## THE FUNCTION OF QUSHENG IN EARLY ZHOU CHINESE

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The Ancient Chinese (AnC) qusheng (or "falling tone, departing tone") has long been recognized as a derivational device in the Chinese language. For Archaic Chinese (ArC), later qusheng is symbolized in Li Fang-kuei's system of reconstruction (1971) by \*-h, but we follow Pulleyblank (1962:216-225) and others in writing final \*-s.

How qusheng is reconstructed in ArC is by and large immaterial to the inquiry into its meaning and function. Among the many scholars who have given attention to the morphological role of gusheng are Karlgren (1949:94-95), Wang Li (1958:213-217), and, in more detail, Downer (1959), Zhou Fagao (1963:5-96), and most recently Mei Tsu-lin (1980). Karlgren and Wang Li showed with a few examples from Classical Chinese (CC) texts that qusheng effects changes in word class, such as formation of verbs from nouns, verbs from adjectives, and the like. More systematic in their procedure were Downer and Zhou who established categories which cover all CC gusheng derivations. Here are Downer's categories, with Zhou's in parentheses:

- A. Basic form verbal derived form nominal (Zhou no. 2)
- B. Basic form nominal -- derived form verbal (Zhou no. 1)
- C. Derived form causative (Zhou no. 5)
- D. Derived form "effective"
- E. Derived form restricted meaning
- F. Derived form passive or neuter (Zhou no. 6)
- G. Derived form adverb (Zhou no. 8)
- H. Derived form used in compounds.

Basically, Zhou's categories are similar to Downer's, except that he distributes Downer's categories D, E and H differently, while adding these:

- No.3 Basic form adjective derived form verb (and vice versa)
- No.4 Basic form word of location -- derived form verb (and vice versa)
- No.7 Derived form completed action.

These neat categorizations cannot hide the fact that qusheng's role is so general as to lead Downer himself to conclude: this tone is "simply ... a system of derivation and nothing more. When new words were needed, they were created by pronouncing the basic word in [qusheng]" (1959:262). So far, then, these descriptions and conclusions have left room for the question if there might not lie beneath these functional categories one or a few more fundamental meanings whose discovery may not only simplify the description of the tone's functions, but also lead to a deeper understanding of Chinese morphology.

Perhaps in searching for a deeper core meaning of <u>qusheng</u>, Cikoski (1970:59-60) injected a new idea into the discussion when he indicated that this tone is involved in the direct/ergative morphology which he postulated for CC. Most recently, Mei Tsu-lin (1980) reduced the semantic categories of <u>qusheng</u> to three: (1) <u>Qusheng</u> marks an "introvert/extrovert" distinction; (2) it marks a switch from verb to noun. (3) A later development is the derivation of verbs from nouns. As can be seen, in addition to his catergorical simplification, Mei also recognizes that CC consists of historic layers.

The present paper's objective is to attempt once more to isolate the earliest meaning of <u>qusheng</u>. To accomplish this, we turn to the earliest texts in order to extract all non-<u>qusheng</u>/<u>qusheng</u> minimal pairs. Because most <u>qusheng</u> words share the same graph with their non-<u>qusheng</u> counterpart, we must rely on early commentaries which distinguish the various readings of a graph. Naturally, there are no such glosses on Western Zhou (1045-771 B.C.) bronze inscriptions and Shang oracle bone inscriptions so that we must be content with the earliest classics <u>Shujing</u> (<u>Shu</u>) and <u>Shijing</u> (<u>Shi</u>) whose language we call here Early Zhou Chinese (EZ). Lu Deming's <u>Jingdian</u> shiwen is a collection of reading glosses for the classics, including <u>Shu</u> and <u>Shi</u>, so that we will rely heavily on this work.

From Shu and Shi I have extracted over 90 EZ minimal pairs. Two kinds of minimal pairs are not included in our corpus: (1) sets whose members are written with the same graph, and whose non-qusheng/qusheng distinction is not commented on by Lu Deming and his sources. An example is cong 1/4 'to follow' which, according to philological tradition, should be read zong when meaning 'follower, retinue.' We have no choice but to interpret the silence of commentators to mean that this word was always read cong in Shu and Shi, even in the meaning 'follower.' This is interesting because a gusheng derivation meaning 'follower', rather than 'followed one, leader', goes counter to the conclusions of this investigation, a reading zong is thus irregular. (2) We disregard a small number of sets the modern conventional reading of whose members is, again, clearly distinguished, but whose graphs seem to be interchangeable in pre-classical texts. Take the set dá < \*tap < \*twap 答 'to respond, answer' vs. duì < \*twaps 對 'to respond, answer.' The bronze inscriptions (according to Zhou Faqao's Jinwen gulin) and Shi do not know the graph 答, it occurs only rarely in Shu, and there in contexts which indicate interchangeability with 對, e.g.用答揚文武之光訓Shu 42, 24 "...and thus (respond to) gratefully extol Wen's and Wu's brilliant instructions." Compare: 對提工体Shi 262,6 (and frg. in bronzes) "(In response:) Gratefully he extolled the king's grace."

答曰 Shu 42, 25 "(The king...) answered saying..." Compare: 對日 Shu 26, 17 "He answered saying..."

After disregarding these two types of inconclusive data, we are left with 87 sets of minimal pairs which fall into two groups: (1) The function of qusheng is to invert the attention flow (see below); (2) residue. The sets in

In other studies, I include the Western Zhou bronze inscriptions in this term EZ.

Mei supplies 36 examples for CC (inc. EZ), many of which are not minimal pairs.

this latter group do not contradict the definition of <u>qusheng</u>'s function in the first, but they are residue by default because the semantic relationship within the sets is not yet clear to me. Hence it seems likely that in EZ the derivational device <u>qusheng</u> had but one single function.

All the <u>qusheng</u> derivations in the corpus below (except, of course, the residue) share one meaning which variously manifests itself as either passive, or ergative, or reflexive (or rather as something like Classical Greek "middle voice"), while the basic form (non-qusheng) can be labeled "direct". Passive, ergative, and middle voice all contrast with direct in one respect: the attention flow is not direct, but inverted. ("Attention flow" and "invert, inversion" are terms borrowed from DeLancey 1981). The following English illustrations, though not strictly valid because ergative and middle voice are not grammatical categories in this Western language, may nevertheless convey some idea of what is involved (some of these sentences are from Lyons 1968:352):

(a) Direct: 'John moved the stone.'

(b) Passive: 'The stone is moved. The stone is moved by John.'

In the direct statement (a), John initiates the action which results in the movement of the stone. The linguistic attention flow (subject to object) agrees with the natural attention flow (agent to patient). In the passive statement (b), the natural attention flow is inverted: the stone (the patient) is placed first; the agent, if mentioned at all ('by John'), is placed later in the sentence.

(c) Ergative: 'The stone moved'.

The attention flow is inverted as in passive: the grammatical subject, the first element in the statement, is the patient. "Ergative" is customarily defined as the subject of an intransitive verb which corresponds to the object of the verb's transitive counterpart.

(d) Middle voice: 'The stone moved (by) itself'.

In Classical Greek, middle voice marks a verb whose agent is also its patient, a situation which is in English expressed with the help of reflexives. It is evident that the attention flow is here also inverted. In EZ, qusheng (\*-s) marks any of the above types of inversion. That inversion (what goes against natural attention flow) is marked (qusheng) while congruence of linguistic with natural attention flow is unmarked, seems to agree with universal linguistic experience.

The following corpus of EZ sets of minimal pairs demonstrates, I believe, that this tone  $(*-\underline{s})$  is an inversion marker. All sets are numbered

Recently, also Mei's study appeared in print. His conclusions go far in the direction which this present investigation is pursuing, although our conclusions are not identical with his.

The first version of this paper (completed in May 1980) was partially inspired by Cikoski's (1970) and Dixon's (1979) discussions on ergativity. This line of inquiry was not as profitable, though, as DeLancey's (1981) concepts which have been more helpful for defining the basic function of <u>qusheng</u> in this revised version than the adoption of two of his terms may suggest.

consecutively, each divided into a non-qusheng (A) and a qusheng member (B). For each word, we give the pinyin spelling, then AnC according to Karlgren (1957) as amended by Li Fang-kuei (1971), finally the reconstructed ArC form based on Karlgren, Li and Pulleyblank (1962-1963; see also Schuessler 1974a and b; 1975). We add, furthermore, the graph, the traditional word-class (N = noun; V = verb; ST = stative verb), and an English gloss. Then we quote, for words other than concrete nouns, a few typical or relevant textual examples to illustrate the word-class assignment and meaning. These quotations are arranged according to the various uses of the word in the sentence: Nom. = nominal; Tr. = transitive; Intr. = intransitive; Adv. = adverbial; Adj. = adjectival. These textual examples are, of course, taken out of their contexts and kept very brief. The context can be verified with the source quotation: Shu refers to the chapter number of the Shangshu concordance, after the comma follows the paragraph (e.g. according to Karlgren 1950); Shi is quoted by ode and stanza.

The first example (no.1) illustrates the inversion effected by \*-s very clearly because our Western Sprachgefühl immediately recognizes the <u>qusheng</u> form (1.B) as "passive" (cf. Downer' category F; Zhou's no.6):

- (1) A. WEI < 7jwei < \*7ywal v. 'to awe, scare' 威. <u>Tr.</u>(a)威之 Shu 5,14 One overawes them. <u>Intr.</u> (b) 惟威 Shu 29,18 (The officials) are terrorizing. Nom. (c天動成Shu 26,18 Heaven has set in motion its (terrorizing:) terror.
  - B. WEI < ?jweì < \*?ywals v. ('be awed, scared':) 'to fear' 畏. Tr. (d) 予 畏上帝 Shu 10,2 I fear Shangdi. Intr. (e) 周 不 祇 思 Shu 26,7 All revered and feared him. (f) 天明 Shu 27,9 Heaven is bright and majestic. Nom. (g) 天 畏 棐 忱 Shu 19,6 Heaven's (fearsomeness:) majesty is not to be relied on.

Traditionally, one reads k in pingsheng (even tone) wei, and E in qusheng, wel. Mattos (1971) has studied tonal anomalies in Shi and concluded that in 96% of all rimes in the Guo feng section (songs 1 to 160) we find tonal congruence, only in 4% tonal disagreement. He suggests therefore that most if not all of the irregular rimes might in fact have been regular if we assume that certain words (47 graphs all told) were read in Shijing times either also with an alternate tone, or with a different tone altogether. The probability for different tones varies, however, within these 47 syllables. Mattos divided them into three groups: A. comprises words which rime two or more times consistently with words having a specific different tone, e.g.  $\frac{1}{7}$  yu rimes without exception with rising tone words, so do 信 jie, 好 shou and 顧 gu; xiang, 底 meng, 信 xin and perhaps also 命 ming rime only with pingsheng words. Hence these words should in all likelihood be reconstructed with that ArC tone which is suggested by the rimes. B. comprises words which rime only once, and with a tone which goes counter to later philological tradition. It is risky to reconstruct a different ArC tone on that slim a basis, and also on the basis of just two, albeit consistent, rimes under group A. Group C includes all words which show rime contact with two tones. Among these we find yel (see our paradigm) which rimes three times with pingsheng words, only once with a qusheng word. Mattos' study strongly suggests, therefore, that was also read in the even tone in these three rimes, in spite of the fact that ₩ everywhere clearly means 'to fear', not 'to awe'.

Here is now an obvious problem: either we should, according to Mattos' study, read the word 'to fear' as well, which would fly in the face of the

tradition which points to a tonal distinction between 'to awe' and 'to fear'. Or, conversely, if the morphological distinction between these two words existed in the <a href="Shijing">Shijing</a> language, then we must assume violation of tonal rime patterns. The issue boils down to this choice: which is less drastic: to assume occasional tonal incongruence in <a href="Shi">Shi</a>, or to reconstruct, on the basis of little or contradictory evidence, alternate or different tones also for words in Mattos' B and C groups (including <a href="E">P</a>)? It is impossible for us to ascertain whether or not all rimes were, in <a href="Shi">Shi</a>, tonally regular. Because of this uncertainty, it seems less drastic to accept occasional tonal irregularities in rime, than to change the reconstruction of tones for certain ArC words. As a result of these considerations, we are inclined to proceed with our discussion on the meaning of <a href="qusheng">qusheng</a> with the assumption that <a href="#">P</a> represents a word in \*-s already in EZ.

Examples (c) and (g) of set no. 1 show that a verb can be used as a noun by being placed into nominal slots in the sentence (e.g. subject, object; see Schuessler 1982) without morphological change. The opposite also happens in EZ and CC: nouns are used in the verbal slot, e.g. 君子不是 Lun 2, 12 "A gentleman is not (implementized:) treated like an implement."

Not only can nouns be employed in the verbal position, and vice versa, but nouns can also be derived from nouns, also without morphological change. Cikoski (1976:42) drew attention to the derivation of the abstract noun ren 仁 'humanity' from the ArC homophonous concrete noun ren 仁 'man'. Consider the following sentence: 其人美自长 Shi 103, 1 "That man is beautiful and (acting human:) kind." Here, 七 is simply 人 used as an intransitive (stative?) verb, similar to 岩 in the Lunyu passage quoted above. Putting 左 back into a nominal slot would yield the original meaning 'man.' However, 七 happens to have developed an identity as a verb (due to frequent usage as a verb?), so that it has apparently split away from the noun 'man' and established itself as a member of the word-class verb; this new verb used as a noun naturally acquires the meaning 'humanness, humanity,' just as wei 'to awe' in set 1 can be used as a noun 'terror.'

The derivations discussed so far can be tabulated in this fashion:

Word-class		Nominal use		oal use	Nominal use
	N	implement	>	use/be treated like an implement	
	N	人 man	→ <del>L</del>	act like a human being, be humane, kind	
			į	(change of word-class)	
	v		七	be humane, —>	humanity
	v		威	to frighten $\longrightarrow$	terror, the 'frightening'

It follows from these considerations that Chinese does not require any morphological process for these common kinds of word derivation. Consequently, \*-s (qusheng) does not mark such changes in word-class or subclass. Such changes which have been observed in conjunction with \*-s (Downer's categories A, B and F) must be highly suspect of being coincidental phenomena which actually have nothing to do with the core meaning of this \*-s. Consequently, qusheng's role in the nominalization of the following examples (2-20a) is secondary at best; the primary function of \*-s here is to invert the attention flow so that the EZ derivations, without exception, are passives of the basic form: e.g. ex.5 'to mount' -- qusheng derivation 'what is mounted' (not: 'Who/what is mounting'). There is not a single case in this EZ corpus in which the "derived noun" is not inverted (passive). Such cases do occur, however, later in CC, e.g. 'who is followed, leader'). In short, \*-s in the following nouns is the same morpheme as in ex. 1 above.

Starting with ex. 3.B, we find that the semantic range of many  $*-\underline{s}$  derivations is narrower than the original, a phenomenon we will comment on after ex. 24.

- (2) A. BĚI < pək < \*pək n. 'North' 北. Tr. 分北三笛 Shu 2,38 He separately (northerned:) sent to the north the Sanmiao. Nom.
  - B. BÈI < puâi < \*paks n. ('What is northerned, turned north' -- in China one orients oneself to the south, "faces south":) 'the back (of body), backquarters' 肯. Nom.
- (3) A. BǐNG < pjwen < \*pyǎn v. 'To hold, grasp' 亲. Tr. 右東白族Shu 22,1 In the right hand, he held a white oxtail flag. 表 Shu 30,9 They held on to wisdom. Nom. 彼 有 遺 隶 Shi 212,3 There are some unharvested bunches.
- (4) A. CĂI < tshậf < \*tshē? v. 'To gather, pluck, cull' 学. Tr. 左右亲之 Shi 1,4 To the right and left we cull it (the plant).
- (5) A. CHÉNG < dźjəŋ < \*ljəŋ v. 'To mount, ride' (animal, boat) 乘. Tr. or intr. (?) 若 乘 好 Shu 16,23 It is like riding in a boat. 王 乔 The king rode in a boat (麥尊).
  - B SHENG < zjan < \*ljans n. ('What is mounted':) 'chariot, team of four horses' \*\*. Nom. \*\* Shi 78,1 He rides in a carriage with four horses.
- (6) A. Di < diei < \*del? (\*dləl??) n. 'Junior, younger brother' 弟. Nom.
  - B. Dǐ < dieì < \*dels (or \*dləls?) n. ('Juniorized, who is made a junior':) 'younger secondary wife' 姊. Nom.
- (7) A. FÉNG < bjwon < \*byun v. 'to sew' 綾. Tr. 可以缝裳Shi 107,1 (The

hands) can sew a shirt.

- B. FENG < bjwon < \*byuns n. ('What is sewn':) 'a seam' (narrowed]. Nom.
- (8) A. Gǔ < kuố < \*ka? st. 'Old' 古. Adj. 古人 Shu 22,5

  The ancients. Adv. 古 找 先 王 ... Shu 16,7 Anciently, our for r kings...
- (9) A. GUĀN < kuẩn < \*kwan v. 'To watch, observe' 起。正 子 若 親 大 Shu 16,8 I am as if watching a conflagration. Intr. 30,7 If you can constantly observe and scrutinize (yourself). 製育
  - B. GUÀN < kuấn < \*kwans n. ('What is watched':) 'a sight' . Nom.
- (10) A. Lī < liek < \*rek (\*rlek?) v. 'To calculate' 歷. Tr. 歷象日月 Shu 1,3 To calculate and delineate the sun, the moon... Adj. 有壓年 Shu 32,17 So that we have so and so many years.
  - B. Lī < lieì < \*reks (\*rleks?) n. ('What is calculated':) 'number; refinement' 魔. Nom. 莫麗 Shu 42,5 (They...) set forth their refinement. 其麗 不信Shi 235,4 Their number, was it not a hundred thousand!
- (11) A. LIANG < ljan < \*ryan? n. 'A pair, two' 5. Nom.
  - B. LIANG < ljàn < \*ryans n. ('What is paired' i.e. wheels:) 'carriage' [narrowed]. Nom.
- (12) A. NÀ < nập < \*nap < \*nwap v. 'To put into, bring in, introduce' 奶.

  Tr. 財 納 Shu 6,33 (The area) brings in as revenue bundled grain with straw. 5 年 全層中 Shu 26,11 Then he put the tablets into the metal-bound coffer. Intr. 奶子香 粉 Shu 2,13 He was introduced to the general management. 納 子大 Shu 2,13 He was sent into the great foothill forest.
  - B. NÈI < nuâi < \*nwaps n. ('What is entered into':) 'the interior, inside' 內. Nom. 事門之內 Shu 42,21 Inside the last gate. 內史 Shi 193,4 The (interior:) private secretary
- (13) A. SHÀN < źján < \*djan? st. 'Be good, be good at' 善. <u>Tr</u>. 权善 射 忌 Shi 78,2 Shu is good at archery. <u>Intr</u>. 無 敢不善 Shu 49,2 Do not dare not be good. <u>Nom</u>. Shu 16,16 Goodness. <u>Adj</u>. 善. Shi 254,5 The good man.
  - B. SHAN < źjàn < \*djans n. ('What is made good, made ready':) 'cooked food' 膳 [narrowed]. Adj. 膳夫 Shi 193,4 Master of the Royal Table.
- (14) A. SHANG < źjáŋ < \*djaŋ? v. 'To rise' 上. Intr. 下上其音 Shi

- 28,3 Falling and rising are their voices.
- B. SHÀNG < źjàn < \*djans n. ('What is risen to':) 'the height, above' 上. Nom. 文主 監在上 一大豐段 Wen Wang is watching (on high:) from above. Adj. 上天 Shi 209,1 The high Heaven.
- (15) A. SHOU(śjaú(\*śjaw? v. 'To guard' 乌. Tr. 中文武大訓 Shu 42,6 To (keep:) adhere to Wen's and Wu's great instructions. Nom. 有守有為 Shu Shu 24,11 Have activity, have self-control.
- (16) A. TIÁN < dien < \*den (\*dlen?) n. 'Field' H. Nom.
  - B. DIAN < dien < \*dens (\*dlens?) n. ('Area which is fielded, turned into fields':) 'domain' 前; ('cause to be turned into a field' -- verbal use of the noun:) 'to cultivate, till' 田 政 前. Nom. 河 以 Shu 6,33 The imperial domain. Tr. 無 田 市 Shi 102,1 Do not till too large a field. 在 前 斯 Shu 39,5 Extensively cultivate the people.
- - B. YĬN < jièn < \*lens n. ('What is led with':) 'trace' (part of harness) 斯 [narrowed]. Nom.
- (18) A. YÙ < jiwok < \*luk v. 'To desire, want' 欲. <u>Tr</u>. 民 周 弗 欲 喪 Shu 19,4 Among the people are none who do not desire your ruin. <u>Intr</u>. (or <u>tr</u>.?) 我 尚 不 欲 Shu 50,5 I rather will not have them (these men). <u>Nom</u>. 正 棘 其 欲 Shi 244,3 He did not alter his (wish:) plans.
- (19) A. ZHĪ < tje < \*tye (\*trye?) v. 'To know' 知. Tr. 知人 Shu 4,2 To know the people. Intr. 文王 图 敢知于兹 Shu 39,14 Wen Wang dared not take any cognizance of them.
  - B. ZHI < tjè < \*tyes (\*tryes?) n. ('What is known':) 'knowledge, wisdom' 知名. Nom.
- (20) ZHI < tśjak < \*tjak v. 'To weave' 織. Nom. 休其發織Shi 264,4 They have to abide by their silkworm work and their weaving. Adj. 被 女 Shi 203,5 The Weaving Lady.
  - B. ZHI < tśi < \*tjəks n.? 'Woven', ('what is woven':) 'woven material' [narrowed]. Adj. or nom. 文 Shu 6,5 Patterned woven (stuff); or: woven material and patterned material.

- (20a) A. CĀN < tshân < \*tshan v. 'To eat' 餐. <u>Intr</u>. (<u>Tr</u>.?)使我不能餐 5 Shi 86,1 But it makes me unable to eat. <u>Nom</u>. 奴 成 時 (Kang Wang 麥 傳 ) At the time the (eating:) meal was over...
  - B. CAN < tshân < \*tshans n. ('what is eaten':) 'food' 槃. 達予授子之粲兮 Shi 75,1 And promptly, I will serve you your food.

The following numbers (21-24) exemplify that, as in ex. 1, the inverted form must not be a noun.

- - B. JìN < dzjèn < \*dsyens v. or st.? 'Be exhausted, destroyed' 煌. <u>Intr</u>. 貝禍以爐 Shi 257,2 They are all struck by calamity and destroyed.
- (22) A. SHÌ < śjäk < \*śjäk v. 'To put away' 程. Tr. 抑釋期長, Shi 78,3
  Now he lays aside his quiver. 開釋事宴 Shu 38,11 They set free
  the innocent. 王程昱 Shu 43,36 the king took off his cap. Intr.
  天不是是于文王受命Shu 36,6 Heaven does not therefore annul the
  mandate received by Wen Wang.
- (23) A. WEN < mjwan < \*mywan v. 'To hear' 周. Tr. 我閱其聲 Shi 199,3 I hear his voice. Intr. 子間 Shu 1,12 I have heard about him. 冒聞于上帝 Shu 29,4 It was seen and heard by Shangdi.
- (24) A. È < 7Ek < \*?rek n. 'Yoke, collar; part of yoke' 厄. Nom.
  - B. AI < ?aì < \*?reks ('Yoked':) 'narrowed, narrow' [隆. Adj. [隆春Shi 245,3] A narrow lane.

At this point we might pause to confirm that for EZ the following alleged distinctive functions of \*-s have no basis in reality: Downer's categories F (passive) and A (nouns) are manifestations of one and the same function of \*-s; his categories E and H (restricted meaning or environment, i.e. narrower meaning of the derived form) also reflect only a secondary phenomenon as generally the semantic scope of a derivation tends to be narrower than that of the base. Hence his groups E and H fall also under our definition of "inversion".

Of the above derivations (exx. 1-24), only nos. 1, 16 and 18 are attested in transitive usage. No. 1 does not appear to be causative (it probably is,

though, see the discussion after ex. 36), but exx. 16 and 18 clearly are, as is the next one:

- (25) A. Bǐ < pjí < \*pyðl? v. ('To put together, put next to each other':) 'to compare' 比. 正. 比 予于表 Shi 35,5 You compare me to poison.
  - B. Bì < pjì < \*pjəls v. ('Be put together, put next to each other':) 'to join', (caus.:) 'to assemble' 比. Intr. 其比如何 Shi 291,6 The stacks are (put next to each other:) are closely—arrayed like a comb. Shi 119,1 Why (aren't you joined:) don't you join company with me? Note that, in spite of the English translation, the subject is affected by the action(as in passive). Tr. 合比其约 Shi 192,12 They assemble their neighbors. 人無有比例 Shu 24,10 Nobody will (cause his power to be put together with those of the others':) take conspiratory action.

We can derive  $\underline{bi}$  'assemble' from  $\underline{bi}$  'put together' only via the intransitive 'to join' and its subsequent causative usage 'make join > assemble'. Therefore, we will propose the working hypothesis that, as a rule, the \*- $\underline{s}$  derivation is intransitive which means that it is automatically causative when used transitively. This hypothesis is not only supported by exx. 16, 18, and 25-31 which all include intransitively or nominally used inverted forms, but also allows us to identify the \*- $\underline{s}$  in exx. 37-74 as the same inversion marker despite the fact that no intransitive usages are attested for these nos. in EZ.

- (26) A. DÀO < dâú < \*daw? n. 'Way, road' 道. Nom.
- (27) A. DOÒ < dâk < \*dak v. 'To measure, plan' 度. Tr. 惟荒度土功 Shu 5,17 I extensively planned the land works. Intr. 禮 接 卒 度 Shi 209,3 the rites and ceremonies are entirely according to rule. 爰 穷度 Shi 241,1 He investigated and measured.
  - B. DÙ < duò < \*daks v. 'Be measured, regulated; (cause.:) cause to be measured, to regulate' 度之. Intr. 三角底之 Shu 6,18 (The country of) Sanwei was regulated. 天命自度 Shu 35,4 By Heaven's command he measured himself. Tr. 度为口 Shu 16,17 Regulate your mouths. Nom. 正法度 Shu 16,5 He determined the laws and regulations. 非度 Shu 20,2 Unlawful things. 美無度 Shi 108,1 Beautiful beyond measure.
- (28) A. Jī < tsjäk < \*tsyek v. 'To accumulate' 積. Tr. 汝有精德 Shu 16,10 You have accumulated virtue. 積之Shi 291,6 They heap it (the harvested grain).
  - B. ZÌ < tsjè < \*tsyeks v. 'Be heaped' 積. Intr. 有實其積 Shi 290,6 Richly it (the grain) is heaped up. Tr. 通積 适倉 Shi 250,1 He collected, he stored (with implied object?).

- (29) A. JĪA < ka < \*kral v. 'To add to' \( \mu \). Tr., intr. (not in Shu and Shi; only attested in Lunyu).
- (30) A. JING < kjen < \*kyen st. 'Be scared, attentive' \$. Intr. 徐 方 震 \$ Shi 263,3 the country of Xu was shaken and scared. 徒 知 不 \$ Shi 179,7 the footmen and charioteers are not attentive. Tr. 爱 张 Shu 2,36 They agitate and (cause to be scared:) alarm my multitude.
  - B. JING < kjen < \*kyens v. ('Be made attentive':) 'be cautious'; 'to take care of, respect' 故. Intr. 故 哉 Shu 29,6 Be careful! Tr. 故 民 Shu 18,5 To take care of the people. 故 央 Shu 29,19 To respect the rules.
- (31) A. ZHONG < tśjwóŋ < \*tjuŋ? n. 'Seed' 種. Nom.
  - B. ZHÒNG < tśjwòŋ < \*tjuŋs v. ('Be seeded':) 'be sown'; ('cause to be sown':) 'to sow' 種. Intr. 實種 Shi 245,5 It was sown. Tr. 種之 Shi 245,5 He sowed it.

It becomes apparent that Downer's category C (causatives) captures only a coincidental semantic aspect of <u>qusheng</u>, one which flows naturally from its intransitive character. Therefore, <u>qusheng</u>'s primary function is not at all the creation of causatives.

The next sets 32-36 also agree with the inversion function of \*-s, but the derived form is "reflexive" or, especially no. 36, perhaps somehow "ergative".

- - B. JIÀN < kàm < \*krams v. 'To mirror oneself' 監. <u>Intr</u>. 人無于 水監 Shu 30,12 Men should not mirror themselves in the water,...
- - B. QŪ < khjwò < \*khyas v. ('To remove oneself':) 'to go away, leave' 去.

    Intr. 高乃去矣 Shi 245,3 Then the birds went away. Tr.(?) 新 另 去 好 Shi 113,1 It has gone so far that we will leave you.
- (34) A. RÁNG < ńźjaŋ < \*njaŋ v. 'To remove, steal' 攘. 壤之Shi 241,2 They cleared them (the trees). Nom. 定 壤 Shi 255,3 Robbers and thieves.
  - B. RANG < ńźjan < \*njans v. ('To remove oneself':) 'to cede' 讓. Tr. (?) 課後人 Shu 36,20 Accede to the successors. Intr. 乡讓 Shu

- 1,1 He could be (ceding:) modest. 讓于稷 Shu 2,28 He ceded (his position) to Ji.
- (35) A. SHÉ < śjá < \*? v. 'To put away, let off, leave' 舍. <u>Intr</u>. 舍拔 Shi 127,2 When he lets off the arrow... <u>Tr</u>. 舍推 牛馬 Shu 49,3 To let loose hobbled oxen and horses. 含其坐 Shi 220,3 They leave their seats.
  - B. SHÈ < śjà < \*? v. ('To put oneself away':) 'to rest, stop' 舍 [narrowed]. Intr. 亦不違含 Shi 199,5 You yet have no time to stop at night.
- (36) A. SHENG (sjay < \*sjay v. 'Be equal to on's task, capable of' 膀. Intr. 影 鼓 弗 Shi 237,6 The drums could not keep pace (with the work rhythm).
  - B. SHÈNG < śjang < \*śjang v. 'To vanquish, conquer' (i.e. the object lets the subject be equal to its [subject's] task see comment below) 形. 工工. 胖般 Shi 285 He conquered Yin.

This last set no. 36 calls for a discussion of the causative uses of \*-s forms. Sheng 'to vanquish' is, in a way, the causative of sheng 'be capable of'. In which way? Normally, causative means that the subject causes the object to act or be in a given state. If the last sentence sheng Yin were causative in this sense, we should translate "he caused Yin to be equal to him (the attacker)", i.e. Yin would win this battle. But the sentence means "He conquered Yin", literally: "He was being caused (pass.) to be equal to Yin". Here, the causative is inverted, the object causes the subject to act or be in a given state -- Yin, the object, is the reason or occasion for the subject to be equal to its [subject's] task — while in an ordinary causative the subject causes the object to act.

Glancing back through the \*-s derivatives presented so far, we uncover further cases of this "inverted causative": set no. 1b "I fear Shangdi" can be paraphrased: Shangdi (object) is the reason that makes me (subject) awed/scared. No. 23 wen could include 'to ask' 段 (see Karlgren 1960:139 -- I have omitted 'to ask' in set no. 23 because the meaning 'be heard' sufficiently illustrates the argument). Karlgren calls wen "a kind of causative [of wen 'to hear']: 'to cause to hear', (let me hear =) 'to ask'" (1960:139). This "kind of causative" is our inverted causative: the object is the occasion/reason or person that lets the (asking) subject hear. No. 30 散 民: the subject does not cause the people to be careful, but the people are the reason which makes the subject take care. No. 33去女 "we will leave you": either 'you' is not the direct object, but the verbal complement, in this case the place which is left; or we have here another reversed causative: you are the reason which makes us leave. No. 34 "accede to the successors": the successors (object) are the reason that makes the subject cede. Normal causatives occur, however, also with \*-s derivatives, see nos. 16, 18, 25, 26, 29, and 31. It is significant, though, that the inverted causative seems to be possible only with \*-s forms. This reversal of the attention flow towards the subject testifies once more to the postulated inversion function of qusheng.

All the <u>qusheng</u> forms listed so far occur, among others, either intransitively or nominally. Among the remaining sets below, transitive occurrences of these forms are the norm. But we believe that their transitive

uses can all be linked to the basic form via a hypothetical intransitive, just as English "wooded area" or "three-legged" are derived from "woods" and "leg" via a nonexistent "to wood" and "to leg" respectively. We have noted above that the causative connotation of the inversion forms results from the transitive employment of these primarily intransitive derivatives.

In presenting the material from set no. 37 on, we will omit textual quotations. As these helped us up to now in tracing the regular semantic connection between the base form and the various uses of the \*-s type derivation, such quotes would add little to our understanding of the following material:

- (37) A. ĀN < ?ân < \*?an st. 'Be peaceful' 安.
  - B. ÀN < ʔân < \*ʔans v. ('Be pacified, stopped'; caus.:) 'Cause to be stopped, to stop' 操 [narrowed?].
- (38) A. BĪN < pjien < \*pjen n. 'Guest' 賓.
  - B. Bin < pjien < \*pjens B. ('Cause to be guested':) to receive as a guest' 富。
- (39) A. CHENG < tśhjan < \* thjan v. 'To lift; set forth'
  - B. CHENG < tśhjəŋ < \*thjəŋs v. 'Be lifted to, be equal to/worthy of something' finarrowed].
- (40) A. CHŪ < tśhjuet < \*thjwat v. 'To come out, go out' 出.
  - B CHÙ < tśhwì < \*thjwats v. 'Be made to come/go out: 'to bring something out' 出.
- (41) A. E < ?âk < \*ak n. (or st.?) 'Evil' 题.
  - B. WŪ < ?uò < \*aks v. (The obj. causes the subj. to be evil/hateful:) 'to hate' 爰. (See discussion after no. 86).
- (42) A. ĚR < nźí < \*nja? n. 'Ear' 耳.
  - B. ER < fizi < \*njas v. 'Cause to be eared: to cut off someone's ears' 耳儿. This graph has been suspected of being a variant of 月儿 'to cut off legs', though. [Narrowed].
- (43) A. FENG < pjun < \*pyum (?) n. 'Wind' 風.
  - B. FÈNG < pjùŋ < \*pyums (?) v. 'Cause to be winded: to criticize' 風 [narrowed].
- (44) A. FÙ < phjuk < \*phyawk v. 'To overturn, turn over; to the contrary' 權。
  - B. Fù < phjau < \*phyawks v. 'Be turned to, cause to be turned to: to revert to someone, attend to someone; to cover someone/something' 覆.
- (45) A. JIĀ < ka < \*kra n. 'House, family' 家.

- B. JIA < ka < \*kras v. 'Be housed: to marry (of girl)' [narrowed].
- (46) A. JUÉ < kåk < \*krawk v. 'Be conscious' . Attested in Lunyu, not Shu, nor Shi.
  - B. JIAO < kau < \*krawks v. 'Make oneself conscious, be made conscious: to awake'
- (47) A. IAÍ < lâi < \*ra v. 'To come' 來.
  - B. LAI < lai < \*ras v. 'Be made to come: encourage' (?) 粉; 'cause something to come to someone: to reward/present someone with something' [narrowed].
- (48) A. NÜ < njwó < \*nya? n. 'Woman, wife' 女.
  - B. NÜ < njwd < \*nyas v. 'Cause to be wifed: give a wife' 女 [narrowed].
- (49) A. QU < tshju < \*tshyu? v. 'To take' 取.
  - B QU < tshju < \*tshyus v. 'Cause a wife to be taken: take a wife' k [narrowed].
- (50) A. RÉN < ńźjam < \*njam v. 'To load (a wagon); carry on the shoulder' 住.
  - B. REN < nzjam < \*njams v. 'Cause to be burdened: to charge someone with something; manager' 仕 [narrowed].
- (51) A. SĀNG < sây < \*sây < \*smay v. 'To mourn, burial' (lit. 'to let disappear') 夏. (Derived from 亡 'disappear').
  - B. SANG < sâŋ < \*saŋs < \*smaŋs v. ('To let oneself disappear':) 'to die'; ('cause to die/perish':) 'to destroy; to lose' 要.
- (52) A. SHI < dźjäk < \*ljak v. 'To hit/aim at' (with bow and arrow) 斯. Only in Lunyu, not Shu, nor Shi.
  - B SHE < dźjà < \*ljaks v. ('Cause to be hit':) 'to shoot' 射.
- (53) A. SHI < dzi < \*dsrya? v. 'To serve, do service, take office; officer, gentleman' 1±, ±.
  - B. SHI < dzi < \*dsryəs v. 'Be served; cause to be served: to serve someone; ('what is served':) 'service, affair'
- (54) A. SHI < śjak < \*śjak v. 'To use, use as a model; model, pattern' 式.
  - B. SHI < \$\frac{1}{2} \text{ si } < \text{\*sj } 2 \text{ks V. 'Be used against a model, be tested'; ('to make someone be used against a model':) to test, try' \( \frac{1}{2} \) [narrowed].
- (55) A. SHÒU < dźjáu < \* djaw? v. 'To receive' &.
  - B. SHOU < dźjau < \*djaws v. ('Cause to be received':) 'to give' 授.

- (56) A. WANG < jwan < \*Ywan n. 'King' 王.
  - B. WANG < jwan < \* ywans V. ('Consider the obj. to be kinged = have a king':) 'be king over' 王.
- (57) A. XIÀ < 省 < \*gra? n. 'Lower part, below' 下.
  - B. XIÀ < /a < \*gras v. ('Be lowered':) 'to fall' \( \tau \).
- (58) A. XIĀNG < sjay < \*syay 'each other' 相.
  - B. XIANG < sjàn < \*syans v. 'to help, assist' 相.
- (59) A. XUÉ < Yak < \*grawk v. 'To learn' 學.
  - B. XIAO < Yau < \*grawks v. ('Cause to be learned':) 'to teach' 数.
- (60) A. YĀN < ?jam < \*?yam st. 'Be content, tranquil' 厭.
  - B. YAN < ?jàm < \*?yams v. ('Cause to be made content':) 'to satiate, tire of, abundant' 原.
- (61) A. YĂNG < jián < \*lan? v. 'To nourish, feed, bring up' 老.
  - B. YANG < jian (\*lans v. ('Cause to be nourished':) 'to keep, support' (parents) [narrowed].
- (62) A. YÍ < yjie < \*yyal v. (or st.?) 'Be in order, proper, ought; to get into order' 宜,侯。
  - B. Yi > njiè > \*nyals st. ('Be ordered, righted':) 'be proper, righteous' [narrowed].
- (63) A. YĪ < ?jei / ?yəl n. 'Clothes' 衣.
  - B. YI < ?jei < \*?yals v. ('Be clothed':) 'to wear' 浓.
- (64) A. YÍN < ?jám < \*?yam? v. 'To drink' 飲.
  - B. YÎN < ʔjām < \*ʔyams v. ('Getränkt werden, be given a drink':) 'to give a drink, tränken' 故.
- (65) A. YÏN < ?jam < \*?yam n. 'Shade, cloud; northern slope' 珍.
  - B. YÌN < ?jàm < \*?yams v. ('Cause to be covered':) 'to shelter' 含.
- (66) A. YŌNG < jiwon < \*lun v. 'To use' 席.
  - B. YONG < jiwòn < \*luns v. ('Cause to be used, be made to use':) 'to use, obey' 用.
- (67) A. YONG < jwén < \* ywan? st. 'Be long' (time, place) 未.
  - B. YONG < jweng < \* \wangs v. ('Be made long':)) 'to chant, sing' 意义 [narrowed].

[narrowed].

- (68) A. YÒU < jáú < \*ǐwa? n. or v.? 'The right side: to turn to the right' 右.
  - B. YÒU < jaù < \* /was v. ('Be righted: be put at someone's right side':)
    'to assist someone' 右, 佑, 又 [narrowed].
- (69) A. YÚ < jú < \* /wa? v. 'To rain; rain' 雨.
  - B. YÙ < jù < \* was v.? ('Being rained':) 'falling' (snow) 雨.
- (70) A. YUAN < jwén < \* wan? st. 'Be distant, far' 遠.
  - B. YUAN < jwen < \* wans v. ('Cause to be "distanced"':) 'to keep at a distance, keep away, go far away from' 读.
- (71) A. ZHÍ < tśjap < \*tjap v. 'To hold, grasp' 執.
  - B. ZHì < tśì / \*tjaps v. 'Be grasped, seized' 孳.
- (72) A. ZHŪ < tśjuk < \*tjawk n. 'Prayer, invoker' 稅.
  - B ZHOU < tśjaù < \*tjawks v. 'Be prayed for, curse' 政人.
- (73) A. ZĬ < tsí < \*tsya? n. 'Son' 子.
  - B Zl < tsi < \*tsyas v. ('Cause to be considered a son':) 'to treat like a son' チ.
- (74) A. ZUĎ < tsấ < \*tsal? v. (or st.?) 'To turn left, left' 左.

Among the above sets we encounter derivations which are connected with the basic form in a rather tortuous way around two corners (inversion, then causative). We should remember, though, that, for example, in Classical Greek the middle voice had massively invaded the realm of the active, particularly the active voice of the future tense was expressed often by middle endings. Experience tells us, therefore, that mushrooming of  $\star$ -s forms into semantic fields which theoretically and with more logic could have been filled by the base form is not unusual.

Finally, we list sets which are tentatively considered residue. Items in this group cannot be shown to fit the \*-s pattern for several reasons: lack of illuminating examples, specialized grammatical function (which obliterates the semantic connections with the basic form), or perhaps forms are unrelated. In any case, that we cannot positively explain these sets in terms of inversion is due to default.

- (75) A. CHÁNG < źjaŋ < \*djaŋ v.(?) 'Be used to, constant' \*.
  - B. SHANG < źjaŋ < \*djaŋs 'Still, continue to, (not...) any more, may'

- (76) A. FÙ < bjuk < \*byawk v. 'To return, restore' 復.
  - B. FŪ < bjaù < \*byawks 'Again' 復. In <u>Lunyu</u> et alia this word means 'to repeat' of which 'again' is merely an adverbial usage. Thus, <u>fu</u> means literally: 'cause to be returned, let be returned: repeat, again'.
- (77) A. HAŎ < xấú < \*? st. 'Be good' 好.
  - B. HAÒ < xâù < \*? v. 'To love' 好 (Cf. no. 41; see discussion below).
- (78) A. HÉ < Yuâ < \*gwal v. (or st.?) 'To harmonize, be harmonious' 和.
  - B.  $H\dot{E} < \chi u \dot{a} < \star gwals v.$  (?) 'To join with someone' (in singing)  $\dot{A}u$ .
- (79) A. LAÓ < lâu < \*raw v. 'To toil' 勞.
  - B. LAÒ < lâù < \*raws v. 'To reward' 数.
- (80) A. LIE < ljät < \*ryat v. 'To broil; be sharp; be blazing, bitterly cold; brilliant' ?...
  - B. LÌ < ljäì < \*ryats v. 'Be cruel' 屬; 'to sharpen' 碼; 'energetically' 屬).
- (81) A. WANG < mjwan < \*myan v. 'To disappear, die' 亡.
- (82) A. WÙ < mjuət < \*mywət 'Don't' 勿.
  - B. WÈI < mjwei < \*mywats 'Not yet' 未.
- (83) A. WÉI < jwe < \* wal 'To function as, be make' 為.
  - B. WÈI < jwe < \*\wals 'For' 為.
- (84) A.  $ZH\overline{AO}$  < tsjau < \*tjaw v. 'To shine, enlighten'  $B_{D}^{p}$ .
  - B. ZHAO < tśjäu < \*tjaws v. 'To shine on, make visible' 增 照 (lit.: 'cause to be shined onto'?).
- (85) A. ZHENG < tśjäŋ < \*tjeŋ v. 'To march, march against, attack' 正, 注. 'To attack' is clearly a specialized application of the basic meaning 'to march' (on the basis of the word's usage in Shu and especially Shi). Consequently, it is difficult to establish a semantic link between this word and:
  - B. ZHÈNG < tśjäŋ < \*tjeŋs st. 'Be straight, to correct; government' 正,政•
- (86) A. GUANG < kwan < \*kwan? st. 'Be extensive, wide'

## B. GUĀNG < kwâŋ < \*kwaŋs st. (?) 'Be extensive' 横, 光.

Perhaps a few of these residual sets can be removed from this group. I suspect that, contrary to traditional assertions, no. 85 B is not derived from 85 A. No. 76 might fit the inversion function of \*-s. It seems rather farfetched to derive ex. 77 B 'to love' from 'good' by way of the inversion marker, but this set should be considered together with no. 41 'bad' vs. 'to hate', and no. 1 'scare' vs. 'to fear'. The last derivation 'to fear' posed no problem for our theory and helps shed some light on the other two. All three derivations are verbs of emotion in which the object evokes the emotions of fear, hate and love in the subject. Thus we can argue that not only in 'to fear', but also in 'to hate' and 'to love', the attention flow is reversed as the object influences the subject, whereas the subject does not act upon the object. This consideration not only makes us more comfortable including  $\underline{w}$  'to hate' among the regular inverted forms, but also allows us to add  $\underline{hao}$  'to love' to the regular derivations. Thus it seems possible to shrink the residue pile down to nine sets.

The preceding thoughts suggest that qusheng is an inversion marker also in a word which does not contrast with a non-qusheng basic form, i.e. jian < kien < \*klans | 'to see' which is similar to the above verbs of emotion in that its object is the occasion for the subject of perceive, 'see': the subject is receptive, the natural attention flow originates with the object and proceeds, in inverted order, to the subject, hence \*-s. Jian is nearly synonymous with ex. 32 A jian < \*kram 'to see'. While the latter is "direct" and implies active participation in the seeing process by the subject and therefore also tends to mean 'to observe, supervise', jian | is never "active" in this sense, only "passive". This illuminates also a specialized meaning of jian | : 'to see a superior, have an audience with'. For the subject, the importance of an audience lies in being noticed, 'seen', by the object (superior), not the other way around.

There might be more qusheng words without a basic form in which the \*-s is the inversion marker, e.g. ming < miwer < \*mywars 'to order; order, mandate' Shaughnessy (1981:62) has pointed out that in the Shang oracle bone inscriptions and in EZ, ming is sometimes used "passively": 'Y is ordered to...', besides the common construction: 'X (causes Y to be ordered:) orders Y to...'

In this article we have proposed that the different functions which have been associated with <u>qusheng</u> (\*- $\underline{s}$ ) in CC can be traced back to a single one in EZ<sup>4</sup>: namely that of inverting the attention flow. This basic purpose of \*- $\underline{s}$  has been captured by Mei in his "introvert-extrovert" category, by Downer's categories F and D, and by Zhou's no. 6. Since many of the inversion derivations in \*- $\underline{s}$  are nouns ("passives") the Chinese in the post-EZ period

This should be emphasized: our data lead us to assume one semantic core for qusheng where other scholars see later in CC many functions. We do not necessarily claim that the phonological feature qusheng has only one phonological origin. Furthermore, postulating an \*-s origin for this derivational device qusheng does not preclude the possibility that under certain conditions a final \*-s led to different phonological developments. Benedict (1979:17-19) has plausibly suggested that in some Sino-Tibetan roots in \*-s, this final phoneme is reflected by the ArC dental stop \*-t.

must have felt that nouns can be created with qusheng so that also direct ("active") nouns were then derived from verbs, e.g. 'overseer' (not 'who/what is overseen') from 'to see' (Downer's ex. A 2; cf. set 32 above), or 'rider' (not 'who/what is ridden') from 'to ride' (Downer's ex. A 9). As Mei, Downer and Zhou studied qusheng in CC, not just in EZ, they were therefore led to define one of this tone's functions as nominalization (Downer cat. A; Zhou no. 2). Since, as we hypothesized, \*-s derivations are fundamentally intransitive, transitive use turned them automatically into causatives. "causativization" (Downer's cat. D; Zhou no. 5) is not an original function of this morpheme. Because the inverted forms can imply perfective aspect (just as English -ed, as in 'learned', implies: (1) passive (i.e. inversion); (2) perfective aspect; cf. especially exx. 2-21 above), Zhou perceived one function of qusheng as marker of completed action (no. 7). Because generally, derived forms are of a semantically narrower scope than the basic forms, Downer's categories E and H are also secondary phenomena and not basic functions of \*-s. We conjecture that in CC the relationship between gusheng's original function of inversion and the secondary characteristics associated with it was so obscure that this morpheme was felt to be a general derivational device which could then also form adverbs (Downer's cat. G; Zhou no. 8) and verbs (Downer's cat. B; Zhou nos. 1, 4 and 5), in short: everything.

As Mei, Downer and Zhou investigated not EZ, but CC, our hypothesis for a single EZ function does not invalidate their conclusions, but shows that restricting the investigation to just the earliest few centuries of CC, namely EZ, can lead beyond previous results and bring us another step closer to an understanding of qusheng's original function.<sup>5</sup>

In CC, the attention flow is inverted by a number of passive constructions, such as marking the agent with the coverb ('preposition')  $\underline{yu}$   $\underline{x}$ ,  $\underline{x}$ . Interestingly enough, such devices, though common in CC, are extremely rare in EZ -- if they exist at all. Perhaps the \*-s derivation originally performed a function which was later, in the post-EZ period when the core meaning of \*-s was lost, assumed by these passive constructions.

The question about the age of the qusheng derivations has not been discussed in this paper because, unlike traditional philologists in the past, most modern investigators agree that this tone is "old", i.e. at least EZ, among them Karlgren (1960:139), Forrest (1960), Zhou (1963:49-50), Mei (1980). Our investigation's conclusions bear this out: if the tone were 'late' (Zhanguo or Qin times), then qusheng readings had been retroactively projected back into Shu and Shi, and EZ and CC functions would then be identical. But since the EZ function is different from CC usages, qusheng must have existed already in EZ.