**Chomsky (2000): "Minimalist Inquiries: The Framework"** [MI] [3.4–3.5]

**3.4 The Strong Thesis**[112-117]

a. Where does SMT fail? Research strategy: seek **imperfections** of L[112]

 (1) Given some apparent property P of L
   a. P is real, and an imperfection.
   b. P is not real, contrary to what had been supposed.
   c. P is real, but not an imperfection; it is part of a "best way" (perhaps not unique) to meet design specifications.

 ➲ Chomsky considers **(c)** the most interesting because novel question

b. "Conceptual 'good design' conditions"[n. 60] derivable from the SMT[112]

 (2) a. The only linguistically significant levels are the **interface levels**.
   b. The **Interpretability Condition**: LIs have no features other than those interpreted at the interface, properties of sound and meaning. [**false**]
   c. The **Inclusiveness condition**: No new features are introduced by $C_{HL}$. [*Uriagereka's Conservation Law = Inclusiveness + Recoverability, preventing unrecoverable deletions*]
   d. Relations that enter into $C_{HL}$ either (i) are imposed by **legibility conditions** or (ii) fall out in some natural way from the **computational process**. [*Uriagereka: representational vs. derivational*]

c. **Chains**: ❶ Indices enrich LA, a subset of Lex, thus a set of lexical types, to **Num**, a set of lexical tokens constructed from Lex (weak departure from Inclusiveness); ❷ **copy theory** simplest version of transformational grammar (cf. Chomsky 1955) [≠ *trace theory*][114]

 ➲ [$_{SO'}$ α [$_{SO}$ α ] ] (each α is a 'copy' of the other) → **chain** $C_\alpha$ = <$\alpha_1$, $\alpha_2$> = "a sequence of **occurrences** of a single α" [*Chomsky 1955; Uriagereka: type > token > occurrence*]

 ➲ Occ(α) in K is the full *context* of α in K → Occ(α) = sister(α) → "simplify chains from sequences to sets": $C_\alpha$ = <$\alpha_1$, $\alpha_2$> → {$\alpha_1$, $\alpha_2$}[115] [*Uriagereka: "A chain is a sort of stretching of a phrasal context beyond the normal limits imposed by the merge operation", a quantum object*]

 (3)  who did you say [ t has [ t' discovered the proof ] ][115]
       Ā            A
   Ā-chain $C_Q$ = {$who_{Q1}$, $t_{Q2}$}
   A-chain $C_R$ = {$t_{R1}$, $t'_{R2}$}
   Occ(*who*) = {$Q_1$, $Q_2=R_1$, $R_2$} → two 2-membered chains, sharing one Occ(*who*)

 ➲ [n. 66: trace invisibility [*MP*] is gone – *what is the interpretation of traces of successive-cyclic movement? Uriagereka: Do intermediate reconstruction sites exist (for Ā-movement, yes, unclear for A-movement)?*]

 ➲ Def. of chain = "set of occurrences of an object α in a constructed syntactic object K"[116]

 ➲ How can Fs delete in *all* copies? Given occurrences, this can happen under identity![116]

d. **Relations**: under (2dii), **Merge**(α,β) → K(α, β) provides directly the relations

    1. **Sisterhood**(α, β), and
    [sisterhood extends to the *modified* LI(α), MLI(α), and to F(α)[116f.]]

    2. **Immediate containment** K ⊇*immediate* {α, β, K}

    **Composition of relations** yields:
    3. **Containment**: K ⊇ {α} if K ⊇*immediate* {α|L ⊇ {α}}
    [transitive closure of immediate containment]

    4. **Term**: α = term(K) if K ⊇ {α}

    5. **Identity** (= sister(sister) ) [*presupposing binarity of Merge, a sister of a sister is itself?*]

    6. **C-command** (= sister(contain) ): α c-commands β if α = sister(K ⊇ {β}) [*stipulated*]
    [n. 67: C-command is *symmetrical*!]

> **Derivational-compositional C-command** (n. 61/67; Epstein 1999) → deduced from LCA
> α c-commands β if Merge(α, K ⊇ {β})

    7. **L-marking** (a primitive government) → **barriers**[117]

d. **Deep structure**: "[*(2a)*] requires that there is no Deep or Surface Structure" → Uriagereka, who makes a case *for* DS (cf. Uriagereka 2008), notes that Numerations, etc., are mere reformulations of DS in terms of properties of DS, which is why "many want to get rid of the Numeration"

> *Uriagereka:* **cycle as a criterion for narrow syntax**

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**3.2 Imperfections**[117-126]

    'design flaw'[117]

a. **Phonological component** (Phon): introduces prosodic structure and narrow phonetics (violates Inclusiveness), phonological properties of LIs and their phonetic instantiations of combinations thereof are discrepant (violates Interpretability)[117]

    (4) *Inclusiveness/Interpretability revised*[118]
    Inclusiveness holds of narrow syntax, and each feature is interpreted at the level LF or associated with phonetic features by the phonological component.

    ➲ Phon = **isolated component**: "*true* phonological features", only visible to Phon, separate subsystem of FL [*this complies with the definition of a Fodorian module: encapsulation, autonomy, domain-specificity,…, thus* __not__ *part of NS*]

b. **Spell-Out** ('operation'!): "in the course of construction of LF, an operation Spell-Out delivers the structure already formed to the phonological component, which converts it to PF"

(5)  *Architecture of FL (so far, as I understand it…)*
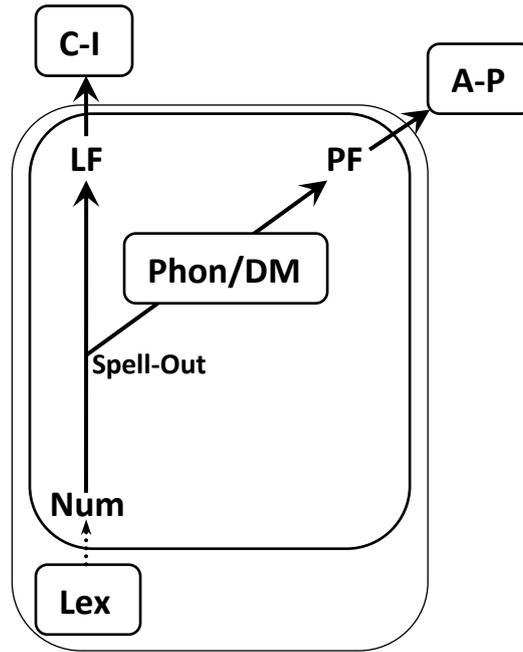


c. **Uninterpretable features** of LIs ($uF \neq iF$): includes Fs with *no* interpretation at LF/PF (violating Interpretability) → **structural Case**; **agreement Fs** problematic ($iF$ on N, $uF$ on V/A; phonetically optional)[117]

   ⮞ **Occ(F)** *cannot* be distinguished (for $u\varphi \neq iF$) → **F-chains don't exist → Fs cannot move or be attracted**!

d. **Move** (the 'dislocation' property): surface phonetic relations ≠ semantic relations[119f.]

   ⮞ Move($\alpha,\beta$) → $C_\alpha$ = {$\alpha_1$, $\alpha_2$}: subsequent operations might distort c-command ($\alpha_1$ c-commands $\alpha_2$) and locality relations between $\alpha_1$ and $\alpha_2$

   (6)  *Multiple head raising*[120]
        [$_{CP}$ [ [$\underline{V_j\text{-}T}]_i\text{-}C$] [$_{TP}$ …$t_i$… [$_{VP}$ …$t_j$…] ] ][120]

        ⮞ $T_i$ ¬c-commands $t_i$; $V_j$ ¬c-commands $t_j$

   (7)  *XP dislocation*[120]  [*i.e. PrtP-fronting*]
        i. [$_{TP}$ [those books]$_j$ couldn't possibly [$_{VoiceP}$ be [$_{PrtP}$ writ-en [$_{vP\text{-def}}$ $t_{writ\text{-}}$ $t_j$ for children] ] ] ]

        ii. [$_{PrtP}$ written $t_j$ for children]$_i$, [$_{TP}$ [those books]$_j$ couldn't possibly [$_{VoiceP}$ be $t_i$ ] ]

        ⮞ Remnant PrtP-movement → [those books]$_j$ ¬c-commands $t_j$

   (8)  'NS': whom$_i$ did everyone talk to whom$_j$ about whom$_k$
        → Derivationally disambiguated *qua* initial Num[120]???
        a. PF$_1$: whom$_i$ did everyone talk to $t_i$ about whom$_k$          i=j
        b. PF$_2$: whom$_i$ did everyone talk to whom about $t_i$          i=k

        [*why no intervention effect/RM-violation*: wh…wh…wh?]

   ⮞ "uninterpretable features and the dislocation property […] have to do with externally imposed legibility conditions"[120] → "'surface properties' appear to be specific to human language. […]

language design marks it in some systematic way"[121] → "the dislocation property is required; it falls within design specifications"[121] → "these devices [*i.e. uninterpretable features*] are used to yield the dislocation property"[121]

➲ "for convergence, uninterpretable features must be deleted in the course of computation of LF"[120]

(9) *Relevant uFs*[121f.]
   a. T[$u\varphi$] identifies T as a target for dislocation
   b. T[EPP] requires ('second') Merge in the position identified by [$u\varphi$]
   c. DP[$u$Case] identifies a DP as a candidate for Merge, hence dislocation

(10) i. [TP T[***u*φ, EPP**] [VoiceP be [PrtP elect-ed [$v$P-def t*elect* [DP an unpopular candidate][φ, ***u*Case**] ] ] ]][122]

   ❶ Agree([$u\varphi$], [$\varphi$])                    ❶ → ❷ Erase([$u$Case])

   ➲ [$u\varphi$] (= **probe**) seeks a **matching** F (= **goal**) establishing agreement → Rel(probe, goal) = *here*: 'T-associate relation'[122]

   ➲ **Case is *ancillary* to agreement** ([$u\varphi$]): "Taking structural **Case to be a reflex of an uninterpretable φ-set**, it [= *Case*] too erases under matching with the probes."[122] [*Correlation goes back to George & Kornfilt (1981)*[n. 81]] → given that Erase = Agree[122], [$\varphi$] and [$u$Case] of a DP may be seen as *two sides of the same coin*…

   ii. [TP [DP an unpopular candidate][φ, ***u*Case**] was-T[***u*φ, EPP**] [VoiceP t*was* [PrtP elect-ed [$v$P-def t*elect* tDP ] ] ] ][121]

      ❶ Agree([EPP], [D])    ❷ Merge(DP, SpecTP)
      (alternative: satisfy [EPP] with Expl[123])

   ➲ Select P(G) → Agree([EPP], G) → Merge(P(G), [Spec, T]), P(G) = phrase det. for pied-piping

   ➲ Def. **Move** = "The combination of selection of P(G), Merge of P(G), and feature deletion under matching (Agree) is the composite operation Move"[122]

➲ Case and Lcats don't enter into Agree since they don't have counterparts (cf. *feature identity* below); ACC Case?; OS is "invisible object agreement, with ancillary Case checking"[123]

e. **Match**: "Matching is a relation that holds of a probe P and a goal G"[122]
   ➲ Match(P,G) → Agree(P,G) if c-command **domain** D(P) ∋ G, under closest c-command

   ➲ **Closeness**: G is **closest** to P if ∄ Match(P,G'), G' ∈ D(P), G ∈ D(G')

   (11) a. Matching is **feature identity**.[122]
        b. D(P) is the sister of P.
        c. Locality reduces to "closest c-command."



G **not closest** to P, G' intervening

f. **Equidistance**: "Terms of the same minimal domain are 'equidistant' to probes."[122]

g. **Minimal domain**: "The minimal domain of a head H is the set of terms immediately contained in projections of H."[123]

h. **Activeness**: undeleted *u*Fs render G active → "structural Case […] enables the closest G to select P(G) to satisfy the EPP by Merge" → if Case is deleted, P(G) is "**frozen in place**"[123]

    ➲ "The operations Agree and Move require a goal that is both **local  and active**."

    ➲ **Defective intervention** constraint: in α > β > γ, Match(α, γ) ok if β is *inactive*

    ➲ MP: Checking = deletion under Match, Attract = Agree + Move [*checking domains obsolete*[124]]

    ➲ **Feature identity** (Match) = identity of the choice of feature [= *attribute*], not value![124]

i. **Deletion**: **one fell swoop** operation → deletes φ-set as a unit [*bundle*], only complete φ can de-activate matched goal[124]

    (12) *Participial agreement (α = Prt defective)* [*my example*][124]

        Elles          sont  venues                                    *unaccusative:* [$_{VP}$ V DP]
        they.FEM.PL  be.PL  come.FEM.PL
        'They have come.'

        a. [$_{PrtP}$ Prt$_{[u\varphi\text{-def:}\,]}$ [$_{VP}$ *ven- elles*$_{[\varphi:3/\text{FEM/PL},\,u\text{Case:}\,]}$ ] ]      Prt[$u\varphi_{def}$] = [$u$NUM] → *number agreement*

        b. [$_{PrtP}$ *elles*$_{[\varphi:\,3/\text{FEM/PL},\,u\text{Case:}\,]}$ *ven-ues*$_{[\varphi\text{-def:}\,\text{FEM/PL}]}$ [$_{VP}$ t$_V$ t$_{DP}$ ] ]                    *participial agreement*

        c. [$_{TP}$ *elles*$_{[\varphi:\,3/\text{FEM/PL},\,u\text{Case:NOM}]}$ *est*$_{[u\text{Case:NOM},\,u\varphi:\,3/\text{FEM/PL}]}$ [$_{PrtP}$ t$_{DP}$ *ven-ues*$_{[\varphi\text{-def:}\,\text{FEM/PL}]}$ [$_{VP}$ t$_V$ t$_{DP}$ ] ] ]

        ➲ ***Defective* heads** (T[$u\varphi_{def}$] = [$u$PERS]; Prt/A$_{def}$ = [$u$NUM]) cannot deactivate F (= [uF], i.e. Case), hence a Goal may/must move on (successive-cyclic A-movement)[124] [*Uriagereka notes that it is odd to interpret T$_{def}$ as containing [PERS] rather than, say, [NUM] (cf. participials), since [PERS] seems to be the (additional) φ-F licensing inflected infinitives incl. overt subject-Case-marking in languages like Portuguese…*]

j. **Expletives** (weak Expl): Expl[G], G = [$u\varphi$], doesn't require F (= Case) for activation; Expl can raise to [Spec, T$_{def}$], but cannot delete T[$u\varphi_{comp}$] → Expl[$u\varphi$] = [**$u$PERS**][124] [*Expl containing [PERS] is a bizarre assumption, acc. to Uriagereka*]

[$_{TP}$ *there*$_{[u\text{PERS:3}]}$ *were*$_{[u\varphi:3/\text{M/PL},\,u\text{Case:NOM}]}$ … [$_{PrtP}$ *declared* … [$_{AP}$ [$_{DP}$ *three men*]$_{[\varphi:3/\text{M/PL},\,u\text{Case:NOM}]}$ [$_A$ *guilty*]$_{def}$
]]]              ❷ Agree                    ❶ LDA
      (Expl[$u$PERS], T[$u\varphi$])        (T[$u\varphi$], DP[$\varphi$])

    ➲ Successive-cyclic *Expl*-raising through T$_{def}$ is possible because deletion requires matching with a *complete* T[$u\varphi$]

    (13) a. Long-distance agreement is a T-associate (probe–goal) relation.
        b. the EPP can be satisfied by
          i.   Merge of expletive
          ii.  Merge of associate
          iii. Merge of α closer to T than the associate.[126] [*Uriagereka: e.g. locative inversion*]