SEMANTIC COMPONENTS IN KECHUA PERSON MORPHEMES

WILLIAM L. WONDERLY
Summer Institute of Linguistics

0. The term[1] SEMEME was defined by Bloomfield[2] as 'the meaning of a morpheme'. Inasmuch as any language is a semiotic system in which continuous reality is arbitrarily classified into discrete categories[3] that correspond to speech forms, it is useful to maintain this definition. By doing so we have the morpheme as the minimal unit of meaningful speech form (Saussure's signifiant[4]) and the sememe as the minimal unit of discretely classified reality (Saussure's signifié) corresponding to it.

There are, however, certain types of morphemes whose meaning is quite obviously complex from a structural viewpoint—morphemes whose sememes do not consist merely of a continuous series of features or a gradient 'area of meaning', but are further analyzable into discrete semantic elements. For these we must deal with semantic features that are submorphemic (and hence subsememic). We do not here refer to semantic complexities that appear as a result of arbitrary or logical subdivisions of meaning unmarked by features of linguistic form; these we rule out as not being symbolized by the semiotic system and therefore not structurally relevant. But examples abound in which submorphemic semantic features are correlated with some formal feature involving either the phonemic shape or the distribution of the morphemes, or both. We term such submorphemic (or subsememic) features SIMULTANEOUS SEMANTIC COMPONENTS or, for brevity, SEMANTIC COMPONENTS;[5] and we assign to them structural relevance within the language system.

0.1. One type of sememe with multiple semantic components is seen in paradigms where two or more morphemes each mark a separate specific meaning but mark a single over-all meaning in common; if such morphemes occur with identical distributions (i.e. are mutually replaceable) in one or more environments, there is one more semantic component than there are morphemes (or sememes).

[1] The Kechua materials in §§1–5 of this paper represent the Ayacucho dialect of Peru; their structure was worked out in essentially the present form by the author in collaboration with Kenneth G. Case of the Evangelical Union of South America, during the 1948 session of the Summer Institute of Linguistics at the University of Oklahoma. Case, who has worked for a number of years in the Ayacucho area, provided the material and a rough analysis, and concurred in the basic features of the present analysis. Most of the conclusions of this paper were read at the summer meeting of the Linguistic Society of America in July 1950. Since that date, Masako Yokoyama has published a morphemic analysis of a different Kechua dialect, that of Cuzco; see fn. 12 below. Her treatment of the person morphemes differs considerably from ours; we have attempted to correlate her analysis with ours in §6 of this paper.

[2] Leonard Bloomfield, Language 162, 264 (New York, 1933).

[3] Cf. Martin Joos, Description of language design, Journal of the Acoustical Society of America 22.701–08 (1950).

[4] Cf. Ferdinand de Saussure, Cours de linguistique générale, Part 1, Chap. 1 (Paris, 1922).

[5] This term implies an analogy with Harris's simultaneous components in phonology; see Lg. 20.181–205 (1944).

https://doi.org/10.2307/410107 Published online by Cambridge University Press

An example is Zoque ncʌktamu *we or you did it* : čʌkyahu *they did it*, in which -tam- (non-3rd person) and -yah- (3rd person) both mark the over-all meaning *plural*. Thus the sememes of both suffixes have the semantic component *plural* in common, but separate components of person.[6]

0.2. In his treatment of Hungarian, Lotz[7] sets up 'semantic terms' (cf. our semantic components) of the base-forming suffixes in nouns; each of the fourteen suffix morphemes has, in his analysis, two, four, or five semantic terms. These terms pertain to four basic 'relations', whose structural relevance is attested by carefully stated phonemic correlates for each. Sebeok[8] sets up a series of five 'semantic features' (cf. Lotz's relations) for Hungarian case suffixes and postpositions; but unfortunately the structural relevance of these semantic features is not attested by any stated correlation with phonemic shape or with distribution. In Sebeok's parallel set of five semantic features for Finnish case suffixes, there is again no stated phonemic or distributional correlation, except that a footnote gives such correlation for some (not all) of the suffixes said to partake of the feature of 'closeness'.

0.3. A somewhat different situation exists in the so-called inflectional formations of Indo-European languages. For example, Spanish hablas *you speak* shows two suffixal morphemes, -a- present indicative and -s 2nd person singular. But hablo *I speak* shows only a single suffixal form -o, in which the meanings of present indicative and 1st person singular are both present. We may choose to employ the metaphor of Carroll[9] and Hockett[10] and say that -o is a portmanteau item which belongs to two morphemes; although this may do a certain violence to our notion of a morpheme as a unit of form, it does have the somewhat doubtful virtue of preserving a one-to-one correspondence between morpheme and semantic component at this point in the structure. Or we may choose simply to say that -o is a single morpheme whose sememe has two semantic components that are paralleled elsewhere in separate morphemes—thereby giving frank recognition to the lack of strict correspondence at this point between the form-unit (morpheme with corresponding sememe) and its isolable meaning features (semantic components).

A more striking example of the same type of problem appears in Greek,[11] where λύω *I loose* shows a morpheme ω whose sememe may be described as having five simultaneous semantic components. The meanings of these components

[6] What is here called a semantic component common to two or more morphemes of a paradigm, C. F. Voegelin has aptly termed 'paradigmatic meaning'; cf. Linguistically marked distinctions in meaning, Proceedings of the 29th Congress of Americanists (1950).

[7] John Lotz, The semantic analysis of the nominal bases in Hungarian, Travaux du Cercle linguistique de Copenhague 5.185 ff. (1949).

[8] Thomas A. Sebeok, Finnish and Hungarian case systems: Their form and function 32 (Acta Instituti Hungarici Universitatis Holmiensis, Series B, Linguistica 3; Stockholm, 1946).

[9] Lewis Carroll, Through the looking glass, chap. 6: '... "slithy" means "lithe and slimy". ... it's like a portmanteau—there are two meanings packed up into one word ...'

[10] Charles F. Hockett, Problems of morphemic analysis, Lg. 23.321–43 (1947).

[11] Cited by Eugene A. Nida, The identification of morphemes, Lg. 24.414–41 (1948); see also A system for the description of semantic elements, Word 7.1–14 (1951).

https://doi.org/10.2307/410107 Published online by Cambridge University Press

parallel the sememes of five separate morphemes in λύσονται *they will loose for themselves* (σ future, ο indicative, ν plural, τ 3rd person, αι middle voice).

0.4. In the Spanish and Greek examples above, the existence of more than one semantic component in a single form-unit (whether interpreted as a polymorphemic portmanteau or as a multicomponential morpheme) is made apparent by the association of the same or corresponding semantic components with unicomponential morphemes elsewhere in the paradigm; in Lotz's treatment of Hungarian, the semantic components are associated with features of phonemic shape. But in the material now to be presented from Kechua, every person marker shows two meanings fused together, neither of which can be demonstrated by association with semantically unicomponential morphemes elsewhere in the language, or connected with any features of phonemic shape. The presence of two semantic components in each of the Kechua person markers is suggested, to be sure, by the semantic oppositions which they present; but their existence is formally demonstrated by distributional criteria. The analysis given in §§1–5 is based on Ayacucho Kechua, which differs in certain respects from the Cuzco dialect of Kechua discussed in §6.

Ayacucho Kechua is analyzed as having thirteen suffix morphemes which mark person plus some other category of meaning in nouns and verbs. Each of the morphemes is thus semantically complex and has a sememe describable in terms of two recurring semantic components. The number of these semantic components is eight; their various combinations constitute the sememes of the thirteen morphemes. Although none of the semantic components is associated with any single phonemic shape or morpheme, each is equated structurally with a distributional class within the group of morphemes involved. The semantic components are thus structurally relevant both in terms of semantic oppositions and in terms of distribution.

In §§1–5 of this paper we list first the Ayacucho semantic components, in terms of number labels; then the morphemes into whose sememes they are combined, in terms of the phonemic shapes of the morphemes and with combined number labels; and finally the distribution of the morphemes, in terms of distributionally defined classes equated with the semantic components and bearing their number labels.

1. Semantic components of the Ayacucho person morphemes. In the person morphemes there is a series of three semantic components that mark structural categories of person; these are represented by unit numbers:

01 first person
02 second person
03 third person

Another series of five semantic components appear in combination with the preceding and mark structural categories other than person; these are represented by decade numbers:

10 imperative mode
20 intentive mode (future or intended action)
30 effective mode (non-future or effected action) in verbs; possessional in nouns

https://doi.org/10.2307/410107 Published online by Cambridge University Press

40 marked case (subject when combined with 03; object when combined with 01, 02)
50 plural

These eight numbers, when cited in the form here given (with a preceding or following zero digit), indicate the semantic components apart from their actualization in specific morphemes; they are also used in this paper to indicate the corresponding distribution classes of the morphemes in whose sememes they appear, and whose classes are in strict correlation with their semantic components. Distribution classes 10–50 are referred to as decade classes; 01–03 as unit classes or (semantically) as person classes.

2. Ayacucho person morphemes. The semantic components designated by decade numbers combine with those designated by unit numbers in thirteen of the fifteen theoretically possible combinations; the resulting complex sememes are associated with phonemic shapes that mark meanings corresponding to the sum of their semantic components; these shapes constitute the suffix morphemes. These are here listed, grouped by decade classes; decimal numbers indicate morpheme alternants:

Class 10 (morphemes whose sememes contain component 10 plus one of the components 02, 03):
12 -y imperative 2nd person
13 -čun imperative 3rd person

Class 20 (morphemes whose sememes contain component 20 plus one of the components 01, 02, 03):
21.1 -sax intentive 1st person
21.2 -sun- (same, before morpheme 52)
21.3 -sxa- (same, before morpheme 42)
22 -nki intentive 2nd person
23.1 -nxa intentive 3rd person
23.2 -sun- (same, between morphemes 41 and 52)

Class 30 (morphemes whose sememes contain component 30 plus one of the components 01, 02, 03):
31.1 -ni effective/possessional 1st person
31.2 -n (same, before morpheme 52)
31.3 zero (same, before morpheme 42)
31.4 -y (same, before suffix -man and with nouns, except when followed by morpheme 42)
32.1 -nki effective/possessional 2nd person (with verbs)
32.2 -yki (same, with nouns)
33.1 -n effective/possessional 3rd person
33.2 zero (same, after aspect suffixes -rxa-, -sxa except when followed by morpheme 42)

Class 40 (morphemes whose sememes contain component 40 plus one of the components 01, 02, 03):
41 -wa- object case, 1st person
42 -yki object case, 2nd person
43 -su- subject case, 3rd person

https://doi.org/10.2307/410107 Published online by Cambridge University Press

Class 50 (morphemes whose sememes contain component 50 plus one of the components 02, 03):

52 -čik plural 2nd person

53 -ku plural 3rd person

3. Distribution patterns of the Ayacucho person morphemes. The morphemes listed above have the following general distributional characteristics with reference to stem-classes and to each other, to be treated in greater detail in §§4–5: classes 10 and 20 occur after verb stems; class 30 occurs after verb stems and noun stems; class 40 occurs after verb stems in sequence with 10, 20, and 30; class 50 occurs in sequence with 10, 20, and 30 after all stems that combine with the latter, or after verb stems in sequence with 10, 20, and 30 plus 40. Possible sequences with verb stems (V) and noun stems (N) are summarized in the following formulae:

$$V + \begin{Bmatrix} 10 \\ 20 \\ 30 \end{Bmatrix} \pm 40 \pm 50$$

$$N + 30 \pm 50$$

4. Distribution with noun stems in Ayacucho Kechua. CLASS 30 MORPHEMES (possessional + person) occur in the first suffixal position after noun stems (suffixes other than these also appear with noun stems but are not treated in this paper). Examples based on the noun stem čakra *field*: čakray *my field* (N + 31.4); čakrayki *your field* (N + 32.2); čakran *his (her) field* (N + 33.1). Examples based on noun stem wasi *house*: wasiy *my house* (N + 31.4); wasin *his house* (N + 33.1).

CLASS 50 MORPHEMES (plural + person) follow a sequence of noun stem + class 30 morpheme; the latter is either of person class 01 or of the same person class as the class 50 morpheme. Specifically, morpheme 52 (plural 2nd person) may follow morpheme 31 or 32; and morpheme 53 (plural 3rd person) may follow morpheme 31 or 33. Examples: čakrančik *our (incl.) field* (N + 31.2 + 52); čakraykičik *your (pl.) field* (N + 32.2 + 52); čakrayku *our (excl.) field* (N + 31.4 + 53); čakranku *their field* (N + 33.1 + 53). The following examples, based on ñuxa *I* (tentatively considered to be a noun stem), show a specialized meaning of semantic component 30 but a regular distribution of class 30 and class 50 morphemes: ñuxayku *we (excl.)* (N + 31.4 + 53); ñuxančik *we (incl.)* (N + 31.2 + 52).

Note that when morpheme 52 occurs in sequence with another morpheme of person class 02, it pluralizes the redundantly marked 2nd person; but when it occurs in sequence with a morpheme of person class 01, it adds a 2nd person plural to the already marked 1st person, yielding a total semantic value of *1st person plural inclusive*. Similarly, when morpheme 53 occurs in sequence with another morpheme of person class 03, it pluralizes the redundantly marked 3rd person; but when it occurs in sequence with a morpheme of person class 01, it adds a 3rd person plural to the already marked 1st person, yielding a total semantic value of *1st person plural exclusive*. This means that the inclusive–exclusive opposition is not an independent structural category in Ayacucho

https://doi.org/10.2307/410107 Published online by Cambridge University Press

Kechua; if it is to be considered a category at all it must be recognized as one derived from combinations of 1st person with 2nd and with 3rd person respectively. Note the absence of a morpheme *51, which if it existed would presumably categorize some type of plural 1st person in its own right.

5. Distribution with verb stems in Ayacucho Kechua. CLASS 10 MORPHEMES (imperative + person) occur with verb stems. Examples based on verb stem maxa- *hit*: maxay *hit!* (V + 12); maxačun *let him hit!* (V + 13). Special environments of class 10 morphemes are the following:

After verb stems in sequence with morpheme 41 (object, 1st person): maxaway *hit me!* (V + 41 + 12); maxawačun *let him hit me!* (V + 41 + 13).

In sequence with a class 50 morpheme (plural + person) of the same person class: maxayčik *hit (pl.)!* (V + 12 + 52); maxačunku *let them hit!* (V + 13 + 53).

In sequence with both morpheme 41 and a class 50 morpheme. The class 50 morpheme may be of the same person class as the class 10 morpheme: maxawayčik *hit (pl.) me!* (V + 41 + 12 + 52); maxawačunku *let them hit me!* (V + 41 + 13 + 53). Or the class 50 morpheme may be of person class 03, marking, in combination with morpheme 41, an object in the 1st person plural exclusive: maxawayku *hit us (excl.)!* (V + 41 + 12 + 53); maxawačunku *let him hit us (excl.)!* (V + 41 + 13 + 53). Note that the two circumstances described in this paragraph intersect: maxawačunku means both *let them hit me!* and *let him hit us (excl.)!*.

CLASS 20 MORPHEMES (intentive + person) occur with verb stems. Examples: maxasax *I shall hit* (V + 21.1); maxanki *you will hit* (V + 22); maxanxa *he will hit* (V + 23.1). Special environments of class 20 morphemes are the following:

In sequence with a class 40 morpheme (marked case + person) of different person class; morphemes 42 and 43 occur only when the person class of the class 20 morpheme is 01 and 02 respectively. Morpheme 42 follows the class 20 morpheme but morphemes 41 and 43 precede it. Examples: maxawanki *you will hit me* (V + 41 + 22); maxawanxa *he will hit me* (V + 41 + 23.1); maxasxayki *I shall hit you* (V + 21.3 + 42); maxasunki *he will hit you* (V + 43 + 22). Note that in verbs, the person marked by a morpheme of class 10, 20, or 30 is in the subject case unless a class 40 morpheme is also present in the sequence. If such a morpheme is present, the person marked by it is in a specified case (subject or object) and the person marked by the class 10, 20, or 30 morpheme is in the case not specified. Semantic component 40 (marked case) has the specific value *object case* in combination with semantic component 01 or 02, but *subject case* in combination with component 03.

In sequence with a class 50 morpheme (plural + person), with the person-class restrictions on the latter stated in §4. Examples: maxankičik *you (pl.) will hit* (V + 22 + 52); maxasunčik *we (incl.) shall hit* (V + 21.2 + 52); maxanxaku *they will hit* (V + 23.1 + 53); maxasaxku *we (excl.) shall hit* (V + 21.1 + 53).

In sequence with morphemes of both classes 40 and 50. Examples: maxawankičik *you (pl.) will hit me* (V + 41 + 22 + 52); maxasxaykičik *I shall hit you (pl.)* (V + 21.3 + 42 + 52); maxasunkičik *he will hit you (pl.)* (V + 43 + 22 + 52); maxawankiku *you will hit us (excl.)* (V + 41 + 22 + 53); maxasxay-

https://doi.org/10.2307/410107 Published online by Cambridge University Press

kiku *we (excl.) will hit you* (V + 21.3 + 42 + 53); maxawanxaku *he will hit us (excl.)* or *they will hit me* (V + 41 + 23.1 + 53); maxawasunčik *he will hit us (incl.)* (V + 41 + 23.2 + 52); maxasunkiku *they will hit you* (V + 43 + 22 + 53).

According to Case's analysis, when both a plural subject and a plural object are in the context, the class 50 morpheme pluralizes only one of them, depending on its person: 1st person is pluralized in preference to either 2nd or 3rd, and 2nd person is pluralized in preference to 3rd. The person not pluralized by a class 50 morpheme may be pluralized by morphemes elsewhere in the sentence, or its plurality may be left to be inferred from the context.

CLASS 30 MORPHEMES (effective + person) have the same distribution with verb stems as class 20 morphemes, except that one of certain aspect suffixes (-rxa-, -sxa-) may appear between the stem and the class 30 morpheme. The examples of class 30 morphemes which follow lack these aspect suffixes.

With verb stems: maxani *I hit* (V + 31.1); maxanki *you hit* (V + 32.1); maxan *he hits* (V + 33.1).

In sequence with a class 40 morpheme: maxawanki *you hit me* (V + 41 + 32.1); maxawan *he hits me* (V + 41 + 33.1); maxayki *I hit you* (V + 31.3 + 42); maxasunki *he hits you* (V + 43 + 32.1).

In sequence with a class 50 morpheme: maxankičik *you (pl.) hit* (V + 32.1 + 52); maxančik *we (incl.) hit* (V + 31.2 + 52); maxanku *they hit* (V + 33.1 + 53); maxaniku *we (excl.) hit* (V + 31.1 + 53).

In sequence with morphemes of both classes 40 and 50: maxawankičik *you (pl.) hit me* (V + 41 + 32.1 + 52); maxaykičik *I hit you (pl.)* (V + 31.3 + 42 + 52); maxasunkičik *he hits you (pl.)* (V + 43 + 32.1 + 52); maxawankiku *you hit us (excl.)* (V + 41 + 32.1 + 53); maxaykiku *we (excl.) hit you* (V + 31.3 + 42 + 53); maxawanku *he hits us (excl.)* or *they hit me* (V + 41 + 33.1 + 53); maxawančik *he hits us (incl.)* (V + 41 + 33.1 + 52); maxasunkiku *they hit you* (V + 43 + 32.1 + 53).

CLASS 40 MORPHEMES (marked case + person) and CLASS 50 MORPHEMES (plural + person) occur only in sequences containing a morpheme of class 10, 20, or 30. Both class 40 and class 50 morphemes may appear in the same sequence. Examples of these two classes have been included in the distributional statements for morphemes of classes 10, 20, and 30.

6. Correlation with Cuzco Kechua. The Cuzco dialect of Kechua, as presented by Masako Yokoyama[12] (hereinafter cited as Y), shows forms corresponding to most of our Ayacucho person morphemes, but with certain phonemic and allomorphic differences. Since her analysis of the dialect of Cuzco was independent of our work on that of Ayacucho, it involves a somewhat different morpheme list, and a morphemic breakdown of certain endings in a manner different from ours. The cause of this difference lies partly in the dialects themselves, partly in the interpretation of the data. To describe the Cuzco person morphemes on the basis of Y's analysis but in terms of semantic components and classes commensurate with those of our Ayacucho analysis, we set up two new unit-numbered semantic components to mark person-negation (C04 and C09 below), and omit

[12] Outline of Kechua structure: I. Morphology, Lg. 27.38–67 (1951).

https://doi.org/10.2307/410107 Published online by Cambridge University Press

certain of the morphemes present in two of our decade classes (20 and 40 of Ayacucho).[13]

For Y's Cz person morphemes, the following semantic components are needed. (Numbers for components, classes, and morphemes are the same as the Ay numbers wherever correspondences exist, except that Cz numbers are identified by a preposed C.) The person-negating components, peculiar to Cz, are unit-numbered because they combine with decade-numbered components; but they are probably best regarded, for both semantic and distributional reasons, as a separate subdivision of the unit-numbered components. Note that neither of the person-negating components is recurrent in different morphemes: C04 occurs only in morpheme C24, C09 only in morpheme C39. Their status as independent semantic components is therefore less clear. The same is true for component C40, which occurs only in morpheme C41. (Note that the numbers C04 and C09 are set up, for purely mnemonic purposes, as the squares of the numbers of the respective person-affirming components C02 and C03.)

Semantic components affirming person:

C01 first person
C02 second person
C03 third person

Semantic components negating person:

C04 non-second person
C09 non-third person

Semantic components marking categories other than person:

C10 imperative
C20 future (= Ay intentive)
C30 non-future in verbs, possessional in nouns
C40 object case
C50 plural

The Cz person morphemes, extracted from Y's paper, are summarized in terms of semantic components as follows (Y's morpheme numbers are given in parentheses):

Class C10 (imperative)

C12 y imperative 2nd person (Y's 8a, imperative)
C13 cun (data from Case, personal communication)

Class C20 (future)

C22 wa- future 2nd person (Y's 9.2, II F)
C24.1 sa-
C24.2 su- } future non-2nd person (Y's 9.1, −II F)

Class C30 (non-future/possessional)

C31.1 ni
C31.2 n- } non-fut./poss., 1st person (Y's 13.1, I S)
C31.4 y
C32.1 ŋki
C32.2 yki } non-fut./poss., 2nd person (Y's 14, II S)
C32.3 -ki

[13] Henceforth we abbreviate Cuzco Cz, Ayacucho Ay.

https://doi.org/10.2307/410107 Published online by Cambridge University Press

C33 ŋ non-fut./poss., 3rd person (Y's 13.2, III S)
C39 -qh non-fut./poss., non-3rd person (Y's 13.3, −III)
Class C40 (object)
C41 wa- object, 1st person (Y's 6, 1st person object)
Class C50 (plural)
C52 -cis plural 2nd person (Y's 16a.1, pron. incl. pl.)
C53 -ku plural 3rd person (Y's 16a.2, pron. excl. pl.)

From a tactical standpoint, the Cz analysis seems considerably more complex than does our Ay analysis. Of our Ay morphemes, only classes 10 and 50 and morpheme 41 show direct correspondence with Cz morphemes (classes C10 and C50 and morpheme C41). Our class 30 suffixes for the most part correspond to Cz morphemes of class C30, but the converse is not true; for those of C30 (including the extra member C39) are described by Y as entering also into sequences with morphemes of class C20 or with other morphemes of C30 to form combinations analogous to the endings that we have analyzed for Ay as single morphemes of classes 20 and 40. Thus Y's analysis shows fewer morphemes but more morpheme sequences; ours, more morphemes but fewer sequences.

The following table presents the Cz equivalents of Ay morphemes in classes 20 and 40; Cz forms treated by Y as composite are divided according to her analysis.

Ayacucho morphemes	Corresponding Cuzco forms		Reference to Y
21.1 -sax	sa-qh	C24.1 + C39	Table 2, set 6
21.2 -sun-	su-n-	C24.2 + C31.2	Table 2, set 6
21.3 -sxa-	sa-	C24.1	fn. 22a
22 -nki	ŋ-ki	C33 + C32.3	Table 2, set 5
	wa-qh	C22 + C39	Table 2, set 7
	wa-qh-ki	C22 + C39 + C32.3	Table 2, set 7
23.1 -nxa	(no correspondent)		
23.2 -sun-	su-ŋ	C24.2 + C33	Table 2, set 6
41 -wa-	wa-	C41	§3.26.6
42 -yki	y-ki	C31.4 + C32.3	Table 2, set 5
43 -su-	su-	C24.2	fn. 22a

Notes on the table. To Ay 21.3: Ay -sxa-yki (21.3 + 42) = Cz sa-y-ki (C24.1 + C31.4 + C32.3).——To Ay 42: We consider Ay -yki to be a sequence of 31.3 [zero] + 42.——To Ay 43: Ay -su-nki (43 + 32.1) = Cz -ŋ-ki (C33 + C32.3).

The factors which underlie the most significant differences between Y's analysis and ours are: (1) the appearance of two morphemes of class C30 in the same Cz sequence without any apparent system; (2) the person-negating morphemes

https://doi.org/10.2307/410107 Published online by Cambridge University Press

C24 and C39; and (3) the setting up of morpheme C22 as wa- to occur only with C39.

From the Cz data, a morpheme C24.1 sa- ~ C24.2 su- appears plausible enough, since sa- recurs in sa-y-ki (C24.1 + C31.4 + C32.3) and sa-qh (C24.1 + C39), and su- recurs in su-n- (C24.2 + C31.2), su-ŋ (C24.2 + C33), and su-ŋ-ki (C24.2 + C33 + C32.3). In the Ay data, however, -sa occurs only in the form -sax (our 21.1, corresponding to C24.1 + C39); our form 21.3 -sxa-, occurring in -sxa-yki (21.3 + 42), does not contain a recurrent partial sa except discontinuously. And in Cz as well as Ay, sa in all of its occurrences might equally well be a marker of 1st person rather than non-2nd.

The Cz morpheme C39 -qh presents a somewhat different problem. Its recurrence in Cz waqh *you will* and saqh *I shall* tends to validate the bimorphemic interpretation of these endings as C22 + C39 and C24.1 + C39 respectively; but the interpretation is weakened by the fact that C22 wa- never occurs apart from C39 -qh, and that C24.1 sa- occurs apart from C39 -qh only in a context where it could just as well bear a different interpretation. For the Ay data, -x (corresponding to Cz -qh) could be called a morpheme only with still greater difficulty, since the sequence corresponding to Cz waqh does not occur but is replaced by Ay morpheme 22 -nki.

This replacing of Cz waqh (C22 + C39) by Ay -nki (22) appears to be an important structural difference in the dialects, since it not only makes a morpheme *39 improbable for Ay and as a corollary to this weakens the case for an Ay morpheme *24 (thus affecting all occurrences of possible person-negating semantic components in Ay), but also by its non-occurrence in this dialect specifically rules out the interpretation of Ay morpheme 22 (-nki) as 22 + 39.

We have restated the Cz endings in terms of semantic components, but have preserved Y's morphemic analysis and morpheme list. It is also possible to restate the same data entirely in terms of our Ay morpheme number list; such a treatment introduces no particular difficulties, but results in a list of Cz morphemes and morpheme alternants that differ in certain details from those of Ay. Such a list would contain the Cz morphemes of classes C10, C30 (with slight allomorphic modifications, and omission of C32.3 and C39), and C50, plus the Cz correspondents of the Ay class 20 and class 40 morphemes (as they are listed in the table above, but interpreted as single morphemes rather than sequences). It is not, however, feasible to reinterpret the Ay data entirely in terms of Y's morpheme list or of our restatement of it.

The validity of each of the two structural systems for its particular dialect appears from the fact that each can be presented consistently, using the same techniques in both cases. Y's system for Cz, however, is on the whole less symmetrical and regular than ours is for Ay. That the two systems are not bilaterally convertible in their entirety may be attributed at least in part to structural differences in the dialects themselves. But with dialects so closely affiliated it might be an advantage, for comparative work and perhaps for other purposes too, to handle both in terms of commensurable semantic components, morphemes, and morpheme sequences.

https://doi.org/10.2307/410107 Published online by Cambridge University Press

7. Addenda. Case, who is working in the field with Ay and also, to a smaller extent, with Cz, has sent me some information that arrived too late to be incorporated in the sections printed above. He tells me that Cz does have a suffix -ŋki (future 2nd person) lacking in Y's material, and that this corresponds to our 22 -nki. Also, the correspondent of Cz wa-qh (listed above as C22 + C39) is an Ay suffix -wax not included in this paper; these forms are not part of the Cz future or the Ay intentive series, but belong to a series of potential mode forms which includes Ay -yman (1st person; alluded to in §2 under morpheme 31.4), -wax (2nd person), -nman (3rd person), and an almost identical series in Cz: -yman, -waqh, -nman. Case was unable to find Y's form wa-qh-ki (C22 + C39 + C32.3) in his Cz data. These data now seem to rule out wa- as a morpheme C22 and to establish -ŋki as C22 in its place, corresponding to our Ay 22. The Cz morphemic analysis therefore needs to be re-examined at this point on the basis of additional material; and more work should be done also on the distribution of person morphemes with respect to the potential mode forms in both dialects.

Case also proposes a more felicitous analysis of certain forms containing morphemes of class 40. Besides a slight change in the alternants of morphemes 21, 31, and 33, he would delete entirely the *subject case* morpheme 43. This makes possible a uniform meaning, *object case*, for semantic component 40 in all its occurrences, and avoids the conflict of meanings (*subject* and *object*) previously grouped under the heading *marked case*. The changes in the morpheme list of §2 are as follows: delete morpheme 43 and morpheme alternant 31.3; change 42 to -ki (not -yki); change 21.3 to -sxay- (not -sxa-); and add 33.3 -sun-. The forms from §5 that are affected by these changes are here listed anew, with their changed formulae; certain changes in the distributional statements are implied but not explicitly phrased. Forms with class 20 morphemes: maxasxayki *I shall hit you* (V + 21.3 -sxay- + 42 -ki); maxasxaykičik *I shall hit you (pl.)* (V + 21.3 -sxay- + 42 ki + 52); maxasxaykiku *we (excl.) shall hit you* (V + 21.3 -sxay- + 42 ki + 53); maxasunki *he will hit you* (V + 23.3 -sun- + 42 ki); maxasunkičik *he will hit you (pl.)* (V + 33.3 -sun- + 42 -ki + 52). Forms with class 30 morphemes: maxayki *I hit you* (V + 31.4 + 42 -ki); maxaykičik *I hit you (pl.)* (V + 31.4 + 42 -ki + 52); maxaykiku *we (excl.) hit you* (V + 31.4 + 42 -ki + 53); maxasunki *he hits you* (V + 33.3 -sun- + 42 -ki); maxasunkičik *he hits you (pl.)* (V + 33.sun- + - 42 -ki + 52).

https://doi.org/10.2307/410107 Published online by Cambridge University Press