DEFINING THE WORD IN NUUCHAHNULTH*

John Stonham & Winnie S.M. Yiu
University of Newcastle upon Tyne

This paper will investigate what determines wordhood in Nuuchahnulth and will provide a set of criteria for deciding on this, as well as tools to isolate the syntactic and phonological word, so as to facilitate discussion of word-related topics, including incorporation, clisis, and various other movement phenomena.

The three main aims of this paper are: 1) to clarify word divisions when analysing syntactic structure in the language; 2) to establish the physical boundaries within which the morphology operates; and 3) to facilitate the investigation of incorporation and other related operations by providing a clear set of criteria for isolating the target, that is, the word, and comparing this to the movement domain involved in other similar processes such as fronting.

1. Introduction

The data for this paper are drawn mainly from the field notes on Tsishaath collected by Edward Sapir from 1911-1922,[1] supplemented by material on the Kyuquot dialect from Rose (1981). Nuuchahnulth is highly polysynthetic with some 500 derivational suffixes, numerous inflectional and aspectual suffixes and a number of clitics. An example is provided in (1).[2]

(1) ʔa.ʔa.ʔaƛ.qimɬ.ḥt.imy.iɬ.m̓inḥ.ʔaaqƛ.eʔicuu
REP- SUF- two -UNITS-on the foot[R]-move-inside-PL-INTENT-2PL.IND
'You will carry two dollars on your feet'

---

* This research is the result of ongoing work arising from a five-year research project supported by the British Arts and Humanities Research Board (AHRB No. B/RG/AN7953/APN12323) to investigate the nature of Nuuchahnulth grammar.

1 The Sapir data (Sapir n.d., Sapir & Swadesh 1939, 1955) is especially important since the language was quite robust at that time, with mainly monolingual speakers.

2 Examples are organized in the following format: the first line represents the utterance with periods showing the morpheme breakdown, the second line provides glosses for each morpheme, and the third line gives a loose translation. Non-transparent abbreviations include: [R] reduplication-trigger, DISTR distributive reduplication, INDIR indirect, INF inferential, LOC locative base, MOM momentaneous aspect, PLdup plural reduplication, QT quotative, REF referential base, REL relative, REP repetitive reduplication, SUF suffix-triggered reduplication.

1.1. Word order

With respect to word order, according to Rose (1981:194), the vast majority of sentences are verb-initial, as demonstrated in (2) and (3).

(2) V S O

ƛ̓naacsa.aƛ̓ ɬuucsme.ʔi qʷaa.ʔak.ʔitq meʔiƛ̓qac.

see -NOW woman -DEF that which -POSS-3S.REL boy

‘ Now the woman saw what her boy was doing.’

(3) V O S

ḥaaḥuup.ši.ʔaƛ̓.weʔin quuʔas.ʔi ʔačy̓aa.mit.ʔi.

advising -MOM -NOW -3.QT person -DEF go for wood -PAST -DEF

‘The one who had come for wood advised the man.’

In (2), the subject immediately follows the verb, while in (3) it is the object that precedes the subject. The position of the verb in sentences such as these demonstrates the strong tendency towards head-initial structures in the language.

1.2. The issue

How does one know what constitutes a word rather than, for instance, two words, especially in a highly polysynthetic language such as Nuuchahnulth? While the status of word categories in the language has been examined previously, e.g., Jacobsen (1979), the appropriate definition of the word in Nuuchahnulth has yet to be fully explored, complicating the investigation of many issues in the syntax, for example, incorporation. In this paper we will discuss wordhood with respect to its phonological, morphological, and syntactic properties, in that order.

2. Phonological Criteria for Wordhood

In Nuuchahnulth, there are a number of phonological phenomena which provide criteria for defining the word. These include (i) primary stress assignment, (ii) variable length vowels, and (iii) a number of edge-sensitive phenomena. We will restrict our discussion here to the first two of these criteria.[3]

2.1. Primary stress assignment

The domain for stress assignment in Nuuchahnulth is the first foot of the word, as in (4).

3 See Stonham (in press) for discussion of some further edge-sensitive phenomena.

(4)	a. ḥíiy̓iiḥ	‘be after blood’
	b. qaḥnáaƙaƛ̓	‘someone now died’
	c. t̓áȟanak	‘have a child’
	d. wáamaaḥsuu	‘I was saying so’
	e. tánakmiičiʔaƛ̓	‘turned into mosquitoes’

In (4), the stress always appears on the first or second syllable.[4] In the cases with two heavy syllables present initially in the word as in (4a) and (4d), stress is assigned to the leftmost of the two, regardless of the presence of heavy syllables further on in the word, as in (4d). When the first syllable is light and the second is heavy, as in (4b), stress is assigned to the second. And when both of the first two syllables are light, again it is the leftmost within the word which is assigned the stress, even though there is a heavy syllable available further on beyond the first two syllables of the word, as in (4e). The rule can be described as in (5):

(5) ***Stress Rule***

Stress the leftmost heavy syllable of the first two syllables; if both syllables are light, stress the leftmost one.

We can employ this analysis of primary stress assignment to assist with the determination of (phonological) word boundaries in the language. Note the sentences below:

(6) ʔúu.simc̆.aƛ̓ máaʔak ʔíiḥtuup kʷ̓álsic.
REF -train for...[L] -NOW California whale whale Kwalisits
‘Kwalisits was training for California whales.’

(7) yáaɬ híɬ.ʔat sít̓a t̓úḥc̓it.at.ʔi qʷ̓áa ʔaḥʔáa.
there LOC -INAL tail head -INAL -DEF thus that way
‘There where his tail was was his head; it was like this.’

Sequences of words in the above sentences are each marked by a primary stress, clearly isolating the phonological words within each sentence. The stress assignment rule is therefore a useful test of (phonological) wordhood.

4 Note that a heavy syllable consists of either a branching nucleus or a coda containing a sonorant consonant. See Stonham (1999) for a more detailed account of Tsishaath Nuuchahnulth stress and syllable structure.

2.2. Variable-length vowels

The phenomenon of variable-length vowels, first described in Sapir & Swadesh (1939), may also be used as a criterion to identify the word, as the first foot of the word constitutes an important domain for this phenomenon.[5]

Nuuchahnulth has both long and short vowels phonemically, and in addition, phonologically variable-length vowels, as shown in (8). (8a) provides examples of minimal pairs of short/long root vowels, while (8b) provides examples of three-way contrastive length within suffixes.[6]

(8) a. yač ‘dogfish’ yaač ‘warped, bent out’
mut ‘cut off chunk’ muut ‘boat’
mit ‘twist yarn’ miit ‘ship’s mate’

b.

Short		***Variable-Length***		***Long***	
-ʾas	‘on ground’	-aˇs	‘daughter of …’	-ʾaas	‘at the wrist’
-i	‘quality of …’	-iˇ	DURATIVE	-ii	INCEP. ITER.
-ʔaɬ	‘aware of…’	-ʔaˇɬ	‘on a surface’	-ʔaaɬ	‘to come off’
-uɬ	‘place of …’	-uˇɬ	‘on the face’	-uuɬ	ITERATIVE

A variable-length vowel such as that in *-naˇkʷ* in (9), is long in the first two syllables of the word, as in (9a), but short when it is in the third or later syllable of the word as shown in (9b) & (c).[7]

(9) a. ʔunaak	b. čapacnak	c. ťáṅanak
REF -have…	canoe -have…	child -have
‘possess it’	‘have a canoe’	‘have a child’

While this distinction has been primarily discussed in terms of suffixes, Swadesh (1937) has suggested that it is also a property of certain roots, although they are not as obvious on the surface. The cases in (10) demonstrate this property with reduplication, in which the position of roots is shifted rightward with respect to the beginning of the word as shown in (10b).

5 See Stonham (1994) for a more detailed exposition of the phenomenon.

6 The symbol of a raised dot with a breve above it, /ˇ/, represents variable length.

7 It should be noted that this distinction of variable-length is a purely abstract one, surface realisations of vowels being either short or long phonetically.

(10) a. kic.aas.iƛ.ma ẏáaq yacaċus hii.hin.ačas.ʔi
log-on surface-MOM-3S.IND long ladder SUF- LOC -at margin[RL]-DEF
'A long stepladder was placed on the edge of the bank.'

b. ẏá.ẏa.ẏaq.ḥi.ʔi 'The long-limbed ones'
PLDUP- SUF- long -at the limbs[R] -DEF

(10b) shows that the first two syllables are part of the word after reduplication, since the variable-length vowel in *ẏaˇq* meaning 'long' becomes short, due to being pushed into the third syllable. A similar situation obtains in (11) where the root *yaˇkʷ* 'sore' shows both long and short alternants, depending on its position.

(11) a. yáak.ši.ʔaƛ̓.at 'became sore'
sore- mom -temp -pass

b. yá.ya.yak.suuḥ 'sore-eyed (DISTRIBUTIVE)'
DISTR- SUF- sore -at eye[R]

These examples with double reduplication confirm that variable-length may be a property of the root vowel, as well as the suffix. Furthermore, it is clear that such cases are sensitive to the left word boundary. These facts combine to provide us with another test of wordhood in Nuuchahnulth, since any morpheme with a variable-length vowel will emerge as long, when in the first foot of the word and as short in later syllables. This is illustrated by the examples in (12), where a sequence of words containing morphemes with variable-length vowels (*sayaˇ* 'far off', *ʔiˇ* DEF, and *-čiˇɬ* DAYS) indicates the word domains within the sentence.

(12) ... sayée.ʔi múu.čiiɬ híinisuuʔuk
far off -DEF four -DAYS go along sea-mammal fashion
'… heading for far away, for four days he went along sea-mammal fashion.'

In (12), the variable-length vowels in the first and second words is long, indicating that the left word boundaries for each are no more than one syllable away, and that there must be two separate words rather than a single word **sayéeʔimuučiiɬ*.

We have now shown two principal instances of phonological indicators of wordhood, (1) primary stress assignment, and (2) variable-length vowels, both of which may be employed in the determination of words in Nuuchahnulth.

3. Morphological Criteria for Wordhood

In addition to the phonological criteria established above, there are several morphological properties which may provide further indication of wordhood in Nuuchahnulth. These include (a) vowel lengthening processes, (b) suffix-triggered reduplication, and (c) full word reduplication.

3.1. Vowel lengthening processes

There is a morphologically-conditioned process that affects the quantity of the root vowel within the word, involving aspectual marking and requiring that the root vowel be long. Aspectual lengthening here refers to the lengthening of the root vowel in order to mark aspect, as in the examples of the graduative aspect (GRAD) in (13), where the roots are normally short but surface with long vowels, showing graduative aspect. If the root vowel is underlyingly long, there will be ambiguity on the surface.

(13) a. qáaḥsapšiƛ ‘He started to beat her.’
qaḥ -[L] -sap -šiƛ
kill -GRAD -CAUS -MOM

b. ʕíiḥšiƛ hitinqisḥ ‘She burst into tears down at the beach.’
ʕiḥak -[L] -šiƛ hita -inqis -(q)ḥ
cry -GRAD-MOM LOC -at beach -BEING

Again, this morphological process of vowel lengthening is able to locate the leftward boundary of a word, so as to know which vowel to lengthen.

3.2. Suffix-triggered reduplication

Reduplication is another phenomenon that occurs in Nuuchahnulth in a variety of patterns, in particular, there are suffixes which trigger reduplication.[8] This may constitute another good indicator of word boundaries since this process requires information about the left edge of the word in which it occurs in order to proceed. This is shown for the root *yaqʷ* RELATIVE BASE in example (14a), while (14b) shows the non-reduplicated situation. If there is an element in front of the reduplicated word, for example due to fronting, there will be no reduplication of that fronted element, as with *nuuk* ‘song’ in (14a), since it is outside the word that this

8 For a more detailed discussion of the same phenomenon in the closely related Ditidaht language, see Stonham (1994).

reduplication-triggering suffix is in. A case like that in (14c) where reduplication is triggered by a morpheme in the preceding word is therefore ruled out.

(14) a. nuu.kʷiiɬ.šiʔ.aƛ̓.ni nuuk ya.yaqʷ.iyaqḥ.ʔaaqƛ̓.qin.
sing -make...-MOM -NOW-1p.ABS song SUF- REL-sing[R]-INTENT-1p.REL
'We started practicing the song we would sing.'

b. hupt.aa.ʔaƛ̓.weʔin yaq.ʔiitq ẅač.uʔaɬ.
in hiding - NOW -3s. QT REL -3s. REL see -perceive
'The one who had seen him was in hiding.'

c. * nuu.kʷiiɬ.šiʔ.aƛ̓.ni [nu.nuuk yaqʷ.iyaqḥ.ʔaaqƛ̓.qin]

In these examples, the reduplication process, as triggered by a particular suffix, will identify the left edge of the word. Again this process is one of the many devices employed to identify word boundaries.

3.3. Word-word reduplication

Rose (1981:273) observes that in Kyuquot there is a special form of reduplication involving the entire word:

(15) There is, however, a multi-word construction which is productive and commonly indicates iterative aspect. This is 'word-word' reduplication, in which a full stem is repeated…. Inflection typically occurs in the leftmost stem. Stems involved in word-word reduplication can have implicit aspect or can be marked for any aspect except -'i·či(ƛ̓) INC(EPTIVE).

(16) a. ʔu·štaq ʔu·štaq He kept working and working on it
ʔuš-taq [L] some -work on ..

b. ẅiƛ̓a ẅiƛ̓a It rained repeatedly
ẅiƛ̓-(y)a· rain -CONT (Rose1981:274)

Clearly this kind of reduplication to indicate iteration (16) must be able to identify a word in the language, in order to determine what exactly to reduplicate in forming this aspectual distinction. Rose's further observation that "Inflection typically occurs in the leftmost stem" (Rose 1981:273) suggests that word boundaries occur between the forms, attesting to the syntactic nature of the process.

This concludes the discussion of morphological criteria, including (a) vowel lengthening processes, (b) suffix-triggered reduplication, and (c) word-word reduplication, which may be employed to isolate the word.

4. Syntactic Criteria for Wordhood

In addition to phonological and morphological criteria, Nuuchahnulth also provides syntactic properties which prove useful in establishing wordhood. Among these are (i) cliticisation, (ii) fronting, and (iii) incorporation.

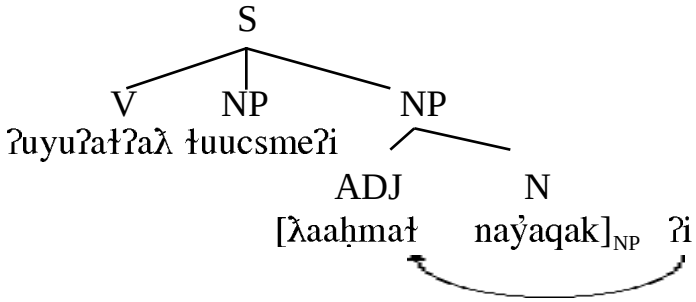
4.1. Cliticisation

Cliticisation is a crucial phenomenon in the identification of the word. There are several clitics in the language, *ʔaɬ* PL, *ƛaa* 'again, also', *ʔaaɬa* 'always', and the definite article, *ʔiˇ*, which only attach to the end of a word. In the case of *ʔiˇ*, it attaches to the end of the first word within the NP, except for elements within SPEC. This element, associated with the entire NP, is able to pick out the word, thereby demonstrating sensitivity to word boundaries, as shown in (17a), where *ʔiˇ* attaches to the numeral 'four', within the phrase 'the four persons'.

(17)a. haaťíi.šiʔ.aƛ [múu.***ʔii*** qúuʔas]NP 'The four people started to bathe'
start to bathe four -DEF person

b. ʔú.yuʔaɬ.ʔaƛ [ɬúucsme.ʔi]NP [ƛáaḥmaɬ.ʔi náy̓aqak]NP
REF -perceive -NOW woman -DEF newborn -DEF baby
' The woman saw the newborn baby'

c.



In (17b), *ʔiˇ* moves to the first member of the object noun phrase 'newborn baby', attaching to the preceding adjective 'newborn'. This behaviour of *ʔiˇ* is demonstrated in the phrase structure tree in (17c), where the clitic is attached to the first member of the phrase.

4.2. Fronting

Fronting is found in certain restricted contexts in Nuuchahnulth. This process demonstrates one of the few places where a word is moved ahead of the main verb. One of the most common contexts for fronting arises with the verb *ʔukɬaa* 'to

name', as shown in (18) where 'Nuuhthlim band', the object of the sentence, is fronted to the very beginning of the sentence.

(18) [nuuɬim.štaqimɬ]$_i$ ʔu.kɬaa.ni [t$_i$].
supernatural being -…group REF -naming -1PL.ABS
'Nuuhthlim band, we were called'

Rose (1981:109) provides further examples of fronting from Kyuquot. In both (19) and (20), the subjects, 'Frog' and 'Raccoon', are fronted ahead of the main verb for emphatic effect.

(19) waʕit ci·qci·qšƛiš 'the frog started to talk'
waʕit CVC- ciq -[L] -šiƛ -ʔiiš frog ITER- talk -GRAD -MOM -IND

(20) ƛapisim ṁaʔaqsɬint ʕuʕuʕu 'the raccoon had a chicken in his mouth'
ƛapisim ṁa -ʔaqsuɬ -int ʕuʕuʕu raccoon bite -at mouth -PAST chicken

(21) & (22) demonstrate that the fronted element is a full NP. In (21) the indirect object 'the one I met', a reduced relative clause, is fronted. In (22), the coordinated noun phrase 'Grizzly and Bear' is extracted from the subject position.

(21) [yaaqʷ.ɬ.q.s ḥamiip]$_i$ ʔu.yi.nt.iis puk [t$_i$]
which-do to..-REL-I meet it-give..-PAST-INDF-I book
'I gave a book to the one I met'

(22) [naanii.qs ʔuḥiiš cims.aqs]$_i$ caẏix.ii.č [t$_i$]
grizzly- female.. and bear- female.. berry-pick -INDF -INF
'Grizzly and Bear were berry-picking'

These examples demonstrate that an entire phrase may be fronted under the appropriate conditions.

4.3. Syntactic Incorporation

Incorporation is described by Baker (1988:1) as a process 'by which one semantically independent word comes to be "inside" another'. With a clearer definition of the notion of 'word' in hand, the status of the incorporated element in the process of incorporation can now be examined.

Yiu & Stonham (2000) and Yiu (2003) have demonstrated that incorporation in Nuuchahnulth involves the movement of the first element of the object phrase into the verb. Only single words may be incorporated as in (23a), although the

incorporated word may be morphologically complex, as in (23) ‘Uchucklesit-tribe’ and (24) ‘two-SONGS’.

In (23), the incorporated word ‘Uchucklesit-tribe’ is morphologically complex in that it consists of two morphemes, *ḥuučuqƛis* and *-ʾatḥ*, while (23b) shows a non-incorporating case involving the same word.

(23)a. ḥuučuqƛis.ʔatḥ.simc̓.apˀ.aƛ̓at ‘They had him do ritual for getting Uchuchlesits’
Uchucklesit -…tribe -train for…[L] -CAUS -NOW -PASS

b. ẏuuqʷaa.ʔaƛ.quu.weʔin ḥuučuqƛis.ʔatḥ ‘The Uchucklesits would do the same’
also -NOW -CND-3S.QT Uchucklesit -…tribe

In fact, the element extracted out of the object phrase must be a word in regards to its original site. Example (24a) demonstrates the incorporation of a numeral with its classifier which can only have originated within the object of the sentence, as supported by the agreement between the classifier and its noun.[9]

(24)a. ʔu.náak.sapˀ.aƛ.aḥ [ʔaƛ.p̓íiɬ.ʔi núuk]
REF -have..-MC-NOW-1S.IND two-SONGS-DEF song
‘I now give him the two songs.’

b. ʔaƛ.p̓íiɬ$_i$.nak.sapˀ.at [t$_i$ ʔastímx.ẏak] ‘He now gives him two lullabies.’
two-SONGS -have -MC-PASS lullaby -song

c. ʔaƛ.qímɬ$_i$.iip t̓íc̓iičaqyu [t$_i$ ʕáatuš] ‘Titichakyo got two deer.’
two -UNITS-get Titichakyo deer

In (24a), placement of stress and the variable length vowel show that both ‘have’ and ‘two–SONGS’ are independent words. ‘have’ forms an independent verb with *ʔu*,[10] a semantically and syntactically empty obligatory neutral base and the bound verb *-naˇkʷ* ‘have’ which is the sole element contributing to the semantics.

In the incorporating case (24b), the independent word ‘two-SONGS’, demonstrated by the attachment of the definite marking clitic *ʔiˇ* in (24a), moves inside the verb to form a larger word and yet remains syntactically active as it is chain co-indexed with its trace, by which it is therefore still part of the object phrase together with the stranded elements, showing the phrasal membership. This is further

9 See Yiu & Stonham (2002) for discussion of the use of classifiers in such constructions. The glosses UNITS, SONGS, DAYS, and LONG-OBJS all represent classifiers here.

10 For discussion of the status of ʔu, see Yiu (2003).

indicated by the agreement between the classifier and the noun in (24c), where 'two-UNITS' is incorporated this time.

The status of wordhood of the incorporated element is further exemplified by (25) and (26) which involve even more complex object phrases containing a numeral.

(25) ʔu.yii.ʔaaqƛ.aḥ [ḥayu.qimɬ mucmuḥaq]
REF -give… -INTENT-1S.IND ten -UNITS bearskin
'I'll give you ten bearskins'

(26) caqiic.qimɬ.ayii.ʔat.ma ƛapisim [t_i ʔiš sučˇa.qimɬ taanaa]
twenty-UNITS -give…-PASS-3S.IND raccoon and five -UNITS dollar
'Raccoon was given twenty-five dollars.'

The first part of the conjoined numeral phrase 'twenty-UNITS' in (26) is extracted to adjoin to the verb while remaining syntactically active, being chain co-indexed with its original position. Meanwhile, it is also semantically bound with the stranded element '… and five dollars', thus constituting an object phrase as a whole, 'twenty-five dollars', the direct argument theta-marked by the verb.

In addition, 'twenty-UNITS' is itself a word which is part of a numeral phrase, whose classifier agrees with the noun *taanaa* 'dollar'. It has to be associated with its original site so as to get the complete reading of the numeral object phrase 'twenty-five dollars', which in turn proves its individual word status.

In Nuuchahnulth, the noun phrase can never begin with *ʔiš* meaning 'and', otherwise ungrammaticality will result, as in (27).

(27) *ʔuuyii.ʔat.ma ƛapisim [ʔiš sučˇa.qimɬ taanaa]

Again, the stress pattern and the presence of the classifier twice suggest that the numeral object phrase in (26) is made up of three separate words.

The incorporated element is in fact a word by itself in the non-incorporating case, although when incorporation takes place, the two elements, the incorporated word and the verb, appear as part of one word on the surface.

Compared with (26), in (28), extraction of a member other than the first syntactic word out of the QP is not allowed. Therefore, the numeral 'five' cannot be extracted instead of 'twenty-UNITS'. Note that complex numerals are not considered as co-ordinated structure in Nuuchahnulth.[11]

11 For supporting arguments concerning coordinated complex numerals being the only exception to the coordinate structure constraint, see Rose (1981:302).

(28) *sučа.qimɬ$_i$.ayii.ʔat.ma λapisim [caqiic.qimɬ ʔiš t_i taanaa]$_{QP}$

five -…UNITS -give…-PASS-3S.IND raccoon twenty-UNITS and dollar
'Five was given to Raccoon twenty and dollars.'

In the case of co-ordinate structures, like that in (29), extraction of either element, 'bow' or 'arrow', is impossible due to the co-ordinate structure constraint, as further supported by Rose (1981:302). Therefore (29b) is ungrammatical.[12]

(29)a. ʔu.kʷiiɬ.šiλ.čiṗ.aƛ̓.is [muustati ʔiš c̓iiḥati.]
REF -make…-MOM -INDIR -NOW -2s>1.IMP bow and arrow
'Make me a bow and some arrows.'

b. *muustati.iɬ.šiλ.čiṗ.aƛ̓.is [t_i ʔiš c̓iiḥati]

bow -make…-MOM -INDIR -NOW -2s>1.IMP and arrow

(30) muu.c̓iq.ačiλ [t_i ʔeʔiiḥ.s.ʔi čaẏaapac]

four -LONG OBJS -go out to sea PLdup- big -in vessel-DEF canoe-PL-
'Then the four big canoes put out to sea.'

In (30), the definite clitic, being a separate syntactic word, *ʔiˇ* does not incorporate along with the incorporated element 'four-LONG OBJS'. It is thus left behind to attach to the first remaining available member of the object phrase for definite marking of the whole object phrase, i.e. 'the big vessels'.

Again, incorporation contrasts directly with the process of fronting in the language, in that, unlike the case of fronting, incorporation of a free standing word into the verb, results in a single verbal complex (31b).

(31)a. hamuut.i$_i$ haʔuk.š.aʔt.int [t_i] 'That bone got eaten'
bone -DEF eat -MOM-PASS-PAST (Rose 1981:110)

b. ha.hamut.naq.ʔi qu.quuc̓.iḥte.ʔi
PLdup- bone -eat…-DEF PLdup- hard -at nose -DEF
'The ones who eat bones, the ones with hard-noses!'

(31a) provides a case of fronting, where the whole NP 'the bone' with the definite marking ʔiˇ, is moved to the front while in (35b), the word 'bone' is moved into the verb to form a larger verbal complex, to which *ʔiˇ* is later attached, to form a nominalization. The different properties of these two cases are:

12 But see Wojdak (2003) for an alternative view of the facts.

(32)	**Fronted element**	**Incorporated element**
Cliticisation (ʔiˇ):	Yes	No
Primary stress domain:	Each element stressed	Entire verbal complex
Variable vowel length:	Word-based	In combination with V
Extracted element:	Phrase	Single syntactic word
Stranding:	No	Yes
Extraction site:	Subject/Object	Object/Subject (intr)

5. Conclusion

In summary, there are a number of areas where the notion of the word is important in Nuuchahnulth grammar, itemised in the table in (33).

(33) **Phonology**	**Morphology**	**Syntax**
Variable-length vowels	Vowel lengthening [GRD]	Cliticisation
Primary stress	Suffix-triggered reduplication	Fronting
	Word-Word reduplication	Incorporation

With the heuristics provided above it should now be possible to isolate the word on phonological, morphological, or syntactic criteria, or to employ a combination of these to arrive at a clear determination of the word in Nuuchahnulth.

References

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing.* Chicago: Univ. of Chicago Press. 543 pp.

Jacobsen, W.H. (Jr.). 1979. 'Noun and Verb in Nootkan.' In B. Efrat (ed.) *The Victoria Conference on Northwestern Languages*, Victoria, B.C.: B.C. Provincial Museum, pp. 83-155.

Rose, Suzanne. 1981. *Kyuquot Grammar.* U. of Victoria Ph.D. thesis.

Sapir, Edward. n.d. Fieldnotes on Nootka. In the Boas Collection of the American Philosophical Society, item no. [W2a.18].

—— & Morris Swadesh. 1939. *Nootka Texts, Tales and Ethnological Narratives.* Philadelphia & Baltimore, Md.: Linguistic Society of America. 334 pp.

——. 1955. *Native Accounts of Nootka Ethnography.* Bloomington: Indiana U. Research Center in Anthropology, Folklore & Linguistics. 457 pp.

Stonham, John. 1994. *Combinatorial Morphology.* Amsterdam: John Benjamins, 206 pp.

——. 1999. *Aspects of Tsishaath Nootka Phonetics & Phonology.* Munich: LINCOM Europa. xii, 155 pp.

——. in press. 'Level ordering in Nootka.' In K. Hanson & S. Inkelas (eds), *The Nature of the Word: Essays in honor of Paul Kiparsky.* Cambridge MA: MIT Press.

Swadesh, Morris. [1937]. 'Nootka Phonology and Morphology.' Unpublished ms. no. [30 (W2a.10)]. Philadelphia: Boas Collection, American Philosophical Society.

Wojdak, Rachel. 2003. 'PF Incorporation: evidence from Wakashan.' GLOW 2003 (Lund).

Yiu, Winnie S.M. 2003. 'When Minimalism meets Incorporation.' *Cognitive Science*, vol. 1, no.1, pp. 51-69.

—— & J. Stonham. 2000. 'Good-stocked with mussels: Incorporation on the edge.' Annual Meeting of the Linguistic Society of America, Chicago, Jan. 8, 2000.

——. 2002.'The Nature of Nuuchahnulth Classifiers.' C. Gillon, N. Sawai, & R. Wojdak (eds), *UBCWPL 9: Papers of the 37th International Conference on Salish and Neighbouring Languages*. Vancouver: Department of Linguistics, UBC.