Richards (2010):

- tries to predict whether wh-movement will be overt or covert, positing a universal condition on wh-prosody
- today's goal: extend the proposal to all relations between Probes and Goals, and between pairs of heads in a Selection relation
- a crucial part of the story: syntax makes reference to, and manipulates, prosodic boundaries

## Wh-movement and wh-prosody

### a point of cross-linguistic variation

1. a. **What** did John buy __?
2. b. John-wa nani-o kaimasita ka?

### a proposal

Given a wh-phrase \( \alpha \) and a complementizer \( C \) where \( \alpha \) takes scope, \( \alpha \) and \( C \) must be separated by as few P-Phrase boundaries as possible, for some level of P-Phrasing.

### relevant parameters

- \( \alpha \) initial or final
- P-phrase boundaries placed at Right or Left edges of (certain) XPs (Selkirk 1984...)

### recipe for constructing a “wh-domain”

- take the Phrase boundary introduced by the wh-phrase as one of the boundaries of the wh-domain, and take any existing phrase boundary as the other boundary:

### four logical possibilities

4. a. \( C \) initial, P-phrase boundaries at **Left** edges of XPs.

\[
\begin{align*}
\text{(XP) } & \overset{(wh-
\phantom{P} \text{XP})}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \\
\end{align*}
\]

b. **wh-movement to the left** (Tagalog)

c. \( C \) final, P-phrase boundaries at **Left** edges of XPs.

\[
\begin{align*}
\text{(XP) } & \overset{(wh-
\phantom{P} \text{XP})}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \\
\end{align*}
\]

So what should this language do?

\[
\begin{align*}
\text{(XP) } & \overset{(wh-
\phantom{P} \text{XP})}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \\
\end{align*}
\]

So:  

\[
\begin{align*}
\text{(XP) } & \overset{(wh-
\phantom{P} \text{XP})}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \overset{(XP) \text{ (XP) } C}{\text{XP}} \\
\end{align*}
\]

\( \rightarrow \text{wh maximally close to C} \) (Basque: Elordieta (1997))
Reconsidering Basque

Elordieta (1997); Basque places prosodic boundaries in two places:

1. after lexically accented words:
   (5) a. [\(P\)-phrase] lagünen dirua
       friend-Gen.Sg. money
   b. [\(P\)-phrase] [\(P\)-phrase] lagünen dirua
      friend-Gen.Pl. money

2. before the verb:
   (6) a. [\(P\)-phrase] [umiari] [normalian] [urâ] [emoten dotzâgu]
       child-DAT normally water give AUX
       ‘Normally, we give water to the child’
   b. [\(P\)-phrase] [Sure [erriko [alkatia]]] [Irúñara] [allaga da]
      our town’s mayor Iruña-arr arrived AUX
      ‘The mayor of our town has arrived in Iruña’

wh-phrases must be immediately preverbal (4d):

    Miren-ERG who-ABS see-PRF AUX
    ‘Who has Miren seen?’
   b. *Séin Mirenek ikusi rau?
      who-ABS Miren-ERG see-PRF AUX
   c. Jon señeik ikusi rau?
      Jon-ABS who-ERG see-PRF AUX
      ‘Who saw Jon?’
   d. *Señeik Jon ikusi rau?
      who-ERG Jon-ABS see-PRF AUX

Basque wh-questions:

DP DP wh \(\uparrow\) V

why is this here?

• because V is always preceded by a boundary?
• because wh-phrases are lexically accented?
Jun et al (2007): every P-phrase (AP "accentual phrase") ends with a H

(9) Meomris didi mamida manana-s bans
doctor-GEN big aunt Manana-ACC is.washing
'The soldier's big aunt is washing Manana'

(10) ([the soldier's ] big aunt] [Manana] is washing

→ apparently this is a Right-edge language.

Jun et al (2007, 49): “…unlike the verb in Y/N questions, the verb in wh-questions is included in
the same AP as the wh-phrase”

(11) romelma gamomndziebelma gaabedniera lamazi meomari?
which investigator made.happy beautiful soldier
'Which investigator made the beautiful soldier happy?'

(see also Skopeteas et al 2009 for a second opinion)
so, back to our question about Basque:

Basque:

DP DP wh) V

why is this here?

• because V is always preceded by a boundary?
• because wh-phrases are lexically accented?

looks like this is it: in Georgian, the preverbal wh-phrase is losing the boundary that would
separate it from the verb, but in Basque, lexical accent inserts a boundary between them (perhaps
after the syntax is done).
Concentrating on Japanese and Georgian, then, we're seeing two ways of forming wh-domains:

(12) a. \((\text{DP} \ (\text{wh}) \ (\text{DP} \ V-T-C) \) \) \[Japanese\]  
  \(\longrightarrow\)  
  b. \((\text{DP} \ ) \ (\text{wh}) \ V-T-C \) \[Georgian\]  
  \(\longrightarrow\)

**recipe for constructing a “wh-domain”:**

(i) take the string which has the wh-phrase on one end and the complementizer on the other.

(ii) within that string, treat the phrase boundary projected by the wh-phrase, on the one hand, and all other phrase boundaries, on the other, **differently** for purposes of projection to the next level of p-phrasal structure. (that is, project either the wh-phrase's boundary or all the other boundaries)

**Japanese:**

(13) a. \([\text{TP} [\text{DP whP}] [\text{VP} [\text{DP} D \text{NP V}]]] \) \[syntactic phrasing\]  
  b. \(\text{whP} \text{D NP V} \) \[P-phrases\]  
  c. \(\text{whP} \text{D NP V} \) \[wh-domain\]  

(wh-domain created by projecting whP's boundary, and neglecting to project other boundaries)

**Georgian**

(14) a. \([\text{TP} \text{DP whP} [\text{VP} \text{V}]] \) \[syntactic phrasing\]  
  b. \(\text{whP} \text{D NP V} \) \[P-phrases\]  
  c. \(\text{whP} \text{D NP V} \) \[wh-domain\]  

(wh-domain created by failing to project whP's boundary, and projecting other boundaries)

Note that the Georgian strategy will only work if there *are* no other boundaries between whP and the Probe—that is, if whP and the Probe are adjacent:

**Georgian**

(15) a. \(\#[\text{TP} \text{DP whP} [\text{VP} \text{V}]] \) \[syntactic phrasing\]  
  b. \(\text{whP} \text{D NP V} \) \[P-phrases\]  
  c. \(\text{whP} \text{D NP V} \) \[wh-domain\]

**Condition on Wh-Prosody:**

Given a wh-phrase \(\alpha\) and a complementizer \(C\) where \(\alpha\) takes scope, create a level of P-phrasing on which \(\alpha\) and \(C\) are separated by (as few P-phrase boundaries as possible.)

Just to have a faster way to say "must not be separated by any P-phrase boundaries on a certain level of P-phrasing", I'll say that \(C\) and the wh-phrase must be **prosodically contiguous**, which I'll standardly shorten to contiguous.

**A caveat**

The world might not be as neatly symmetrical as I've made it sound; in particular, there might be languages (cf. Elfner to appear a, b on Irish) that make use of both edges of maximal projections to define their prosodic structures. If this is right, then some of the definitions described above will have to be changed.

**Generalizing Contiguity**

proposal: Contiguity doesn't just hold between \(C\) and wh.

**Generalized Contiguity**

Given two syntactic objects \(\alpha\) and \(\beta\) that are related via either Agree or Selection, \(\alpha\) and \(\beta\) must be prosodically contiguous on some level of P-phrasing.

Generalized Contiguity will be enforced at the point in the derivation when Agree takes place; *not* an output condition on final representation.

**roadmap:**

- Contiguity for Agree (Probe-Goal Contiguity)
  - English, French
  - Irish
- Contiguity for Select (Selectional Contiguity)
  - Final-over-Final Constraint
  - ergativity and word order
For some reason, both of these languages require the subject to move to the specifier of TP:

\[(16)\]

a. TP
   \[DP, T'\]
   \[John \, T\]
   vP
   v
   VP
   kisses Mary

b. TP
   \[DP, T'\]
   \[Jean \, T\]
   vP
   v
   VP
   embrasse Marie

…now what?

French and English are both head-initial; French allows wh-in-situ, and English doesn't:

\[(17)\]

a. Who did you see?
   Tu as vu qui?

b. Tu as vu qui?

\[> \text{French marks Right edges of maximal projections (Selkirk 1986)}\]

\[> \text{English marks Left edges of maximal projections (note ominous lack of citation).}\]

T Agrees with the subject, and v Agrees with the object:

\[(18)\]

a. TP
   \[DP, T'\]
   \[John \, T\]
   vP
   v
   VP
   kisses Mary

b. TP
   \[DP, T'\]
   \[Jean \, T\]
   vP
   v
   VP
   embrasse Marie

Let's concentrate on (18a) first.

In (19), v Agrees with Mary across a prosodic boundary. This is a familiar situation.

\[(19)\]

\[\text{[John} \, T \, v \, \text{kisses} \, \text{Mary]}\]

We know what happens in (20) already; the grammar uses the "project all boundaries except that of the wh" option, which only works if the wh-phrase and the C are more or less adjacent (not separated by any phrases).

\[\rightarrow \text{we expect adjacency between the v and the direct object in English, for the same reason.}\]

(21) John kisses (*often) Mary

This may (or may not) be enforced by movement of the direct object past intervening material: cf. Johnson 1991, Koizumi 1993, etc., etc.)

If (19) is like (20), we also expect that Contiguity will require the creation of a larger P-phrase in which the direct object's Left boundary has been erased (parallel to the "wh-domains"):

\[(22)\]

\[\text{[John} \, T \, v \, \text{kisses} \, \text{Mary]}\]

Maybe this is why we don't typically see an actual prosodic break between the verb and the object in English.

More generally, we expect Probes to have to be adjacent to following Goals in English:

\[(23)\]

a. Probably John is happy.
   b. * Is probably John happy?

\[(24)\]

a. [For Mary to be about to leave] would make me nervous.
   b. * [For probably Mary to be about to leave] would make me nervous.

Note that the facts in (23) tell us something interesting: the T-Subject Contiguity requirement persists even after T moves to C. This isn't like "checking."
Now let's turn to French:

(25) Jean [T v embrasse Marie]

Here the situation is reversed; no boundary between v and the object, but there is a boundary between T and the subject. So we expect adjacency between T and the subject, but not between v and the object:

(26) a. Jean (*souvent) embrasse (souvent) Marie
   b. John (often) kisses (*often) Mary

The facts in (26) are the heart of the argument (Emonds 1978, Pollock 1989) that "the French verb raises higher than the English one".

How about when there's no subject in French?

(27) a. Jean parle pas l'italien
   'Jean doesn't speak Italian'
   b. * Jean pas parle l'italien
      'Jean not speaks Italian'
   c. Pas parler l'italien...
      'To not speak Italian...'
   d. * Parler pas l'italien...

nothing preventing adverbs from preceding the verb, when there's no subject, and so they do ("the French verb doesn't raise as high in infinitives").

As we expect, even in infinitives, adverbs can intervene between the French verb and the object:

(28) (à peine) parler (à peine) l'italien...
     hardly to.speak hardly Italian
     'To hardly speak Italian...'

---

Contiguity and the derivation: Irish (Zapotec, Garífuna)

Some VSO languages are described as requiring V, S, and O to be adjacent:

(29) a. Chuala (*ar ndóigh) m' an t-amhrán sin
     heard of course I that.song
     'I of course heard that song' [Irish: Adger 1997]

b. Phleanáil an muinteoir (*fosta) an rud amach
   planned the teacher also the thing out
   'The teacher also planned out the thing'

(30) Ú-dáá (*chili’a) Juáàny béjl
    ASP-eat slowly Juan fish
    'Juan ate the fish slowly' [San Dionicio Ocotepac Zapotec: Broadwell 2002]

(31) Ru-tu (*yahaun) Maria (*yahaun) fein (yahaun) l-un
    give-3SG.FEM.T here Maria here bread here 3SG.MSC.G-to John
    'Maria gives bread to John here' [Garífunu: Kaufman 2010]

On the other hand, McCloskey demonstrated that this isn't quite true for Irish; there is a class of adverbs that can intervene between S and O:

(32) a. Deireann siad i gCéoláidh paidir roimh am li
    say they always prayer before time lie
    'They always say a prayer before bed-time' [Irish: McCloskey 1996, 259]

b. Chuala Róise go minic roimhe an t-amhrán sin
    heard Róise often before it that.song
    'Róise had often heard that song before'

c. Ní chluinfeadh aon duine choicé ariach Ciarrán ag ghabháil cheoil
    NEG hearCOND any person ever again Ciarrán making.music
    'No-one would ever again hear Ciarrán making music'

d. Níor shaothraigh Eoghan ariamh pingin
    NEG earned Owen ever penny
    'Owen never earned a penny'
If T and v are both either in or near the verb, and if Irish associates prosodic effects with Left edges of maximal projections (cf. Either to appear a, b)...

→ then Contiguity apparently holds for T and the subject, but not for v and the object:

(33) \( \text{T}_v \) $\text{S}_O$

Once the verb moves past the subject, the Contiguity relation between v and the object is broken.

- **note:** the adverbs in question don't have to be where they are in (34); they can be at the end of the sentence (Jim McCloskey, p.c.)

→ once the O and the v are no longer Contiguous (thanks to verb movement), adverbs feel free to gratuitously make the situation worse. Sheds light on the nature of persistence for Contiguity:

**Persistence:** Once Contiguity between \( \alpha \) and \( \beta \) is established, it persists, and is maintained, until some \( \gamma \) interrupts it.

Contiguity between \( \alpha \) and \( \beta \) can be reestablished after movements of \( \alpha \) or \( \beta \) (cf. English, French relations between T and the subject). But in Irish, the v-O relation, once disrupted by the subject, is lost, and adverbs can be inserted.

The behavior of Irish T in (33) exhibits a property I'll call ruthlessness:

**Ruthlessness:** Given an existing Contiguity relation between \( \alpha \) and \( \beta \) and a newly Merged syntactic object \( \gamma \), the grammar must choose between an operation that satisfies the requirements imposed by \( \gamma \) and an operation that preserves the existing Contiguity relation, it chooses to satisfy \( \gamma \)'s requirement.

Thus, in (33), T triggers movement of the verb to itself (for reasons we haven't explored), even though this destroys the Contiguity relation between v and the object.

On the other hand, we've seen that adverbs try not to destroy persisting Contiguity relations (though once Contiguity's broken they can freely Merge between the formerly Contiguous points). Various ways we could handle that, but one would be to modify Ruthlessness slightly:

**Mitigated Ruthlessness:** Given an existing Contiguity relation between \( \alpha \) and \( \beta \) and a newly Merged syntactic object \( \gamma \), the grammar prefers operations that both preserve the Contiguity relation and satisfy the requirements imposed by \( \gamma \). If the grammar must choose between an operation that satisfies the requirements imposed by \( \gamma \) and an operation that preserves the existing Contiguity relation, it chooses to satisfy \( \gamma \)'s requirement.

---

**Interlude: Selectional Contiguity**

So far we have concentrated on **Probe-Goal Contiguity**: generalizing a proposal made in Richards (2010) for relation between C and wh, to Probes and Goals more generally.

next up: **Selectional Contiguity**. Pairs of heads in a selection relation must also be contiguous. All of the cases we'll see will involve the "Georgian" strategy for creating Contiguity adjacency.

As we've seen, Contiguity need not hold throughout the derivation, but must hold at some point:

**Ruthlessness**

One apparent counterexample for Selectional Contiguity in a language like English, which will play a role later:

(34) CP

\( C \) and TP are Contiguous after Spellout, and that's apparently good enough.

**two applications for Selectional Contiguity:**

- Final-over-Final constraint
- Ergativity and word order
The Final-over-Final Constraint (Biberauer, Holmberg and Roberts 2010)

Final-over-Final Constraint (FOFC)
If $\alpha$ is a head-initial phrase and $\beta$ is a phrase immediately dominating $\alpha$, then $\beta$ must be head-initial. If $\alpha$ is a head-final phrase and $\beta$ is a phrase immediately dominating $\alpha$, then $\beta$ can be either head-initial or head-final.

(36)  

- for $X=\text{Aux}$, $Y=\text{V}$, $ZP=\text{Object} \rightarrow *\text{V O Aux}$ (3 cases):

Case #1: Germanic

(37)  

- $X$ that John has read the book  
  $[\text{English: Aux V O}]$
- da Jan wilt een huis kopen  
  $[\text{West Flemish: Aux O V}]$
- dass Johann das Buch gelesen hat  
  $[\text{German: O V Aux}]$
- $X$ that Jan wants to buy a house
- $X$ that Johann has read the book

Case #3: Basque (Haddican 2004, 116)
Negation triggers Aux-fronting:

(39)  

- Jon-ek ez dio esan-Ø Miren-i egia  
  $[\text{Aux O V}]$
- Jon-ERG not AUX say-ASP Miren-DAT truth  
  'Jon has not told Miren the truth'
- Jon-ek ez dio Miren-i egia esan-Ø  
  $[\text{Aux O V}]$
- Jon-ERG not AUX Miren-DAT truth say-ASP  
  'Jon has not told Miren the truth'
- Jon-ek Miren-i egia esan-Ø dio  
  $[\text{O V Aux}]$
- Jon-ERG Miren-DAT truth say-ASP AUX  
  'Jon has told Miren the truth'
- * Jon-ek esan-Ø Miren-i egia dio  
  $[*\text{V O Aux}]$
- Jon-ERG say-ASP Miren-DAT truth AUX  
  'Jon has told Miren the truth'

Case #2: Finnish (Holmberg 2000)
Finnish is typically Aux-V-O, but if matrix C is [+focus] or [+wh] (!), you get more freedom:

(38)  

- Milloin Jussi olisi kirjoittanut romaanin?  
  $[\text{Aux V O}]$
  when Jussi would have written INDEF.novel
  'When would Jussi have written a novel?'

- Milloin Jussi olisi romaanin kirjoittanut?  
  $[\text{Aux O V}]$
  when Jussi would have INDEF.novel written

- Milloin Jussi romaanin kirjoittanut olisi?  
  $[\text{O V Aux}]$
  when Jussi written INDEF.novel would have

- * Milloin Jussi kirjoittanut romaanin olisi?  
  $[*\text{V O Aux}]$
  when Jussi written INDEF.novel would have

(e and f will have to involve movement operations… maybe object shift in e, "object extraposition" in f)
these are all about V and Aux, but there are many other examples. V and complement C:

(40) a. dass er gesagt hat, [dass...] that he said has C

that he said [that...]

b. dass er [dass...] gesagt hat [German: *[C...] V Aux]

that he said has

(41) [to] ita C said

[Japanese: [...C] V]

(42) a. Chele-Ta Sune-che [je or baba aS-be] [Bengali: V [...C] V]

boy-class hear-3SG.PAST C his father come-will

'The boy heard that his father will come'

b. Chele-Ta [or baba aS-be hole] Sune-che [Bengali: [...C] V]

boy-class his father come-will C hear-3SG.PAST

'The boy heard that his father will come'

...and many other cases.

One class of common counterexamples: C can be final even if T is initial:

(43) Ni hai shuo zhongwen ma? [Chinese]
you can speak Chinese Q

'Can you speak Chinese?'

I'll follow Biberauer et al (2010) (and López (2009)) in assuming that Kayne's LCA is the default way of mapping c-command onto precedence relations, but that there is an operation which can override the LCA under various circumstances; part of our job will be to understand the circumstances.

Mechanically, the idea will be that you can tag a node X with a diacritic which is interpreted by phonology as meaning "If X c-commands Y, then X follows Y": I'll call this process of tagging "rotation", just to have a name for it. If X isn't rotated, then it obeys the LCA.

The Rotation operation has to be motivated, and we'll see two motivations for it: rescuing unlinearizable structures, and creating Selectional Contiguity.

Consider a derivation:

(44) a. VP D < V it read

Somewhere down at the bottom of the tree is a place where two heads are Merged. At this point in the derivation, their order isn't fixed; we can fix it by choosing a head to Rotate. Let's rotate the V.

b. VP D v it read

v is Merged, along with its thematic specifier. Now v and V have to be made Selectionally Contiguous.

c. VP D v it read

Here v has Rotated, creating Contiguity between v and V. There are various ways to create Contiguity (another would have been to move V to v) but this is one...

One obvious question is how languages decide whether to Rotate or not. Let me put that question aside for now, and let's go on.
Now consider, more abstractly, how a derivation like the one above might proceed, once it's been determined that V and v are head-final.

(45) a. \( X \leftarrow vP \)
    \( D \) she \( VP \leftarrow v' \)
    D \( < V \)
    it \( \text{read} \)

b. \( v\-X \leftarrow vP \)
    \( D \) she \( VP \leftarrow v' \)
    D \( < V \)
    \( \text{it read} \)

b'. \( vP \leftarrow X \)
    \( D \) she \( VP \leftarrow v' \)
    D \( < V \)
    \( \text{it read} \)

(46) a. \( vP \)
    \( D \) she \( \text{V-}v \) read \( \text{VP} \)
    D \( \text{it} \)

b. \( X \leftarrow vP \)
    \( D \) she \( \text{V-}v \) read \( \text{VP} \)
    D \( \text{it} \)

b'. \( \text{V-}v\-X \leftarrow vP \)
    \( D \) she \( \text{V-}v \) read \( \text{VP} \)
    D \( \text{it} \)

So if the lower heads are final, the new head X can be either initial (as in (45b)) or final (as in (45b')). Let's consider a different derivation, one in which the lower heads are initial:

b'. \( \text{Rotating X}. \)

c. \( \text{Head-movement of the verb to X, if X is an affix}. \)

c'. \( \text{Waiting for D to move into some higher specifier position (maybe the specifier of X, if that's possible)}. \)
Maybe rotating D?

...but here's something there's no point in doing:
Rotating X. Doesn't create Contiguity between X and v. If Contiguity is what drives Rotation, then you won't Rotate here.

- If the lower heads are initial, the higher head will be initial (46c, c', c''), not final (46c').
- If the lower heads are final, the higher head can be initial (45b) or final (45b').

This is the Final-over-Final Constraint.

Why is C often a counterexample?

(47) Ni hai shuo zhongwen ma? [Chinese]  
you can speak Chinese  
'Can you speak Chinese?'

Because C is a phase head:

(48) CP  
C TP

After Spellout, C and TP are both effectively heads, in a mutual c-command relation, satisfying Selectional Contiguity.

Either might Rotate, but the decision has nothing to do with Contiguity; it's about linearizing mutually c-commanding heads.

Ergativity and word order

Selectional Contiguity might be part of an explanation for why a language like English would bother to raise the subject to the specifier of TP:

(49) CP  
C TP  
DP T'  
Mary  
vP  
has DP  
v  
T  
v'  
VP  
read the book

Raising Mary to the specifier of TP creates Contiguity between T and v.

(Contiguity between C and T is created after Spellout)

How would a language behave if it didn't raise the subject?

(50) CP  
C TP  
T vP  
has DP  
v  
T  
v'  
VP  
read the book

Such a language would have to satisfy Contiguity in some other way, either by making all the heads final or by moving the verb up to T:\n
\[1\] This assumes that lowering of affixes either (i) cannot satisfy Contiguity (perhaps because it is postsyntactic) or (ii) is blocked by the intervening subject.
creation of Contiguity relations takes place in the syntax.

logic of which Contiguity relations actually survive is the logic of t elements related in these ways must be made
between Probes and Goals more generally

• A version of the condition on wh-prosody posited in Richards (2010) holds for relations
between Probes and Goals more generally, and between heads in a Selection relation; syntactic
elements related in these ways must be made contiguous.

• Contiguity relations need not survive to the end of the derivation; syntax is Ruthless. The
logic of which Contiguity relations actually survive is the logic of the cycle; argument that the
creation of Contiguity relations takes place in the syntax.

So such a language would have to be SOV or VSO;

it couldn't, for example, be Aux SVO, as in (64).

Interestingly, ergative languages, if they have a fixed word order, are invariably verb-peripheral
(Dixon 1994, Mahajan 1994…).

If ergative languages must leave the subject in situ,
then we understand why they must be verb-peripheral.

Conclusions

• A version of the condition on wh-prosody posited in Richards (2010) holds for relations
between Probes and Goals more generally, and between heads in a Selection relation; syntactic
elements related in these ways must be made contiguous.

• Contiguity relations need not survive to the end of the derivation; syntax is Ruthless. The
logic of which Contiguity relations actually survive is the logic of the cycle; argument that the
creation of Contiguity relations takes place in the syntax.

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