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A Case of Typological Change

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*Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics
Society* (1984), pp. 307-323

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FROM VERB-MEDIAL ANALYTIC LANGUAGE TO VERB-FINAL SYNTHETIC LANGUAGE:

A CASE OF TYPOLOGICAL CHANGE*

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0. Introduction

According to the traditional classification of languages into analytic and synthetic types, Chinese is always cited as an extremely analytic language. The language has no inflection. There are no morphological markers or processes denoting number, gender, person, tense, grammatical role or parts of speech. There is no concordance between parts of a constituent. Affixes are relatively scarce. Despite the great diversity and multitude of dialects in the Chinese language family, this isolating status is the hallmark of all Chinese languages.

The classification of Chinese within the word order typology of Greenberg (1966) is more problematic than its classification as an analytic language. Traditionally, Chinese is considered a verb-medial language because the verb occurs in sentence-medial position in most sentence types. However, standard Mandarin Chinese has some important verb-final constructions involving co-verbs, especially b_á.¹ Partly because of the b_á-construction and partly because of the noun phrase structure of standard Mandarin, Tai (1973) has suggested that, synchronically, Mandarin Chinese may be considered a verb-final language. Furthermore, Li and Thompson (1976) have pointed out that for centuries Mandarin Chinese has been shifting towards a verb-final word order, although the fact remains that the verb-medial word order is not only predominant in simple sentences but is also nearly the exclusive word order in serial verb constructions in standard Mandarin Chinese.² Among the southern dialect families, Wu, Min, Yue and Hakka, the verb-medial status has never been questioned because the co-verb sentences are either absent or insignificant.

In this paper, I will present a sketch of a Chinese dialect from western China which is considerably removed from the typological norm of the Chinese language family. The dialect is spoken by the Hui people of Línxià in southern Gānsū province.³ I will

* I wish to thank S. A. Thompson for her critical comments on the first draft of this paper. Field research for this article was supported by a grant from the CSCPRC, National Academy of Sciences, and grant #BNS 79-20944 from the National Science Foundation. Preparation of this article was supported by grant #BNS 83-08220 from the National Science Foundation.

first outline the salient characteristics of the phonology of this dialect. Then, its case system, word order and postpositions will be discussed. Finally, I will examine Hui's typological transition from the Chinese norm, in view of linguistic as well as social and historical information.

I. The phonologic features of Hui

I.1 The initials and finals⁴

The initials and finals of Hui are, for the most part, typical of a northern Mandarin dialect. The initials include the usual series of three stops at the bilabial, alveolar and velar positions, as well as the series of three fricatives and affricates at the alveolar, palatal and retroflex positions. Aspiration is phonemic for both the stops and the affricates. Voicing is phonemic only for the labio-dental fricative and the retroflex fricatives. Table 1 provides the initials of Hui.

p	t			k
p ^h	t ^h			k ^h
f, v	s	ʃ	ʃ, ʒ	x
	ts	tʃ	tʃ	
	ts ^h	tʃ ^h	tʃ ^h	
m	n			
∅	l			

Table 1: Hui initials

The voiced pharyngeal fricative [ʕ] occurs non-contrastively in Hui as an initial co-occurring with the high, back, unrounded vowel [u] as in [ʕw] 'two'. The occurrence of [ʕ] in a Chinese dialect is unusual. Its presence in Hui, however, can be viewed as an areal feature since it occurs in all of the languages, Chinese as well as non-Chinese, of the geographical area surrounding Línxiá. Its presence in Hui is predicted by rule (1):

$$(1) \emptyset \rightarrow [ʕ] / \text{___} [w]$$

Like most Chinese dialects, Hui has few phonological rules affecting its initials. One notable rule predicts the occurrence of labio-dental affricates which are the allophones of aspirated and unaspirated bilabial stops:

$$(2) \left[\begin{array}{l} /p/ \\ /p^h/ \end{array} \right] \rightarrow \left[\begin{array}{l} [pf] \\ [pf^h] \end{array} \right] / \text{___} [\emptyset]$$

Some examples are:

/pəkə/	[pfəkə]	'pigeon'
/pəli/	[pfəliʒ]	'glass'
/p ^h əp ^h ə/	[pf ^h əp ^h ə]	'husband's mother'
/p ^h əŋ p ^h əŋ/	[pf ^h əŋ p ^h əŋ]	'a shed'

Both [pf] and [pf^h] are aspirated. Their difference rests with the degree of aspiration. [pf^h] was consistently articulated by my Hui consultant with heavier aspiration. As unusual as this phonetic contrast between [pf] and [pf^h] is, it is also found in the Chinese dialect of Xi-an.⁵ However, in Xi-an, these affricates correspond to standard Mandarin retroflex affricates in the context of the high, back, rounded vowel /u/, whereas in Hui, the labio-dental affricates correspond to standard Mandarin's bilabial stops in the context of the mid-central vowel /ə/. Furthermore, the labio-dental affricates are phonologically contrastive with other initials in Xi-an but not in Hui.

The finals of Hui, in general, exhibit the standard features of the northern Mandarin dialect group. For instance, the only syllable-final consonants of Hui are the alveolar and velar nasals [ŋ] and [ŋ]; neither the unreleased stops [p], [t], [k] nor the bilabial nasal [m] of the finals of Ancient Chinese are present. In the speech of my Hui consultant, the syllable final nasals [ŋ] and [ŋ] are often but not consistently dropped, leaving the vowel nuclei of the syllable heavily nasalized. For example, [fãŋ] 'noodle soup' alternates with [fã̃], and [sũãŋ] 'garlic' alternates with [sũã̃]. It appears that the syllable-final nasals in Hui are following the universal diachronic pathway of being dropped. Since their loss is still in progress, as evidenced by the free variation in my consultant's speech between retaining and dropping them, they are included in the list of finals below.

1, ʷ	ɛ	u	o	ɔ	ə	a	aɪ	a	an	aŋ	ei	ən	əŋ
i	iɛ	iu	io	io				ia	ian	iaŋ		in	iŋ
y	yɛ								yan			yn	
u		uo			uə	uai	ua	uan	uaŋ	ui	uən	uŋ	

Table 2: Hui finals

Although the Hui finals have the general characteristics of the northern Mandarin Chinese dialect group, there are several uncommon phonetic realizations of the Hui vowels. First, the high, back, rounded vowel /u/ is articulated with spirantization at the labio-dental point if the vowel stands alone as a final. The symbol with which I choose to represent the labio-dental vowel is [ʷu]. The relevant rule and examples follow:

$$(3) /u/ \rightarrow [{}^V u] / \left\{ \begin{array}{l} C \\ \emptyset \end{array} \right\} _ \#$$

e.g. [ʷu] 'fog' [tʃʷu] 'pig'

(6) /ə/ → [o] /u _____

I.2. The tones

Hui has only three tones in isolation:

- (i) A rising tone which may be represented by 24 on the tone scale. This tone generally corresponds to the Yin Ping and Yang Ping tones of standard Mandarin.
- (ii) A high level tone, 44, which generally corresponds to the Shang tone of standard Mandarin.
- (iii) A high falling tone, 42, which generally corresponds to the Qu tone of standard Mandarin.

The following examples are illustrations:⁶

/fəŋ/	24	'wind'	/y/	44	'rain'
/biŋ/	24	'ice'	/ha/	44	'sea'
/gəŋ/	24	'steel'	/ma/	44	'horse'
/u/	42	'fog'	/fan/	42	'noodle soup'
/tʂɛ/	24	'eggplant'	/tə/	24	'head'

In terms of number of tones, three is the lowest among Chinese dialects with tone. But the most interesting phenomenon of the tone system of Hui is that all three tones change to a low level tone, 22, when the syllable is "de-stressed". The best way to clarify the phonetic nature of "de-stressed" is to compare it with a Mandarin example. In Mandarin, the third tone on a syllable such as /mǎ/ 'horse', is realized as the 213 tone only when it is stressed. When it is "de-stressed", it is realized as a 21 tone. Thus, the tone of a de-stressed syllable in Hui is not equivalent to the neutral tone in Mandarin. The 22 tone of a de-stressed syllable in Hui is a full tone without any devoicing of the segments of the syllable or any weakening of the syllabic structure. The majority of compounds in Hui involve a de-stressed syllable. Here are some examples.

/sun-dzɿ/	22-44	'grandson'
/hə-dzɿ/	22-44	'box'
/tʂuən-tʂan/	24-22	'spring season'
/mi-rən/	24-22	'match-maker'
/tʂɛ-tʂa/	22-44	'iron fork'
/da-i/	44-22	'overcoat'
/fu-luŋ/	44-22	'rich peasant'
/dzɿ-dzu/	44-22	'landlord'

Sentences (7) and (8) are examples illustrating de-stressed tones in sentences:

- (7) 24 22 22 22 42
 dzɑŋsan ɕioli - ε nai
 Dʒɑŋsan ɕioli - accusative love
 'Dʒɑŋsan loves ɕioli.'
- (8) 24 22 44 24 44 22 22 22
 dzɑŋsan meiguə tɕi bu ha liɔ
 Dʒɑŋsan America go not can sentence
 particle
 'Dʒɑŋsan cannot go to America.'

Finally, the 42 tone of Hui syllables in isolation is merged with the 44 tone if it is followed by another syllable. The 42 tone may occur only in the final position of an utterance. In the following examples, the syllable which has the 42 tone in isolation, but is realized as the 44 tone either obligatorily or optionally, is underlined:

/tɕi-tɕə/	44 - 22	'automobile'
/ɕin-fəŋ/	44 - 24	'envelope'
/pu-dzɿ/	44 - 22	'shop'
/tɕan-dəŋ/	44 - 24	'electric light'
/gua-fu/	44 - {44 22}	'widow'
/ma-dɛ/	22 - {44 22}	'a sack made of hemp fibre'
/lɔ-su/	44 - {44 42}	'an old tree'
/yɛ-liaŋ/	22 - {44 42}	'moon'

In this section on the phonological features of Hui, I have briefly described the segmental phonology and the tones of Hui. The segmental phonology of Hui contains several unusual phonetic segments which are rarely found in Chinese dialects. The tone system appears simpler than that of any other Chinese dialect except Wutun.⁷ The overall picture of the phonology of Hui is that while it bears the unmistakable mark of a northern Mandarin Chinese dialect, it also contains features which set it apart from other members of the northern Mandarin dialect group.

II. The case system, word order and postpositions of Hui

II.1 The case system

Hui has a suffixal case system signalling various grammatical roles of nominal complements in sentences. Each of the case suffixes will be discussed below.

a.) The nominative case is unmarked. Sentence (9) is an example of a simple sentence showing the nominative case being unmarked.

- (29) ta meiguə rən bu ʃɿ dʒi - ɛ nǚ dʒɿdɔ
 s/he American person not be nominalizer - accusative I know
 'I know that s/he is not an American.'

The subject noun /nǚ/ 'I' may occur before the object complement clause in both (28) and (29). However, when the object complement clause is long as in (29), it is preferable not to place the subject noun of the sentence before the clause.

- (iv) Equational sentences are verb-final. This word order, however, is being replaced by the verb-medial construction in the speech of the young people because of the influence of standard Mandarin. The copular verb in the verb-final equational sentence is /dʒw-ʃɿ/. It becomes /ʃɿ/, which is a cognate of the copular verb in standard Mandarin, only in negative equational sentences. e.g.,

- (30) ta dʒɔŋɡuə rən dʒw-ʃɿ
 s/he Chinese person be
 'S/he is a Chinese.'
- (31) ta dʒɔŋɡuə rən bu ʃɿ
 s/he Chinese person not be
 'S/he is not a Chinese.'

II.3. Postpositions/Suffixes

Where standard Mandarin uses the co-verb construction involving a co-verb/preposition phrase, Hui typically employs a postposition or suffix on the noun phrase. In the following examples, each Hui sentence is presented along with its standard Mandarin counterpart in order to contrast the use of suffixes in Hui with the use of co-verbs in Mandarin.

- (32) (a) cóng zhè biān zǒu (Mandarin)
 from this side go
 'Go from this side!'
- (b) dʒɿ mian - da dʒɿ (Hui)
 this side - from go
 'Go from this side!'
- (33) (a) wǒ jiā lǐ lánzhōu hěn yuǎn (Mandarin)
 I home leave Lanzhou very far
 'My home is far from Lanzhou.'
- (b) nǚ - dʒi dʒiɑ landʒɿ - la li - dʒi (Hui)
 I - genitive home Lanzhou - away leave - nominalizer

'My home is far from Lanzhou.'

jyan
 far

- (34) (a) wǒ duì zhè - ge wèntí méiyǒu yìjiàn
I to this - classifier problem have: not opinion
'I have no opinion on this problem.' (Mandarin)
- (b) nē dzɿ - gə vɛntɕi - ɛ idʒən mi
I this - classifier problem - dative opinion have: not
'I have no opinion on this problem.' (Hui)
- (35) (a) wǒ bèi lǎozhāng dǎ - lə yíduàn (Mandarin)
I passive old Zhang hit - perfective once: over
'I was beaten up by Old Zhang.'
- (b) lɔdzəŋ nɑ da - dʒi - liɔ iduŋ (Hui)
old Zhang me hit - reach - perfective once: over
'I was beaten up by Old Zhang.'
- (36) (a) wǒ gěi nǐ dào chá (Mandarin)
I for you pour tea
'I pour tea for you.'
- (b) nē nia tʂa: dɔ - dʒi (Hui)
I you (benefactive) tea - accusative pour - reach
'I pour tea for you.'
- (37) (a) wǒ gēn tāmen wán (Mandarin)
I with they play
'I play with them.'
- (b) nē tāmen - la van li (Hui)
I they - comitative play attitudinal
particle
'I play with them.'
- (38) (a) tā bǎ pingguo chī - diao - le (Mandarin)
s/he apple eat - complete - perfective
'She ate the apple.'
- (b) pingguo: ta tʂɿ - ʂəŋ - liɔ (Hui)
apple - accusative s/he eat - up - perfective
'S/he ate the apple.'

The Hui sentence (35) (b) is not a passive construction as (35) (a) is in standard Mandarin, because in (35) (b), the agent, /lɔdzəŋ/ 'Old Zhang', remains the subject, and the patient, /nɑ/ 'me', is in the accusative form. But the verb suffix /dʒi/ 'reach' in (35) (b) highlights the fact that the action denoted by the verb impinges on the patient. It is the presence of this verb suffix that imparts onto (35) (b) a passive feature. Sentence (39) below is identical with (35) (b) except the verb suffix /dʒi/ is removed.

- (39) lɔdzəŋ nɑ da - liɔ iduŋ
Old Zhang me hit - perfective once: over
'Old Zhang beat me up.'

(39) and (35) (b) have different pragmatic functions. (39) describes the event from the point of view of the agent, 'Old Zhang'. (35) (b) takes the perspective of the patient, 'me', as the recipient of the action.

Sentence (38) (a) is an example of the widely discussed $b\check{a}$ -construction of Mandarin Chinese. In a $b\check{a}$ -construction, the patient noun is marked by the co-verb/preposition, /b \check{a} /, and placed before the verb. Hui does not have a $b\check{a}$ -construction. The patient noun of a transitive verb in a pre-verbal position is simply marked with the accusative case suffix, as shown in (38) (b).

The foregoing discussions on the constituent ordering and the case system of Hui make it clear that the language is considerably removed from the well-accepted typological classification of Chinese. I have shown that the predominant word order in Hui is verb-final, and a synthetic grammatical structure functions as an important component of the grammar of the language.

In recent years, several articles have appeared in China reporting on the verb-final word order and the presence of an object marker in the Chinese dialect of Qinghai province.⁹ During my fieldwork in western China, I also collected in-depth data on Wutun, a Chinese language in southeastern Qinghai, which, under the influence of Tibetan and Altaic languages, has lost its tones and acquired a rich agglutinative morphology as well as strict verb-final word order. Thus, Hui is not the only language among western Chinese dialects which has deviated from the typological norm of Chinese. In the case of Wutun, however, the data clearly show that its change from the typological norm of Chinese is due to the influence of the surrounding non-Chinese languages. It has a large number of Tibetan loan words and borrowed grammatical forms. In the case of Hui, it is not at all clear that its synthetic, verb-final features are borrowed from neighboring languages. I will discuss this issue in the next section.

III. Borrowing or substratum interference

It is well known that most of the languages spoken in western China belong to the Mongolian family, the Turkic family and the Tibetan family, and until the last two or three decades, Chinese speakers constituted a minority of the population in western China. Even in today's western China, the Chinese population tends to be concentrated in a few urban centers, outside of which the non-Chinese population and their languages remain dominant. Given this multi-lingual situation in western China, let us now consider the ethnic and linguistic make-up of the area surrounding Línxìà.

Within a radius of one hundred kilometers of Línxìà, a total of seven ethnic groups co-exist: Baonan, Monguor, Santa, Salar, Amdo Tibetan, Hui, and Wutun. Each ethnic group has its own language. Baonan, Monguor and Santa belong to the Mongolian

language family; Salar is Turkic; Amdo Tibetan is an atonal Tibetan language; Hui and Wutun belong to the Chinese language family. All seven languages are mutually unintelligible. Hence, multilingualism is common and language contact and linguistic interference are intense in this small area. Linguistic borrowing, in particular, is common in all directions. For example, Wutun has borrowed so extensively from Amdo Tibetan, both grammatically and lexically, that on first encounter, one hardly recognizes it as a Chinese language, whereas Baonan, a Mongolian language which was the main object of my fieldwork in 1982, has approximately 50% Chinese loan words in its lexicon¹⁰ and numerous syntactic structures heavily influenced by Chinese. Typologically, the languages of the Línxìà area fall into two groups. One, represented by Chinese, is analytic and verb-medial; the other, which includes the Mongolian languages, Salar (Turkic) and Amdo Tibetan, is synthetic and verb-final. Since Hui is unmistakably a Chinese language, are its synthetic and verb-final features the result of borrowing? Let us examine the available information on the history, the culture and the language of the Hui people as we seek an answer to this question.

The Hui people are Moslems. They have been considered an ethnic group in China,¹¹ distinct from the Han Chinese for centuries. At present, the Hui people live in various parts of China and each group speaks the local Chinese dialect of the place in which it lives. However, the majority of the Hui people are concentrated in southern Gānsū, where Línxìà is located, and in a neighboring province called the Níngxìà Hui Autonomous Region, a province set aside by the Chinese government for the Hui people in order to guarantee their cultural autonomy. Traditionally in Línxìà, the Hui people lived on the outskirts of the city, whereas the Han Chinese lived inside the city wall. Hostile clashes between the Han Chinese and the Hui were not uncommon until the establishment of the People's Republic of China. Today, the city wall of Línxìà no longer exists and Línxìà is the seat of the district government of the Línxìà Hui Autonomous District. However, one can still tell a Hui from a local Han Chinese in Línxìà by listening to his/her accent, their dialects being different in phonologic as well as grammatical features.

The ethnic identity of the Hui people of Línxìà remains strong. They believe they are the descendants of immigrants from Moslem countries to the west of China. Circumstantial evidence seems to suggest that the Hui people's belief in their central Asia origin might be correct. If so, it follows that the Hui people originally were speakers of a non-Chinese language (probably Altaic) and the non-Chinese features of the present day Hui of Línxìà would be the relics of their ancestors' native language which interfered with the immigrants' attempt to acquire the local Chinese dialect in western China.

The linguistic evidence also lends support to the above hypothesis. But before delving into the linguistic evidence, we must

first distinguish between the two types of contact-induced language change: borrowing and substratum interference. As noted by Thomason (1982), borrowing is the incorporation of foreign features into the native language of a community, whereas substratum interference is caused by the native language of a group of speakers in their acquisition of a target language with which they are in contact.

In borrowing, vocabulary from the source language is inevitably the first and the major item to be taken. For instance, in Wutun, a Chinese language which has borrowed extensively from Amdo Tibetan, we find a large number of Tibetan loan words, and in Baonan, as previously noted, we find that 50% of its vocabulary consists of Chinese loan words. Hence, if the non-Chinese features in Hui were borrowed from the Altaic and Tibetan languages with which it is in contact, we would expect to find a substantial quantity of Altaic and Tibetan loan words in Hui. The fact is that Hui has few loan words. The few it does have are religious terms of Persian origin, e.g., /axuŋ/ 'priest', /asmani/ 'heaven'. It is highly unlikely that the Hui people eschewed the vocabulary and concentrated on morphology and syntax in their attempt to borrow linguistic elements from languages with which they were in contact. While the borrowing hypothesis runs counter to the Hui data, substratum interference seems to fit the data perfectly. As an immigrant group attempts to acquire the language of their new homeland, the sounds and grammatical structures of their native tongue are most likely to interfere with their acquisition process. In other words, their pronunciation of the target language is likely to contain speech sounds and certain phonologic features from their original language and they may very well impose certain grammatical structures of their original language upon the target language they are acquiring. The restricted case of vowel harmony and certain phonetic segments of Hui are alien to both Chinese and the non-Chinese languages around Línxià. The possibility of substratum interference not only accounts for the presence of those phonetic segments and the limited case of vowel harmony, but also explains the typical Altaic features of synthetic grammatical structure and verb-final word order found in Hui even though it has practically no Altaic loan words. It is, therefore, very likely that the Hui people originally spoke an Altaic language before their immigration to western China. At this juncture, the substratum interference possibility remains a conjecture, even though it is a strong one favored by the linguistic facts and supported by circumstantial evidence. The information that could confirm this conjecture will have to come from a study of the history and ethnography of the Hui people, which presents a challenge to scholars interested in the language and the culture of the Hui.

Notes

1. Co-verbs form a syntactic category of morphemes which are historically derived from verbs. Some of them function as full-fledged prepositions; some still retain a certain number of the properties of verbs. For a full discussion of co-verbs, see Chapter 9 of Li and Thompson (1981). The bǎ-construction is a widely discussed verb-final construction in standard Mandarin. The construction typically involves a transitive verb with an object noun phrase introduced by the co-verb bǎ before the transitive verb. For more detail, see Chapter 15 of Li and Thompson (1981).
2. In zero-anaphora languages, of which Chinese is an example, sentences in discourse context rarely occur with their full nominal complements. Therefore, where data are drawn from discourse, the distinction between verb-medial and verb-final word orders will be difficult to uphold in zero-anaphora languages.
3. I will refer to this dialect as Hui in the remainder of the paper.
4. The tradition in the study of Chinese phonology calls for the analysis of each syllable in terms of its syllable-initial consonant and its final, that is, the remainder of the syllable.
5. See Hànyǔ fāngyán cǐhuì (A Comparative Lexicon of Chinese Dialects). Xi-an is approximately 600 kilometers east of Línxiá. Interestingly, none of the Mongolian, Turkic or Tibetan languages in contact with Hui in the Línxiá area have the labio-dental affricates.
6. In the phonemic transcription for Hui, the symbols /b/, /d/, /g/ represent the unaspirated voiceless stops [p], [t], [k], and the symbols /p/, /t/, /k/ represent the aspirated voiceless stops [p^h], [t^h], [k^h].
7. Wutun, an atonal Chinese dialect, is heavily Tibetanized. It is spoken in a few villages in southeastern Qinghai province, approximately 100 kilometers to the west of Línxiá. Features of Wutun which are alien to the Chinese language family are discussed in Li (forthcoming) and Chen (1982).
8. The so-called 'double-subject' construction refers to a traditional term in Chinese linguistics for a special type of topic-comment sentence. For more detail on the construction, see Chapter 4 of Li and Thompson (1981).
9. For instance, see Cheng (1980), Zhang (1981) and Chen (1982).
10. This percentage figure for Chinese loan words in the Baonan lexicon is based on approximately 3,000 morphemes I collected during my fieldwork. See Li (forthcoming) for more information on the sinicization of Baonan.
11. Not all Moslems in China are Hui. For instance, the Baonan people in the Línxiá area are Moslems belonging to the Baonan ethnic group.

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