Hes and *Kus* Questions in Yurok:
A case for lexeme-specific word order[1]

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Many syntactic approaches view word order as a derivative property of phrase-structure. An alternative is that word order is a learned property of constructions or even lexemes. What distributional patterns might provide evidence of lexeme-specific word order? A minimal grammatical pair is presented from Yurok, an Algic language of northwestern California. Words of the same general category and phonological type are associated with distinct distributional patterns within the clause. The polar interrogative hes occurs after the first word of the sentence or finally; kus 'where, when, how' occurs initially. Though both distributions are common cross-linguistically, the existence of both types in a single language provides evidence for lexeme-specific word order patterns.

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1. Introduction

Within the tradition of generative syntax, surface word order is often modeled as a derivative property of sentence structure (Chomsky 1957, 1965). Transformations yield surface word order patterns from non-surface configurations, and can be quite specific in content, referring to specific lexemes (e.g. English 'BE') and even specific morphemes (English *-en*) (Chomsky 1957: 112). More general movement processes motivated by subtheories of case, binding and theta roles are proposed in the Government and Binding framework (Chomsky 1981), and the more recent Minimalist program attributes head and operator movement to feature checking and interpretability under a general economy principle (Chomsky 1995). Phonological constraints have also been invoked to derive surface word order from non-surface patterns. This is especially true for second position clitics, where prosodic factors, sometimes combined with syntactic constraints, are invoked to derive surface word order (Tegey 1977; Anderson 1992; Anderson 1993; Halpern and Zwicky 1996; Anderson 2000). Semantic features like topic, focus, animacy, definiteness, and scope are also argued to play a role in determining surface word order. In some cases, the syntax is claimed to mediate this function (e.g. Bock and Warren 1985), while in others, semantic effects are coupled with phonological factors (e.g. McDonald et al. 1993), often independent of syntactic structure, as in the pragmatic determinants of word order in many Native American languages (Mithun 1999: 194-203).

However, recent work in Construction Grammar (e.g. Filmore et al. 1988, Goldberg 1995, 1997) demonstrates that fixed word-order patterns may be highly construction-specific. The failure of children to extend these construction-specific patterns in the course of acquisition suggests that children learn word-order as part of syntactic constructions which may be more narrowly associated with individual verbs (Tomasello 2003). A reasonable alternative to generative accounts, then, is that word order is a learned property of different construction types, and that different word orders may be associated with different constructions, or different lexemes. With this alternative in mind, we can ask what sorts of distributional patterns might

provide evidence of lexeme-specific word-order in contrast to word-order determined by general syntactic, phonological, or semantic constraints. What we are looking for is, in essence, a minimal grammatical pair: words of the same category and phonological type, which are associated with distinct and fixed distributional patterns within the clause.[2] Whatever syntactic and phonological constraints apply to one word should apply to the other, so that distinct word order patterns must be attributed to the lexemes or constructions themselves.

In this paper, I suggest that Yurok, an Algic language of Northwestern California, provides good evidence for a minimal grammatical pair of this type.[3] The construction types I compare are two question types in Yurok: polar interrogatives, formed with the particle *hes*, and information questions with the particle *kus*.

Of interest is the fact that these two particles have distinct patterns of distribution, despite their phonological and categorial similarities. The polar interrogative particle *hes*, occurs after the first word of the sentence or in sentence-final position, while the particle *kus* 'where, when, how' occurs sentence-initially. Though both types of distribution are common cross-linguistically for similar kinds of question words, the existence of both particle types in a single language with distinct distributional patterns provides a grammatical minimal pair of the relevant type. On this basis, it appears that language-specific construction-specific lexeme-specific word order patterns must be recognized.

2. Yurok simple sentence structure

A template for Yurok simple sentence structure is shown in (1), with examples illustrating various realizations of this template in (2).[4] Note that this template is not meant to represent anything more than the set of construction types over which a Yurok speaker generalizes. The template in (1) represents instances or exemplars of attested sentences, and potential generalizations over them. It is not meant as a designation of abstract features which impose themselves on sentences.

(1)   Template for simple sentences in Yurok

(S-Adv) (NP*)$_{FOC}$ [(Adv) (Prt*) V (NP*)]$_{XP}$ (S-Adv)

(2)   Yurok simple sentences

  a. SVO   *Ku pegrk   no'pe'n   mewihl.*[R:19]
                the man   chase.3SG   elk
                The man chased the elk.

  b.i SV   *Helome'y   ku   pegrk.*[R:19]
                dance.3SG   the   man
                The man is dancing.

b.ii VS *Ku pegrk   helome'y.*[R:19]
the man   dance.3SG
The man is dancing.

c. OVS *Nekach   newope'n   ku   wenchokws.*[R:19]
me   see.3SG>1SG   the   woman
The woman saw me.

d. OSV *Ke'l   nekah ki   nii'goo'm.*[R:19]
you.SG we   FUT   take.COLL
We will take you with us.

e. V *To'   ki   kem newochek'   'owook'.*[RSS:1]
so   FUT   again see.1SG>2SG   tomorrow
I will see you (sg.) again tomorrow.

f. S V *Hikon [ku 'ela hoole'moni   nikichyu]*_{NP} *'o   hookw* [LA16-1:1]
long.ago the PST be.there.ATTR everyone   LOC gamble.VN
Once upon a time all who where there were gambling,

g. S V *Puuk   ro'op'.* [YL:2]
deer   run.3SG
The deer is running.

h.i SO *Wo'oot   ku tmiigomin.*[R:16]
he   the hunter
He is the hunter.

h.ii OS *Kich   mewimor 'ne-ch'ish.*[R:16]
PRF   old.man   1-dog
My dog is now an old fellow.

The central component of any Yurok sentence is the verb, and a sentence need not contain any overt noun phrases (2e). Optional sentential adverbs can appear clause initially (2f) or finally (2e). Arguments of the verb appear either in a preverbal focus position, or post-verbally (2b). And within the verb phrase, adverbs with local scope appear pre-verbally, before an optional string of pre-verbal particles (2e), which are the primary means of expressing tense/aspect distinctions in the language.

Word order of subject and verb is free in intransitive clauses (2b,f). However, when both subject and object noun phrases occur in the sentence, the subject precedes the object (2a), unless the argument roles are rendered unambiguous either by the inflected form of the verb (2c,d) or by objective case-marking on a pronoun like *nekach* 'me' in (2c). Finally, in equational sentences, NP can replace V in the schema in (1), resulting in sentences like (2h).

An interesting consequence of the schema in (1) is that the first **syntactic word** of a Yurok sentences may be of any syntactic category. Sentences may begin with adverbs (2f), articles (2a,bii), nouns (2g), pronouns (2c,d,hi) pre-verbal particles (2e,hii) or verbs (2bi). This observation is important in describing the distribution of the yes-no particle *hes*, which we turn to now.

3. Polar interrogatives with *hes*

Yurok, like many other languages of the world has a particle which, when added to a statement, creates polar interrogatives or *'ee-paa* 'yes-no' questions. In Yurok, the particle is *hes*. In (3), the positioning of *hes* is shown schematically for simple sentences. As with the template in (1), the templates in (3) are meant to express speakers' generalizations over exemplar sentences. In (3i) the particle *hes* occurs in the 2nd position of the sentence, following the first syntactic word. In (3ii), *hes* appears in sentence-final position. A rare utterance type consists only of this particle, and is treated as a degenerate instance of the (3ii) template.

(3)   Templates for Yurok questions with *hes*

    i.   [X *hes* …?]   2nd position, X = syntactic word (see below)

    ii   [….*hes*?]   Final position
              [*Hes*?]   Final position (=only position)

Questions with *hes* are typically answered with *'ee* 'yes', *paa* 'no', *'ekekw* 'I don't know' (or a synonymous phrase), with or without further clarification.

3.1 *Second position hes*

Examples of the schema in (3i) are given in (4). In all of these sentences, *hes* occurs as the second syntactic word of the sentence. Recall that word order freedom, and optionality of components illustrated in (2), results in a range of sentence-initial word types. As expected, the sentences in (4) show every category type preceding *hes* in sentence-initial position: adverbs (4a-d), nouns (4e); pronouns (4f,g); particles (4h,i); and inflected and uninflected verbs (4j-l).[5]

(4)   Second-position *hes*

    a. *Pekwsu **hes** ki*   *pe'wome'm?* [GT:41]   X = Adverb
       NEG   Q   FUT   cook.2SG
       Will you cook?

    b. *Chpaani **hes** k'e-rurek' roy?* [LA:138-1:16]   X = Adverb
       wide   Q 2-swim.SG river
       Is the river wide for you to swim ?

c. *Lekwsik   hes kich sootok'w ku mewimor*? [RHR:37]   X = Adverb
    Outside   Q PRF go.3SG   the old.man
    Has the old man gone outside?

d. *K'e-'ekah   hes 'ochkaa hoh*? [GT:37]   X = Noun
    2-hat   Q now   make.VN
    Are you making a hat?

e. *Ke'l   hes   saa'agoche'm*? [JE:187]   X = Pronoun
    you.SG Q   speak.Indian.2SG
    Do you speak Yurok?

f. K*elew hes ho   helomeye'mo'w*? [RHR:4]   X = Pronoun
    you.PL Q PAST   dance.COLL.2PL
    Have you folks been dancing?

g. *Kich hes neskwechok'w   ku wr'yrs?* [R:150]   X = Particle
    PRF   Q come.3SG   the girl
    Has the girl come back yet?

h. *To' hes kich muuhl*? [GT:38]   X = Particle
    so Q PRF pay.VN
    Have you settled up?

i. *Skewoksime'm hes   ki   k'e-kemeyek'?* [LA16-7:87]   X = Verb (infl.)
    want.2SG   Q   FUT 2-go.home.SG.SUB
    Do you (sg.) want to go back home?

j. *'Ok'w   hes   k'e-meregukwech?* [TT:19]   X = Verb ('there is')
    be.3sg Q   2-wipe.VN
    Is there toilet paper (for you to wipe)?

k. *Skewok hes   ki   k'e-pyurkerek'?* [TT:8]   X = Verb (uninfl.)
    want.VN Q   FUT 2-play.SG.SUB
    Do you (sg.) want to play?

Second position, or Wackernagel's position, is a common place for clitics (see Tegey 1977; Anderson 1992; Halpern and Zwicky 1996; Anderson 2000, among others). However, there is good reason to believe that *hes* is not a clitic in Yurok in sentences like those in (4). Clitics are usually defined as syntactic closed class formatives which are typically unstressed, and are prosodically dependent on preceding or following material. In Yurok, prosodic words are minimally CVC or CVV syllables (Blevins 2003a). Prosodic words including particles, are the

domain for a range of sound patterns in Yurok, including: intervocalic voicing of *h* to *g* = [ɣ], *h*-loss, *h* to *y* = [j] */i_*; degemination; sibilant palatalization; rhotic harmony; and neutralization of glottalized sonorants (Robins 1958:8-9; Blevins 2002). A generalization over all alternations involving /h/ is that phonetic /h/ in Yurok is limited to prosodic word-initial position (Garrett 2001). Examples of /h/-initial syntactic words and particles which are medial within the phonological word, and undergo sandhi, are shown in (5).

(5)   Some examples of /h/-sandhi

	h → g / V_V		h → y/ i_
'o ge'm	's/he said'	*kem 'i ye'm*	'again s/he said'
'o ge's	's/he thought'	*ki yegok'w*	's/he will go'
'o gesi'	'it was said'	*nini yegok'*	'I go around'

However, in sentences like (4a) and (4b) there is no intervocalic voicing to *g*, or realization as *y* after *i* respectively. In fact, in the entire corpus of *hes*-questions, there are no examples of the sandhi rules in (5) applying to the initial *h* in *hes*. This suggests that, with the exception noted below, *hes* is always initial within the phonological word.

The one exception to this generalization are sentences like those in (6), where a preceding particle *to'* 'and, then, so, although' is optionally proclitic to *hes*, with contraction of the sequence to *to's*. Note that the contraction in (6) is optional: there are sentences like (4h), where the same sequence of particles /to' hes/ is realized without contraction.

(6)   *To' + hes > To's* when optionally phrased as single phonological word

   a. *To's   trgrwrm-el-e'm?* [R:150]   X = Particle
      so.Q   speak-PASS-2SG
      Were you spoken to?

   b. *To's kit   heweche'm*? [YL:400]   X = Particle
      so.Q FUT.IM get.well.2SG
      Are you beginning to get better?

If there is clear evidence that second position *hes* begins a new phonological word itself, can we rule out *hes* as a proclitic to the following word? Slight optional pauses after *hes* in sentences like those in (4) suggest distinct phonological words. Another piece of evidence for a prosodic word boundary between *hes* and a following word is the absence of degemination in this environment. Consonant degemination is found across syntactic word boundaries, within the phonological word (Robins 1958: 8-9; Blevins 2002). However, degemination does not occur in sentences like *Muschen hes skewok*? 'Do you really want (it)?'.

In sum, though *hes* occurs in second position in sentences like (4), we can not attribute this position to the status of *hes* as a clitic. Although *hes* is an uninflecting closed-class particle in Yurok, it constitutes a minimal prosodic word, and shows no evidence of cliticization to preceding or following elements.

3.2 *Sentence-final hes*

Examples of the schema in (3ii) are given in (7). In all of these sentences, *hes* occurs in sentence-final position. An interesting property of verb-only sentences, as noted for (7a,b) is the ambiguity of positioning for *hes*: for these examples, *hes* can be analyzed as either in second position, or in final position.

(7)   Sentence-final *hes*

   a. *Chiweye'm   hes*? [JE:185]   (Ambiguous 2nd position/final)
       be.hungry.2SG Q
       Are you (sg.) hungry?

   b. *Che'lokse'm   hes*? [JE:185]   (Ambiguous 2nd position/final)
       be.thirsty.2SG Q
       Are you (sg.) thirsty?

   c. *Kich sega'ageye'm hes*? [R:150]
       PRF   be.rich.2SG   Q
       Are you (sg.) rich?

   d. *Ho   sku'y soo chkeye'm hes*? [TT:21]
       PST   good thus sleep.2SG Q
       Did you (sg.) sleep well?

   e. *Ho   lo   meregukweche'm hes*? [TT:19]
       PST   LOC wipe.2SG   Q
       Did you (sg.) wipe?

   f. *Mo   nimi ko'moyo'm   hes*? [R:150]
       PST   NEG hear.2SG   Q
       Don't you (sg.) hear it?

   g. *Skewok pa'ah   hes*? [TT:16]
       want.VN water   Q
       Do you want water?

   h. *Kich ta'anoy'hl, hese'm   hes*? [TT:6]   (Tag question)
       PRF   be.hot.3SG, think.2SG Q

It's hot weather, don't you think?

In sentences like those in (7), there is no sandhi of *h* to *g* when the word preceding *hes* ends in a vowel: *Tenoo **hes***? 'Is there a lot'. Sometimes a short pause may precede *hes* also, providing evidence that *hes* is not enclitic to the preceding word.

      An obvious question arises in comparing the sentences in (7) to those in (4). Is the element preceding *hes* in second position, focused, in comparison to sentences in (7), with no focused element? Comrie (1984) discusses polar question focus for Russian sentences with *-li*, and a similar analysis is presented by Valentine (2001) for Ojibwe. Unfortunately, I have been unable to answer this question conclusively. The speakers I work with find no significant differences in meaning between sentences like *Ke'l hes saa'agoche'm?* and *Ke'l saa'agoche'm hes?* 'Do you (sg.) speak Yurok?', though such judgments should not be taken as definitive, since differences in focus are notoriously difficult to elicit out of context.[6]

      There are rare examples in texts of the schema in (3ii), where *hes* constitutes the entire phrase. In the examples in (8), spirit beings are initiating dialogue with humans.

(8)   *hes*-only questions

  a. ***Hes***? *Kwesi hes wi'iit mehl nu nes*? [Ac:12]   (Spirit talking)
      Q?   So   Q   here with AND come.VN
      Indeed? Is that why you came here?

  b. ***Hes***? [SW1:10]   (Sky Girl talking)
      Q
      Is it so?

Since, otherwise, *hes* never occurs at the beginning of a phrase, these can be analyzed as instances of phrase-final *hes* similar to sentences in (7). In these examples, however, the element being questioned is not overt, and may include propositions in the preceding utterance or discourse.

      In sum, polar questions with *hes* have the distribution shown in (3). *Hes* appears to be an independent syntactic and phonological word in Yurok, with the exception of the optional contraction illustrated in (6). If this is so, the positioning of *hes* after the first syntactic word of the sentence (3i) cannot be attributed to the clitic status of *hes*. I suggest that the templates in (3i) and (3ii) are language-specific, and construction-specific, and serve to determine the distribution of *hes* in Yurok.[7]

4. Yurok information questions with *kus* 'where, when, how'

There are two basic kinds of information questions in Yurok. Those with question words beginning with *ti'*, an interrogative pronoun (*ti' now* 'who', *ti' ni sho* 'what'), and those with *kus*. Here I focus on *kus* questions, because *kus* forms a phono-morpho-syntactic minimal pair with *hes*. Both *hes* and *kus* have CVC syllable structure, and constitute minimal prosodic words; both

are uninflecting particles; and both are question words with syntactic distributions which could be viewed as overlaid on the basic sentential template in (1).[8] From this perspective then, differences in the distribution of these two particles are of interest, and must reflect language-specific syntactic differences, semantic differences, or both.

The distribution of *kus* is strictly initial in simple clauses, as schematized in (9), with examples in (10).[9] In (10a,b) *kus* constitutes an entire adverbial phrase of its own. In (10c,d) the phrase *kus noohl* means literally 'how long, how far'; and in (10e), a 'how' question, *kus* modifies the predicate *son* 'to be'.

(9)   Template for Yurok questions with *kus*

        [*Kus* …?] 1st position in simple sentence

(10)   *Kus* questions

   a. ***Kus* ho   tepoh**? [YL:327]
      Q   PAST be.hit
      Where was he hit?

   b. ***Kus*   tu ko 'o   tekto'y**? [X16:12]
      Q   and FUT LOC stand.3SG
      Where will it stand?

   c. ***Kus* noohl ki kem   nu   nuu'm   yo'hlkoh**? [YL:73]
      Q   then   FUT again AND come.COLL they
      When are they coming back?

   d. ***Kus*   noohl ki   kemeye'm**? [RHR:53]
      Q   then   FUT go.home.COLL
      When will we go home?

   e. ***Kus*   'we-son**? [YL:130]
      Q   3-to.be.VN
      How did it happen?

   f. **Ku*s*   tomowoh ha'aag**? [YL:317]
      Q   many.CLF rock
      How many rocks are there?

The phrase-initial position of *kus* could be interpreted as an instantiation of the sentence-initial sentential adverb slot in (1). However, as shown by sentences like (2e), sentential adverbs can occur phrase-finally in Yurok as well. If the distribution of *kus* was simply following that of other sentential adverbs, we would expect *kus* and *kus*-phrases sentence-finally, but these are

unattested, and judged as ungrammatical. We can conclude that a template like that in (9) must constitute part of the inventory of Yurok construction types. Let us now explore some of the implications of the general distributional statements in (3) and (9) for *hes* and *kus*.

5. Historical explanations for lexeme-specific word-order

In sections 3 and 4, we have seen that two phonologically similar particles constituting minimal prosodic words have distinct string-based distributions in Yurok which do not appear to follow from general phonological, syntactic, or semantic generalizations or constraints. However, is it not uncommon cross-linguistically for question particles to have fixed positions within the sentence. Here I briefly discuss two plausible historical developments which may have played a role in the divergent distributional patterns of *hes* and *kus* in Yurok.

Harris (1984:272) focuses on the diachrony of question structures, and asks generally how it comes about that question words come to have certain fixed positions. In this context, consider the positioning of *hes* either after the first syntactic word, or sentence-finally. Is it possible that only one of these positions was attested at some earlier stage, and that regular processes of syntactic change led to the other? I suggest that this may indeed have been the case. If we assume that the original position of *hes* was *second-position only*, the high frequency of simple V-*hes* questions in direct discourse may have given rise historically to an alternative interpretation of *hes* as a sentence-final particle. The sentence types leading to this reanalysis are those like (7a,b) where, in direct discourse, a bare verb, without preceding pre-verbal particles, is followed by *hes*. A language learner faced with high-frequency V-*hes* structures could interpret this as an instantiation of sentence-final *hes*, giving rise to innovative structures where *hes* is no longer in second position. At the same time, all other sentence types where *hes* is non-final will defy any analysis, except the original 'second-word' pattern. The proposed development is schematized in (11).

(11)   Historical development from second-position to second- or final-position *hes*

		Stage 1	Stage 2
a.	[X *hes* Y]	2nd position *hes*	
b.	[X *hes*]	2nd position *hes*	Final *hes*

The current database supports a development of this sort. With the exception of *hes*-only utterances (8), all pre-1950 Yurok *hes*-questions show *hes* in unambiguous 2nd position (11a), not final position (11b). *Hes*-final questions then could be a 20th century development, perhaps related to a rise in the frequency of direct discourse genres in post-contact everyday life where (11b) sentence types are more common.

If *hes* was originally limited to second position within the sentence, is there any way of understanding the distribution of *kus* as involving a shift from second to first position of the clause? Recall from 3.1, and footnote 5, that there are no initial [*ku hes*…] sentences in Yurok, where *ku* is a definite article, though such sequences are expected given the template in (3.i). One possible explanation for this gap is that *kus* is a historical contraction of **ku + hes*. In

general, CV forms in Yurok are subminimal prosodic words, and if initial, must be proclitic to the following element. More specifically, recall from (6) that a similar process of contraction is attested for the sequence *to' + hes*, though in this case, contraction is optional. Furthermore, sandhi processes involving *h*/zero alternations are found elsewhere in Yurok: *h*-initial nouns surface without *h* when pronominal prefixes are added (Robins 1958:26-27). On the phonological side, then, there is good reason to believe that an initial sequence *[ku hes…] could evolve into [kus…], with its internal composition no longer transparent. This phonological development is illustrated in (12).

(12)   Historical development of second-position *hes* to first position *kus*: phonological contraction

Stage 1	[*ku hes…*]	2nd position *hes*
Stage 2	[*ku hes…*] ~ [*kus...*] (< /ku + hes/)	2nd position *hes*
Stage 3	[*kus...*] (opaque)	1st position *kus*

However, assuming *hes* as a general yes-no question marker, what will account for the development of *kus* into a content question word with primary meanings 'where, when, how, why'? The answer to this question may lie in the synchronic multi-functionality of *ku* in Yurok. Though the two most common uses of *ku* are as a definite determiner, initial in the noun phrase, and as a future tense preverbal particle, there is another function which is illuminating in the present context. In some sentences, *ku* + pronominal prefix verb functions as a temporal clause, and precedes the main verb. Examples from Robin (1958:57) are given in (13). Given the clear temporal 'when'-function of initial *ku* in these clause types, it is not unreasonable to imagine a development where this particular *ku* in a *kus* (< *ku* + *hes*) question could evolve to mean 'when?'. Robins (1958:100) is explicit in assigning these instances of *ku* "no specific time reference," and notes that they occur as the first member of a group "with any other particle or groups of particles." Initial positioning is a necessary ingredient of the phonological development sketched in (12), while non-specific time reference might have contributed to the interpretation of **ku + hes > kus* as a general indefinite/interrogative adverbial.

(13)   Phrase-initial *ku* with temporal (subordinating) function

a. **ku**   kich ho 'u-ko'moyok' mesi   hego'l   [R:57]
    when PRF   PST 3-hear.SG.SUB then   go.3SG
    When he heard it, he went.

b. **ku**   wonik 'we-rohpek' ku 'wo'hlp'e'p 'u-meraa 'o   he'm   ku mewimor [R:57]
    when up   3-float.SG.SUB   the angelica   3-smoke LOC speak.3SG the old.man
    As the smoke from the angelica root drifted upwards the old man spoke.

The diachronic developments sketched in (11) and (12) for the history of Yurok suggest ways in which the fixed order of one lexical item can bifurcate in two directions: in (11), sentences with ambiguous placement of *hes* (second position **or** sentence-final) yield a split in its distribution; in

(12) phonologically induced contraction of proclitic *ku* with *hes*, yields a new particle *kus* with consistent first-position placement from the earlier second-position system. If such developments are generally plausible ones in the context of language change, then we should not be at all surprised to find lexeme-specific word order of the type exemplified by Yurok.

6. Summary

Synchronically, *hes* can occur in second position **or** phrase-finally, while *kus* must occur in sentence-initial position. Since *hes* and *kus* have the same syllable structure, and both constitute minimal words, the differences in their distribution do not appear to reflect prosodic differences. Both particles are non-inflecting with limited syntactic distribution and both particles can take phrasal or sentential scope. Differences in distribution, then do not appear related to category differences, or semantic differences, to the extent these can be assessed.

In Yurok, when *hes* occupies 2nd position ('Wackernagel's position') this is the position following the first **syntactic word**. With the exception of *to' + hes* contraction (6), *hes* is not an enclitic to the preceding word, nor proclitic to the following word. Any analysis where 'position after the first word' is associated with clitic status (e.g. Hock 1996) and linked to notions of prosodic word, then, must be reconsidered. Since syntactic words are arguable constructs in linguistic systems, there is no *a priori* reason why a rule of word placement cannot refer to the position following the first syntactic word.

Synchronically, the distribution of neither *hes* nor *kus* follows from the basic phrase structure of the language outlined in (1). There is no designated syntactic position after the second word of the clause, nor one which follows the last element. Though *kus* might be seen as occupying the sentence-initial adverbial position, a syntactic constraint must prevent it from occurring word-finally where the same set of adverbs are also attested. While second position, initial position and final position are not uncommon positions for question particles cross-linguistically, the convergence of these patterns in Yurok results in a minimal grammatical pair of the sort outlined in the introduction. Words of the same category and phonological type are associated with distinct and fixed distributional patterns within the clause. Since these distributional patterns differ, distinct word order patterns in Yurok must be attributed to the lexemes or constructions themselves. While one might view this aspect of Yurok grammar as exceptional, the historical developments sketched in section 5 illustrate just two of many imaginable pathways by which lexeme-specific word order can evolve.

In contrast to derivative approaches to word-order, the direct statement of language-specific construction-specific and lexeme-specific word order patterns has several advantages. It allows for simple descriptions of synchronic lexeme-specific distributions like those in (3) and (9) for Yurok; it accounts for historical developments like those in (11) and (12) on the basis of surface distributional patterns; and it is consistent with a growing body of knowledge suggesting that word-order patterns may be associated with specific construction types.

Notes

[2] It is nearly impossible to find semantic minimal pairs. The example discussed here comes close in that it involves two question particles which are both inanimate (or undefined for this feature), which both can have wide (lexical/clausal) or narrow (sentential) scope, and which, as question words, presumably have similar topic/focus/definiteness status.

[3] Unannotated Yurok data, and data coded [TT] = Blevins (2003b), comes from by own fieldwork with the speakers mentioned in footnote 1. Source abbreviations for other published and unpublished work are: [R],[RSS], [YL] = Robins (1958), RHR = spoken sentences by Florence Shaughnessy recorded by R. H. Robins in 1951; LA16-1 = 'The Mourning Dove', recited by Florence Shaughnessy, recorded by R. H. Robins in 1951; LA16-7 = 'The Young Man from Serper', recited by Florence Shaughnessy, recorded by R. H. Robins in 1951; GT = Trull (2004); JE = Exline (no date); LA138-1 = spoken sentences by Florence Shaughnessy, recorded by P. Proulx in 1980; [Ac] = Lame Billy: Gambling Medicine Formula (1902), A.L. Kroeber, notebook 41, pp.55-58; [SW1] = Susie of Wechpus: Menstruation Medicine (1902), A. L. Kroeber notebook 40, pp.61-19; [X16] = Captain Spott reciting 'The Obsidian Cliff at Rek'woy', recorded June 17, 1907, transcribed in A.L. Kroeber notebook 75, pp.1-8. In each case, source is followed by page or line number of the texts/catalogues/recordings. A bibliography of Yurok and catalogues of unpublished materials and recordings can be found at the Berkeley Yurok Project website at: http://linguistics.berkeley.edu/~yurok.
The transcription system used in this study is phonemic. Symbols have their approximate IPA values, with the following exceptions: kw = [kʷ], k'w = [k'ʷ], ch = [tʃ], ch' = [tʃ'], hl = [ɬ], s = [ʂ], sh = [ʃ], g = [ɣ], '= [ʔ], y = [j], r = [ɹ] (non-syllabic in the margin, syllabic in the nucleus) and long vowels are written as doubled letters. The orthography used here is the same at that used on the Berkeley Yurok Project website, and is used to facilitate comparison with material there

[4] Complex sentences with suboordinate clauses will not be discussed, since data on embedded questions is scarce.

[5] The one word class missing from initial position are the articles *ku* 'the', *k'i* 'the, this, that'. These sentences are judged as ungrammatical. One potential historical explanation for missing [*ku hes…*] sentences is suggested in section 5.

[6] Unfortunately, the Yurok text collection does not contain large numbers of polar questions. Where these do occur, they are often short question/answer pairs, which make assessment of potential focus constructions difficult.

[7] The distribution of *hes* described here differs slightly from that proposed by Robins (1958:139). He describes *hes* as appearing usually in second position, but as possible "anywhere, except initially." The differences in analysis could be due to Robins' conflation of simple and complex clauses with *hes*. The

only example of a complex *hes*-question in the current database is from Robins: *Sku'y soo ko'moyo'w hes ki ni 'ne-soo toh*? 'Do you all hear us talking well?'. In this example, [*ko'moyo'w ki…*] 'you hear…' is embedded under *sku'y* 'be good'. In the embedded clause, *hes* occurs in second position, but conflating this example with simple clauses might lead one to think *hes* could appear anywhere.

[8] It is also possible that *kus* and *kus*-initial phrases occupy the optional initial sentential adverb slot in (1), though see discussion below.

[9] Robins (1958:150) says that *kus* 'normally' is the "first word in the clause or sentence." His qualification seems to stem from two sentences in his database: *Kelew kus 'i k'e-me'wome'mow'm*? 'Where are you people from?' [R:54] and *Ke'l kus wi k'e-soo soch*? 'What do you mean?' [R:58]. In re-eliciting these sentences, I find a major pause after the initial pronouns, which appear to constitute independent focused phrases, preceding the main clause, which begins with *kus*.

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