Aspects of the Linguistic History of South China

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HISTORICAL AND ARCHAEOLOGICAL REVISION OF THE PREHISTORY OF SOUTH CHINA

FROM HAN DYNASTY TIMES onward, many sources of Chinese history have treated the study of South China as essentially one of the expanding civilization (= sinicization) of backward barbarians by a totally indigenous, very advanced (= with writing) North Chinese cultural tradition. (This exaggeration is a convenient straw man to use for the purposes of orderly argument.) In terms of language development we see a similar tradition: all South Chinese dialects except Min are regarded as mere variants of the Tang koine depicted in the Qie-yun tradition, and even Min is some sort of Han relic. In the eyes of some scholars these dialects only rarely preserve any features of interest in the reconstruction of the early history of the Chinese language.

Students of both the history and the archaeology of South China have criticized this tradition. Treistman (1968; 1970; 1972) reviewed the archaeological and early textual evidence and suggested some revisions in our interpretation of it. She viewed the Han

historical sources as biased "to serve the political end of unification and justification of Han expansion" (1968:853). She felt that this Han bias against the surrounding "barbarians" had extended into modern historical and archaeological traditions of interpretation of the data. Wiens (1954) also recognized the bias in the Han Chinese view of their history, "an outlook through very darkly (Han) Chinese colored glasses which recognized only what was North Chinese" (p. 30). Treistman suggested an alternative view of China's prehistory:

> Indeed, for all Asia there is developing a picture of local cultures, each with its own unique history but each also participating in active inter-cultural exchange. (1970:368)

If we look at China's prehistory in this way, what cultural traditions can we discern? First there is a north central one:

> The peoples of Shensi, at 1000 B.C., were heir to generations of familiarity and interaction with steppe cultures, but because of their uniquely diversified ecological situation, they shared as well in the great streams of civilization that were beginning to surface in northern Southeast Asia. (Treistman 1972:129–130)

The south is somewhat more complex. Leaving aside the southwest, there appear to be several traditions, but all are somewhat influenced by cultures in Southeast Asia. Treistman further suggested that even within the distinct cultural traditions in the south, there may have been substantial variety; the south may have exhibited very well organized agricultural villages in flood plains interacting with "diffusely settled and imperfectly 'sedentized' people" (1970:368). Wiens also attempted to describe "the complex cultural picture of the historical geography of South China" (1954:30). He too recognized that "folk relationships were (and are) far more complicated [in the south] than they were in the north or west" (p. 40).

Treistman (1968:856) nicely summed up her view of the prehistorical evidence:

> It is a history of the "confrontations" of many cultural elements and not of the colonization of the weaker or less-advanced peoples by stronger civilization. Historical interference and archeology suggest that China, at 1000 B.C., was an area of great diversity. Perhaps in this diversity, this mosaic of cultures, lies the clue to the significance of later Chinese civilization. Certainly this diversity is the proper concern of historical, linguistic, and anthropological study.

A number of archaeologists have also been sallying forth into the arena occupied solely by the champions of the North China syndrome. Solheim, Bayard, and Meacham have been debating with Kwang-chih Chang on the matter of who influenced whom, when, and how. Generally the first three scholars place South China in the same sphere of development as Southeast Asia; then they demonstrate the possibilities of strong cultural influence from the south into North China, at least prior to 1500–2000 B.C. (Bayard 1975:73). But the major brunt of their argument is that South China was a very complex area with a number of independently developing but mutually interacting cultures:

Prior to the Han expansion the inhabitants of the southern two-thirds of China (with the probable exception of Ch'u) were simply not Chinese, but presumably Tai, Austronesian and Tibeto-Burman. (Bayard 1975:76)

The complicated cultural mosaic of South China has received much less attention than it deserves. (Meacham 1975:105)

Meacham (1974:76) went so far as to suggest that there was probably little or no North Chinese influence on South China prior to Han.

Solheim (and others) have suggested a possible southern source for such Chinese cultural items as bronze metallurgy (Solheim 1971:332), wet-rice cultivation (p. 335), and the domestication of cattle (p. 335). Keightley (1978:8–9) suggested that plastromancy and the appropriate turtle shells may have come to Shang from South China. Solheim (1979) said that within the south, Wu and Chu interacted more with each other than with Chou, and Meacham compared neolithic societies, suggesting that:

It is by no means certain that the Chou people at that time (three generations before the conquest of Shang) were any more advanced than were the people of Wu. (1976–1978:107)

Solheim felt that the South Chinese input to the Chinese civilization we know historically has been so great that

It would be best to say that China and Chinese did not begin until the unification of the Ch'in and Han Dynasties. (1979:200)

Bayard is probably the most explicit scholar I have read on ethnic *Urheimaten;* he even provided a map of his proposed early habitats for various ethnic groups (1975:74). He labeled all of the Wu area (Jiangsu, Zhejiang), northern Fujian, and Taiwan as Austronesian; southern Fujian (Amoy south), much of Guangdong, Guangxi, and the Tonkin area of Vietnam were said to be Tai/Kadai. More western parts of southern China were labeled Tibeto-Burman; North China was Sinitic. Bayard, claiming to be in agreement with Kwang-chih Chang and Solheim, said

Most authorities are in general agreement that the Central Lowlands and northern Southern Coast were occupied by Austronesian speakers. (1975:77)

Solheim (1971) tied a number of the possible south-to-north influences to the very early seaworthy boats developed in Southeast Asia. In his 1973 paper he put the Austronesians in South China; in 1975 he put them there as late as the Han migrations (p. 109). He, too, saw Taiwanese traits as originating on the mainland, and suggested that the Austronesians came to China by boat and probably overlaid another culture. Solheim (1979) expanded on his ideas in connection with seafarers, and posited an Austronesian seafaring culture, the Nusantao, that traveled and traded extensively all around the South China Sea area. He thought these Austronesians may have had substantial settlements in South China, particularly in the Changjiang (Yangtze) delta area, which has been known throughout history for its involvement in overseas trading.

Generally speaking, K-c. Chang (1974:37), Howells (1973:198–206), Eberhard (1977: 6), and Bellwood (1979:181; 1980:178) all supported the Austronesian hypotheses. So did Shorto (1979:77–78), who posited an extensive if thin population ranging from the mainland opposite Taiwan north to the Changjiang. The Miao-Yao were also important for Bellwood. Before the Han period they lived along the lower middle Changjiang River and moved south and west within the last 500 years.

> The Miao and Yao . . . may have been an important ethnic element in South China during the period prior to Eastern Chou expansion in the first millennium B.C. On these grounds, they may prove to be of more than peripheral concern in Southeast Asian prehistory. (Bellwood 1979:85)

Wiens (1954) stated that Tai, Miao, and Yao elements were present in South China for long periods. He considered that Miao was toward the west, Yao in the east, and Tai everywhere—mixed in with Miao and Yao. Another group, Tan, was also present toward the east, and these he said were culturally neo-Austronesian. Sinicization was not a simple process because the south was not simple. The Han Chinese followed the Tai up the Changjiang River, while the Miao-Yao practiced slash and burn agriculture in the hills (Wiens 1954:6). Wiens thought the Austronesian element preponderant in Yao: "The Yao are the Austronesians who stayed on land" (p. 41). Then there was a Miao florescence between Han and Tang, with Miao all over South China (1954:84–85). Wiens included about twenty historical maps, on almost all of which there is a northern boundary of some kingdom or province through the Changjiang delta. Frequently Chu includes the coastal area now covered by southern Jiangsu, Zhejiang, and Fujian; often the later three are a unit by themselves. This correlates with internal dialect boundaries in Wu and the boundaries for Wu and Min.

Of all the peoples of Southeast Asia, the Tai seem to have stimulated the most scholarly interest in tracing an ancestry to an *Urheimat* somewhere other than Thailand. Briggs (1949) placed them east and south of the Tibeto-Burmans in South China and suggested they may have been closely related to Yueh and part of Chu. He noted that they preferred a river-plain habitat and cultivated wet rice; the Yueh, however, were oriented toward tidewater areas.

Terwiel considered an origin this far north improbable for the Tai. He said that

> It may be historically plausible to depict a prolonged and bitter struggle between southern valley dwellers and northern Chinese during the first millennium B.C. (1978:242)

and he believed that wet-rice cultivation may have existed in the Changjiang valley by the first millennium B.C., but found no evidence that Tai were doing it (p. 242). Terwiel debunked most current theories about various *Urheimaten* except one: the Tonkin/Guangxi region for at least the period 1000 B.C. to A.D. 1000.

Chamberlain based his discussion of the Tai *Urheimat* on the reconstruction of Proto-Tai words for various animals. On the basis of this evidence he located them farther north in China than did Terwiel. He claimed they were coastal and no further north than Fujian (1979:2). But the ancestors of "Proto-Tai and Proto Kam-sui must have inhabited the valley of the lower Yangtze" (Chamberlain 1979:2).

You (1980) put the homeland of Chuang-Tong (= Tai) and paddy-rice cultivation in south central China and northern Vietnam, Laos, and Thailand. Paddy-rice cultivation traveled from there either east and up the coast, or north and down the Changjiang basin. Wiens also had the Tai all along the north bank of the Changjiang (1954:113); as a result some old Wu words are Tai (p. 112).

Speculations on the earlier distribution of the Miao-Yao are harder to come by. Lemoine provided one interesting but suspicious tidbit: the Mien-Yao have an oral and written tradition of coming from the Nanjing area during the Ming dynasty and Guangdong by boat and then inland. This legend would have them abandon the cultivation of rice. More likely for the Yao is the scholarly tradition Lemoine cited (1972:55) that the Yao were very ancient inhabitants of the mountains of the southeast coast. The National Geographic Society (1980) said:

> The She, who now speak mainly Chinese, may be descended from the Yao who retreated to the west 500 years ago under pressure of Han expansion.

Their map shows She sites from central Zhejiang to southern Fujian. I have heard and seen other suggestions that the She were Yao (Downer 1972; Chen 1982), but Benedict claimed that She is closer to Miao than to Yao (personal communication). Wiens said the Yao were in the southern Changjiang hills as early as they could be traced (1954:36), and that the Zhejiang-Fujian mountain block showed the longest resistance to Han Chinese (p. 8).

THE SOCIOLINGUISTICS OF SOUTH CHINA

How might these ethnic groups have affected the history of southern Chinese dialects? Several scholars have pointed to possible Tai influences on Cantonese; O-K. Y. Hashimoto (1976) is one such source. There is considerable debate about possible influences on Min. Norman and Mei (1976) argued for an Austroasiatic substratum for Min and Chu, and/or an Austronesian substratum for Min. Norman (1979) argued against one proposed Tai influence on Min. I have outlined (Ballard 1971b) a hypothesis about the relationships among the southern Chinese dialects, arguing especially for a strong connection between Wu and Chu (old Xiang). Wu dialectology shows that the Wu area is best treated as having three distinct sections: southern Jiangsu and a little of northern Zhejiang, central Zhejiang, and southern Zhejiang. I have shown that the southern third shows the strongest affinities for the northern half of the contiguous Min area in tone sandhi (Ballard 1984b). The archaeological, historical, and geophysical data would seem to indicate a transitional area influenced from both the north and the south. I have argued for some years (Ballard 1971a; 1979; 1980a) that the dialects of South China cannot be accounted for as mere dialectal variants of Mandarin (in some sense); rather they seem to represent linguistic traditions that have been more or less influenced by the standard language of the various capitals, that is, Mandarinized. Thus, Wu, Cantonese, Chu, and Min, traditionally regarded as being divergent dialects derived from Ancient Chinese (Archaic in the case of Min), actually represent separate linguistic traditions that have incorporated much Chinese material.

It is easier to argue for substratal influences on a language form when both languages

are still collocated. Thus a Tai influence on Cantonese, a Yao (via She) influence on Min, or a Miao influence on (Nan)-Chu are more plausible on the surface than any influence on Wu. But in fact mere contiguity does not necessarily lead to any more profound influence than a little local lexical borrowing, so we need a more complex model to make plausible some notion of a pervasive, systematic impact on the distinctive development of these dialects.

The southern Chinese dialects to this day display very extensive layer phenomena. Traditionally these layers are called "literary" and "colloquial," but there may be more than two layers, and in various ways either may be more conservative and/or more like Mandarin (Ballard 1979). In a sense each layer shows a life and history of its own. T'sou showed just how sociologically significant and long lasting these layers are:

> At the grassroots level *collective diglossia* may be a characterization of the national scene in traditional China. (1979:7)

> China presents a more classical model of the stratification of bilingualism in complex societies. (1979:13)

Diglossia characterizes these areas, and it can be shown for several of them that one "low" language form is often (at least until fairly recently) a minority language. Thus one can imagine a long-term situation of diglossia, with the low form preserving the non-Chinese indigenous language—purely during the early colonial period, more mixed later, and finally just as a very different kind of Chinese. The diglossia preserves the sociolinguistic situation over thousands of years with changing linguistic means.

There is evidence to support the existence in ancient times of significant numbers of non-Chinese peoples in the Chinese sphere of influence, and/or of their impact on Chinese.

Bielenstein's careful analysis of Chinese census reports from the Han to Tang periods gave us some notions about populations and their locations in South China during this period (1974). Early Chinese colonization was restricted to alluvial areas. The total Chinese population in South China may not have been large until after Tang (1974:139), though there was significant north-to-south migration during the early Han (p. 141). The foreign tribes were not absorbed as such—they provided wives, and otherwise took to the mountains (p. 144).

Serruys showed that the linguistic situation in China was considerably more complicated than the uniformitarian Qieyun tradition would imply.

> Some dialects are results of expansions of a dialect into an area which preserved elements of the original language or dialect—even non-Chinese elements—mixed with literary and standard influences. (Serruys 1959:77)

His study of *Fangyan* is most useful in showing dialect affinities—which dialects were most like each other. His evidence indicated that Wu, Yueh, and Nan-Chu were closely connected (1959:95) and that Yang (a southwestern extension of Wu), Ou (Wenzhou area), and Yueh were heavily interrelated. He thought that some of these, especially Wu and Yueh (p. 99), might overlay non-Chinese languages. But *Fangyan* ignored non-Chinese speakers in its survey (p. 100), and reported words from such groups only if they had

already been so nativized as to be unrecognizable as foreign, even where statistically the foreign words were numerous (p. 166). Serruys summarized the sociolinguistic complexity of the process of sinicization:

Other expansions into non-Chinese areas proceeded by slow penetration and infiltration, so that the previous population is partly absorbed but also to a certain extent contributed originally non-Chinese words, which are sinicized, and accepted, partly disguised by means of a convenient Chinese graph, and finally felt as a real Chinese word —a process differing in tempo and depth according to the social level, political importance of the area and population, and the time factor involved in the language contacts. (1959:237–238)

Thus, the meager Chinese evidence clearly indicates significant non-Chinese populations in South China up to at least the Han period. They have significantly affected dialect development in this area. Wu shows strong relationships with (Nan)Chu on the one hand and with Yueh/Yang/Ou on the other. I think the striking correlation between this linguistic data and the archaeological-cum-historical data presented earlier provides a very plausible basis for comparing features of the modern dialects with those of non-Chinese languages in the hope of "explaining" various aspects of the development of these dialects as well as confirming, specifying, and identifying the earlier non-Chinese groups in some of South China.

"Much of the difficulty in assessing Southeast Asian linguistic affinities stems from the likelihood that ancestral speakers of the main stocks were already in contact—in South China?—at an early date" (Shorto 1976:99). They must have remained in contact with each other, and with Chinese, until relatively late, since sinicization of the southern Changjiang (Yangtze) basin was slow and not complete until the Tang dynasty; northern Jiangsu was sinicized by the third century B.C., but Zhejiang not till after the third century A.D. "South China has only slowly become digested in the Han-Chinese body politic" (Wiens 1954:130). Wiens felt that the most sinicized element in South China were Tai wet-rice farmers, since they were the ones most exposed to Chinese government. But as Wiens noted it is important to remember that sinicization proceeded from the top down, socially. Coming under Chinese sway did not mean that the masses and all areas had been completely sinicized (Wiens 1954:119). Bayard also emphasized that the southeast has been a confused and complex ethnohistorical mixture. The spread of languages in this area is always based on "a very large number of small-scale, localized movements of small, sometimes related groups in different directions over different routes" (1979:278–279). Language change need not equal mass migration. A small court elite plus an army moves in, and the new language becomes expedient for the local population, which leads to several generations of bilinguals (p. 279).

Yan presented the history of the sinicization of the Chu people and their language; he stated that "these factors mirror that Zhuang-Tong or Miao-Yao had once constituted the substratum of Chuyu, while the elements of the Han language had only instituted its superstratum" (1983:136). But Yan also noted that a literary form of Chuyu spread north during the Qin and Han dynasties (p. 132). Benedict stated that "Chinese generally played the borrower rather than the donor role in the earlier loan relationships, with reversal of the roles in later phases" (1976:63). The sinicization process must have been

rather different from the spread of Tang koine over South China or its imposition in Sinoxenic areas to create Sino-Vietnamese, Sino-Korean, and Sino-Japanese. In these later cases Chinese was clearly the superior culture and language. "Chaozhou like other languages in China or outside of China has a complicated history with migration waves, loans and analogical formations" (Egerod 1982:173). In looking at tonal histories in South China, Egerod found that "the phenomenon of ancient Chinese tones receiving different treatments in different lexical items is rather common in Chinese dialects. . . . The most accepted and most likely explanation is the existence of strata" (1982:170), that is, what Ballard (1979) called sociolinguistically differentiated speech forms.

Diller described one interesting current example of this phenomenon in Thai society. In one village, most of the speakers know (can speak and understand) several Thai dialects that differ primarily in tone systems. Speakers here pick the speech form, that is, tone systems, that fits the sociolinguistic situation (Diller 1979:83). Diller inferred from this phenomenon that southern Thai speakers know the correspondence rules between the tones of their local dialect and those of standard Thai. The situation seems rather different in Chrau (Thomas 1971). In that language older Vietnamese loans have been thoroughly assimilated and have lost their tones. For newer borrowings, however, the amount of tone that is kept varies with the bilingual ability of the speaker (Thomas 1971:28), which seems to imply that tones are not part of the native Chrau system.

Filbeck (1972) described a perhaps comparable situation in a Mon-Khmer language called T'in. (I am grateful to Bill Gage for the reference.) T'in has three stresses that are determined by features of the syntax of sentences; that is, they are not tied to specific lexical items. (These stresses show significant elements of pitch and contour, but more of that anon.) In addition some lexical items have a tone that interrupts the intonation contour and stress pattern. Filbeck suggested this tone is present because of influence from Thai, and most Thai borrowings have this tone, but their original tone in Thai is irrelevant and a few native T'in words also have this tone. Altogether Filbeck estimated that about 5 percent of the vocabulary has this tone, but these items are of high frequency in everyday speech and are auditorily salient. (There is no loss or change of segments to account for this tonogenesis.) But some more assimilated Thai loans do not have the tone. Filbeck concluded that the tone is an internal innovation that constitutes a sociolinguistic device to mark borrowed words (1972:116). In addition most T'in numerals are Thai borrowings, but here T'in preserves all the appropriate Thai tones.

If sinicization was slow and spotty in South China and if significant non-Chinese elements continued to exist throughout that area, we must revise our sociolinguistic picture of pre-Tang South China. The Chinese historical sources are not reliable on this point because people undergoing sinicization cease to be viewed as alien and therefore do not surface as such in those sources (Wiens 1954:31). In other words, non-Chinese linguistic features incorporated into the Chinese spoken in this area would be regarded as Chinese (Serruys 1959), as in T'in. Moreover migrations would have kept the social situation in flux, so that linguistic influences would have constantly moved north and south. Thus Wiens stated that after Ch'in took over South China it was pervaded by southern elements (1954:129). Norman found in Min a sequence of such swaps: first Chinese is brought south and develops independently, then northern Chinese is brought south again in the fourth century, and it was already different. Then, "it was a later version of this transplanted northern dialect which became the most important component of the phonological system of the Qieyun dictionary" (Norman 1982:15). By "later version," I take it he

meant a form that had incorporated features from both earlier sinicization and from non-Chinese languages. Thus Qieyun Chinese, the most solid base for our description of the historical phonology of Chinese, is already much influenced by the languages of southern China.

Tone Systems in East Asia

One characteristic feature of most languages of Southeast Asia is their persistent march toward lexical tone on monosyllabic morphemes. Most recent discussion of possible substratal influences in South China has centered on this area of the phonology of these languages. What are the gross facts on tones?

Most Tibeto-Burman languages, all Tai languages, Miao-Yao, Vietnamese, and Chinese are tone languages, that is, just and only differences in relative pitch and/or pitch contour can indicate semantic contrast or distinguish two lexical items. But beyond that bold, rather commonplace observation, it is difficult to make any other generalizations that hold true in the typology or tonal histories of these language groups.

Tibeto-Burman languages may or may not be tonal; dialects of the same language may or many not share tonality. Tones are lost or gained rather readily through contact (Chamberlain 1975:146). Only two tones can be reconstructed for Tibeto-Burman (A, B) and their lexical ratio is approximately 1:1 (Benedict 1980:1). Tibetan itself appears to have acquired tone only very late and apparently independently; Mazaudon (1980) questioned Benedict's A/B reconstructions on the basis of a correlation of no greater than 50 percent of A to A, B to B, in some Tibeto-Burman languages. Bradley (1980) suggested that Burmese has reinterpreted its tonal system as a register system due to the strong Austroasiatic substratum in that language.

Tai shows four real tones, A/B/C/D; D is not just another tone with stops because it has broken into two sets, D short and D long that have unique tonal histories in the various Tai languages; the modern languages show tonal contrasts on stopped syllables (Brown 1976). (M. Hashimoto claimed Cantonese tones 7 and 8 show a similar long/short distinction [1979:280]). No Tai language did not develop tone, and no Tai language has completely lost tone due to language contact. Tai shows a history of very complex interactions between types of a syllable's initial consonants and tones, but the voiced/voiceless contrast is still the most common correlate of tonogenesis. (Lolo-Burmese shows some similarities here, but in a less uniform way.) There is no known reason for the four basic tones to have split in different ways in different dialects (Chamberlain 1975).

Tai, Chinese, and Miao-Yao show similar lexical ratios of tone A to tones B and C: 2:1:1 (Benedict 1975; 1980). The difference between the Chinese A:B ratio and the Tibeto-Burman one Benedict accounts for as being due to an s-prefix which shifted B to A in Chinese, wreaking havoc in the correspondences. Benedict took the Tai/MY/Chinese data to indicate that "any rules for tone assignment will have to be fitted into an overall configuration" (Benedict 1980). Vietnamese, with a 4:1 B/C ratio, though generally similar in its tonal system, must have somewhat different rules. Benedict (personal communication) held that Tai tones agree with Chinese better than Chinese with Tibeto-Burman, but still, Chinese and Tibeto-Burman show "excellent agreement in tones."

Though Chinese is said to have four tones, D, the stopped tone, is less real as a tone than in Tai. In much of North China, D merges with (an) other tone(s); it never shows a distinct tonal configuration with no final stop there. It is often phonemicized as another

tone stopped. The Chinese languages show a marked continuum of more tones to fewer from south to north (M. Hashimoto 1976). South China shows a much richer system of morphophonological tone alternations than North China (where tonal alterations are often blatantly phonetic), or than Southeast Asia, where tonal alternations are usually just morphological or syntactic (Henderson 1967). Northern Mandarin now shows a phonologically significant element of stress; this form of Chinese appears to be reducing the distinctiveness of tone through the creation of bisyllabic forms and the acquisition of stress.

HYPOTHESES CONCERNING THE ORIGIN OF TONE

What scenario can best account for this array of typological diversity within apparent similarity in overall patterning? Several hypotheses as to the origin of tones in these languages have been debated of late. Close examination of proposals that tones originated from segments (final -*s*, -*h*, or -*ʔ*; voicing in initial consonants) show them to be logically flawed and/or supported by a very weak evidential base. I have debated these suggestions extensively elsewhere (Ballard 1984*a*); Plazcek (n.d.) and Gage (1980) have also entered the fray.

I consider that these dogmata have arisen out of a strong Western bias toward segmental phonology, probably due to the organization of our writing system. Tone is a complex, nonsegmental phenomenon by its nature, and there is no real necessity to try to find a segmental origin for it. Tone is a matter of distinctions inhering in some languages in the production of the carrier wave; it is a fact of manipulation of the glottis, of phonation type. My prejudice is to seek a cause and a history that lie in the same domain.

Benedict maintained that Tai borrowed tones from Chinese, giving as one reason for this belief the general correlation of the two systems (and that of Miao-Yao) (Benedict 1975:191; personal communication). Benedict's hypothesis is based, in part, on his assumptions about the origin of Chinese, Kadai, and Miao-Yao. He constructed Sino-Tibetan and early Chinese with two tones; the third tone, C (departing), was "of sandhi origin in the Chinese prototype" (1975:193). Kadai and Miao-Yao, on the other hand, are branches of Austro-Tai in his reconstruction and started out toneless. The general correlation of all three tone systems points to a common origin (Chinese) but the problems with Kadai and Miao-Yao tonal correspondences suggest that they borrowed tones from Chinese independently (Benedict 1975:199).

There are problems with this hypothesis. On the Chinese side, first, others have criticized Benedict's reconstruction of two tones for Sino-Tibetan (Mazaudon 1980). Tibeto-Burman generally points toward two tones, but the correspondences are weaker in tones than in segments; perhaps both share some pretonal features, but not necessarily lexically distinctive tones per se. Moreover, mainstream (i.e., northern) Chinese is fairly reductionist when it comes to tones and lacks extensive phonological tone sandhi so that tonal creation seems out of character. (Southern Chinese is a different matter.) Finally tone D does not appear ever to have been a real tone in northern Chinese. On the Kadai/Miao-Yao side there are also difficulties. First, correspondences are a serious problem (Benedict 1975:191; Solnit 1982). Second, tone plays a very different role in Tai: it is less connected to stress, bifurcates readily in consonance with syllable initial manners, and D acts like a real tone. On the other hand Tai, too, shows little evidence of tone sandhi. I feel that this direction of tone borrowing is a creation of the typical Han historical prejudice against the

non-Han ethnic groups to their south. In addition, to be accepted, this hypothesis must show, as Benedict knows, that the assignment of lexical items to the allegedly borrowed four tones must follow a common pattern, one common to their inheritance and to the Chinese pattern.

Benedict has been unable to find a segmental basis for tonal assignment in Kadai or Miao-Yao (1975:191–192). I attempted a systematic examination of some of Benedict's proposed cognates. I first examined them for every citation of a Tai form for which I had data on several languages from Gedney (personal communication) and then compared these forms with the Proto-Indonesian (PIN; from Dempwolff) listed by Benedict. I found that assignment to tones A, B, or C in Tai cannot be predicted from PIN segments or from the process(es) leading to the monosyllabic Tai form. If the PIN form ends in a voiceless stop, assignment to Tai D is assured, but vowel length here and generally is not predictable. Note that this is different from saying that the basis for assigning words to Tai tones A, B, or C is simply unknown.

It appears that initial segments and final segments have not been shown to be the causes of the shared tonal phenomenon. Neither can the monosyllabification process and borrowing from Chinese solve the assignment problem. Chinese as the source seems to fight with the history of the relationship between Chinese and its southern neighbors and with its own typology. Perhaps an answer lies in the milieu in which tones, as we know them, developed—the sociolinguistic matrix of tonality.

In Austronesian, accent can be on the penult or final, it can be marked by amplitude or pitch, and the pitch mark can be higher or lower than normal (Blood 1977; Topping 1973:41–47; He and Kang 1981). Shorto (1976:97) and Benedict (1975:153, 201) both invoked variable (distinctive) accent placement in Austronesian. Lee hypothesized that a prefinal (penultimate) stress in pre-Chamic with a shift to final stress best explains the system of reduction to monosyllables in Chamic (n.d.:3). I think the evidence indicates that any Proto-Austronesian accent system involved pitch as well. Benedict (1975:200) also pointed out that accent problems in his comparisons often involve particular form classes such as numerals, vocatives, and diminutives; compare the discussion of special tone sandhi for such groups all over South China/Southeast Asia below.

Hiranburana (1972) reported that accent in Thai depends on syntax; accent in polysyllabic words in Thai most often is due to Indic or Mon-Khmer borrowing. Filbeck (1972) and Manley (1972:22) reported that T'in and Sre, Austroasiatic languages, have some pitch correlates of accent and syllable type.

Voiced, breathy murmur is considered to be characteristic of one of the (usually) two registers in Austroasiatic languages (Egerod 1976:59; Benedict 1975:468, 487). Murmur and register presumably led to Vietnamese tones (Haudricourt 1972; Gage 1980). Benedict (1975:468) said -h is uncommon in his Austro-Tai, and said Sino-Tibetan caused Kadai and Miao-Yao to lose it. Egerod (1976:59) said -h is characteristic of Austro-Tai, but that Tai and Miao-Yao are like Sino-Tibetan. Catford (1964:34), Fuller (1977:85), Fribek and Hor (1977:17, 131), and Lee (1977:89) cited various voiced aspiration/murmur phonation types in Austronesian languages.

Glottalization, in one form or another, appears all over the map. Preglottalized initial consonants are reported for Wu dialects (Sherard 1982; and others), and in Miao-Yao and Kamsui (Haudricourt 1972:67; and others), and, of course, are well known in Tai. Gedney generalized this as creakiness (laryngealization or glottalization) to almost all of central

and southwestern Tai (1978:3). It is important to note that he said this glottalization can be borrowed between dialects, usually in tone B, and, of course, a large number of Chinese dialects show a final -ʔ in words derived from the older stopped syllables.

The voiced/voiceless contrast in its relation to tonal developments has been discussed ad nauseam; less systematic has been the discussion of aspiration developments. Benedict posited secondary aspiration of initial consonants in Sino-Tibetan and Tai (1975:487). When formerly voiced consonants in Chinese dialects devoiced, they became aspirated or not, depending on tone and dialect. Tai apparently had far stronger initial consonant distinctions in manner that were quite significant in tonal developments (Gedney 1978; Chamberlain 1975), and still appear in extant Tai languages.

Assorted phenomena point toward salience or prominence to the right or left in speech chain, but this does not appear to be the same thing as stress (Ballard 1984*b*). To explain developments in Tai, Brown suggested that "it will be assumed that syllable center focus on the point where the vowel begins led to V-L" (1975:43). (V-H developments are those where tones after voiced initials are high; V-L, low.) Further, he tied this to differences in treatment of initial consonants: "If V-L languages had an earlier [in the syllable] point of focus than V-H languages, we would expect them to better preserve initial consonant distinctions than V-H languages, but not finals" (Brown 1975:45). (And vice versa?) Henderson asserted that control of the breath is important in pronouncing final stops in Thai; considerable breath force must be maintained fully up to the oral closure (1964:420). (Focus right?) Lee, in discussing Haroi, said that the modern register is dependent on features in the earlier bisyllabic forms and on the nature of the medial consonant: if it was an obstruent, register features spread left; if it was not an obstruent, they spread right (1977:97). Hu (1982) divided the Tibetan languages he examined into three groups: A, B, C. (A includes Lhasa.) In A and B, the voicing distinction is lost (inventory to the left reduced), and the high and low tones become distinctive. In C, on the other hand, voicing is kept and finals are drastically reduced, but there is no tone (Hu 1982:29). In group B, finals are somewhat reduced and the high and low tones split into two each based on voicing in the finals (p. 36). Hu declared firmly that on sociolinguistic grounds this could not have been due to greater versus lesser Chinese influence (p. 29). Hu's left (C), right (A,B) dichotomy parallels developments in southern Chinese languages. Min, Cantonese, Yao, and Tai (widely) lose the voicing distinction and clearly split the earlier four tones into eight; they keep more final distinctions (stops and nasals). Miao and Wu, on the other hand, preserve more initial distinctions, and in many Wu dialects, at least, tones can be analyzed as consisting of four with two allotones each. Wu and Miao also tend to show more tone sandhi, but the right/left dichotomy is again echoed in Wu where Shanghai spreads the first syllable tone to the right, but Wenzhou tends to preserve more tone distinctions to the right and reduce them leftward (Ballard 1980*b*). Benedict (1975:151–152) found a parallel dichotomy between Kadai and Miao-Yao. The former tends to preserve the final syllable of bisyllabic forms, the latter, the penult. He attributed this to end-stress versus fore-stress (p. 195), but this applied regardless of the PPh (= proto-Philippine?) stress (p. 201); I question whether this left/right preference is a matter of stress at all, since there are strong parallels among Chinese dialects where stress is presumably irrelevant. Brown (1976) suggested V-H affected Tai languages before V-L; this implies some Tai changed from right to left. If Miao-Yao were left, Yao must have changed to right later in its history. Thus, not only must right and left be distinguished, but a language must also be allowed to switch during its history.

Since Cham is both indubitably Austronesian and indubitably subject to monosyllabification (Benedict 1975:150), but also not tonal, the process of monosyllabification cannot lead to tones automatically. More precisely, Rade, a Chamic language in an Austroasiatic context, does not acquire tone; Huihui on Hainan, a Chamic language in Sino-Tibetan (tonal) context, does (Haudricourt, personal communication; Benedict 1983*b*). Austroasiatic may also have had mostly bisyllabic roots (Benedict 1975:488) and has also undergone much monosyllabification without acquiring tone (except Vietnamese, of course).

Benedict reconstructed two tones with bona fide pitch (and contour?) differences for Sino-Tibetan, and believes they are maintained in early Chinese (1980). As noted above, pitch is also involved in the Austronesian accent system. Brown (1976:39) and Strecker (1979) argued that pitch is a variable in early Tai developments. Four Austronesian languages out of thirty in New Caledonia also developed tones independently (Rivierre 1972). Cham shows devoicing and some pitch lowering (Blood 1962). A couple of Austroasiatic descriptions have mentioned pitch: Sre (Manley 1972: 14–15) and Chrau (Thomas 1971:56–59). In the latter, pitch goes with word class. Benedict (1975:488) claimed tone for some other Austroasiatic languages.

<center>TONE SANDHI</center>

I have documented at length the tone sandhi in Wu. It is varied, extensive, and complex, and is governed by semantics, syntax, and phonology (Ballard 1980*b*). A student of mine completed a similar study for Min (Liang Chang 1982) and I have compared the two sets of data (Ballard 1984). In neither area, of course, is the sandhi at all like the rather limited, mostly phonetic sandhi of Mandarin.

Kam (1980) reported that Taishanese, Bobai, and Siamese all show semantic derivation by tone in similar categories: reduplication, part of speech shifts, diminutives, endearments, and surnames. He called this a "pan-regional" system, but many of these same elements appear in Wu and Min. Henderson (1965; 1967) has described Southeast Asian tone sandhi at length; Henderson (1964:421) noted that the tones on particles are not the same as any of the regular five tones in Thai. Okell (1979) discussed a complex tone alternation in Maru verbs. (Low becomes mid, while mid becomes high.)

Benedict suggested that Chinese tone C was of sandhi origin (1975:193) and Wu sandhi supports this to some extent (Ballard 1980*b*:138–140). But in Wu C would appear to be the unmarked tone in tone sandhi, the neuter toward which more marked tones collapse when out of focus. This is rather different from Tai, where it is tone A that is unmarked, is the recipient of most loans, and dominates the Austro-Tai etyma (Gedney 1976:76). Benedict said it is possible "sandhi rules were operative also at an early period in KD and/or MY but it seems more likely that the three-tone system was taken over in both stocks, independently and at the same period, without reference to sandhi" (1975:193). He noted that certain deictics "constitute a form class in Thai, comparable with that found with stress in Tagalic" (1975:198), and deictics show special sandhi in a number of southern Chinese dialects. Those who would argue that categorical, syntactic/semantic tone sandhi was not widespread in ancient South China are burdened by the obligation to posit an origin for the extensive nonphonetic sandhi now found in South China and Southeast Asia.

The tone systems of these languages also show affinities. The systems can all be subsumed in the following descriptive schema. There are four basic tones historically: I, II,

III, and IV—the last of which contained all and only words ending in oral stops. All four developed two allotones each—one for syllables with plain voiced initial consonants (b), and one for the rest (a). Most of these languages or dialects still show eight tones, but some, Chu in particular, show some mergers. In some dialects (Li et al. 1972:86–87; Kun Chang 1972:8–9, 27) the tones of syllables with voiceless initials have undergone tonal splits (and mergers) according to aspiration in the (voiceless) initial consonant. Three Wu dialects in Jiangsu (Xie 1958) show similar splits and mergers. In both language groups, in the case of a split tone, the unaspirated tone is higher than the aspirated, and the patterns of tones that are split (and of consequent mergers) are parallel in the two groups. In addition, some Miao-Yao dialects, like some southern Wu dialects, keep a separate tone for former stopped syllables (D = IV) despite the loss of a final stop (Kun Chang 1972:30).

The most striking evidence of Miao/Wu affinities concerns the extensive, grammatically conditioned tonal alternations (tone sandhi, TS) they both show. Most Wu TS shows shifts to III and/or shifts to mid-level. Min and Miao show similar shifts. Wu TS varies, in general, from more extensive preservation of *first* syllable contrasts with changes in the following syllable(s) in the north, to more extensive preservation of right-most syllables and loss of contrast leftward to the south. Some of the Min data show the greatest change to the left, others to the right. Miao appears to favor change in following syllables.

The contrast with Mandarin is strong. As usually described, Manadrin sandhi is far less extensive, much simpler in terms of rules, and more obvious phonetically. Mandarin, of course, also tends to preserve far fewer tones and lacks any systematic reflex of the voiced/voiceless (*a/b*, yin/yang) relationships between tones. Wu and Miao, at least, usually keep their registers straight in TS, so that *a* tones tend to exchange with *a* tones, *b* with *b*. Wu TS, like Miao and Min TS, is clearly grammatical: Grammar determines the boundaries and types of tone sandhi groups; TS in most Wu dialects may or may not apply with a difference in meaning.

THE MIXTURE OF PHONATION FEATURES IN SOUTH CHINA

What kind of hypothesis would explain the extensive tone sandhi of Wu—sandhi that does not show up in Mandarin and is not traceable to the Qieyun koine? It is much easier to hypothesize a Miao type of language maintaining its tone sandhi morphology in the face of extensive sinicization than to suppose Wu either borrowed or created its own tone sandhi within the last millennium or so (since Ancient Chinese times). This tone sandhi evidence, coupled with the archaeological/historical data, the sociolinguistics of South China, the dialectological history of Wu, Chu, Min, and Cantonese, and the typological and segmental affinities, provides fairly strong confirmation of the following hypothesis about the linguistic history of South China: Cantonese (Yueh) shows the clear influence of Tai-like languages; some Min areas show similar influences. Min shows strong affinities with Yao, and Wu/Chu even more so with Miao. We can suggest, then, that the original populations in these areas before sinicization were related to these ethnic groups. The complexities in Wu and Min dialect subgrouping indicate that the substratal influences and sinicization may have fluctuated somewhat up and down the coastal region at least through the Tang koine period.

Thus, I would divide South China into several linguistic types: Tai/Yueh, Min/Yao, Wu/Chu/Miao; this division somewhat contradicts Mantaro Hashimoto's (1976; 1980*a*) hypothesis of an even continuum, south to north, of more Tai-like to more Altaic-like

developments in Chinese dialects. Hashimoto (1979) did support a Miao-Yao substratum for Wu on the basis of similar tendencies toward monophthongization and parallels in the demonstratives. He suggested a closer link between Yao and Northern Wu, and between Miao and Zhejiang dialects (1979:199–200). I find the latter quite likely, but the Yao affinity is otherwise supported only by Lemoine's legend and seems odd geographically. Northern Wu must remain a problematic area for the time being.

Benedict saw a major (geographic) cleavage between Sino-Tibetan and the Austronesian descendants heavily influenced by it (Miao-Yao and Kadai) and Austroasiatic (Benedict 1975:488). Austroasiatic has -h and register; the other group has no -h and tone, which originated in Sino-Tibetan and was passed to Tai and Miao-Yao via Chinese, which had added a third tone to the basic Sino-Tibetan two via tone sandhi. On the basis of the facts discussed earlier in this paper, I feel Benedict's hypothesis is a bit too oversimplified.

In the first place, Benedict's view of Chinese is largely oriented toward archaic Chinese, a language more in line with Tibeto-Burman, but also a language not obviously a direct parent of modern Chinese, and one not clearly demonstrable to have had more than two tones, and those maybe not distinguished primarily by pitch and contour.

The sociolinguistic history belies a steady ST → A influence. For much of the early period, non-Chinese languages must have dominated South China. In addition, even the kind of Chinese spoken there must have been heavily infiltrated with non-Chinese elements, which subsequently were fed back into the mainstream of northern Chinese development. Borrowing lexical items back in a changed form has occurred among all these groups. This makes it very difficult to ascertain original, pure vocabulary. To date, it has been very difficult to draw up any large body of clear cognates between Chinese and Tibeto-Burman. There are, likewise, strong differences of opinion about the "true" genetic relationships among and within the Chinese, Tibeto-Burman, Miao-Yao, Tai, Austronesian, and Austroasiatic families. It is probably not possible to understand these varied phenomena without bearing in mind Egerod's dictum (1976) of different rules moving at different speeds over different areas at different times and in different directions.

One general unifying dichotomy that has been undervalued in earlier discussions is the Left/Right phenomenon. Under Left can be grouped Brown and Strecker's V-L (the voiced consonants + low pitch vowels), preservation of initial types, loss or reduction of finals, preservation of the penult. Under Right can be grouped V-H (the voiced consonants + high pitch vowels), initial contrasts reduced, finals preserved, final syllable preserved. Generally Wu, Miao, and some of the Tai and Tibetan languages are Left; Min, Cantonese, Yao, and other Tai and Tibetan languages are Right. Since this phenomenon is so pervasive and since it cuts across so many genetic lines, it must be explained. Benedict adduced stress to explain some of it, but I think stress is irrelevant to those aspects which affect only monosyllables, but which still seem appropriately grouped with the others.

Egerod and Hashimoto (1982) were concerned with a variety of phonological apparatuses that are all oriented toward marking and delineating syntagmatic units. Generally, much of Wu and Min tone sandhi should be taken in this way: Compounds tend to show the sandhi whereas syntactically related items (verb-object, for example) often show no sandhi or a different pattern. I suggest that this kind of sandhi may have had its ultimate origin in Austronesian accent patterns, which were pitch oriented, and was influenced in its development by the process of monosyllabification (Lee n.d.: 3–5). It is as if speakers reproduce an Austronesian pattern of pitch changes on bisyllabic roots with varying affixes, and, therefore, location of accent, over groups of morphemes in Wu and Min.

Glottalic features may also have affected tone assignment and certainly affected tone histories. Such features of register as murmur can be exchanged across genetic boundaries as shown by Burmese and Akha; Tai shows the spreading of creaky voice; and Vietnamese and other Austroasiatic languages show tone can be borrowed to replace glottal features. It is usually assumed that voicing led to murmur, but the features inhere in such different phonological subsystems that the direction of influence is not clear. Perhaps the two features are independent; if a voiced/voiceless distinction exists, borrowed murmur might become localized there. This may explain the retention of a third series in Wu, and the variation in the historical treatment of supposedly old voiced initials vis-à-vis aspiration. In a sense I am suggesting here that AT *-h* did not disappear in Kadai and Miao-Yao due to influence from Chinese; rather it was absorbed as a phonation feature by Chinese. If glottalization and murmur as phonation types collided in South China with a two-tone pitch system, then multipying of tones and Tai tone splitting both become likely.

In this view the principal northern Chinese contribution to the South China soup was two pitch tones. At various times southern influences fed back into North China from the south. It is my contention here that one of the principal southern components was the alleged 4/8 tone system of Ancient Chinese; another may have been murmur after voiced initials. I suspect that neither "took" very well in the north. Many places perhaps never acquired a C voiceless/voiced tonal distinction, or a C voiced/B voiced tonal distinction or both. Murmur may only have been incorporated as aspiration in some tones. Our uniformitarian view of northern Chinese having had four full tones with two allotones each is ultimately based on Qieyun, but that source was written by southerners at the height of a southern influx into North China, was intentionally pan-dialectal, and was intended to have the function of standardizing the national language in the political atmosphere of an era of emerging unification.

I hesitate to say categorically that the Chinese C tone originated in Chinese and that in the final analysis tones passed from Chinese to Kadai and Miao-Yao. The 4/8 tone system evidenced in Kadai, Miao-Yao, southern Chinese dialects, and perhaps northern Chinese, originated in South China in the steaming cauldron of a mixture of languages and influences. I would rather think of all of the 4/8 systems observed today as outliers of this soup, as all being derivative fossilizations of a grand linguistic mixture in South China.

CONCLUSION

We may speculate, then, that modern Chinese represents a convergence of various rather different language strains—Sino-Tibetan in the Shang/Chou area, the northern and western barbarians, Miao-Yao, Tai, and possibly others. Such convergences have occurred a number of times in English: the original blend of the Saxons, Angles, and Scandinavians (and Celts); the Middle English blend of Old English with Norman French; the blending of English with various Indian dialects to produce that modern variety of English; and the suggested ongoing blend of Black English and "Standard English" in the southeastern United States. Such a convergence makes extremely difficult the application of the classical comparative method, which depends crucially on the notion of a branching tree with diverging dialects.

Perhaps we should replace our image of an all pervasive, fecund, even orgiastic family tree for Chinese with one that allows for far more extensive cross-fertilization than we may find ideologically comfortable. Chinese might just turn out to have more Austronesian, Austroasiatic, or what-have-you bars on the escutcheon than Tibeto-Burman.

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BSOAS   *Bulletin of the School of Oriental and African Studies,* University of London
CAAAL   *Computational Analyses of Asian and African Languages,* Tokyo
CISHAAN   31ᵉ Congrès International des Sciences Humaines en Asie et en Afrique du Nord, Tokyo and
            Kyoto, August-September, 1983
CLAO   *Cahiers de Linguistique Asie Orientale,* Paris
ICSTLL   International Conference on Sino-Tibetan Languages and Linguistics
JAAS   *Journal of Asian and African Studies,* Tokyo
JCL   *Journal of Chinese Linguistics*
OLSP   Oceanic Linguistics Special Publications, University of Hawaii Press, Honolulu
YY   *Yuyan yanjiu*
ZGYW   Zhongguo Yuwen, Beijing

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