理論的帰結と分析 (I) シークエンス形成と等位接続構造について

大宗　純（関西外国語大学）

omune@kansaigaidai.ac.jp

July 31, 2021

1. 長年に渡る未解明の問題

Two problems we haven't been able to handle at all:

[1] 無限の非構造的シークエンス (unbounded unstructured sequences)

-E.g., John, Bill, my friends left for the vacation.
-You can get that sequence as long as you want: it's unbounded.
-It has no structure: it is ungenerable by any MERGE based system, by phrase structure rules, by transformational rules.

[2] 主要部移動 (head movement)

-Head movement (or internal pair-Merge) is not only against SMT but also unformulable in any framework.
-It has no semantic consequences but seems to be cyclic (e.g. V-to-T-to-C): apparent contradiction (part of externalization or the narrow syntax?).

What would be the minimal assumptions needed to incorporate both of these unformulable matters within the domain of explanatory theory?

2. シークエンス

Every time you see a single XP like in *John ran* [exp. from Chomsky 2021], it's basically the limiting case of a sequence.

(1) a. John ran.
b. John, Bill, my friends... ran, danced, took a vacation...

(2) Form Sequence: $<(\&), X_1,...,X_n>$

(3) a. John lives [near the border] [next to a farm] [with his family]
b. John lives [near the border], [next to a farm], and [with his family]

-The true coordination (3b) i) imposes a different prosody.
ii) imposes rigid structures (cf. (4): the coordinate structure constraint).

(4) a. which farm does John live near the border next to __ with his family
b. *which farm does John live near the border next to __ and with his family

The coordinate structure constraint can be reduced to matching conditions on coordinations. We can assume that the coordinate structure constraint is just a special case of strict matching conditions on coordinations (Riny Huybregts). If you pull out of one element, you've got to pull out all of them otherwise the matching condition is missed.

There are some semantic properties of the matching condition (classical rhetorical Zeugma):

(5) a. John arrived early, met Bill, and got a good seat
→ **can be independent events**
b. to arrive early, meet Bill, and get a good seat seems/*seem to be what John wants
→ **a single event (vP&vP)**
c. arriving early, meeting Bill, and getting a good seat seems/*seem to be what John wants
→ **a single event (NP&NP)**
d. to arrive early, to meet Bill, and to get a good seat seems/seem to be what John wants
→ **can be independent events (TP&TP)**

(6) a. John arrived at the hospital [in an ambulance] and [in a coma]
→ **can be independent events (PP&PP)**
b. *John arrived at the hospital in [an ambulance and a coma]
→ **a single event (NP&NP)**
c. John arrived at the hospital in [an ambulance and his street clothes]
→ **a single event (NP&NP)**

[Chomsky 2021]

- No Democrat had won Arizona and Georgia since Clinton [in 1992 and in an upset] respectively
- *No Democrat had won Arizona and Georgia since Clinton in [1992 and an upset] respectively

3. シークエンスの生成手順

Let's turn to see how these forms are generated with the right interpretations in accord with the strong minimalist thesis.

[Chomsky 2021]

(7) John lived [[on a farm] [with his family]]

1. MERGE: {on a farm}, {with his family}
2. MERGE: {{on a farm}, {with his family}}
3. MERGE: {XP, {{on a farm}, {with his family}}}
4. MERGE: {C,…, {XP, {{on a farm}, {with his family}}}}
5. Form Sequence: {C,…, {XP, ＜{on a farm}, {with his family}＞}}

(8) which farm did John live on __ with his family

(9) John lived [[on a farm] and [with his family]]

1. MERGE: {on a farm}, {with his family}
2. MERGE: {{on a farm}, {with his family}}
3. MERGE: {&, {{on a farm}, {with his family}}}
4. MERGE: {XP, {&, {{on a farm}, {with his family}}}}
5. MERGE: {C,…, {XP, {&, {{on a farm}, {with his family}}}}}
6. Form Sequence: {C,…, {XP, ＜&, {on a farm}, {with his family}＞}}

(10) *which farm did John live on __ and with his family

-厳密な適合条件（strict matching condition）の特別な場合 (cf. (4))

One of the more complex cases, which pairs an unaccusative and a transitive:

(11) John arrived and met Bill.

(12) C, {John$_3$, {INFL, <&, {$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}>}}

[Chomsky 2021]

EM: {$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}} (satisfying theta theory)

EM: {{$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}}

EM: {&, {{$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}}} (optional)

EM: {INFL, {&, {{$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}}}}

IM: {John$_3$, {INFL, {&, {{$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}}}}}

EM: {C, {John$_3$, {INFL, {&, {{$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}}}}}}

FSQ: {C, {John$_3$, {INFL, <&, {$_1$ v, {arrive John$_1$}}, {$_2$ John$_2$, {v*, {meet Bill}}}>}}}

Two Types of Sets Targeted by Form Sequence:

In (12), *arrive* and *meet* are both roots. they are interpreted verbal because the categorizer, actually the v/v* distinction, which may or may not create a phase. That's eliminable. It's actually determined by the lexical content of the roots. So, we don't really have any need to postulate different categorizers, depending on the lexical content. It will be v or v*. And it's v*, it's a phase. We use the distinction only for convenience (Chomsky 2021).

[Chomsky 2019a, b]

Pair-merge probably forms <v, R> (and <n, R>) in the lexicon. R: lexical root

→ Form Sequence may form <v, R> (or <R, v>) in the lexicon. See also Epstein, Kitahara & Seely 2016.

-We're still assuming derivation to be strictly Markovian, no memory. That means the interpretative system doesn't know which one raised. It can't look back and see.

-The Minimal Search operation says, “don’t delete.” That can find $John_3$, it can’t find $John_1$ and $John_2$.

4. ATB削除と更なる帰結

Across-the-board (ATB) deletion falls out as a special case.

(13) what did John buy __ and Bill hand __ to Tom:

$what_1$ [John bought $what_2$ and Bill handed $what_3$ to Tom].

注）Chomsky は(13)の派生を具体的には示していないため、以下の派生は Omune による誤解が含まれているかもしれない。

MERGE: {$what_1$, {C, {&, {{John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}}}}}}

FSQ: {$what_1$, {C, < &, {John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}} > }}}

[Chomsky 2019a, b, Kitahara]
主要部移動 (INFL-to-C movement):

(14) WS＝[C,{EA, {IFNL, vP}}]

FSQ: [＜INFL, C＞,{EA, {INFL, vP}}]
EM: [{＜INFL, C＞,{EA, {INFL, vP}}}]

See also Omune et al. 2020

(13) の派生で主要部移動を示すと、

MERGE: [C, {&, {{John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}}}}]

FSQ: [＜INFL, C＞, {&, {{John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}}}}]

MERGE: {$what_1$, {＜INFL, C＞, {&, {{John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}}}}}}

FSQ: {$what_1$, {<INFL, C>, < &, {John, {INFL, {John, {v*, {buy, $what_2$}}}}}, {Bill, {INFL, {Bill, {v*, {hand, {$what_3$, {to, Tom}}}}}}} > }}}

The conjuncts share tense, but that's not necessary.

(15) John [arrives every day at noon and met Bill yesterday].

It follows from that tense is a feature of small v (or that region (Chomsky 2021)), not of INFL. Tense is the feature of small v because it can vary in the two cases. It's not a feature of INFL; this thing is not T. It's phi-features, but not T. Phi-features have to be the same, but tense doesn't. Therefore, INFL is what used to be called AGR-S (Chomsky 2021).

[Chomsky 2021: Q&A Section]
The same analysis also applies to distinct aspectual and modal structures.

(16) John [arrived yesterday and will leave tomorrow].

The sequence shows that tense (modality, aspect) is within the paired items, while phi-features are outside.

5. まとめ

シークエンス形成（Form Sequence）は非構造的等位接続と主要部移動を捉える最小限の仮説。

シークエンス形成（とそれに伴う厳密な適合条件）の帰結:

1. （真の）等位構造からの抜き出し
2. くびき語法（Zeugma）の再解釈
3. レキシコンでの語彙範疇化
4. ATB 削除
5. 主要部移動
6. 時制素性（tense）の場所

参考文献

Chomsky, Noam. 2019a. MIT lectures. [http://whamit.mit.edu/2019/05/06/noam-chomskys-lectures-now-online/]

Chomsky, Noam. 2019b. UCLA lectures. [https://linguistics.ucla.edu/noam-chomsky/]
Chomsky, Noam. 2020. Minimalism: where we are now, and where we are going. a talk given at the 161st meeting of the Linguistic Society of Japan. [https://www.youtube.com/watch?v＝X4F9NSVVVuw]
Chomsky, Noam. 2021. Genuine Explanations. a talk given at WCCFL 39. [https://www.youtube.com/watch?v＝F6SbPKmVNVQ]
Epstein, Samuel D., Hisatsugu Kitahara & T. Daniel Seely. 2016. Phase-cancellation by pair-Merge of heads. *The Linguistic Review* 33. 87–102. DOI: 10.1515/tlr-2015-0015.
Omune, Jun, Hisatsugu Kitahara, Masayuki Oishi & Masashi Nomura. 2020. Pair-Merge under MERGE. *JELS* 27. 270–271.

＊特に記載がない限り、本ハンドアウトの英文は Chomsky 2020 を基にしている。