シンポジウム B 室

統語と音韻のインタフェイス

司会 時崎久夫 (札幌大学)

ミニマリスト・プログラムに基づく目下の生成文法研究では、統語構造の音韻部門における線形化とインタフェイス条件の解明が主要な研究課題となっている。本シンポジウムは、4 人の講師が最新の研究成果を発表することにより、この問題に理論的・経験的な進展をもたらすことを目指す。扱うトピックは、ラベルのない句構造とフェイズごとの循環的派生による線形化、韻律範疇とその階層、話題と音調句、韻律の自律性、インドネシア語の能動マーカーによる *v*P フェイズの証拠、統語派生後の語彙挿入の破綻としての「削除」、語順・複合語・前置詞残留・wh 移動などの統語パラメターの強勢・音調などの音韻パラメターへの還元などである。

“Phasing in Linearization of Unlabeled Phrase Structure”

講師 成田広樹 (早稲田大学高等研究所)

Since representation of labels is an unwarranted departure from the desideratum of bare phrase structure, it is commendable that a growing body of literature provides various refinements of syntactic theory that makes little-to-no recourse to labels/projections (Collins 2002; Chomsky 2008; Narita 2011 *a.o.*). Building on this move, this talk will cast doubt on the dominant assumption, shared by traditional directionality-parameter, various versions of Kayne’s LCA, Fukui & Takano’s theory of Demerge, etc., that the mechanism of linearization requires labeled input. An alternative label-free theory of linearization is proposed, which takes the cyclicity of phase-by-phase derivation as its necessary component.

“Deriving the Prosodic Hierarchy”

講師 土橋善仁 (新潟大学)

The Prosodic Hierarchy is one of the central notions in the study of prosody. It is a representational schema that stipulates the organization of prosodic constituents. In this study, I propose that each of the prosodic constituents should be recast as a linguistic level that is derived in the syntax-phonology mapping. That is, terminal elements in syntax are mapped to the linguistic level where prosodic words are linearly ordered, and this level is mapped to the level of phonological phrase, which in turn is mapped to the level of intonational phrase. I show that this derivational approach, coupled with a general condition that the mapping in the interface is local,

gives a principled account of how the prosodic constituents are organized, why a topic coincides with an intonational (but not, say, phonological) phrase, and how autonomous prosody is.

"Successive Cyclicity at the Syntax-Phonology Interface: Voices from Standard Indonesian"

講師 佐藤陽介 (シンガポール国立大学)

One of the central hypotheses within generative grammar is successive cyclicity. This hypothesis is a crucial design feature of the syntactic computation within Phase Theory (Chomsky 2000 et seq.). This paper presents new evidence for this hypothesis from the distribution of the active voice/AV marker *meN-* in Standard Indonesian. In this language, the movement of an NP across an active verb deletes the AV morpheme from the verb. I propose that the movement of an NP causes a change in the feature content of *v** and that this change, in turn, blocks the insertion of the otherwise obligatory AV morpheme under *v** in the post-syntactic morphological component. The data discussed here provide support for *v*P phases at the syntax-phonology interface and yields a new understanding of the "deletion" of derivational morphemes as failure of the post-syntactic vocabulary insertion (Harley 2005).

"Universal Syntax and Parametric Phonology"

講師 時崎久夫 (札幌大学)

The minimalist program claims that conditions are on the interface between syntax and sensorimotor (SM) system and conceptual- intentional (C-I) system (i.e. bare output conditions). In order to pursue this idea, we need to reconsider the status of the syntactic parameters proposed so far. In this paper, I propose a hypothesis that parameters are only in phonology while morphosyntax is universal. This hypothesis, Universal Syntax and Parametric Phonology, claims that apparent morphosyntactic variation in the world's languages can be attributed to interface conditions on movement. I discuss parameters such as head-directionality, compounding, preposition stranding and wh-movement. It is shown that these morphosyntactic properties are derived from word-stress location and tone/pitch features together with interface conditions on movement. I argue that restricting parameters within phonology has a number of desirable consequences for theories of languages including language acquisition and language change.

Phasing in Linearization of Unlabeled Phrase Structure

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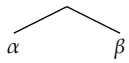
1 The Discrepancy

(1) **Phonology:** All the past proposals on linearization refers to label-based notions like 'specifier', 'head' and 'complement':
   a. directionality parameter (Chomsky 1981, Epstein et al. 1998 etc.)
   b. the LCA of any sort (Kayne 1994, Chomsky 1995, Moro 2000, Uriagereka 1999)
   c. Fukui and Takano's (1998) theory of 'Demerge'
   d. Merge as pair-formation (Merge(α, β) = $\langle\alpha, \beta\rangle$), effectively departing from bare phrase structure (Saito and Fukui 1998, Kayne 2011, Zwart 2009, forthcoming).

(2) These past proposals were meant to capture:
   a. the (near universal) 'Specifier'-left generalization
   b. the (stipulated in)variability of 'head'-'complement' ordering (that is sometimes category-sensitive, as shown by C-initial and V-final in German)

(3) **Syntax:** Phrase structure is 'bare', *i.e.*, associated with no labels/projection.

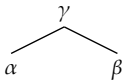
(4) The theory of *bare phrase structure* (Chomsky 1994, 1995 *et seq.*):
Merge is the only generative device for structure generation.

(5) Merge(α, β) = a. $\{\alpha, \beta\}$
b. 

(order irrelevant)

(6) Merge, understood as a simple set-formation, generates hierarchical structure of linguistic constituents without assigning 'labels' (*i.e.*, nonterminal symbols) to them.

(7) Therefore, despite its familiarity and widespread acceptance, "reference to labels ... is a departure from SMT." (Chomsky 2007:23)

(8) 

. . . set-theoretically inexplicable

(9) Assignment of labels to bare phrase structure is a plain violation of the Inclusiveness Condition and the No-Tampering Condition (see Sorida 2011, in progress, and Narita 2011b for relevant discussion).

2 Headedness via Minimal Search

(10) labeling ≠ projection ≠ headedness
   a. labeling: association of nonterminal symbols (S, NP, V', etc.) with phrasal constituents
   b. projection: duplication of features of a lexical item (LI) onto (typically 'dominating') constituents
   c. headedness (endocentricity): centrality of a certain LI in the distribution/interpretation of a constituent

(11) Syntax without labeling/projection can still seek the (hopefully minimal) theory of headedness.
   a. $\{\alpha, \beta\}$ is headed by (the head of) α if α selects or probes β (Chomsky 2000, Collins 2002 *et seq.*).
   b. (i) In {H, α}, H an LI, H is the head.
      (ii) If α is internally merged to β, forming $\{\alpha, \beta\}$ then the head of β is the head of $\{\alpha, \beta\}$. (Chomsky 2008:145,(2)-(3), rephrased)

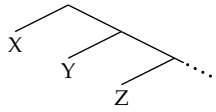
c. **Minimal head detection (MHD)**:
The head of an SO Σ is the LI that Σ immediately contains (Chomsky, lectures at MIT in fall 2010; see Narita 2011b, Ott 2011).
(The effect of (11c) is that if an SO Σ takes the form {H, α}, H an LI, H is the head of Σ.)

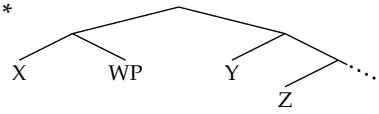
(12) In particular, Chomsky's MHD is articulating the view that the mechanism of head-detection can be radically reduced to minimal search of an LI for each phrase.

3 MHD and *{XP, YP}

(13) Narita (2011b) (see also Narita forthcoming,to appear, 2011c):
a. MHD is the only device to determine headedness.
b. SOs to which MHD cannot assign headedness are uninterpretable and hence ruled out by Full Interpretation.
c. *{XP, YP} is derived from (a) and (b).
d. Combination of two XPs can be achieved only when at least one of the XPs be reduced by Transfer to a simplex LI.

(14) *{*XP, YP*} (the *H-α schema*):
No two phrases can be merged.

(15) a.


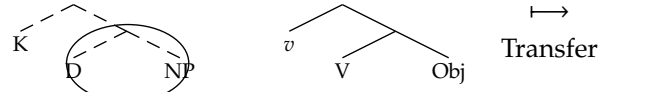
b. *


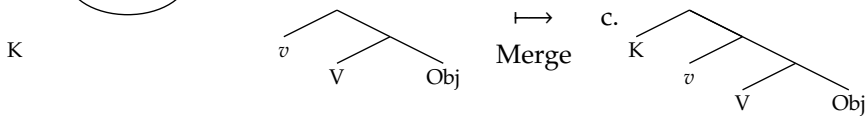
(16) *Transfer*:
Applied to a phase with a phase head X, Transfer subjects the complement of X to interpretation by CI and SM, eliminating it from the derivational workspace.

(17) Application of Transfer effectively reduces {X, YP} to a simplex 'phase-head' LI X.
a. . . . {X, YP} . . . $\longmapsto$ b. . . . X . . .
Transfer

(18) a.


b.


(19) a.


b.


(20) Narita claims that his theory of *{XP, YP} derives a number of desirable empirical consequences:
a. Phrase structure can be projection-free, strictly satisfying the Inclusiveness Condition and the No-tampering Condition.
b. Recursive structure-embedding necessitates cyclic Transfer.

c. The interplay of *{XP, YP} and cyclic Transfer straightforwardly derives the complementarity of ph(r)asal-movement and head-movement, as well as Takano's (2000) generalization (see Narita 2011b,a).
d. The H-α schema (*{XP, YP}) accounts for the distribution of free positions in phrasal idioms (Narita 2011a).
e. The interplay of *{XP, YP} and cyclic Transfer provides a unified account of CED effects with better empirical coverage (see Narita 2011b, forthcoming; cf. Uriagereka 1999).

(21) **Interim Conclusion:** The notion of 'specifier' has no place in the minimal theory of headedness (cf. Starke 2004, Jayaseelan 2008, Chomsky 2010a,b, Lohndal in progress and Narita 2011b).

(22) (21) is good news for theorists of linearization, since the notion of specifier has always been a major source of headache for them.

4 Linearization of Projection-free Syntax

4.1 Proposal

(23) a. head-complement ← directionality parameter revamped in terms of MHD
b. IMed 'specifier' ← the universal leftness of movement (cf. Abels and Neeleman 2009)
c. EMed 'specifier' ← can be treated as, to wit, 'second complement'

(24) **MHD-based Directionality Parameter**:
a. *head-initial*: MHD maps {H, α} to H → Lin(α).
b. *head-final*: MHD maps {H, α} to Lin(α) → H.

(where H is an LI and Lin(α) stands for the linear sequence assigned to the SO α.)

(25) **Leftward movement and trace-deletion** (cf. Abels and Neeleman 2009):
If IM creates {X, α},
a. the lower copy of X within α is deleted.
b. {X, α} is mapped to X → Lin(α).

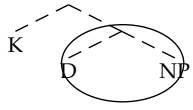
(26) **Order preservation**:
a. If a sequence $\alpha \rightarrow \beta$ is generated prior to another sequence $\alpha \rightarrow \gamma$, then map these sequences to $\alpha \rightarrow \beta \rightarrow \gamma$.
b. If a sequence $\alpha \rightarrow \beta$ is generated prior to another sequence $\gamma \rightarrow \beta$, then map these sequences to $\gamma \rightarrow \alpha \rightarrow \beta$.

(27) **Headedness Synchronization**:
If {X, Y} is headed by X in the mapping to SEM, it is also headed by X in the mapping to PHON.

4.2 Sample Derivations

(28) *English*: The boy eat the apple.

(29) *Japanese*: otokonoko-ga ringo-o tabe-ta.
boy-PL-NOM apple-ACC eat-PAST

(30) K-phase:
a. 

⟼ Transfer
b. K

(31) *English*: K → *the*$_D$ → *boy/apple*$_N$

(32) *Japanese*: $otokonoko/ringo_{N} \rightarrow \oslash_{D} \rightarrow ga/o_{K}$

(33) v-phase:

a. 

$\longmapsto$ Transfer

b. v

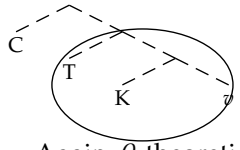
(34) *English*: a. $v \rightarrow eat_{V} \rightarrow K$
(+(31)) b. $v \rightarrow eat_{V} \rightarrow K \rightarrow the_{D} \rightarrow apple_{N}$

(35) *Japanese*: a. $o_{K} \rightarrow tabe_{V} \rightarrow v$
(+(32)) b. $ringo_{N} \rightarrow \oslash_{D} \rightarrow o_{K} \rightarrow tabe_{V} \rightarrow v$

(36) Even though MHD may in principle single out either eat_{V} or K as the head of $\{eat_{V}, K\}$, the choice of V is required by Headedness Synchronization (27) for legitimate interpretation at SEM and PHON.

(37) Specifically, I assume that the θ-role assignment from V to K at SEM indirectly requires the choice of V as the head of {V, K}.

(38) C-phase without the EPP-driven A-movement (as in Japanese):

a. 

$\longmapsto$ Transfer

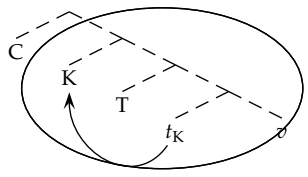
b. C

(39) Again, θ-theoretic considerations require (via (27)) that v, not K, is singled out as the head of $\{K, v\}$ (K thus becomes a 'second complement' of v).

(40) *Japanese*:

a. $ga_{K} \rightarrow v$ (= $Lin(\{ga_{K}, v\})$; cf. (39))
b. $ringo_{N} \rightarrow \oslash_{D} \rightarrow o_{K} \rightarrow tabe_{V} \rightarrow v$ (= (35))
c. $ga_{K} \rightarrow ringo_{N} \rightarrow \oslash_{D} \rightarrow o_{K} \rightarrow tabe_{V} \rightarrow v$ ((40a) + (40b) via (26))
d. $otokonoko_{N} \rightarrow \oslash_{D} \rightarrow ga_{K}$ (= (32))
e. $otokonoko_{N} \rightarrow \oslash_{D} \rightarrow ga_{K} \rightarrow ringo_{N} \rightarrow \oslash_{D} \rightarrow o_{K} \rightarrow tabe_{V} \rightarrow v$ ((40c) + (40d))
f. $otokonoko_{N} \rightarrow \oslash_{D} \rightarrow ga_{K} \rightarrow ringo_{N} \rightarrow \oslash_{D} \rightarrow o_{K} \rightarrow tabe_{V} \rightarrow v \rightarrow ta_{T} \rightarrow (yo/ne/no?/...)_{C}$ ((40e) + T + C)

(41) C-phase with the EPP-driven A-movement (as in English):

a. 

$\longmapsto$ Transfer

b. C

(42) *English*:

a. $Lin(\{t_{K}, v\}) = Lin(v)$ (by trace-deletion (25a))
b. $will_{T} \rightarrow v \rightarrow eat_{V} \rightarrow K \rightarrow the_{D} \rightarrow apple_{N}$ (+ (34) + T)
c. $K \rightarrow will_{T} \rightarrow v \rightarrow eat_{V} \rightarrow K \rightarrow the_{D} \rightarrow apple_{N}$ (= $Lin(\{K, \{T, \{t_{K}, v\}\}\})$ via (25b))
d. $K \rightarrow the_{D} \rightarrow boy_{N}$ (= (31))

e. K → the_{D} → boy_{N} → $will_{T}$ → v → eat_{V} → K → the_{D} → $apple_{N}$ ((42c) + (42d) via (26))
f. ($that/if/whether/\oslash)_{C}$ → K → the_{D} → boy_{N} → $will_{T}$ → v → eat_{V} → K → the_{D} → $apple_{N}$ ((42e) + C)

(43) No reference to representational labels/projections is necessary in this theory of linearization.

5 Further Issues

5.1 Disharmonic Word Order

(44) **The 'specificity' principle** (commonly assumed in the literature of morphology including Distributed Morphology):
The most highly specified wins.

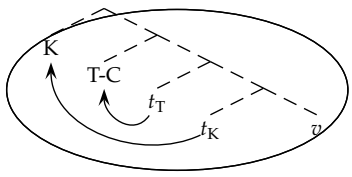
(45) *German and other V2 languages*:
a. Lin({[+N], α}) = [+N] → Lin(α), where [+N] is any LI with nominal features (including P).
b. Lin({[+V], α}) = Lin(α) → [+V], where [+V] is any LI with verbal features.
c. Lin({C, α}) = C → Lin(α).

(46) *German*: der Junge hat den Apfel gegessen.
the boy has the apple eaten

(47) K → der/den_{D} → $Junge/Apfel_{N}$ (K-phase, head-initial)

(48) v-phase, head-final:
a. Lin{V, K} = K → V (via Headedness Synchronization (27))
b. K → den_{D} → $Apfel_{N}$ → gegessen_{V} (via Order Preservation (26))
c. K → den_{D} → $Apfel_{N}$ → gegessen_{V} → v (+ v)

(49) C-phase with T-to-C movement and topicalization:



a. Lin({t_T, {t_K, v}}) = Lin(v) (trace-deletion (25a))
b. hat_{T-C} → v (= Lin({T-C, {t_T, {t_K, v}}}))
c. hat_{T-C} → K → den_{D} → $Apfel_{N}$ → gegessen_{V} → v ((b) + (48) via Order Preservation)
d. K → hat_{T-C} → K → den_{D} → $Apfel_{N}$ → gegessen_{V} → v (via leftward movement (25b))
e. K → der_{D} → $Junge_{N}$ → hat_{T-C} → K → den_{D} → $Apfel_{N}$ → gegessen_{V} → v ((d) + (47) via Order Preservation)

5.2 Speculations on Acquisition of LIs

(50) How 'complex' are LIs? How can the composition of each LI be learned/acquired by the child through experience?

(51) The H-α schema (*{XP, YP}) may help not only the 'bottom-up' synthesis of such LIs into clausal syntax, but also the 'top-down' analysis and reanalysis of phonological word structures, leading to constant revisions of provisionally analyzed LIs.

(52) Various cues from the primary linguistic data (prosodic or distributional):
a. Stress readily delineates phonological words (see Yang 2002, 2004, Gambell and Yang 2003) (*e.g.*, /ðəˈboɪzˈkistəˈgərl/, *the-bóys kíssed a-gírl*).
b. Focus prominence marks α of {H, α} (cf. Cinque 1993).
c. Overt 'XP'-movement is a privilege only of phases (cf. Chomsky 2000, Narita 2011b)
d. Prosodic phrasing signals phase boundaries (cf. Kratzer and Selkirk 2007, Samuels 2009)

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Deriving the Prosodic Hierarchy

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1. Introduction

- Computational efficiency (e.g. Chomsky 2008)
- Syntax-phonology interface and computational efficiency (Dobashi 2010)

- *Prosodic Hierarchy* (Selkirk 1984, Nespor and Vogel 1986; Halliday 1967):

(1)
[ ] Utterance
[ ][ ] Intonational Phrase
[ ][ ][ ] Phonological Phrase
[ ][ ][ ][ ] Prosodic Word

- Representational schema
- Recent studies: Phase-by-phase mapping creates phonological phrases.
- Proposals:
  - Each layer of the prosodic hierarchy constitutes a linguistic level (cf. Nespor and Vogel 1986).
  - Syntax-phonology mapping:

    Syntax → Spell-Out (Linearization/Prosodic Word) → Phonological Phrase → Intonational Phrase → Utterance
  - A general condition on the mapping: *Local Mapping* – efficient computation

- The prosodic hierarchy is derived by the mapping (Samuels 2009).
- To what extent is prosody autonomous?

2. Spell-Out → Phonological Phrase

- Phonological phrasing: Linearization/Spell-Out (Dobashi 2003, 2009)

(2) Multiple Spell-Out

The sister of a phase head is spelled out in the course of narrow syntax derivation.

(3) $[_{WP}$ s **W** $[_{XP}$ r X $[_{YP}$ q **Y** $[_{ZP}$ Z p]]]

(4) (s W) (r X q Y) (Z p)

- *Assembly Problem*: How are the units of Spell-Out linearized with respect to each other?

(5) (a b c) (d e f): For a > b > c and d > e > f, if c > d, then a >b > c > d > e > f.

(6) The leftmost element in each unit of Spell-Out is left behind for the next Spell-Out so that the linearization of the units of Spell-Out is possible

(7) a. S-O(ZP) yields Z > p; p is sent to the phonological component Φ, as in (8a).
b. S-O(XP) yields r > X > q > Y > Z; X > q > Y > Z is sent to Φ, as in (8b).
c. S-O(Root) yields s > W > r; s > W > r is sent to Φ, as in (8c).

(8) a. (p)
b. (X > q > Y > Z) > (p)
c. (s > W > r) > (X > q > Y > Z) > (p)

(9) $[_{CP}$ **C** $[_{IP}$ NP_{Subj} Infl $[_{vP}$ t_{Subj} **V-v** $[_{ZP}$ t_V $NP_{Obj}]]]$

(10) a. (C NP_{Subj}) (Infl V) (NP_{Obj})
b. # (C) (NP_{Subj} Infl V) (NP_{Obj})

- Syntax-Phonology Mapping: A phonological string mapped to Φ is a phonological phrase.

- Spell-Out/Linearization defines phonological phrasing.

3. Phonological Phrase → Intonational Phrase

- Intonational Phrase (Nespor and Vogel 1986): Intonational contour and pause

(11) a. Your car, you should sell *t*
b. $[_I$ Your car], $[_I$ you should sell]

- Why does a topic coincide with an intonational phrase, but not with a phonological phrase?
  - Selkirk (1984: 286): sense unit
  - Nespor and Vogel (1986:189): a string that is not structurally attached to the sentence tree
  - Frascarelli (2000: 194): the absence of feature-checking operations

- Autonomy?

- Topic seems to be linearized rather freely.

Italian (Rizzi 1997: 295-296):

(12) a. Credo che a Gianni, QUESTO, domani, gli dovremmo dire
C Top Foc Top IP
"I believe that to Gianni, THIS, tomorrow we should say"

b. Credo che domani, QUESTO, a Gianni, gli dovremmo dire

c. Credo che domani, a Gianni, QUESTO gli dovremmo dire

d. Credo che a Gianni, domani, QUESTO gli dovremmo dire

e. Credo che QUESTO, a Gianni, domani, gli dovremmo dire

f. Credo che QUESTO, domani, a Gianni, gli dovremmo dire

Chichewa (Bresnan and Mchombo 1987: 744-745):

- S can be a topic, O is a topic:

(13) a. SVO: Njûchi zi-ná-wá-lum-a alenje
bees SM-Past-OM-bite-Indic hunters

b. VOS: Zináwáluma alenje njûchi

c. OVS: Alenje zináwáluma njûchi

d. VSO: Zináwáluma njûchi alenje

e. SOV: Njûchi alenje zináwáluma

f. OSV: Alenje njûchi zináwáluma

- Valuation of [uF] = part of TRANSFER/Spell-Out (Chomsky 2001, 2004)

(14) A topic is not linearized by Spell-Out. (Cf. Frascarelli 2000)

- A topic is sent to the phonological component as a last resort. Otherwise, it would cause the derivation to crash because its phonological features would enter LF.

- Topic is not in the unit of Spell-Out. It is not linearized with respect to the rest of the sentence.

- Spell-Out/Linearization defines phonological phrasing (section 2).

- Topic is not part of the phonological phrasing of the rest of the sentence. It is in a separate "tier". (Cf. Haraguchi 1983)

(15) a. Syntax: Your car, you should sell

b. S-O/Linearization: (your > car) (you) > (should > sell)

c. Phonological phrase: ($_{\phi}$ Your car) ($_{\phi}$ you) > ($_{\phi}$ should sell)

d. Intonational phrase: [$_{I}$ ($_{\phi}$ Your car)], [$_{I}$ ($_{\phi}$ you) ($_{\phi}$ should sell)]

- Spell-Out/Linearization refers to Syntax (c-command).
- Phonological phrase refers to the linearized string.
- Intonational phrase refers to the phonological phrasing.
- Syntax → Spell-Out → Phonological Phrase → Intonational Phrase

Syntax is not visible when a phonological phrase is formed; otherwise the topic could not be distinguished when the intonational phrasing is defined.

- *Local Mapping* (Efficient computation):

(16) In mapping from a linguistic level L_n to L_{n+1}, L_{n+1} may refer only to L_n.

- Other instances of Intonational Phrases (Nespor and Vogel 1986):

(17) a. [As you know] Isabelle is an artist.

b. Isabelle [as you know] is an artist.

c. Isabelle is [as you know] an artist.

d. Isabelle is an artist [as you know].

(18) a. That's Theodore's cat [isn't it]

b. [Clarence] I'd like you to meet Mr. Smith.

c. [Good heavens] there's a bear in the back yard.

d. They are so cute [those Australian koalas]

e. My brother [who absolutely loves animals] just bought himself an exotic tropical bird.

(19) Recurrence of adjectives and adverbs: "a blue, bright flower"

- A string that is not spelled-out as part of the sister of a phase head is not linearized with respect to the rest of the sentence, and it forms an independent intonational phrase.
- Autonomy of prosody: to the extent that (16) is observed.

4. Syntax → Spell-Out (Linearization/Prosodic Word)

- *The Principle of the Categorial Invisibility of Function Words* (Selkirk 1984:337):

(20) a. ($_{\phi}$ Ánnemarie áte)

b. ($_{\phi}$ Ánnemarie áte it) Inkelas and Zec (1995:544)

c. ($_{\phi}$ Annemaríe) ($_{\phi}$ áte an ápple)

- Autonomy?
- Spell-Out/Linearization <Syntax, Ordered prosodic words>
- In effect, Spell-Out defines prosodic words.
- Given the Local Mapping condition, Spell-Out may refer to the distinction between function words and content words when it maps syntax to linearly ordered prosodic words.

5. Some Consequences

- *Strict Layer Hypothesis* (Selkirk 1984: 26, Nespor and Vogel 1986: 7):

(21) A category of level *i* in the hierarchy immediately dominates a (sequence of) categories of level *i-1*.

- Local Mapping derives (21).

- Recursive phrasing should be allowed if each level is "derived" by a concatenation operation like Merge in syntax. (Cf. Truckenbrodt 1999)
- Nespor and Vogel (1986: 197): Restructuring of Intonational Phrase and "NP rule"

(22) **[**(The giant panda) (eats) (only one type) (of bamboo) (in its natural habitat)**]**

(23) a. [(The giant panda) **]** **[**(eats) (only one type) (of bamboo) **]** **[** (in its natural habitat)]

b. [(The giant panda) (eats) (only one type) (of bamboo) **]** **[** (in its natural habitat)]

c. [(The giant panda) **]** **[**(eats) (only one type) (of bamboo) (in its natural habitat)]

d. #[(The giant panda) (eats) (only one type) **] [** (of bamboo) (in its natural habitat)]

e. # [(The giant panda) (eats) **] [** (only one type) (of bamboo) (in its natural habitat)]

(24)

(25) a. ($_{\Phi}$ of-bamboo) ($_{\Phi}$ in-its-natural-habitat)

b. ($_{\Phi}$ only-one-type > ($_{\Phi}$ of-bamboo)) > ($_{\Phi}$ in-its-natural-habitat)

- In (25a), *of-bamboo* is not linearized with respect to *in-its-natural-habitat* since it is embedded.
- In (25b), *of-bamboo* is linearized with respect to *only-one-type*, and *in-its-natural- habitat* is linearized with respect to the entire NP *only-one-type-of-bamboo*.

(26) (The giant panda) (eats) **(only one type (of bamboo))** (in its natural habitat)

- **(of bamboo)**, being embedded, is invisible to the restructuring.

6. Conclusion

- The Prosodic Hierarchy is not a representational notion.
- Local Mapping
- Autonomy

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Successive Cyclicity at the Syntax-Phonology Interface: Voices from Standard Indonesian

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1. Introduction

Goals of the Talk

- The distribution of the active voice/AV morpheme *meN-* in Standard Indonesian/SI reflects successive cyclicity at the syntax-phonology interface (Chomsky 2000 *et seq*).
- *MeN*-deletion is a two-step process: a) D-feature checking in the syntax and b) failure of vocabulary insertion in the post-syntactic phonological component (Halle and Marantz 1993).
- The patterns of *meN*-deletion in SI provide empirical evidence against the Movement Theory of Control/MTC (Hornstein 1999 *et seq*).

2. Active Voice Morphology in Standard Indonesian

(1) Cole and Hermon's (1998) Generalization (see also Saddy 1991)
The obligatory omission of *meN-* with verbs that would otherwise permit *meN-* indicates the movement of an NP argument over the *meN-* + verb.

- *MeN-* deletion under **A′-contexts** (*wh*-movement and relativization)

(2)a. Siapa$_i$ yang Bill (***mem**)-beritahu ibu-nya [$_{CP}$ yang t_i *(**men**)-cintai Fatimah]?
who that Bill AV-tell mother-his that AV-love Fatimah
'Who does Bill tell his mother that loves Fatimah?'

b. Siapa$_i$ yang Bill (***mem**)-beritahu ibu-nya [$_{CP}$ yang Ali (***mem**)-cintai t_i]?
who that Bill AV-tell mother-his that Ali AV-love
'Who does Bill tell his mother that Ali loves?'

(3)a. [Lelaki$_i$ [$_{CP}$ OP$_i$ yang [t_i *(**mem**)-beli buku itu]]] adik saya.
man that AV-buy book that brother my

'The man who bought that book is my brother.'

b. [Buku$_i$ [$_{CP}$ OP$_i$ yang [John (***mem**)-beli t_i]] itu] menarik.
book that John AV-buy that interesting
'The book that John bought is interesting.'

- *MeN-* deletion under **A-contexts** (zero passive; see Polinsky and Potsdam 2008 and Sato 2011a)

(4) Ali$_i$ saya (***men**)-cubit t_i.
Ali I AV-pinch
'I pinched Ali. /Ali was pinched by me.'

- *This construction looks like topicalization, a case of **A′**-movement, but it involves **A**-movement in SI.*

(5)a. Dia datang untuk ber-cakap-cakap dengan Ali.
he come for INTR-talk-RED with Ali
'He came to talk with Ali.'

b. ?* Saya mem-bawa surat itu untuk teman saya (dapat) baca.
I AV-bring letter that for friend my can read
'I brought the letter for my friends to (be able to) read.'

c. Saya mem-bawa surat itu untuk (dapat) di-baca oleh teman saya.
I AV-bring letter the for can PASS-read by friend my
'I brought the letter to (be able to) be read by my friends.'
⇨ **Canonical passive** (*di*-verb + *oleh* agent NP)

d. Saya mem-bawa surat itu untuk (dapat) kau baca.
I AV-bring letter the for can you read
'I brought the letter to (be able to) be read by you.'
⇨ **Zero passive** (1st/2nd pronominal agent + base verb)
(Chung (1976: 46-47), with a slight modification)

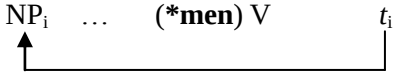
- *MeN-* deletion is triggered by the movement of an NP.

(6)a. Kenapa$_i$ Mary *(**mem**)-beli buku itu t_i?
why Mary AV-buy book that
'Why did Mary buy that book?'

b. [$_{PP}$ Di mana]$_i$ John *(**mem**)-beri Mary buku itu t_i?
at where John AV-give Mary book that
'Where did John give Mary that book?'

c. [$_{PP}$ Kepada siapa]$_i$ Mary *(**mem**)-beri buku itu t_i?
to who Mary AV-give book that
'To whom did Mary give that book?'

(7) The blocking effect of the AV morpheme *meN-* on the movement of NP



Central Issues
- What is the true nature of this phenomenon called *meN*-deletion in SI?
- What are the theoretical imports of this phenomenon for generative syntactic theory?

3. Phase Theory, Deletion and Failure of Vocabulary Insertion at the Syntax-Phonology Interface

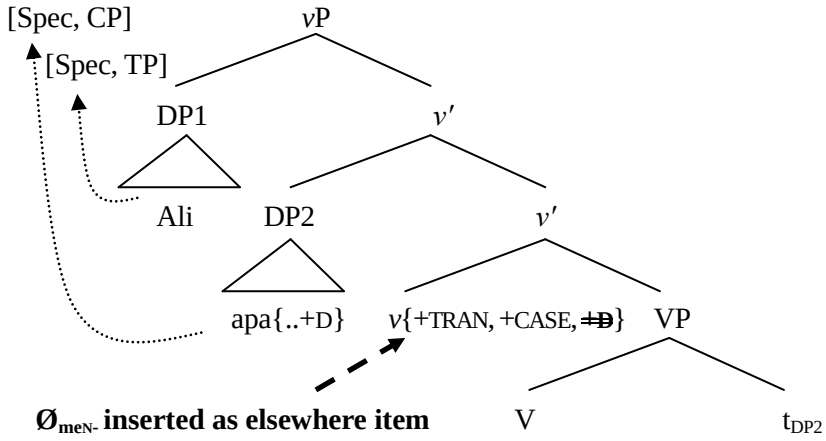
3.1. MeN-*Deletion as Failure of Vocabulary Insertion at the Syntax-Phonology Interface*

(8)a. Successive cyclicity enforced by the Phase Impenetrability Condition (Chomsky 2000 *et seq*)
b. Late insertion in the post-syntactic phonological component (Halle and Marantz 1993)

(9) Phase Impenetrability Condition (Chomsky 2000: 108)
In phase α with head H, only H and its edge are accessible to operations outside α.

(10)a. *meN-* ↔ [$_v$ ___ [+D]] (specific case)
b. $Ø_{meN-}$ ↔ [$_v$ ___ […]] (elsewhere case)

(11) Apa_i yang Ali (***mem**)-beli?
what that Ali AV-buy
'What did Ali buy?'



Our analysis predicts that ***the movement of any NP across the active voice verb*** *should cause* meN-*deletion, regardless of its thematic role or grammatical function.*

(12)a. Kamu ***(mem)**-beli-kan ibu-mu bunga.
you AV-buy-APPL mother-your flower
'You bought your mother a flower/flowers.'
b. Apa_i yang kamu **(*mem)**-beli-kan ibu-mu t_i?
what that you AV-buy-APPL mother-your
'What did you buy your mother?'
c. $Siapa_i$ yang kamu **(*mem)**-beli-kan t_i bunga?
who that you AV-buy-APPL flower
'Who did you buy a flower/flowers?'

3.2. *Unaccusativity in Standard Indonesian and the Phasehood of vPs*

(13)a. Kalau [$_{NP}$ harga minyak] tidak **turun**, kita akan bankrut.
if price oil NEG fall we will bankrupt
'If the oil price doesn't fall, we'll go bankrupt.'
b. Kalau tidak **turun** [$_{NP}$ harga minyak], kita akan bankrut.
if NEG fall price oil we will bankrupt
'If the oil price doesn't fall, we'll go bankrupt.'
(SI; based on Soh and Nomoto (2009: 4))

(14)a. [$_{NP}$ Se-orang lelaki tinggi] **pergi** ke pasar.
1-CL man tall go to market
'A tall man went to a market.'

b. * Ke pasar **pergi** [$_{NP}$ se-orang lelaki tinggi].
to market go 1-CL man tall
'A tall man went to a market.'

(SI; based on Soh and Nomoto (2009: 2))

(15)a. Pemerintah telah **me-nurun-kan** harga minyak.
government PERF AV-fall-APPL price oil
'The government has lowered the price of oil.'

b. * Fatimah **me-mergi-kan** Ali ke pasar.
Fatimah AV-go-APPL Ali to market
'Fatimah caused Ali to go to the market.'

(SI; (15a) based on Soh and Nomoto (2009: 4))

MeN- in unaccusative verbs contributes a progressive-like reading. It is not an AV marker.

(16)a. Tarif listrik **turun**
price electricity fall
'The electricity price fell.'

b. Tarif listrik **me-nurun.**
price electricity PROG-fall
'The electricity price is falling.'

(SI; based on Soh and Nomoto (2009: 4))

(17)a. *meN-* ↔ [$_{v}$ ___ [+D]] (specific case) (=10a)
b. Ø$_{meN-}$ ↔ [$_{v}$ ___ […]] (elsewhere case) (=10b)
c. *meN-* ↔ [$_{ASP}$ ___ [+PROG]]

What about zero passives? It has been suggested that passive vPs do not form strong phases (Chomsky 2001, 2004). Then, why is it that this construction causes meN-deletion?

(18) Ali$_i$ saya (***men**)-cubit t_i. (=4)
Ali I AV-pinch
'I pinched Ali. /Ali was pinched by me.'

*"zero passive" is a misnomer. It is headed by v*P, which introduces an external argument.*

(19)a. **Diri-mu** mesti [$_{vP}$ **kau** serahkan ke polisi].
self-2 must you surrender to police
'Yourself must be surrendered to the police.'

(Arka and Manning (1998))

b. * **Diri-nya** tidak [$_{vP}$ di-perhatikan **Amir**].
self-3 NEG PASS-care Amir
'Himself was not taken care of by Amir.'

(Arka and Manning (1998))

4. On the Movement Theory of Control: Further "Voices" from Standard Indonesian

(20) The Movement Theory of Control/MTC (Hornstein 1999 et seq)
- a. Obligatory control is a subspecies of raising/A-movement.
- b. Obligatory control involves the movement of an NP into a θ-position.

(21) a. John tries to win.
b. $[_{TP}$ John$_i$ $[_{VP}$ t_i tries $[_{TP}$ t_i to $[_{VP}$ t_i win]]]]

(22) Esti$_i$ sudah men-coba [$e_{i/*j}$ bicara dengan teman-nya].
Esti already AV-try talk with friend-her
'Esti tried to talk with her friend.'

- This SI construction exhibits various structural/interpretive properties of obligatory control in English (Fodor 1975; Williams 1980; Lebeaux 1985; Higginbothan 1992; Hornstein 1999)

(23) The empty argument in the SI construction requires an overt antecedent.
* Di-harap-kan *e* menang.
PV-expect-APPL win
'It was expected PRO to win.'

(24) The antecedent in the SI construction, if any, has to be local.
* Esti$_i$ pikir di-harap-kan e_i menang.
Esti think PV-expect-APPL win
'Esti$_i$ thinks it was expected PRO$_i$ to win.'

(25) The local antecedent in the SI construction has to c-command the empty argument.
[Ibu Esti$_i$]$_j$ men-coba PRO$_{*i/j}$ bicara dengan guru itu.
mother Esti AV-try talk with teacher that
'[Esti$_i$'s mother]$_j$ tried PRO$_{*i/j}$ to talk with that teacher.'

(26) The empty argument in the SI construction only allows the sloppy interpretation
Esti ingin menang, dan Imelda, juga.
Esti want win and Imelda too
'Esti wants PRO to win and Imelda, too.' (= Imelda wants to win, *= Esti wants to win).

(27) The empty argument in the SI construction does not allow split antecedents.
Esti$_i$ men.yuruh Imelda$_j$ PRO$_{*i/j/*i+j}$ men-cuci satu sama lain.
Esti AV.tell Imelda AV-wash one same another
'Esti$_i$ told Imelda$_j$ PRO$_{*i/j/*i+j}$ to wash themselves/each other.'

(28) The empty argument in the SI construction only permits the so-called *de se* reading.
Orang malang itu meng-harap-kan menang.
person unfortunate that AV-expect-APPL win
'That unfortunate person expects PRO to win.'
(→ "The unfortunate person believes of him/herself that he or she will win.")

(29) The empty argument in the SI construction only allows the bound variable reading.

Hanya	Soekarno	ingat	ber-pidato.
only	Soekarno	remember	INTR-speech

'Only Soekarno remembers giving a speech.'

(i) OK "Only Soekarno remembers himself giving a speech." (bound variable reading)

(ii) * "Only Soekarno remembers that he gave a speech" (free variable reading).

- *The MTC predicts that meN- should be eliminated from the matrix verb, contrary to facts.*

(30)

Esti	*(**men**)-coba	me.masak	makanan	Jepang.
Esti	AV-try	AV.cook	food	Japan

'Esti tried to cook Japanese food.'

5. Conclusions

The distribution of the active voice morpheme *meN-* in Standard Indonesian is important because …

- It highlights the role of the *v*P phase at the syntax-phonology interface.
- It illuminates the nature of "deletion" in the PF component.
- It is an important testing ground for analyses of obligatory control.

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Universal Syntax and Parametric Phonology

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1. Introduction

- Background: the minimalist program claims that conditions are on the inerface between syntax and sensorimotor (SM) system and conceptual-intentional (C-I) system. Pursuing this idea, we need to reconsider the status of syntactic parameters.
- The aim of this talk is to show that all the parameters deriving all the syntactic variations in the world's languages are in phonology.
- Parameters: head-directionality, compounding, preposition stranding, wh-movement, …
- These syntactic properties are derived from phonological properties such as word-stress location, tonal features and phonological prominence.
- Road map

  §2. Deriving compounding and head-directionality from word-stress location

  §3. Deriving wh-movment from prominence

2. Deriving compounding and head-directionality from word-stress location

2.1 Typology of stress location: Goedemans and van der Hulst (2005, 2011)

- Two types of stress locations: fixed stress and weight-sensitive stress.
- Fixed stress: stress is located on the same syllable in each word. The location is independent of the weight (usually quantity) of the syllables in the word and is determined with reference to a word edge only.
- Weight-sensitive stress, heavy syllables (CV or CVC) attract stress, while light syllables (CV) only get stress if they are in the right location in the string of syllables.

(1) Fixed stress location

Initial (92), Second (16), Third (1) Antepenultimate (12) Penultimate (110) Ultimate (51)

(2) Weight-sensitive stress

a. Left-edge: the first or second syllable (37) (ˈ*kutira, paʈˈʈaaɭakˌkaaran* (Malayalam)
b. Left-oriented: the third syllable is involved (2) (Kashaya, Hokan; Laragia, Australian)
c. Right-edge: penultimate or ultimate (65) (ˈ*warra, waˈraa* (Epena Pedee, Choco))
d. Right-oriented: antepenult, penult or ultimate (27) (*doˈmesticus, reˈfeːcit* (Cl. Latin)
e. Unbounded: anywhere in the word (54) (ˈ*nosogid, kɛmiŋˈgaːr* (Dongolese Nubian))
f. Combined: both Right-edge and unbounded (8) (Alamblak, Danish, Iraqw, …)
g. Not predictable (26) (e.g. Abkhaz, Burushaski, Grebo, Hixkaryana, Mandarin, …)

2.2 Comounding parameter: Snyder (2001) and Sugisaki and Snyder (2002)

(3) The grammar {disallows*, allows} formation of endocentric compounds during the syntactic derivation. [*unmarked value] (cf. Recursivity (Mukai 2008, Tokizaki 2010))

(4) a. [$_N$ [$_N$ worm] [$_N$ can]]

b. [$_{NP}$ *boite* [$_{PP}$ *aux* *vers*]]

can for-the worms

(5) There {is, is not} a word-formation rule in the lexicon which creates a complex verb of the following form: [$_V$ V-Particle].

(6) a. Who are you working with?

b. *Avec qui travaillez-vous?*

with who work-you

(7) John should pick up the book. (cf. *French)

(8)	Language	V-Particle	P-stranding (A'-m)	Stress position
Germanic	Icelandic	V-Prt-NP	Preposition-stranding	Initial
	Norwegian	V-Prt-NP	Preposition-stranding	Right-oriented
	Swedish	V-Prt-NP	Preposition-stranding	Right-oriented
	Danish	V-Prt-NP	Preposition-stranding	Combined: R-ed/ unbnd
	English	V-Prt-NP	Preposition-stranding	Right-oriented
Greek	Greek	NO	NO	Antepenult
Romance	French	NO	NO	R-edge
	Italian	NO	NO	R-edge
	Spanish	NO	NO	R-edge
Slavic	Bulgarian	NO	NO	n.d.
	Russian	NO	NO	Unbounded
	Serbo-Croatian	NO	NO	Unbounded
Austronesian	Indonesian	?	NO	Penultimate

- Preposition stranding is allowed only in languages with initial, right-oriented and combined stress, and not in languages with antepenult, ultimate, right-edge and unbounded stress.

2.3 Head-directionality parameter

(9) a. Affix-Stem (*un*-[[*real*-*ist*]-*ic*])

b. Word-Word (*chaleco salva-vidas* (vest save lives) 'life-saving jacket' (Spanish))

c. Noun-Modifier (*books of John*)

d. Verb-Object (*read the books*)

e. Adposition-Object (*in the mood*)

f. Adverbial Subordinator-Clause (*before you go*)

(10) a. Stem-Affix (*stabiliz-ation*)
b. Word-Word ([*red wine*] *glass*)
c. Modifier-Noun (*John's books*)
d. Object-Verb (*Bücher lesen* 'read books'(German))
e. Adposition-Object (*huoneese-en* 'into room' (Finnish))
f. Clause-Adverbial Subordinator (*anata-ga iku maeni* (you-Nom go before) 'before you go'(Japanese))

(11)

	Jap/Kor	Uralic	Germanic	English	Romance	Bantu
a. Stem-Affix	+	+	+	+	+	+–
b. Word (C)-Word (H)	+	+	+	+	–	–
c. Modifier-Noun	+	+	+	+	–	–
d. Object-Adposition	+	+	+–	–	–	–
e. Object-Verb	+	+	+–	–	–	–
f. Clause-Subordinator	+	–	–	–	–	–
g. Word-Stress location	No/ Initial	Initial	R-oriented	R-oriented	Penult	R-edge

- As the stress moves leftward, complement-head orders increase.

2.4 Strong juncture in left-branching structure

(12) a. [[A B] C] b. [A [B C]]

(13) a. A B C b. A / B C

- Strong juncture in left-branching structure makes it a compound-like unit

(14) a. [[*nise tanuki*] *shiru*] → *nise danuki jiru*
mock badger soup 'mock-badger soup'
b. [*nise* [*tanuki shiru*]] → *nise tanuki jiru*
mock badger soup 'mock badger-soup'

- OV is pronounced as a prosodic phrase while VO as two prosodic phrases (Wagner 2005).

(15) a. (*Sie hát*) (*einen Tángo getanzt*)
she has a-Acc tango danced 'She has danced a tango.'
b. (*Sie tánzte*) (*einen Tángo*)
she danced a-Acc tango 'She danced a tango.'

2.5 Stress constraint on roll-up complement movement

(16) Syntactic objects with no phonetic features (e.g. trace) are invisible in PF.

(17) Compact PF: strong juncture is prefered to weak juncture (left-branching > right-branching).

(18) Snowballing movement: complement cyclically moves to the spec position for Compact PF.

(19) a. [H [C]] b. [[C] *[*H *C]*] c. [[C] H]

(20) a. H / C b. C H

(21) Stress constraint on snowballing movement: derived 'compounds' have the same stress location as words.

(22) a. Complement receives stress (Nespor and Vogel 1986)

b. Most deeply embedded element receives stress (Cinque 1993)

(23) a. $[H_2\ [H_1\ [C]]]$ b. $[H_2\ [[C]\ /H_1\ C/]]$ c. $[[[C]\ /H_1\ C/]\ H_2\ /[C]\ /H_1\ C//]$

(24) a. $[H_2\ [H_1\ [C]]]$ b. $[H_2\ [[C]\ H_1]]$ c. $[[[C]\ H_1]\ H_2]$

(25) a. H_2 / H_1 / C b. H_2 // C H_1 c. C H_1 H_2

(26) a. affix-stem (Bantu) → [Word stem-affix] (Romance)

b. word-[Word stem-affix] (Romance) → [Compound [Word stem-affix]-word] (Germanic)

c. N-[Modif stem-affix-word] (Romance)→ [NP [Modif [Word stem-affix]-word]-N] (Germanic)

d. P-[Mod [Wd stem-affix]-word]-N] (Germ) → [PP [Mod [Wd stem-affix]-word]-N]-P] (Uralic)

e. V-[PP [Md [Wd stem-affix]-word]-N]-P] → [VP [PP [Md [Wd stem-affix]-word]-N]-P]-V] (U)

f. C-[IP…[VP [PP [Cmpnd [Wd stem-affix]-word]-N]-P]-V]] (Uralic) →
[CP [IP… [VP [PP [Cmpnd [Wd stem-affix]-word]-N]-P]-V]]-C] (Japanese/Korean)

- Complement moves to the specifier position to derive a compound-like unit if it matches the stress pattern of words and compounds in the language.
- Compounding and head-directionality are derived from word-stress location.

3. Deriving wh-movment from prominence

3.1. Implicational universals

(27) a. OV → wh in situ

b. VO → wh-movement

3.2. Testing implicational universals with WALS (Haspelmath et al. (2005))

(28) a. OV & Not initial interrogative phrase: 317 languages

a'. OV & Initial interrogative phrase: 76 languages!

b. VO & Initial interrogative phrase: 156 languages

b'. VO & Not initial interrogative phrase: 253 languages!

3.3. Wh-, complementizer and prosodic phrasing (Richards 2009)

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

3.4. Stress and Movement (Kahnemuyipour 2009)

(30) a. What did Hellen review?

b. * What did Hellen review?

c. Who reviewed what?

d. (I didn't quite catch you!) Who reviewed the book?

(31)

	+Move	–Move
+Stress	focus-fronting (Persian, Hungarian)	wh-in-situ
–Stress	wh-movement (English)	*

3.5 Prominence by position or word-prosody

(32) Japanese: pitch accent (accented words)

a. dare dou dore doko
b. nani naze (cf. nani-iro)
c. itsu ikutsu

(33) Chinese: lexical tone

shuí *shénma*
who what

- Clause initial position is also prominent.

(34) a. What did you buy in Boston?
b. You bought WHAT in Boston?

(35) a. Nani-o boston-de kaimashita-ka?
b. Boston-de nani-o kaimashita-ka?

(36) a. Who went to Boston?
b. Who bought what in Boston?

(37) a. tone (pitch accent) → wh-in-situ
b. no tone (pitch accent) → wh-movement

(38) a. Complex tone system & Not initial interrogative phrase: 36
a' Complex tone system & Initial interrogative phrase: 8!
b. Simple tone system & Not initial interrogative phrase: 55
b'. Simple tone system & Initial interrogative phrase: 16!
c. No tones & Initial interrogative phrase: 63
c'. No tones & Not initial interrogative phrase: 100!

(39) Wh-phrases must be prominent by

a. its lexical tone/pitch accent
b. clause-initial position
c. contrastive stress

4. Conclusion

- Some parameters deriving the syntactic variations in the world's languages are in phonology.

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