The Phonological Aspect of the Navajo Conjunct Verb System
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(1) (a) (Shí) siláo ch'íshidiníłdązh.
'The policeman snatched me out.'

(b)

I	IV	V	VI	VII	VIII	IX	X
ch'í-	shi-	Ø-	di-	ní-	Ø-	ł-	-dązh
out	1sg		th	perf	3	voice	jerk

(c)

ch'í-	I	'adverb, out horizontally'
shi-	IV	'1sg, object'
Ø-	V	'3, subject'
di-	VI	'thematic prefix relating to arms and legs'
ní-	VII	'n-Perfective'
Ø-	VIII	'3, subject'
ł-	IX	'voice, transitive'
-dązh	X	'verb stem, perfective; move in jerky manner'

(2) Disjunct Zone (morpheme structure CV, with full range of vowels):
  I   Adverbial and Thematic Prefixes (Preverbs)
  II   ná-Iterative Mode
  III da-Distributive Plural

Conjunct Zone (morpheme structure C, vowels by epenthesis):
  IV   Direct Object Pronouns
  V   Deictic Subject
  VI   Adverbial, Thematic, and Aspectival (Qualifiers, Aspect)
  VII   Modal-Aspectival (Situation Aspect, Viewpoint Aspect)
  VIII Subject Pronouns (generally portmanteau with VII).
  IX   Classifier (Voice)
  X   Stem (Root and Verbal Nucleus)

(3)

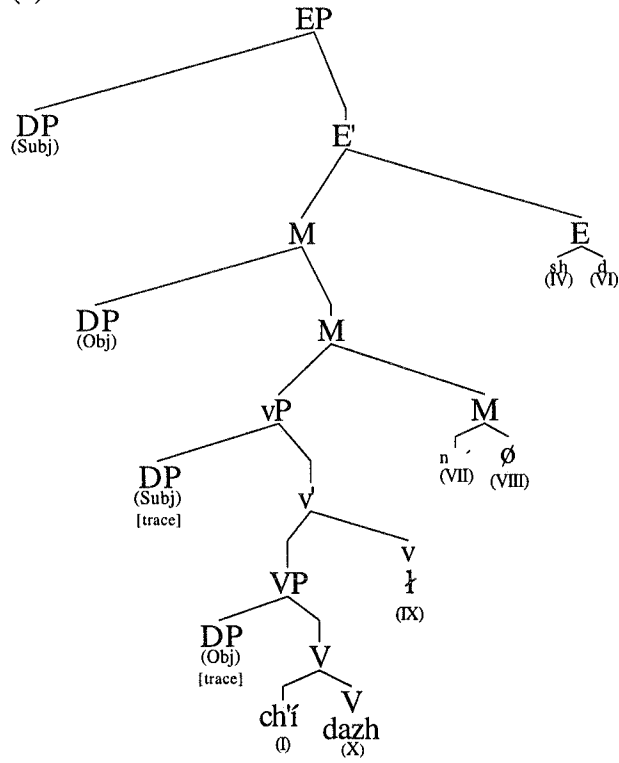| I	IV	V	VI	VII	VIII	IX	X
ch'í-	shi-	Ø-	di-	ní-	Ø-	ł-	-dązh
out	1sg		th	perf	3	voice	"jerk"
			E	M		v	STEM

(4) Relevant Structural Facts.
  (a) Preverbs (ch'í-, yá-, ha- etc) form a lexical unit with the Verb Stem: ch'í#dązh
  'extract by jerking'; yá#ł-ti' 'speak'; ha#zhil 'start to breathe.'
  (b) VI selects VII and X: d-s-l-nish 'start working.'
  (c) VII selects X: d-Ø-l-níísh, d-s-l-nish.
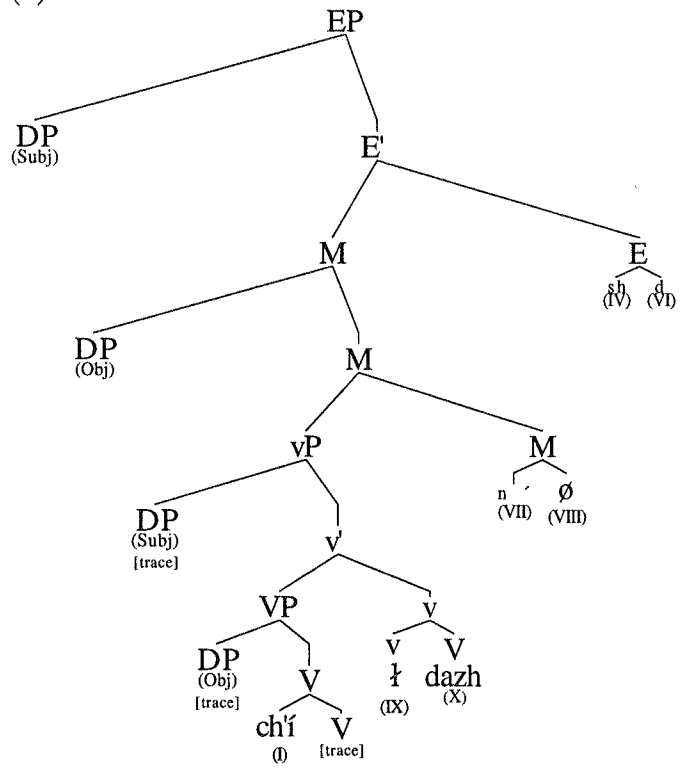 (d) IX selects X: (-d-)dlą́ą́'; -l-ghał.

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(d) VII and VIII form a portmanteau
(e) VI + IV = E(edge of Conjunct); VII + VIII = M(ode)

(5)   The Head Movement (V-Raising) Alternative.

(a)

```
                          EP
                       /      \
                      /        \
                DP              E'
               (Subj)        /    \
                            /      \
                          M         E
                        /   \      / \
                       /     \   sh   d
                   DP         M  (IV) (VI)
                  (Obj)     /   \
                           /     \
                         vP       M
                        /  \     / \
                       /    \   n   Ø
                   DP        v' (VII)(VIII)
                  (Subj)    /  \
                  [trace]  /    \
                         VP      v
                        /  \     ł
                       /    \   (IX)
                   DP        V
                  (Obj)     / \
                  [trace]  /   \
                        ch'í    V
                         (I)   dazh
                               (X)
```

(b)

EP
DP (Subj)
E'
M
DP (Obj)
M
vP
DP (Subj) [trace]
v'
VP
DP (Obj) [trace]
V
ch'í (I)
V [trace]
v
v ł (IX)
V dazh (X)
M
n (VII)
ø (VIII)
E
sh (IV)
d (VI)

(c)

EP
DP (Subj)
E'
M
DP (Obj)
M
vP
DP (Subj) [trace]
v'
VP
DP (Obj) [trace]
V
ch'í (I)
V [trace]
v [trace]
M
M
n (VII)
ø (VIII)
v
v ł (IX)
V dazh (X)
E
sh (IV)
d (VI)

(d)

EP

DP (Subj)

E'

M

E

DP (Obj)

M

E

M

vP

M [trace]

sh (IV) E (VI)

M

v

DP (Subj) [trace]

v'

n (VII) ʼ ø (VIII)

v V
ł dazh
(IX) (X)

VP

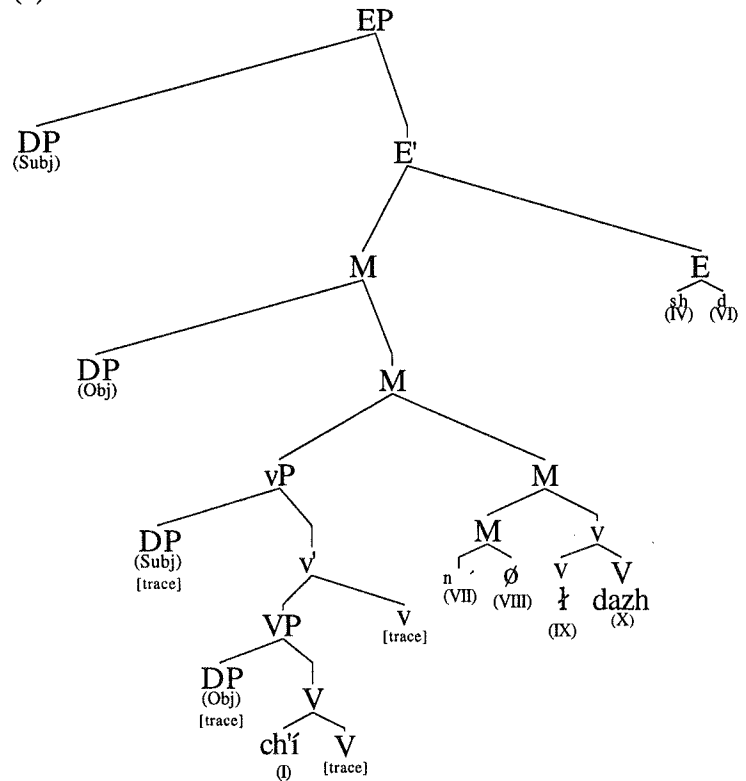V [trace]

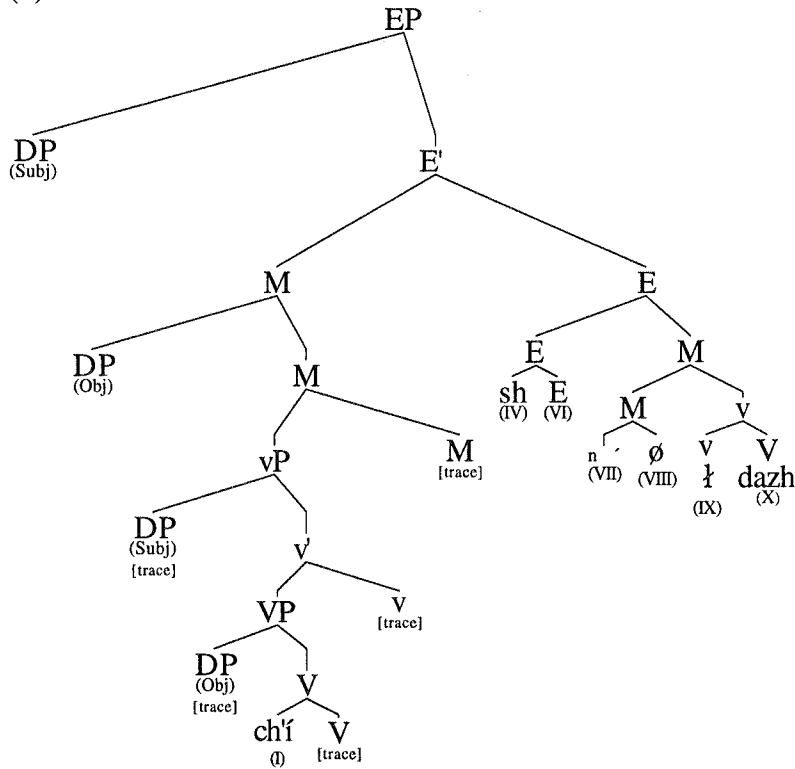DP (Obj) [trace]

V

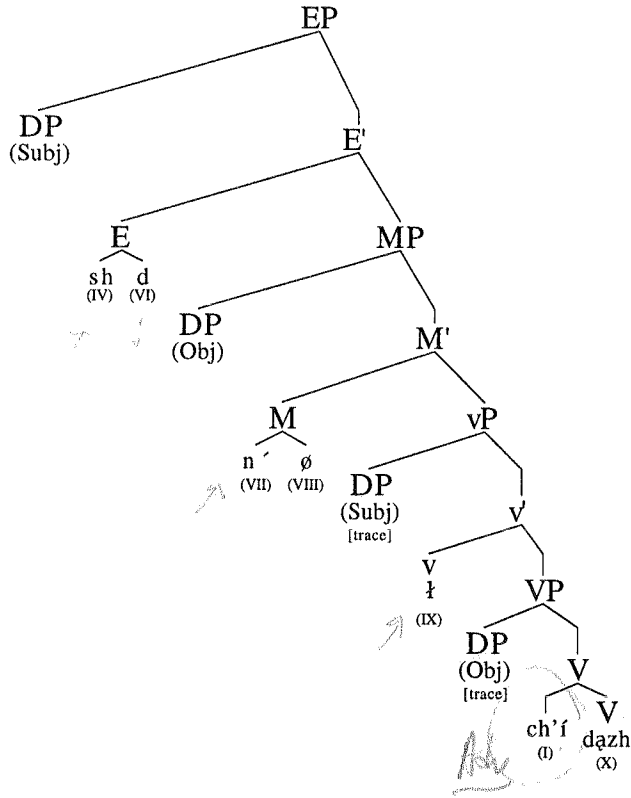chʼí (I) V [trace]

(6)   Agreement:
        An argument agrees with the nearest Agr-bearing head which governs   it.

(7)   A Relevant Phonological Fact (McDonough, 2000):
        The Conjunct Zone is a Bipartite Structure. The elements of the Conjunct Zone are
        consonantal; vowels are secondary, by epenthesis. There is a target in composing
        the Conjunct Zone which is at least the disyllable CV(C)CV(C).

        (a)   VII-VIII IX X
                sh-   Ø -cha   >   yishcha
                'I cry.'

        (b)   I   VI VII-VIII IX X
                yá- d- w-   ł- -ti'   >   yádoołti'
                '(S)he will speak.'

        (c)   I   VII-VIII IX X
                na- sh-   Ø -á   >   naashá
                'I walk around.'

        (d)   I   VII-VIII   IX X   > nanilnish
                na-   n-   l- -nish
                'You are working.'

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(8) The Head-Initial Alternative:

EP
├── DP (Subj)
└── E'
    ├── E
    │   ├── sh (IV)
    │   └── d (VI)
    └── MP
        ├── DP (Obj)
        └── M'
            ├── M
            │   ├── n (VII)
            │   └── ø (VIII)
            └── vP
                ├── DP (Subj) [trace]
                └── v'
                    ├── v
                    │   └── ł (IX)
                    └── VP
                        ├── DP (Obj) [trace]
                        └── V
                            ├── ch'í (I)
                            └── dazh (X)

(9) Assembling the Conjunct System (Phonology):
(a) Consider the extended projection of the Verb (V, v, M, E). Assume that there is a plane on which only the heads are visible in that projection, Specifiers, Complements, and Adjuncts being invisible there.
(b) Group each head (closest first) with the Verb, forming syllables in accordance with the principle of the Navajo Bipartite Structure (McDonough, 2000).
(c) Spell out the Verb thus assembled (head-final).
(d) Compose the full word by cliticizing Preverbs, Quantifiers, and Particles to the Conjunct Structure, following the ordering determined by the syntax.

łdazh

níłdazh   (epenthesis, tone assignment, coda)

diníłdazh   (epenthesis)

shidiníłdazh   (epenthesis)

ch'íshidiníłdazh   (proclisis of Preverb)

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(10)   The Inchoative (transitive base):

   (a)   Yishhozh.
          'I tickle him.'

IV	VII	VIII	IX	X
Ø-	Ø-	sh-	ł-	-ghozh

   (b)   Bi'niishhóósh.
          'I start to tickle him.'

IV	V-VI	VII	VIII	IX	X
bi-	'nii-	Ø-	sh-	ł-	-ghóósh

(11)   The Inchoative (unergative base):

   (a)   'Ashhosh.
          'I sleep.'

IV	VII	VIII	IX	X
'-	Ø-	sh-	ł-	-ghosh

   (b)   'I'niishháásh.
          'I start to sleep.'

IV	V-VI	VII	VIII	IX	X
'-	'nii-	Ø-	sh-	ł-	-gháásh

(12)   The Inchoative (unaccusative base):

   (a)   Yishdlóóh.
          'I get cold.'

VII	VIII	IX	X
Ø-	sh-	d-	-dlóóh

   (b)   Shi'niidlóóh.
          'I start to get cold.'

IV	V-VI	VII	VIII	IX	X
shi-	'nii-	Ø-	—	d-	-dlóóh

(13)   Yishdlóóh. 'I get cold, freeze to death.'

```
                        MP
              ┌──────────┘
          DP              M'
        (Subj)      ┌─────┘──────┐
         (shf)      M            vP
                  ┌─┘─┐      ┌────┘
                  Ø  sh     DP         v'
                          (Subj)   ┌───┘───┐
                           (shf)   v        V
                          [trace]  d    ┌───┘──┐
                                       DP      V
                                     [trace]  dlóóh
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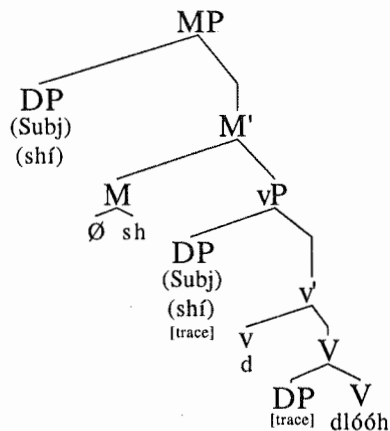
(14)   Eccentric Agreement:
         Shi'niidlóóh. 'I start to get cold.'

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                        EP
              ┌──────────┘
          DP              E'
        (Subj)      ┌─────┘──────┐
         (shf)      E            MP
                  ┌─┘─┐      ┌────┘────┐
                 sh  'nii    M         vP
                 (IV) (VI) ┌─┘─┐    ┌───┘
                           Ø   —   DP         v'
                                 (Subj)   ┌───┘───┐
                                  (shf)   v        V
                                 [trace]  d    ┌───┘──┐
                                             DP      V
                                           [trace]  dlóóh
```
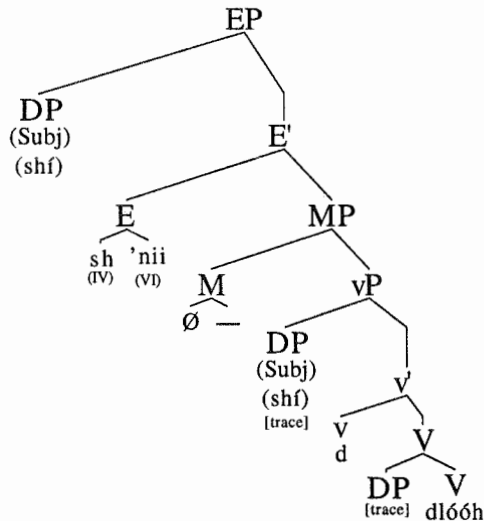
(15)   Questions about Object Person-Number Morphology:
         (a)   Why is this morphology agglutinative?
         (b)   Why is it left-most in the Conjunct System?
         (c)   Why is there no constant host for Object morphology, as there is
         for Subject morphology??

(16)   The Pronominal Argument Theory:
         Person-Number morphology in the Navajo verb word has the status of full
         argument (Subject, Object, etc.); it is not "agreement." N-headed nominal
         projections of the type DP, NP are not arguments but, rather, adjuncts linked to the
         true arguments (the way a dislocated expression is "linked" to a resumptive
         pronoun). The category of the true arguments is D, an X-zero and X-max type.

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(17) Ellavina Tsosie Perkins' discovery (1976), the Condition C Problem:
    (a)   Jį́įdą́ą́' shizhé'é bįįh yiyiisxín-ę́ę néidooł'ah.
         'My father will butcher the deer he killed (earlier) today.'
    (b)   [ec]$_i$ [today my father$_i$ deer it-he-killed]-RL it-he-will-butcher
    (c)   my father, deer, [today it-he-killed]-RL it-he-will-butcher

(18) Mary Willie's observation:
    (a)   *Shí ni ni-sh-hozh.
         I you 2sg-1sg-tickle
         'I tickle you.'
    (b)   Shí ni-sh-hozh.   'Í tickle you.'
         Ni ni-sh-hozh. 'Yóu I tickle.'

(19) Dative Construction:
    'Ashkii 'at'ééd 'ałk'ésdisí yeiní'ą́.   (< y-aa yi-ní-'ą́)
    boy girl candy her-to-it-gave
    'The boy gave the candy to the girl.'

(20)

I	IV	V	VI	VII	VIII	IX	X
ch'í-	shi-	Ø-	di-	ní-	Ø-	ł-	-dązh
out	1sg		th	perf	3	voice	jerk

8
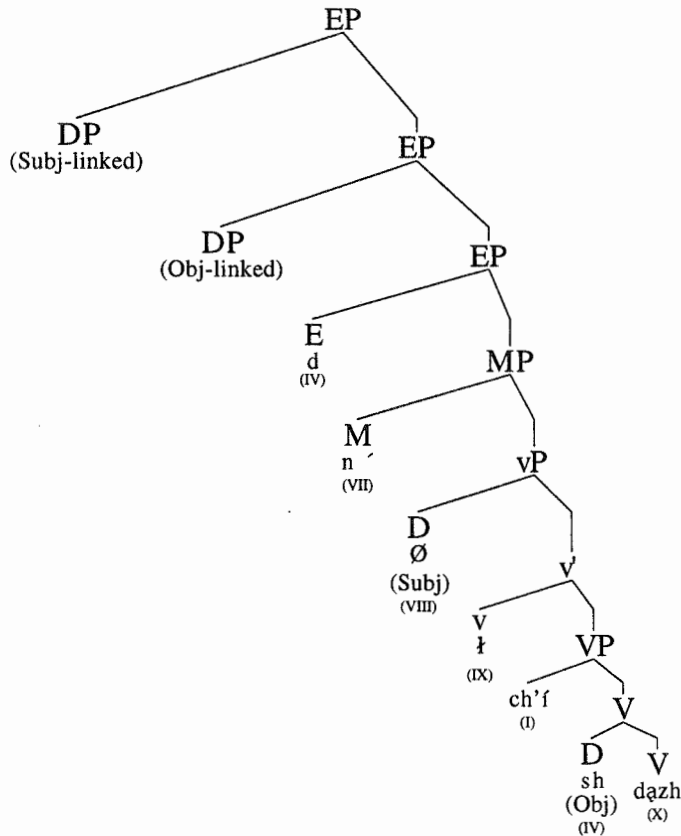
(21) Spellout (informal):
(a) Functional heads take their complements on the right; Lexical heads take their complements on the right.
(b) M and D (subject) fuse, forming a portmanteau-like unit.
(c) Assemble the conjunct system by attracting successively each head onto the verb.

(22) Third Person:
Third person subject is regularly Ø. Third person object (of verb) is also Ø if the subject is 1st, 2nd, 4th, or indefinite person. Otherwise a third person object is overt, i.e., if: (i) the subject is third person; (ii) the third person object in question is the object of postposition (P).

(23) The Object of a verb in the Inchoative aspect (-'nii-) is assigned an oblique case P):

(a)   Binááda'niilghal. (Y&M87:187)
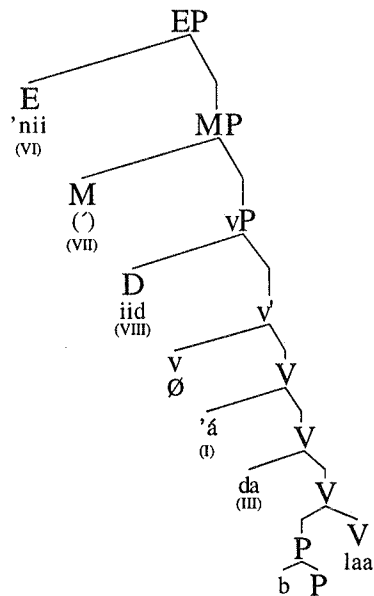   'We started to eat some more if it (meat).'

(b)

IV/I	Ic	III	VI	VII	VIII	IX	X
bi-	náá-	da-	'nii-	(´)-	iid-	d-ł-	ghal
it	more	pl	Inch	perf	1nsg	voice	eat-meat

(c)
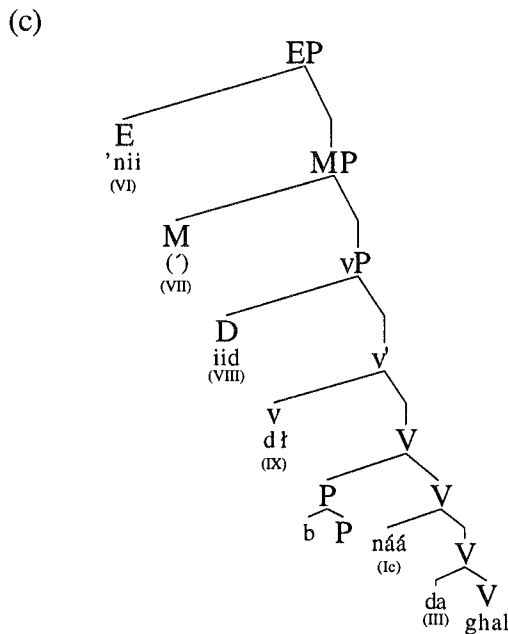
(24)   (a)   'Ádabi'niilyaa. (Y&M87:187)
               'We started to make it.'

      (b)

I	III	IV	VI	VII	VIII	IX	X
'á-	da-	bi-	'nii	(´)-	iid-	Ø-	-laa
thus	pl	it	Inch	perf	1nsg	voice	make

      (c)

(25)   (a)

VII	VIII	IX	X
Ø	sh	d	dlóóh
impf	1sg	voice	get-cold

      (b)

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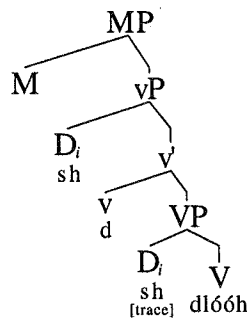
(24) (a)   Ia   VI   VII   IX   X
      sh-P   'nii   Ø   d   dlóóh
             1sg-P Inch   impf   voice get-cold

(b)
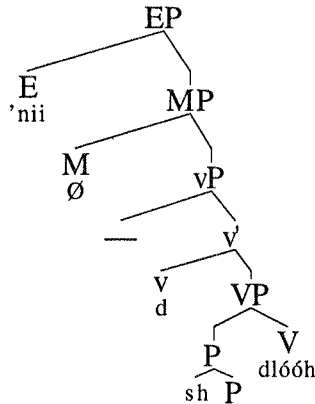
References

McDonough, Joyce. 2000. "On a bipartite model of the Athabaskan verb." Theodore B. Fernald and Paul R. Platero (eds.), *The Athabaskan Languages: Perspectives on a Native American Language Family*. Oxford: Oxford University Press.

Rice, Keren. 2000. *Morpheme Order and Semantic Scope: Word Formation in the Athabaskan Verb*. Cambridge: Cambridge University Press.

Young, Robert, and William Morgan. 1987. *The Navajo Language*. Albuquerque: University of New Mexico Press.

ABSTRACT
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The Navajo verb word can contain up to 25 prefixes, each occuping a relatively fixed relative position within the word, suggesting that the structure is templatic. However, when the pieces of the Navajo verb are related to elements external to the word itself, the template model crumbles, and problems of an entirely different sort present themselves. For example, proclitic (preverb) elements at the absolute front of the verb word turn out to form lexical units with the verb stem, at the absolute rear of the verb, in a pattern of "discontinuous constitutents" reminiscent of Dutch verb particle constructions used by Jan Coster to argue for the SOV syntax of that language. Initial attempts to deal with this astect of Navajo employed a hierarchical structure based on the prevailing head-final structure of the language. In this model, the surface ordering of elements was achieved by means of a series of movement rules of the type called Head Movement and subject to the constraints on that process (Travis 1984). While this had the positive characteristic that it related word-internal morphology to the outer syntax and it achieved in a technical sense the required

surface ordering of elements, it was never morphophonologically real. The parts of the so-called Conjunct Zone (Kari 1985) did not cohere, i.e., they did not appear to be set up in a manner which would permit spell-out in the simple manner which appeared to apply, involving epenthesis alone. A simple shift in perspective, seeing Navajo as head-medial, as least in so far as the verb is concerned, allows us to eliminate Head Movement entirely and to assemble the elements of the Conjunct Zone into a structure which correctly represents the ordering of both Conjunct and Disjunct morphemes, maintaining the necessary internal and external syntactic relations. The secret is in the phonology of the Conjunct Zone, assembled in accordance with the Bipartite Syllabic Principle of McDonough (2000).