

WRITING SYSTEMS AND UNDERLYING REPRESENTATION
THE CASE OF THE CHEROKEE SYLLABARY

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Various views have been advanced regarding the relationship between writing systems and phonological representation. One view, the predominant one throughout the structuralist era, is that linguistically naive writers will write autonomous phonemes provided that culturally prescribed spelling or the tendency to minimize the orthographic representation of allomorphy does not interfere (King 1969:208). A view more in accord with generative phonological theory is proposed by King (209), who suggests that writing systems will represent underlying systematic phonemes in the absence of strong nonnative orthographic influence.

Campbell (1971:206-7) has suggested that the question of what kind of phonemes tend to be reflected by orthographies can only be resolved by examining the inception of writing systems devised by native speakers of languages with no previous tradition of literacy. Otherwise, Campbell argues, whatever tendency writers may have to represent either autonomous or systematic phonemes is likely to be obscured by culturally prescribed spelling. He therefore suggests the study of writing systems such as the Korean alphabet of King Sejong, the Tibetan alphabet attributed to Thonmi, and other systems unlikely to be restricted by cultural complications. Campbell (207) concludes that "if these prove to be morphophonemic systems, we can throw cold water on structuralist fancies about phonemes and writing systems."

Campbell might well have included the Cherokee syllabary on his list of orthographies to be investigated, since the Cherokee writing system was designed by Sequoyah, a monolingual Cherokee with no familiarity with any previous literary tradition. Sequoyah's orthography may well be unique among the world's writing systems because of its apparently complete freedom from

external influence in its inception, as will be noted below. It thus constitutes an ideal test case for Campbell's claim that writing systems uninfluenced by cultural complications may be expected to provide evidence regarding the nature of phonological representation.

The purpose of this paper is to examine the relationship between the syllabic writing system devised by Sequoyah and Cherokee phonological representation. If it can be shown that Sequoyah represented either autonomous or systematic phonemes consistently, Campbell's hypothesis would be supported. If the Cherokee syllabary is not consistent, however, we might conclude that even writing systems free from complicating cultural factors will be unlikely to provide reliable evidence regarding the nature of underlying phonological representation.

The facts concerning the origins of the Cherokee syllabary are well known,¹ but I will summarize them briefly. In the early years of the nineteenth century Sequoyah observed white men reading. He concluded that they had developed a system for representing their language by the use of symbols, and he determined to devise a similar system for his own language. It is reported that Sequoyah first attempted to employ a word writing system, which he soon abandoned as unfeasible. After years of trial and effort Sequoyah at length arrived at a syllabic system utilizing 85 symbols. Seventy-eight of these represent syllables consisting of one or more consonants and a vowel, six represent the vowels of Cherokee, each of which can occur as a syllable, and one symbol represents syllable initial, pre-consonantal s.² Sequoyah's system is thus a mixed syllabic-alphabetic one, although the alphabetic principle is employed only to represent pre-consonantal s.³

The explanation for Sequoyah's use of the alphabetic principle in the single instance just noted seems rather obvious. To have represented each syllable beginning with s plus consonant with a separate symbol would have required 22 additional letters. Sequoyah, apparently aware of the difficulty of learning a system

with an excessively large number of symbols, evidently chose to represent pre-consonantal s alphabetically in order to keep the number of letters within his system within manageable proportions

Turning to the question of the relationship between Sequoyah's system and Cherokee phonological representation we find that Sequoyah failed to represent a number of contrasts which would be included in either a consistently autonomous phonemic or systematic phonemic orthography⁴ Syllables beginning with h followed by y, w, n, or l are represented by the letters used for the corresponding syllables without initial h To have represented these underlying contrasts orthographically would have required an additional 23 letters In 25 instances, contrasts between syllables differing only with respect to the aspiration or lack of aspiration of the initial stop or affricate are not represented Since h before the glides, n, and l is underlying in either an autonomous phonemic or systematic phonemic analysis of Cherokee, and since the same is true of aspiration, it is clear that Sequoyah's system is neither consistently autonomous phonemic nor systematic phonemic Sequoyah's failure to represent these contrasts was likely motivated by the same factors which led him to represent s alphabetically the desire to keep the number of symbols in his system within workable limits

Another important contrast exists in Cherokee which is not reflected by the writing system Syllables may end with h, but Sequoyah did not represent the contrast between syllables ending with h and the corresponding syllables without h To have done so would have required several dozen additional symbols In this instance also, the desire to avoid increasing the number of letters in his system apparently led Sequoyah to fail to represent an underlying contrast which would be indicated in a consistently phonemic orthography, whether autonomous or systematic

Sequoyah's writing system is thus neither autonomous nor systematic phonemic Since the system itself does not provide evidence favoring either autonomous

phonemic or systematic phonemic theory, one might wish to inquire what writers of Cherokee do when they have the option of writing either autonomous or systematic phonemes. Such an option is available to writers in situations involving the deletion of a final vowel or of a consonant plus final vowel. Final vowels may ordinarily be deleted in Cherokee, giving rise to shortened forms, e.g. sasa "goose" may be shortened to sas. When the final vowel is preceded by s, as in the case of sasa, deletion provides writers with the option of writing the symbol for pre-consonantal s, indicating that deletion has occurred. A survey of manuscripts written in the syllabary shows that this option is rarely followed, however, the preference being to retain the letter used to spell the s plus vowel sequence which occurs in the unshortened form. This preference seems to provide evidence that writers of the syllabary tend to write underlying systematic phonemes, but the situation is not so simple. When a final syllable is composed of a sequence of s plus consonant plus vowel, the final consonant-vowel sequence can be deleted, note gawonih~~as~~, the shortened form of gawonih~~as~~go "is he speaking". In situations of this kind, syllabary writers seem to prefer to omit the symbol for the final consonant-vowel sequence, resulting in an autonomous phonemic spelling. We thus find that writers of the syllabary are not consistent when confronted with the option of representing deleted systematic phonemes or of omitting them in spelling. At times their spelling reflects the underlying systematic phonemic form, at other times it does not.

To summarize, the Cherokee syllabary is remarkably free in its origins from complicating cultural factors. Nevertheless, the system fails to be consistently autonomous phonemic or systematic phonemic because a number of underlying contrasts are not represented. Sequoyah's failure to represent these contrasts may be explained by a principle of economy. Sequoyah was apparently sensitive to the fact that the representation of all the segmental contrasts of Cherokee would have made his system difficult to learn because of the very large number of symbols which would have been required. For the same reason, Sequoyah chose to

represent s alphabetically in syllable initial position before a consonant rather than assigning a large number of additional letters to syllables beginning with s followed by a consonant. In addition, in cases in which writers of the syllabary have the choice of a spelling which reflects underlying systematic phonemic representation or of a spelling which is autonomous phonemic, the evidence is inconclusive, with both options followed under different conditions.

The evidence from the Cherokee syllabary clearly does not support Campbell's hypothesis that writing systems free in their inception from complicating cultural factors will be likely to provide evidence regarding the nature of underlying phonological representation. If the Cherokee situation is not atypical, we will apparently have to conclude that writing systems fail to be consistent for a number of reasons, only some of which are cultural.

NOTES

¹See Foreman 1938 for a detailed account of the life of Sequoyah and of the circumstances leading to the development of the syllabary.

²Charts giving the sound values of the symbols employed in the syllabary may be found in Trager 1974:473 and in Feeling 1975.

³The claim is sometimes made that the alphabetic principle was discovered only once and later diffused throughout the world. Sequoyah's use of the alphabetic principle, although limited, falsifies this claim.

⁴Chafe and Kilpatrick (1963) discuss the inconsistencies of Sequoyah's system, but not from the point of view advocated by Campbell.

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