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WHERE HAVE ALL THE ADJECTIVES COME FROM?
THE CASE OF CHEROKEE*

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R.M.W. Dixon, in his paper "Where have all the adjectives gone?" (1977), states that "not all languages have the major word class Adjective. Either they have no Adjective class at all, or else there is a small non-productive minor class that can be called Adjective" (p. 20). Dixon examines the way in which concepts belonging to seven semantic types (DIMENSION, AGE, VALUE, COLOR, SPEED, PHYSICAL PROPERTY, and HUMAN PROPENSITY) are expressed in a number of languages, and he establishes two typological dimensions along which languages may vary: a language may have an open or closed adjective class, and may be dominated by either verbs or adjectives, or may be neutral.<1>

In a language with an open adjective class, all or most of the concepts in all seven adjectival semantic types will be expressed by the same part of speech, either verb (as in Yurok or Mandarin) or adjective (as in English). Thus, a language can have an open adjective class without having any adjectives. In a language with a closed adjective class, only some of the adjectival concepts will be expressed by adjectives (typically those in the types DIMENSION, AGE, VALUE and COLOR, which have relatively small, finite memberships), and the rest (typically those in the large, open-ended types PHYSICAL PROPERTY and HUMAN PROPENSITY) will be associated with some other part(s) of speech, such as verb or noun.<2> In a strongly adjectival language, all seven semantic types are associated with the class adjective (as in Dyirbal). In a strongly verbal language, there are many adjectival oppositions, such as 'raw'/'cooked' for which the marked pole is realized by a verb, and the unmarked pole by an adjective (as in Alamlak) or noun (as in Hausa). In a neutral language, but for most oppositions, both poles are associated with adjectives (as in English).

It is not always clear how to fit a given language into Dixon's typology. Even within his own survey, certain judgments on part-of-speech classification seem to have been made with difficulty. For example, Dixon says of Telugu (p. 51):

Some (or perhaps all) of the roots which have basic membership of the Adjective class can also be used extensionally as nouns in semantically marked contexts . . . ; in view of this, Adjectives are shown as 'A(-N)' in [his] Table 2 A number of Telugu roots can function as nouns or as adjectives--they are shown as 'N-A' in Table 2 (Whereas the A(-N) items appear to be basically

adjectives . . . the N-A items are basically nouns, that can also function as adjectival modifiers.)

In Tzotzil (p. 53):

The Adjective class appears to be open; it includes COLOR, AGE, VALUE, and SPEED terms. Some DIMENSION concepts are expressed through adjective roots . . . but others are rendered by transitive verbs--hamal 'wide' is derived from ham 'to open, reveal' . . . some physical property concepts are expressed by verb roots, e.g. transitive hux 'sharpen'

Problematic points include deciding the basic part of speech of a root common to surface forms of several categories, and deciding whether a given surface form really is derived at all (consider such English forms as bashful and uncouth). Dixon does not commit himself to an explicit theory of morphology, and in particular he does not appear to consider the possibility that a language might contain a small number of basic adjective roots, but a large number of surface adjectival forms, most of them derived from non-adjectival roots. Such a language might, by certain of Dixon's criteria, be diagnosed as have a closed adjective class, but, by other of his criteria, might be diagnosed as having an open adjective class.

Linguists have claimed that the Southern Iroquoian language Cherokee has no adjectives at all, assigning those words which belong to the adjectival semantic types either to the category verb, or in a few cases, to the category particle (King 1975, Cook 1979).<3> Under such analyses, Cherokee could be said either to have an open adjective class and to be strongly verbal, or (if the few concepts represented by particles were considered to be true adjectives) to have a closed adjective class and, again, to be strongly verbal.

We propose that Dixon's methodology in classifying adjective behavior across languages might be insightfully improved by making explicit reference in the taxonomy to a distinction between underlying and surface levels of description, a distinction which he himself makes in the Theoretical Preliminaries section of his paper. In this paper, we argue that Cherokee represents a type of language intermediate between the possibilities presented by Dixon (and not specifically entertained by him), namely one in which (apart from a few adjectival concepts which are represented by true verbs) there is a large class of true adjectives which can be distinguished from other parts of speech, and which consists of two sub-classes: a small class of words with purely adjectival roots, and a much larger class of words with verbal (or, more rarely, nominal) roots. Cherokee has an open adjective class at

a surface level and a closed adjective class at an underlying level; and at the surface Cherokee is strongly adjectival, while underlyingly it is more strongly verbal.

We will first present evidence to show that there is indeed a category adjective in Cherokee, distinct from the categories particle, verb, and noun. We will then examine briefly the derivational relationships that exist between surface adjectives and their roots, and the placement of Cherokee in Dixon's typological framework.

Cherokee Parts of Speech

Cherokee adjectives can be distinguished from the other parts of speech (particles, verbs, and nouns) on the basis of morphological and syntactic criteria.

The particles, which correspond to adverbs (to:yi 'outside'), conjunctions (ale 'and, or'), and adpositions (ti:tla 'toward') in other languages, are uninflected in Cherokee. Adjectives, in contrast, are inflected to agree with the nouns they modify in animacy, person and number. Many adjectives may be used adverbially; adverbs, however, cannot in general be used adjectivally. Moreover, adjectives, unlike particles, can stand as predicates.

Verbs in Cherokee, as in the other Iroquoian languages, are distinguished by their complex derivational and inflectional morphology. Deverbal adjectives show the internal morphology associated with the verbs from which they are derived, but adjectives cannot take verbal inflectional morphology, so they are not marked for negation or aspect or mood, for example, even when they are used as predicates.<4> Negation and aspect/mood (other than simple present) must be marked on the copula for adjectives. Example (1) illustrates a simple present for a verb (a) and an adjective (b); examples (2) and (3) show negative and imperfective past forms for verbs and adjectives.

- (1) a. U:-li:ye:t-ihá. (verb)
 3sg.-moan-PRESENT
 'S/he's moaning.'
 b. Uw-otú:hi. (adjective)
 3sg.-pretty
 'She's pretty.'
- (2) a. Hla y-u:-li:ye:t-ihá. (verb)
 not NEGATIVE-3sg.-moar.-PRESENT
 'S/he's not moaning.'
 b. Hla uw-otú yi-ki. (adjective)
 not 3sg.-pretty NEGATIVE-is
 'She's not pretty.'
- (3) a. U:-li:ye:t-i:skv:ʔi. (verb)
 3sg.-moan-IMPERFECTIVE:PAST
 'S/he' was moaning.'

- b. Uw-otú ke:-sv:ʔi. (adjective)
 3sg.-pretty is-PAST
 'She was pretty.'

Verbs and adjectives take pronominal prefixes, which refer to one or two arguments for verbs, and to the modified noun for adjectives. Adjectives and one-argument verbs are marked in the lexicon as taking one of two sets of prefixes, here referred to as set A and set B. The A and B prefixes correspond, respectively, to the "agent" (or "subjective") and "patient" (or "objective") prefixes, in the other Iroquoian languages. A-marked verbs and adjectives differ from one another in third person singular inanimate agreement: while third person singular inanimate verbs always take a pronominal prefix (4a), adjectives beginning with certain consonants (including /s/) may lack a prefix (4b). Both verbs and adjectives take the same third person singular animate prefixes (4a, c).

- (4) a. A:-sv:-ka.
 3sg.-smell-PRESENT
 'It smells; S/he smells.'
 b. Sakho:niké:ʔi.
 blue
 'It's blue.'
 c. A:-sakho:niké:ʔi.
 3sg.-blue
 'S/he's blue.'

Cherokee verbs appear in one of two shapes, tonic or atonic (these terms are from Cook 1979). A verb assumes the tonic shape when used indicatively as a main verb, and the atonic shape when in a subordinate clause; the atonic involves a slight modification of the pronominal prefix and a special atonic accent on the penultimate vowel, which, if necessary, is lengthened to accommodate it.<5> The atonic accent is shown with an acute accent mark (´) in the examples; tonic accent patterns are left unmarked in this paper. Adjectives, however, have only one accent pattern: the atonic accent is assigned to the rightmost long vowel, whether the adjective is used as a main or subordinate predicates or as an attributive. Example (1), above, repeated as (5), illustrates predicate constructions for verbs (a) and adjectives (b); (6) illustrates relative clause constructions. (7) illustrates an attributive.<6>

- (5) a. U:-li:ye:t-iha. (verb)
 3sg.-moan-PRESENT
 'S/he's moaning.'

- b. Uw-otú:hi. (adjective)
 3sg.-pretty
 'She's pretty.'
- (6) a. na ake:hy ts-u:-li:ye:t-i:ha (verb)
 that woman RELATIVE-3sg.-moan-PRESENT
 'the woman who is moaning'
- b. na ake:hy uw-otú tsi-ki (adj)
 that woman 3sg.-pretty RELATIVE-is
 'the woman who is pretty'
- (7) uw-otú ake:hya (adjective)
 3sg.-pretty woman
 'pretty woman'

It should be noted that Cherokee has a small number of true verbs which represent PHYSICAL PROPERTY and HUMAN PROPENSITY concepts. Like other verbs, they are inflected. Compare (8a), a present, to (8b), a negative, and (8c) a past.

- (8) a. U:-yo:s-iha.
 3sg.-hungry-PRESENT
 'S/he's hungry.'
- b. Hla y-u:-yo:s-iha.
 not NEGATIVE-3sg.-hungry-PRES
 'S/he's not hungry.'
- c. U:-yo:s-i:skv:?i.
 3sg.-hungry-PAST
 'She was hungry.'

Also like other verbs, and unlike adjectives, these verbs have distinct tonic and atonic patterns. The atonic is used not only in subordinate constructions (9a), but also as an attributive (9b). Compare the tonic form in (9c).

- (9) a. na ake:hy tsi-ka-hlv́:-ska
 that woman RELATIVE-3sg.-sleepy-PRESENT
 'the woman who is sleepy'
- b. ka-hlv́:-sk ake:hya
 3sg.-sleepy-PRESENT woman
 'sleepy woman'
- c. Ka-hlv́:-ska.
 3sg.-sleepy-PRESENT
 'S/he's sleepy.'

Cherokee nouns fall into two classes. There is a substantial class of concrete nouns which have tonic accent patterns; there are also many transparently deverbal nouns (primarily agentives and instrumentals) which have atonic accent on the rightmost long vowel. All adjectives, on the other hand, have atonic accent. Like adjectives, nouns are not marked for

such categories as negation, aspect, and mood, which are marked on the copula instead. Unlike adjectives, which are always marked for the number of the modified noun regardless of animacy, many inanimate nouns are not inflected for number (10a,b).

- (10) a. ka:ké:t nv:ya
 heavy rock
 'heavy rock'
 b. ti:-ka:ké:t nv:ya
 PLURAL-heavy rock
 'heavy rocks'

Word order in Cherokee is relatively free, within the noun phrase as elsewhere. There is a tendency, however, for adjectives to precede the nouns they modify; nouns rarely modify other nouns, but when they do, the modifier tends to follow the modified (Pulte and Feeling 1975, p. 330).

The Derivation of Adjectives

Many Cherokee adjectives are transparently derived. Participles, for example, are formed productively from verbs, in most verb classes by means of the suffix -ta. The adjective 'rotten,' for example, is a participle u:kó:sita formed on the verb stem /ko:s/ 'decay' (the i is epenthetic). Likewise, 'dirty' is the partitive form ka:tahá:ʔi formed on the noun ka:ta 'soil.' Note that both adjective forms receive the atonic accent on their rightmost long vowels.

Many adjectives, however, bear no suffix: é:kwa 'large,' uwé:thi 'old (inanimate)', u:yó:ʔi 'bad,' a:yanú:li 'fast,' etc. These, it will be observed, belong to the semantic types DIMENSION, AGE, SPEED, and VALUE which are typically represented in the small set of true adjectives in one of Dixon's 'closed-class' languages. The fifth such semantic type, COLOR, is less clear-cut in Cherokee: ki:ké:ʔi 'red' is clearly founded on ki:ka 'blood,' but other color terms appear to be unsuffixed, while still others bear the same suffix -e:ʔi but do not appear to be derived from other forms.

This latter state of affairs recurs throughout the adjective inventory of Cherokee: certain suffixes are common, some of them identical in form to verbal aspect and mode suffixes, but it is possible neither to relate the root in question synchronically to some other, non-adjectival form, nor to isolate the meaning of the suffix. For instance, ka:ké:ta 'heavy' contains the common adjectival termination -ta, but seems not to be related to any noun or verb, and is certainly not a participial form; indeed, if we are not to posit several suffixes of the shape -ta, it makes more sense to analyze participles as formed on verb stems by the addition of an

ADJECTIVAL suffix *-ta*. Likewise, ordinals are formed on cardinals by the addition of the same terminal *-e:ʔi* found in color terms: *sko:hi* 'ten,' *sko:hi:né:ʔi* 'tenth.'

Recall that all these adjectives bear the atonic accent. Since finite verbs only take this accent in subordinate clauses, and since nouns appear not to take the accent unless derived, it might at first be argued that the presence of the accent on adjectives itself argues that they are all derived, and that Cherokee is simply an open-class language of the verbal kind. But what is a morphologically simple form like *e:kwa* 'large' to be derived from? And, even if a form like *ka:ke:ta* 'heavy' were to be assigned its accent by virtue of the suffixation of *-ta*, the synchronic status of the putative stem /ka:ke/ is not at all clear.

Consider, however, the loan from English *asamá:ti* 'smart, intelligent.' This form clearly belongs to the semantic type HUMAN PROPENSITY, and if Cherokee were a strongly verbal open-class language, one would naturally expect it to have been borrowed as a verb, which it was not. On the alternative assumption that Cherokee is a closed-class language, it would be highly unlikely for 'smart' to be borrowed into that closed adjective class; what other part of speech might it then be? If not a verb, then either a noun or a particle--yet clearly this is not a derived form (it is morphologically simple, except for the added third person animate prefix *a-*), and underived nouns and particles do not receive the atonic accent. Nouns borrowed into Cherokee consistently receive a TONIC accent pattern: *wa:tsi* 'watch, clock,' *Tsi:sa* 'Jesus,' etc. Consider also particles, such as *to:yi* 'outside' and *ale* 'and, or, almost.' The obvious alternative explanation is that 'smart' has been borrowed directly into an open class of true adjectives, all of which redundantly receive the atonic accent.

Once the surface form *asamá:ti* had been borrowed into the surface open class, it would have to be analyzed in the lexicon as a basically adjectival root. However, there is still no explanation for its atonic accent if this accent is viewed as a result of morphological derivation: derived adjectives would receive their accent by virtue of their derivation, but certain adjective roots, including /sama:ti/ 'smart,' would have to be specified for inherent accent, and the generalization regarding the accenting of all Cherokee adjectives would be missed. Such a closed-class analysis would still optimally require a late rule accenting all adjectives, thus acknowledging that, at the surface, adjectives form a natural (open) class with respect to this rule (and with respect to the distributional facts described above).

Underlyingly, then, Cherokee has a small, closed class of true adjective roots; most adjectival concepts are expressed with deverbal or denominal forms. (There are also a few verb

roots corresponding to adjectival concepts, which surface as stative verbs). On the surface, however, Cherokee has the character of an open-class language.

Typological Considerations

At an underlying level, Cherokee must be considered a closed-class language: there are a small number of roots which surface as adjectives and which cannot plausibly be assigned to the other parts of speech (e.g. /e:kwa/ 'large'). In addition to that class, there are a large number of verb roots which may surface as adjectives (e.g. u:kó:sita 'rotten' from the verb stem /ko:s/ 'decay'), and there are a small number of stative verb roots which always surface as verbs, though they may be considered as expressing adjectival concepts (e.g. u:yo:siha 's/he is hungry' with stem /yo:s/ 'be hungry': see (8)).

At a surface level, Cherokee must be considered an open-class language, with adjectival concepts represented by adjectives (and not by verbs). Despite the large number of adjectives with verbal roots, it would be wrong to claim that Cherokee expresses adjectival concepts with an open class of verbs, because this would fail to capture the similarity between root-adjectival forms (like é:kwa 'large') and deverbal adjectives (like u:kó:sita 'rotten'), and it would fail to capture the difference between both these types on the one hand and verbal words (like u:yo:siha 's/he is hungry') on the other.

Recall that Dixon distinguishes strongly adjectival, strongly verbal, and neutral languages, depending upon which parts of speech are used to express adjectival oppositions. It appears from his discussion, which makes reference to verb and noun roots, that he intends this classification to be applicable at an underlying level. At any rate, since all but a very few adjectival concepts are expressed by adjectives at the surface, Cherokee would, trivially, be considered strongly adjectival with respect to surface forms. At an underlying level the matter of a three-way distinction is a non-issue, because all closed class languages must be strongly verbal. Under Dixon's definition, it appears that only open-class languages with true adjectives (as opposed to verbs, as in Yurok and Mandarin) can be considered strongly adjectival. And, since most adjectival oppositions must be realized by adjectives in a neutral language, a language cannot be neutral if it has only a small number of adjectives to begin with.<7> However, both open- and closed-class languages may be strongly verbal: Cherokee is a closed-class strongly verbal language, underlyingly.

Cherokee adjectives come from many sources, but they form a distinct and natural, if largely derived, class.

Notes

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<1>There are other adjectival semantic types not considered by Dixon and not discussed here.

<2>SPEED may be expressed by adverbs in some languages.

<3>It is plausible to claim that the Northern Iroquoian languages have no adjectives, and this may well have been true for Cherokee at an earlier stage.

<4>This fact has led Cook (1979) to call adjectives "uninflectible verbs."

<5>There is a late rule which deletes a final vowel (and a preceding laryngeal) except in phrase-final position. All final vowels in Cherokee surface as short: even a penultimate vowel lengthened to accommodate atonic accent will be shortened if it becomes final by virtue of final vowel deletion (6b).

<6>Note, in (6b), that the relative clause marker cannot occur on the adjective; like other inflectional morphemes, it is placed on the copula.

<7>Dixon allows for neutral closed-class languages; such languages would have very large, but closed, adjective classes. It is not clear how a very large class of adjectives is determined to be closed.

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