comparative Grammar of the Languages of Further India: A Fragment and other Essays*. London: W.H. Allen and Company.
- Forchhammer, E. 1882. Indo-Chinese languages. *Indian Antiquary* XI: 177-189.
- Forrest, R.A.D. 1956. Towards common Tibeto-Burman. *Wentii* [i.e. Wëntf] (New Haven, Connecticut) 10: 1-18.
- Goepper, R. (ed.) 1996. *Das Alte China: Menschen und Götter im Reich der Mitte 5000 v.Chr. - 220 n.Chr.* (Kunsthhaus Zürich, 4. April 1996 - 14. Juli 1996). Zürich: Kunsthhaus Zürich.
- Grierson, G.A. (ed.) 1909. *Linguistic Survey of India (Vol. III, Part I, Tibeto-Burman Family: Tibetan Dialects, the Himalayan Dialects and the North Assam Group)*. Calcutta: Superintendent of Government Printing, India.
- Grube, W. 1881. *Die sprachgeschichtliche Stellung des Chinesischen*. Leipzig: T.O. Weigel.
- Guìzhōu Shěng Bówùguǎn Káogǔzǔ and Guìzhōu Shěng Hèzhāng Xiàn Wénhuà Guǎn. 1986. Hèzhāng Kělē fājué bàogào [Report on the excavations at Kělē in Hèzhāng district]. *Káogǔ Xuébào* 1986 (2): 199-251.
- Jaxontov, S.E. 1959. Fonetika kitajskogo jazyka I tysjačelija do n.è. (sistema finalej). *Problemy Vostokovedenija* 1959 (2): 137-147.
- . 1965. *Drevnekitajskij jazyk*. Moscow: Izdatel'stvo "Nauka".

- Karlgren, B. 1920. Le proto-chinois, langue flexionnelle. *Journal Asiatique* XI<sup>e</sup> Série Tome XV: 205-232.
- . 1923. *Analytic Dictionary of Chinese and Sino-Japanese*. Paris: Geuthner.
- . 1933. Word families in Chinese. *Bulletin of the Museum of Far Eastern Antiquities* 5: 9-120.
- . 1957. *Grammata Serica Recensa* (= *Bulletin of the Museum of Far Eastern Antiquities* 29: 1-332).
- Klaproth, J.H. 1823. *Asia Polyglotta*. Paris: A. Schubart.
- Kuhn, E. 1883. *Ueber Herkunft und Sprache der trans-gangetischen Völker. Festrede zur Vorfeier des Allerhöchsten Geburts- und Namensfestes Seiner Majestät des Königs Ludwig II., gehalten in der öffentlichen Sitzung der Königlichen Akademie der Wissenschaften zu München am 25. Juli 1881*. München: Verlag der Königlichen Bayerischen Akademie.
- . 1889. Beiträge zur Sprachkunde Hinterindiens (Sitzung vom 2. März 1889). *Sitzungsberichte der Königlichen Bayerischen Akademie der Wissenschaften* (München), *Philosophisch-philologische Classe*, II: 189-236.
- Lee, Y. K. 1996. Material representations of status in the Diān culture. *Bulletin of the Indo-Pacific Prehistory Association* 14: 216-225.
- Lepsius. 1861. Über die Umschrift und Lautverhältnisse einiger hinterasiatischer Sprachen, namentlich der Chinesischen und der Tibetischen. *Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin aus dem Jahre 1860*, pp. 449-496.
- Leyden, J. 1808. On the languages and literature of the Indo-Chinese nations. *Asiatic Researches* X: 158-289.
- Li, F.K. [= Lǐ Fāngguì] 1974. Studies on Archaic Chinese (translated by G.L. Mattos). *Monumenta Serica* XXXI (1974-1975): 219-287.
- . 1977. *A Handbook of Comparative Tai*. Oceanic Linguistics Special Publication No. 15. Honolulu: University of Hawaii Press.
- . 1983. Archaic Chinese. In David N. Keightley (ed.) *The Origins of Chinese Civilization*, pp.393-408. Berkeley: University of California Press.
- Logan, J.R. 1858. The West-Himalaic or Tibetan Tribes of Asam, Burma and Pegu. *Journal of the Indian Archipelago and Eastern Asia* (Singapore) II (1): 68-114.
- . 1859. Ethnology of the Indo-Pacific islands: The affiliation of the Tibeto-Burman, Mon-Anam, Papuanesian and Malayo-Polynesian pronouns and definitives, as varieties of the ancient Himalayo-Polynesian system; and the relation of that system to the Dravido-Australian. *Journal of the Indian Archipelago and Eastern Asia* (Singapore) III (1): 65-98.
- Mason, F. 1858. Notes on the Karen language. *Journal of the Asiatic Society of Bengal* XXVII (II): 129-168.
- . 1860. *Burmah, Its people and Natural Productions, or Notes on the Nations, Fauna, Flora and Minerals of Tenasserim, Pegu and Burmah*. Rangoon: Thomas Stowe Ranney.
- Matisoff, J.A. 1968. Review of *Proto-Lolo-Burmese* by Robbins Burling. *Language* 44 (4): 879-897.
- . 1982. The tones of Jinghpaw and Lolo-Burmese: common origin vs. independent development. *Acta Linguistica Hafniensia* XV (2): 153-212.
- . 1985. God and the Sino-Tibetan copula with some good news concerning selected Tibeto-Burman rhymes. *Journal of Asian and African Studies* (Tokyo) 29: 1-81.
- . 1991. Sino-Tibetan linguistics: Present state and future prospects. *Annual Review of Anthropology* 20: 469-504.
- . 1995. Sino-Tibetan palatal suffixes revisited. *Senri Ethnological Studies* 41: 35-91.
- . 1997. *Sino-Tibetan Numeral Systems: Prefixes, Protoforms and Problems*. Canberra: Pacific Linguistics, Research School of Pacific and Asian Studies, Australian National University.
- Michailovsky, B. 1994. Manner vs. place of articulation in the Kiranti initial stops. In Kitamura, H., T. Nishida and Y. Nagano (eds) *Current Issues in Sino-Tibetan Linguistics*, pp. 59-78. Ōsaka: Organizing Committee of the 26th International Conference on Sino-Tibetan Languages and Linguistics.
- Müller, F.M. 1855. *Languages of the Seat of War in the East, with a Survey of the Three Families of Language, Semitic, Arian, and Turanian* (frontispiece title: *Max Müller's Survey of Languages*), second edition. London: Williams and Norgate.
- . 1881. *Selected Essays on Language, Mythology and Religion* (2 vols.). London: Longmans, Green and Company.
- . 1901 (posthumous). *My Autobiography*. London: Longmans, Green and Company.
- Pott, A.F. 1887. *Zur Litteratur der Sprachkunde Europas*. Leipzig: Johann Ambrosius Barth.
- Przyluski, J. 1924. "le sino-tibétain" and "les langues austroasiatiques". In Meillet, A. and M. Cohen (eds) *Les Langues du Monde*, pp. 361-384 and pp. 385-403. Paris: Librairie Ancienne Édouard Champion.
- Przyluski, J. and G.H. Luce. 1931. The number "a hundred" in Sino-Tibetan. *Bulletin of the School of Oriental Studies* VI (3): 667-668.
- Puhvel, J. 1994. West-Indo-European affinities of Anatolian. In Dunkel, G.E., G. Meyer, S. Scarlata and C. Seidl (eds) *Früh-, Mittel-, Spätindogermanisch: Akten der IX Fachtagung der Indogermanischen Gesellschaft vom 5. bis 9. Oktober 1992 in Zürich*, pp. 315-324. Wiesbaden: Ludwig Reichert.
- Pulleyblank, E.G. 1962. The consonantal system of Old Chinese. *Asia Major* (new series) IX (1): 58-144, (2) 206-265.

- 1973a. Some further evidence regarding Old Chinese -s and its time of disappearance. *Bulletin of the School of Oriental and African Studies* XXXVI (2): 368-373.
- 1973b. Some new hypotheses concerning word families in Chinese. *Journal of Chinese Linguistics* 1: 111-125.
- 1984. *Middle Chinese: a Study in Historical Phonology*. Vancouver: University of British Columbia Press.
- 1991. *Lexicon of Reconstructed Pronunciation in Early Middle Chinese, Late Middle Chinese, and Early Mandarin*. Vancouver: University of British Columbia Press.
- Rask, R.K. 1834 (posthumous). *Samlede tildels forhen utrykte afhandlinger* (2 Vols.). Copenhagen: det Popske Bogtrykkeri.
- Schlegel, G. 1901. Review: *Elements of Siamese Grammar* by O. Frankfurter, Ph.D., Bangkok: Printed at the American Presbyterian Mission Press, Leipzig, Karl W. Hiersemann, 1900. *T'oung-pao* (Série II) II: 76-87.
- Schott, W. 1856. Über die sogenannten indo-chinesischen Sprachen insonderheit das Siamische. *Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin aus dem Jahre 1856 (philosophisch-historische Klasse)*, pp. 161-179.
- Schüssler, A. 1987. *A Dictionary of Early Zhou Chinese*. Honolulu: University of Hawaii Press.
- Shafer, R. 1955. Classification of the Sino-Tibetan languages. *Word, Journal of the Linguistic Circle of New York* 11, 94-111.
- 1974. *Introduction to Sino-Tibetan*. Wiesbaden: Otto Harrassowitz.
- Shào W. 1984. Huánghé zhōngliú de Yǎngsháo wénhuà [The Yǎngsháo culture along the middle course of the Yellow River]. In *Xīn Zhōngguó de kǎogǔ fāxiàn hé yánjiū (Archaeological Excavations and Researches in the New China)*, pp. 41-68. The Archaeological Research Institute of the Chinese Academy of Social Sciences. Peking: Wénhuà Chūbǎnshè.
- Shěn Z. 1987. Sānxīngduì èr hào jìsīkēng qīngtóng lǐrén xiàng chū jì [Preliminary notes on the bronze standing human figures from the Sānxīngduì sacrificial pit]. *Wénwù* 1987 (10): 16-17 [with plates].
- Simon, W. 1929. Tibetisch-chinesische Wortgleichungen, ein Versuch. *Mitteilungen des Seminars für Orientalische Sprachen an der Friedrich-Wilhelms-Universität zu Berlin* XXXII (1): 157-228.
- Starostin, S. A. 1989. *Rekonstrukcija drevnekitajskoj fonologičeskoj sistemy*. Moscow: Izdatel'stvo "Nauka".
- 1994. The reconstruction of Proto-Kiranti. Paper presented at the 27ème Congrès International sur les Langues et la Linguistique Sino-Tibétaines, Centre International d'Études Pédagogiques à Sèvres, 14 Octobre 1994.
- Tong Enzheng, Lang Jian and Wangdui Suolang. 1982. Unraveling Tibetan prehistory at Karuo. *Archaeology* 35 (5): 62-63, 81.
- Xià N. 1977. Tàn-shísì cèdìng niándài hé Zhōngguó shǐqián kǎogǔxué [C-14 dating and the prehistoric archaeology of China]. *Kǎogǔ* 1977 (4): 217-232.
- Xizàng Zizhìqū Wénwù Guǎnlǐ Wěiyuán Huì (Managing Committee for Cultural Affairs of the Autonomous Region of Tibet). 1979. Xizàng Chāngdū Kǎruò yízhǐ shìjué jiǎn bào [Brief report of an initial excavations of the site at mKharro, Chab-mdo, Tibet]. *Wénwù* 1979 (9): 22-28.
- von Xylander, J.R. 1835. *Die Sprache der Albanesen oder Schkipetaren*. Frankfurt am Main: die Andreäische Buchhandlung.
- Yán W. 1981. Gānsù Qín"ān Dàdìwān xīn shíqì shí dài zǎo qī yí cún [Early neolithic remains from Dàdìwān, Qín"ān, Gānsù]. *Wénwù* 1981 (1): 1-8.
- Zhāng P. and Zhōu G. 1981. Shítán Dàdìwān yì qī hé qítā lèixíng wénhuà de guānxi [Tentative discussion of the connexion between Dàdìwān I and other cultures]. *Wénwù* 1981 (1): 9-15 and 86.
- Zhāng X., Zhāng P. and Guō D. 1980. Tán Mǎjiāyáo, Bānshān, Máchǎng lèixíng de fēn qī hé xiānghù guānxi [On the periodization and interrelationships of the Mǎjiāyáo, Bānshān, Máchǎng types]. In *Zhōngguó kǎogǔ xuéhuì dì yí cì niánhuì lùnwén jí, 1979 (Proceedings of the First Annual Conference of the Chinese Archaeological Society, 1979)*, pp. 50-71. Peking: Wénwù Chūbǎnshè.