Words and Spans

Peter Svenonius
CASTL, University of Tromsø
The Arctic University of Norway

Roots IV
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(1) We need a syntactic theory of words
(1) We need a syntactic theory of words
(2) Why?
(1) We need a syntactic theory of words
(2) Why?
(3) Because phonologists are counting on us!
Words: Higher-level prosody is constrained by syntactic organization

(4) x
   x
   x x x x
   philosophy dissertation

(5) x
   x
   x x x
   philosophy dissertation
Words: Higher-level prosody is constrained by syntactic organization

(6) Higher-level means above the foot, i.e. starting with the word

(7) \[
\begin{array}{cccccc}
\omega & \phi \\
\Sigma & \Sigma & \Sigma & \Sigma & \Sigma \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma
\end{array}
\]

phi lo so phi cal dis ser ta tion

(8) \[
\begin{array}{cccccc}
\phi \\
\omega \\
\Sigma & \Sigma & \Sigma \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma
\end{array}
\]

phi lo so phy dis ser ta tion
Words: Higher-level prosody is constrained by syntactic organization

(9) Higher-level means above the foot, i.e. starting with the word

(10) \[
\begin{array}{cccccccc}
\omega & \phi \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma \\
\Sigma & \Sigma & \Sigma & \Sigma & \Sigma \\
\end{array}
\]
phi lo so phi cal dis ser ta tion

(11) \[
\begin{array}{cccccccc}
\phi \\
\omega & \omega \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma \\
\Sigma & \Sigma & \Sigma & \Sigma \\
\end{array}
\]
phi lo so phy dis ser ta tion
Words: Higher-level prosody is constrained by syntactic organization

(12) Adjunction at different levels

(13) \[ \phi \]

\[
\begin{array}{cccccc}
\omega & \omega \\
\Sigma & \Sigma & \Sigma & \Sigma \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma \\
\text{phi lo so phi cal dis ser ta tion} \\
\end{array}
\]

(14) \[ \phi \]

\[
\begin{array}{cccccc}
\omega & \omega \\
\omega & \omega \\
\Sigma & \Sigma & \Sigma \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma \\
\text{phi lo so phy dis ser ta tion} \\
\end{array}
\]
Words: Syllables and feet are phonology-internal

(15) Central Alaskan Yupik, Woodbury (1987): Iambic feet built left-to-right
a. pi-ssú:-tu-llí:ni-lú:ni
   \textit{thing-hunt-always-apparently-APP.3REFL}
   ‘S/he apparently always hunted [things]’
b. mallú:-ssu-tú:-lliní:-luni
   \textit{beached.whale-hunt-always-apparently-APP.3REFL}
   ‘S/he apparently always hunted beached whales’
(16) Central Alaskan Yupik, Woodbury (1987): Iambic feet built left-to-right

a. \((\text{pi-ssú:})-(\text{tu-llí:})(\text{ni-lún})\)ni
\((\text{thing-hunt})-(\text{always-appa})(\text{rently-APP}).3\text{REFL}\)
‘S/he apparently always hunted [things]’

b. \((\text{mallú:})-(\text{ssu-tú:})(\text{líní:})\)luni
\((\text{beached.whale})-(\text{hunt-always})-(\text{apparently})\)-\text{APP}.3\text{REFL}\)
‘S/he apparently always hunted beached whales’
Words: Syllables and feet are phonology-internal

(16) Central Alaskan Yupik, Woodbury (1987): Iambic feet built left-to-right

a. (pi-ssú:)-(tu-llí:)(ni-lú:ni
   (thing-hunt)-(always-appa)(rently-APP).3REFL
   ‘S/he apparently always hunted [things]’

b. (mallú:)-(ssu-tú:)-(lliní:)-luni
   (beached.whale)-(hunt-always)-(apparently)-APP.3REFL
   ‘S/he apparently always hunted beached whales’

(17) No language determines word boundaries this way, ignoring syntactically-established morpheme boundaries
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal
(19) Words and phrases have a phonology-external source
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source

a. The bounds of the phonological word (in the input) are determined by syntax
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source

a. The bounds of the phonological word (in the input) are determined by syntax

b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source
   a. The bounds of the phonological word (in the input) are determined by syntax
   b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax

(20) Phonological computations may erase or move word boundaries
Words and phrases have a phonology-external source

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(19) Words and phrases have a phonology-external source

a. The bounds of the phonological word (in the input) are determined by syntax

b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax

(20) Phonological computations may erase or move word boundaries

a. $[\omega \text{Matt}]$ ’z here
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source
   a. The bounds of the phonological word (in the input) are determined by syntax
   b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax

(20) Phonological computations may erase or move word boundaries
   a. $[^{\omega} \text{Matt}]$ ’z here
   b. $[^{\omega} \text{Matt’s}]$ here
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source
   a. The bounds of the phonological word (in the input) are determined by syntax
   b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax

(20) Phonological computations may erase or move word boundaries
   a. [ω Matt] ’z here
   b. [ω Matt’s] here

(21) a. P D [ω noun]
Words and phrases have a phonology-external source

(18) Syllables and feet are phonology-internal

(19) Words and phrases have a phonology-external source
a. The bounds of the phonological word (in the input) are determined by syntax
b. The difference between affixes, clitics (Selkirk’s affixal clitics) and free function words (Selkirk’s external clitics) is determined in large part by syntax

(20) Phonological computations may erase or move word boundaries
a. [ω Matt] ’z here
b. [ω Matt’s] here

(21) a. P D [ω noun]
b. [ω P D ] [ω noun]
(22) A syntactic theory of words should explain
A. The distribution of Phonological Words
A syntactic theory of words should explain

A. The distribution of Phonological Words
   (but also the syntactic properties which correlate with phonological word status, such as)
(22) A syntactic theory of words should explain
A. The distribution of Phonological Words
   (but also the syntactic properties which correlate with
    phonological word status, such as)
B. Head movement
A syntactic theory of words should explain

A. The distribution of Phonological Words
   (but also the syntactic properties which correlate with phonological word status, such as)
B. Head movement
C. Contiguity and adjunction sites
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   (but also the syntactic properties which correlate with
   phonological word status, such as)
B. Head movement
C. Contiguity and adjunction sites
D. Clitic placement
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A. The distribution of Phonological Words
   (but also the syntactic properties which correlate with phonological word status, such as)
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D. Clitic placement
E. Word meaning restrictions
A syntactic theory of words should explain

A. The distribution of Phonological Words  
   (but also the syntactic properties which correlate with phonological word status, such as)
B. Head movement
C. Contiguity and adjunction sites
D. Clitic placement
E. Word meaning restrictions
(23) A syntactic theory of words should explain
A. The distribution of Phonological Words
(23) A syntactic theory of words should explain
A. The distribution of Phonological Words

(24) In the input to phonology, at the interface with syntax
(23) A syntactic theory of words should explain
A. The distribution of Phonological Words

(24) In the input to phonology, at the interface with syntax
    Syntactic elements with property \( w \) correspond to phonological elements with property \( \omega \)
A syntactic theory of words should explain

B. Head movement
Words: B. Head Movement

(25) A syntactic theory of words should explain
B. Head movement

(26) V remains low in Norwegian embedded clauses, vaults to
C in main clauses
A syntactic theory of words should explain
B. Head movement

V remains low in Norwegian embedded clauses, vaults to
C in main clauses

a. ...fordi  Jens nesten røpet  hemmeligheten
because Jens almost revealed the.secret
‘...because Jens almost revealed the secret’

b. Derfor  røpet  Jens nesten hemmeligheten.
therefore revealed Jens almost the.secret
‘Therefore Jens almost revealed the secret’
(27) A syntactic theory of words should explain

C. Contiguity and adjunction sites
A syntactic theory of words should explain contiguity and adjunction sites.

Phrasal modifiers can be inserted at word boundaries, not within words:

- a. over-re-think
- b. over-think again
- c. *over again think
(29) A syntactic theory of words should explain
D. Clitic placement
(29) A syntactic theory of words should explain
D. Clitic placement

(30) Some classes of second position clitics are sensitive to
word boundaries

a. boni pueri bonae-que puellae
   
   good boys  good-and  girls
   ‘good boys and good girls’ (Klavans 1985)
(29) A syntactic theory of words should explain
  D. Clitic placement

(30) Some classes of second position clitics are sensitive to word boundaries
  a. boni pueri bonae-que puellae
     \textit{good boys good-and girls}
     ‘good boys and good girls’ (Klavans 1985)
  b. in Apuliam circum-que ea loca
     \textit{in Apulia around-and those places}
     ‘in Apulia and around those places’ (Hale and Buck 1966, 165)
(31) A syntactic theory of words should explain
E. Word meaning restrictions
(31) A syntactic theory of words should explain

E. Word meaning restrictions

(32) Subparts of words aren’t “referential” (Di Sciullo and Williams, 1987)
Words: E. Word meaning restrictions

(31) A syntactic theory of words should explain

E. Word meaning restrictions

(32) Subparts of words aren’t “referential” (Di Sciullo and Williams, 1987)

a. I was minding a baby. Boy, was she ugly.

b. I was baby-sitting. #Boy, was she ugly.
A syntactic theory of words should explain

Subparts of words aren’t “referential” (Di Sciullo and Williams, 1987)

a. I was minding a baby. Boy, was she ugly.
b. I was baby-sitting. #Boy, was she ugly.

Subparts of words aren’t accessible to syntax (Di Sciullo and Williams, 1987)
(31) A syntactic theory of words should explain
E. Word meaning restrictions

(32) Subparts of words aren’t “referential” (Di Sciullo and Williams, 1987)
  a. I was minding a baby. Boy, was she ugly.
  b. I was baby-sitting. #Boy, was she ugly.

(33) Subparts of words aren’t accessible to syntax (Di Sciullo and Williams, 1987)
  a. *How complete-ness do you admire?
  b. *The who-killer did the police catch?
(34) The current mainstream theory of words is the $X^0$ theory
A. A PhWd is a maximal lexical $X^0$
(34) The current mainstream theory of words is the $X^0$ theory
A. A PhWd is a maximal lexical $X^0$
B. Head movement targets local maximal $X^0$
The current mainstream theory of words is the $X^0$ theory
A.  A PhWd is a maximal lexical $X^0$
B.  Head movement targets local maximal $X^0$
C.  Phrases cannot attach to $X^0$
The current mainstream theory of words is the $X^0$ theory

A. A PhWd is a maximal lexical $X^0$
B. Head movement targets local maximal $X^0$
C. Phrases cannot attach to $X^0$
D. 2P clitic placement can refer to local maximal $X^0$
(34) The current mainstream theory of words is the $X^0$ theory
A. A PhWd is a maximal lexical $X^0$
B. Head movement targets local maximal $X^0$
C. Phrases cannot attach to $X^0$
D. 2P clitic placement can refer to local maximal $X^0$
E. Restrictions on word meaning — a hot topic
(35) \( X^0 \) and the distribution of Phonological Words

A. A PhWd is a maximal lexical \( X^0 \)
(35) $X^0$ and the distribution of Phonological Words

A. A PhWd is a maximal lexical $X^0$

(36) a. Maximal because complex $X^0$ contain multiple $X^0$
which do not correspond to word boundaries
A. Phonological words

(35) $X^0$ and the distribution of Phonological Words
A. A PhWd is a maximal lexical $X^0$

(36) a. Maximal because complex $X^0$ contain multiple $X^0$
   which do not correspond to word boundaries
b. Lexical because functional heads are $X^0$ but not
   phonological words
(35) \(X^0\) and the distribution of Phonological Words
A. A PhWd is a maximal lexical \(X^0\)

(36) a. Maximal because complex \(X^0\) contain multiple \(X^0\) which do not correspond to word boundaries
b. Lexical because functional heads are \(X^0\) but not phonological words

(37) Problems:
   a. Compounds contain word boundaries which do not correspond to maximal \(X^0\)
   b. The status of a head as lexical is nonlocal
(38) Compounds contain word boundaries which do not correspond to maximal $X^0$.

(39) $\omega$ $\sigma$

$\Sigma$ $\sigma$

$\Omega$

$\sigma$

$\Omega$

$\sigma$

$\Omega$

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(40) \(X^0\) and head movement

B. Head movement targets local maximal \(X^0\)
(40) $X^0$ and head movement

B. Head movement targets local maximal $X^0$

(41) a. Local because of the Head Movement Constraint
b. Maximal because subparts of words do not move
X^0: B. Head movement

(40) X^0 and head movement

B. Head movement targets local maximal X^0

(41) a. Local because of the Head Movement Constraint
    b. Maximal because subparts of words do not move

(42) Advantage: Unification of head movement with movement
X°: B. Head movement

(40) X° and head movement
B. Head movement targets local maximal X°

(41) a. Local because of the Head Movement Constraint
b. Maximal because subparts of words do not move

(42) Advantage: Unification of head movement with movement

(43) Problems:
   a. Counter-cyclicality
   b. Lowering
   c. Distribution of triggers
X⁰: B. Head movement

(44)

\[\begin{array}{c}
\text{vP} \\
\text{v⁰} \\
\text{V⁰} \\
\{ \}
\end{array} \begin{array}{c}
\text{VP} \\
\text{DP} \\
\text{røpe} \quad \text{hemmeligheten}
\end{array}\]

'reveal' \quad 'the secret'
(45) Countercyclic: Violates the Extension Condition

\[ \text{Countercyclic: Violates the Extension Condition} \]

\[ \begin{array}{c}
\text{VP} \\
\text{vP} \\
\text{v} \\
\text{V} \\
\text{V} \\
\text{røpe} \\
\text{'reveal'} \\
\text{hemmeligheten} \\
\text{'the secret'} \\
\end{array} \]
(46) Trigger problem: What motivates $v^0$ to $T^0$?

```
(46) Trigger problem: What motivates $v^0$ to $T^0$?

TP
   /
  /  \
T$^0$  $vP$
    /
   /
  $v^0$  VP
   /
  /
$V^0$  $v^0$  $t_{v^0}$

røpet
'revealed'

hemmeligheten
'the secret'
```
(47) Trigger problem: If \( v \) doesn’t move, why doesn’t \( C^0 \) attract \( T^0 \) by itself?

\[
\begin{align*}
\text{CP} \\
\text{C}^0 & \quad \text{TP} \\
\text{T}^0 & \quad \text{vP} \\
\text{v}^0 & \quad \text{VP} \\
\text{V}^0 & \quad \text{t}_{v^0} \\
\{ \text{røpet} \} & \quad \text{hemmeligheten} \\
\end{align*}
\]
The distribution of modals and auxiliaries shows that $C^0$ doesn’t specifically attract lexical V, or $v$

Therefore could Jens already reveal the secret.
In Yimas, words can contain coordinations

\[ \text{ya-mpu-park-mpi-kapik-mpi-wark-t} \]

\[ \text{vpl.obj-3pl.agt-split-and-break-and-tie-perf} \]

‘They split the branches, broke them, and tied them’

(Yimas, Foley 1991)

A movement approach to the formation of such words would violate the Coordinate Structure Constraint, which is crosslinguistically robust (Stassen 2000)
X^0: C. Contiguity

\begin{equation}
(52) \quad X^0 \text{ theory and contiguity}
\end{equation}

C. Phrases cannot attach to X^0
X^0: C. Contiguity

(52) \( X^0 \) theory and contiguity

C. Phrases cannot attach to \( X^0 \)

(53) \[
\begin{array}{c}
V^0 \\
p^0 & V^0 \\
\text{\textit{over}} & \text{\textit{think}}
\end{array}
\]
X⁰: C. Contiguity

(52) X⁰ theory and contiguity

C. Phrases cannot attach to X⁰

(53) 

```
\[
\begin{array}{c}
V^0 \\
P^0 \\
\overline{over} \\
V^0 \\
\overline{think}
\end{array}
\quad * \quad
\begin{array}{c}
V^0 \\
P^0 \\
\overline{over} \\
\overline{again} \\
\overline{think}
\end{array}
\]
```
C. Contiguity

(54) $X^0$ theory and contiguity

c. Phrases cannot attach to $X^0$
(54) $X^0$ theory and contiguity

c. Phrases cannot attach to $X^0$

(55) But there is evidence for phrase attachment inside complex $X^0$
(54)  $X^0$ theory and contiguity

c. Phrases cannot attach to $X^0$

(55)  But there is evidence for phrase attachment inside complex $X^0$

```
(31)    N
         / \
N     N
          /   \ 
AP   N
     /    \ 
American   history  teacher
```
(56) \( X^0 \) theory and clitic placement

D. 2P clitic placement can refer to the word
(56) $X^0$ theory and clitic placement

D. 2P clitic placement can refer to the word

(57) But when it does, it may be the phonological word that matters rather than the local maximal $X^0$

\[
ob\quad e\bar{a}s\text{-}que\quad r\bar{e}s\]

\emph{because these-and things}

‘and on account of these achievements’ (Hale and Buck 1966, 165)
E. Word meaning restrictions

(58) $X^0$ theory and word meaning restrictions

E. $X^0$ does not contain referential phrases
(58) \( X^0 \) theory and word meaning restrictions

E. \( X^0 \) does not contain referential phrases

(59) Can be derived from phase theory — independent of \( X^0 \)
Section 2 Summary: There are challenges for the $X^0$ theory of words
Section 2 Summary: There are challenges for the $X^0$ theory of words

And the phrasal approach to word-building fares even worse
(62) Span: A contiguous sequence of heads in a head-complement relationship
Span: A contiguous sequence of heads in a head-complement relationship

Related to extended projections (Grimshaw 2005)
(64) Span: A contiguous sequence of heads in a head-complement relationship

(65) Inspired in part by Brody’s (2000a) Mirror Theory, in which there is no head-phrase distinction
(64) Span: A contiguous sequence of heads in a head-complement relationship

(65) Inspired in part by Brody’s (2000a) Mirror Theory, in which there is no head-phrase distinction

```
TP
   /\   /
  DP  T'
 /   /   /
D  NP  T  vP
 /  /  /   /
N  v  VP
   /   /
  DP  V
```
(64) Span: A contiguous sequence of heads in a head-complement relationship

(65) Inspired in part by Brody’s (2000a) Mirror Theory, in which there is no head-phrase distinction
(66) Span: A contiguous sequence of heads in a head-complement relationship

(67) Two-stage lexical insertion, Bye and Svenonius (2012)

a. Lexical word: A span bounded by $w$, the lexical access point (L-Match)

b. Word: a span bounded by $\odot$, the linearization point (Insertion) (Brody 2000b)
(68) Two-stage lexical insertion, Bye and Svenonius (2012)

a. Lexical word: A span bounded by w, the lexical access point (L-Match)

b. Word: a span bounded by @, the linearization point (Insertion)
Two-stage lexical insertion, Bye and Svenonius (2012)

a. Lexical word: A span bounded by w, the lexical access point (L-Match)
b. Word: a span bounded by @, the linearization point (Insertion)

Within a phase, there are

a. points of lexical access (L-Match, w)
(68) Two-stage lexical insertion, Bye and Svenonius (2012)

a. Lexical word: A span bounded by \( w \), the lexical access point (L-Match)

b. Word: a span bounded by \( @ \), the linearization point (Insertion)

(69) Within a phase, there are

a. points of lexical access (L-Match, \( w \))

b. points of linearization (Insertion, \( @ \))
(70) KP is a phase

K

D

Dem

UNIT

Num

Cl

A

n

N
(71) Specifiers are points of lexical access (w) — each specifier is a domain for L-Match

```
K
  /\  
D  
  |  
Dem^w  UNIT
  |     
Num^w  Cl
  |      
A^w    n
  |    
N
```
Certain complements are also points of lexical access

(72) Certain complements are also points of lexical access

\[ K \]
\[ \overrightarrow{D} \]
\[ \text{Dem}^w \]
\[ \text{UNIT} \]
\[ \text{Num}^w \]
\[ \text{Cl}^w \]
\[ A^w \]
\[ n \]
\[ N \]
(73) A span (of a certain size) has a linearization point

\[ K \quad D \quad \text{Dem}^w @ \quad \text{UNIT} \quad \text{Num}^w @ \quad \text{Cl}^w @ \quad \text{A}^w @ \quad n \quad N \]
A compound contains multiple \( w \), but only one linearization point — the adjoined element is ‘too small’ to have its own \( @ \).

\[
\begin{array}{c}
\text{Cl}^{w @} \\
\downarrow \\
\downarrow \\
\downarrow \\
in \\
crowd \\
P^{w} \\
\downarrow \\
\downarrow \\
in \\
crowd \\
\end{array}
\]

\[
\begin{array}{c}
\omega \\
\downarrow \\
\downarrow \\
\downarrow \\
in \\
crowd \\
\Sigma \\
\downarrow \\
\downarrow \\
\downarrow \\
\sigma \\
\end{array}
\]

Peter Svenonius, CASTL, University of Tromsø
(75) A free function word (Selkirk's external clitic) is a distinct linearization point, without a distinct $w$
(76) A bound function word doesn’t have a distinct linearization point (Selkirk’s affixal clitics)

\[ D^w \]

\[ \text{Cl}^w@ \]

\[ n \]

\[ N \]

hund-en

‘dog-DEF’
(77) A span-based theory of words
A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by @ (maximal)
A span-based theory of words

A. A PhWd is a span containing \( w \) (minimal) and bounded by \( \emptyset \) (maximal)

(i) (dissociates linearization from incorporation)
A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by \( @ \) (maximal)
   
   (i) (dissociates linearization from incorporation)
   (ii) (reverses the markedness of incorporation)
(77) A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by @ (maximal)
   (i) (dissociates linearization from incorporation)
   (ii) (reverses the markedness of incorporation)

B. Head movement is linearization of a local span, bounded by @
(77) A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by @ (maximal)
   (i) (dissociates linearization from incorporation)
   (ii) (reverses the markedness of incorporation)

B. Head movement is linearization of a local span, bounded by @

C. Linearization of phrases is linearization with respect to @
A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by @ (maximal)
   (i) (dissociates linearization from incorporation)
   (ii) (reverses the markedness of incorporation)

B. Head movement is linearization of a local span, bounded by @

C. Linearization of phrases is linearization with respect to @

D. Word-sensitive 2P clitic placement is prosodic, not syntactic
(77) A span-based theory of words

A. A PhWd is a span containing w (minimal) and bounded by @ (maximal)
   (i) (dissociates linearization from incorporation)
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B. Head movement is linearization of a local span, bounded by @

C. Linearization of phrases is linearization with respect to @

D. Word-sensitive 2P clitic placement is prosodic, not syntactic

E. w can dominate referential material, but it linearizes separately because of the distribution of @ (phases)
A PhWd is a maximal lexical span, bounded by w and @

a. w gives minimal word boundaries
b. @ gives linearization boundaries, upon which phonology superimposes additional boundaries
(79) Coordination below the word level in Yimas

\[ \text{ya-mpu-park-mpi-kapik-mpi-wark-t} \]
\[ v_{\text{PL.OBJ}}-3\text{PL.AGT-}split-and-break-and-tie-\text{PERF} \]
‘They split the branches, broke them, and tied them’
(Yimas, Foley 1991)

(80) $\&/V$

$\&/V$

$V \&/V$

$\& V$

park mpi kapik

‘split’ ‘and’ ‘break’
(81) Coordination below the word level in Yimas

\[
\begin{array}{c}
F_w@ \\
& /V \\
& V & /V \\
& & & & & V \\
\end{array}
\]

\textit{park-mpi-kapik}

‘split and break’
Head movement is a matter of linearization.

Insertion of lexical material requires linearization, represented by @.

@ is sensitive to phonological content; @ with no phonological content (e.g. matrix C in non-English Germanic) attracts the nearest independently linearizable material.
(85) Head movement is linearization

\[ \nu^w@ \]

\[ V \]

\[ \text{DP} \]

\[ \text{røpe} \quad \text{hemmeligheten} \]

‘reveal’ \quad ‘the secret’
(86) Head movement is linearization

```
(\text{T})
  \quad \text{D} \quad v^w @
  \quad \text{\textit{Jens}} \quad V
  \quad \text{DP}
  \quad \text{\textit{røpet}} \quad \text{\textit{hemmeligheten}}
```

‘revealed’ ‘the secret’
Head movement is linearization

\[
\text{(87) Head movement is linearization}
\]

\[
\begin{array}{c}
\text{C} \\
\text{P}^{w} \\
\text{derfor} \\
\text{T} \\
\text{D} \\
\text{Jens} \\
\text{V} \\
\text{DP} \\
\text{røpet} \\
\text{hemmeligheten}
\end{array}
\]

Peter Svenonius, CASTL, University of Tromsø
Spans: B. Head Movement

Head movement is linearization

(88) Kunne røpe hemmeligheten 'could reveal the secret'

Peter Svenonius, CASTL, University of Tromsø
(89) Phrasal modifiers are regularly merged inside structure that will spell out as words, it simply doesn’t linearize there
Phrasal modifiers are regularly merged inside structure that will spell out as words, it simply doesn’t linearize there.

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(89) Phrasal modifiers are regularly merged inside structure that will spell out as words, it simply doesn’t linearize there.

Voice\textsuperscript{w@}
\quad \text{init}
\quad \text{proc}
\quad \text{Adv}\textsuperscript{w@}
\quad \text{res}
\quad \text{overthink again}
\quad \text{P}
```

Peter Svenonius, CASTL, University of Tromsø
(89) Phrasal modifiers are regularly merged inside structure that will spell out as words, it simply doesn’t linearize there.

\[
\begin{align*}
\text{Phrasal} & \quad \text{modifiers} & \quad \text{are} & \quad \text{regularly} & \quad \text{merged} & \quad \text{inside} & \quad \text{structure} \\
& \quad \text{that} & \quad \text{will} & \quad \text{spell} & \quad \text{out} & \quad \text{as} & \quad \text{words}, \quad \text{it} & \quad \text{simply} & \quad \text{doesn’t} & \quad \text{linearize} & \quad \text{there} \\
\end{align*}
\]
(90) Word-sensitive 2P clitics are similarly a matter of linearization

(91) Phonological words

\begin{align*}
\text{ob} & \quad \text{eās-que} & \quad \text{rēs} \\
\text{because these-and things} & \quad \text{‘and on account of these achievements’} & \quad \text{(Hale and Buck 1966, 165)}
\end{align*}
Spans: D. 2P clitics

(92) &

P@

D@

Clw

N@

ob eās que rēs

‘because’ ‘these’ ‘and’ ‘things’
Spans: E. Restrictions on meaning

(93) w can dominate referential material, but it linearizes separately because of the distribution of © (phases)
A syntactic theory of words is needed
A syntactic theory of words is needed

The $X^0$ theory of words is problematic
A syntactic theory of words is needed (94)
The $X^0$ theory of words is problematic (95)
The span-based theory of words is promising (Svenonius, 2015) (96)
(94) A syntactic theory of words is needed

(95) The X⁰ theory of words is problematic

(96) The span-based theory of words is promising (Svenonius, 2015)

(97) Do it for the phonologists!


