10. NULL SUBJECTS

(1) a. Qui a-t-il dit que Martin avait envie de voir?
   ‘Who did he say that Martin felt like seeing?’
   *Qui a-t-il dit que s’est évanoui?
   ‘Who did he say (that) fainted?’

(2) a. la personne à qui il a dit que Nicole a donné l’argent
   ‘the who he said (that) Nicole gave the money to’
   *la personne qu’il a dit que va venir ce soir
   ‘the person that he said (that) is going to come tonight’

Perlmutter 1971 proposes following surface structure constraint for French:
(3) Any sentence other than an Imperative in which there is an S that does not contain a subject in surface structure is ungrammatical.

(4) a. *Avons travaillé toute la journée. ‘(We) worked all day long.
   b. Hemos trabajado todo el día.

(5) a. ¿Quién dijiste que salió temprano?
   ‘Who did you say (that) left early?’
   b. el tipo que dijiste que salió temprano
   ‘the guy that you said (that) left early’

(6) a. Il pleut. / *Pleut. ‘It is raining’
   b. *El llueve / Llueve.

(7) a. *What did he say that happened?
   b. *the events that he said that happened
   c. *Raining.

(8) a. What did he say happened?
   b. the events that he said happened

(9) [Tree diagram showing the structure of the sentence]
Dutch and Icelandic are ‘intermediate’ languages: they have no null personal pronominal subjects, yet they allow extraction of a subject clause headed by a complementizer (Maling and Zaenen 1978):

(11) *(ik) heb ze allemaal gezien (Dutch)
    I have them all seen
    ‘I saw all of them’

(12) wie, vertelde je dat e, gekomen was
    who said you that come was
    ‘who did you say that had come’?

(13) Juan/él/Ø siempre habla de sí mismo.
    ‘John/he/Ø always talks about himself’
(14) Juan/él/Ø dijo que Maria siempre habla de *sí mismo/él/*Juan
    ‘John/he/Ø said that Mary always talks about *himself/him/*John

Null subject languages allow (according to Chomsky 1981):

(15) a. missing subjects (see 6b above)
    b. free inversion in simple sentences: Leyó el libro María ‘Read the book Mary’
    c. long wh-movement of subject (across wh-islands): el hombre que me preguntó a quién vio ‘the man who I wonder who saw’
    d. empty resumptive pronouns in embedded clauses: esta es la muchacha [que me preguntó [quién cree [que ___ puede …]]] ‘this is the girl who I wonder who thinks that (she) may …’
    e. apparent violations of the that-trace filter (see 5a-b above)

(16) Solution 1 (Chomsky 1981). ‘e’ is a base-generated empty category. The Null Subject parameter is that AGR can be a proper governor:
(17) Solution 2 (Chomsky 1981). The Subject is PRO. In a NSL, Affix-Movement can apply in the syntax, leaving the subject ungoverned:

```
S
  NP   (INFL)   VP
    PRO

V
  INFL
```

(18) Solution 3 (Chomsky 1982). The subject is pro (an empty ‘ordinary’ pronoun). It is licensed by the rich inflection on AGR:

```
S
  NP   INFL   VP
    pro
  [+pro-ana]
   AGR  V
```

(19) Rizzi 1982's modification: INFL may be [+pronominal] in NSL languages (and act like a clitic in its ability to license an empty category). Contrary to appearances, Italian does have a that-trace effect, but its existence is masked by the fact that there can be extraction of a subject from a postverbal position. Four cases:

a. NP INFL VP
b. [NP e] INFL VP
c. NP INFL VP
   [+pron]
d. [NP e] INFL VP
   [+pron]

Only (a) and (d) are OK. In (b), since INFL is not clitic-like, so it is not a proper governor, and ECP is violated. In (c), both NP and the pronominal INFL require Case, but there is only one Case available, so the structure violates the Case Filter.

(20) Two issues of typological importance:

a. Whether null subjects can be tied to rich agreement
b. Whether the properties cluster
(21) habl-o 1s  (Spanish)
    habl-as 2s
    habl-a 3s
    habl-amos 1pl
    habl-áis 2pl
    habl-an 3pl

German has no null thematic subjects, though it has null expletive subjects:
(22) Es ist möglich dass ___ getanzt wurde
    It is possible that danced was

German is inflected for person, number, and tense (though some forms are identical):
(23) (ich) arbeit-e 1s
    (du) arbeit-est 2s
    (er/sie) arbeit-et 3s
    (wir) arbeit-en 1pl
    (ihr) arbeit-et 2pl
    (sie) arbeit-en 3pl

Totally null subject Irish has partial identity (McCloskey and Hale 1984):
(24) ‘would put’ ‘put’
    1s chuirm-inn cuir-im
    2s chuirm-ea cuir-eann
    3s chuirm-eadh cuir-eann
    1p chuirm-imis cuir-eann
    2pl chuirm-eadh cuir-eann
    3pl chuirm-eadh cuir-eann

(25) Solution 4 (Jaeggli and Safir 1989). Null subjects are permitted in all and only languages with morphologically uniform inflectional paradigms. A language has morphologically uniform inflectional paradigms if all its forms are morphologically complex or none are:
NONE — Chinese, Japanese
ALL — Spanish, Italian, Irish, German
SOME — English (talk, but talk-s); French (parl, but parl-ô)

Gilligan 1987 tested claims of clustering. He took two proposals: Rizzi 1982; Safir 1985 and 4 features assumed to be part of the cluster
(26) Some proposed correlates of null thematic subjects:
    a. Null nonthematic subjects (e.g. weather verbs)
    b. that-trace filter violations
    c. Free subject inversion in simple sentences
    d. Long WhMovement of subjects
    e. Empty resumptive pronouns in embedded clauses
### LANGUAGE TYPES

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The null-subject parameter and its predicted correlations (Gilligan 1987)


### REFERENCES


11. BOUNDING AND WH-MOVEMENT

Many languages don’t have wh-movement at all:

(1) John-ga dare-o butta ka (Japanese)
    John-SU who-OB hit
    ‘Whom did John hit?’ (compare: John-ga Bill-o butta ‘John hit Bill’)

(2) Zhangsan xiang-zhidao [Lisi mai-le shenme] (Chinese)
    Zhangsan wonder Lisi bought what
    ‘Zhangsan wonders what Lisi bought’

(3) Question Movement Parameter (Baker 2001: 184-185):
    a. Interrogative phrases must move to the front of the clause (English).
    b. Interrogative phrases must appear in the same position as other noun phrases (Japanese).

Optional wh-movement:

(4) a. Lillian ndu yunkët Babine-Witsuwit’en (Denham 2000)
    Lillian what-3s boght-3s
    What did Lilian buy?

    b. Ndu Lillian yunkët

Optional wh-movement only in root clauses:

(5) a. Jean a acheté quoi (French)
    Jean has bought what
    ‘What has Jean bought?’

    b. Qu’est-ce que Jean a acheté
       what-is-it that Jean has bought

(6) a. Je me demande ce que Jean a acheté
    b. *Je me demande que Jean a acheté quoi

In situ wh-movement with discourse differences:

(7) a. What did you eat?
    b. You ate what?

Multiple wh-movement

(8) Koj kavko na kogo dade Bulgarian (Pesetsky 2000)
    who what to whom gave
    ‘Who gave what to whom?’

\[
\begin{array}{ccc}
\text{Wh-in situ} & \text{V-final} & \text{SVO} & \text{V-initial} \\
71 & 42 & 16 \\
73 & 30 & 13 \\
\end{array}
\]

Proportion of languages with Wh-in situ and final question particles (Dryer 1991)
(9) mu-kufuna chiyani (Chichewa)
you-want what
‘What do you want?’

Two big issues for wh-movement and generative syntax (Cheng 2003)
(10) a. Is there covert Wh-Movement (i.e. in LF)?
b. What licenses (allows) wh-elements in remain in situ in some languages?

**Overt and covert Wh-Movement**
(11) Question Movement Parameter (Huang 1982a; b):
a. Wh-Movement applies in the (overt) syntax
b. Wh-Movement applies (covertly) in LF

So, sentence (2) above would have LF representation:
(12) Zhangsan xiang-zhidao [CP shenme] [IP Lisi mai-le ti]
Zhangsan wonder what Lisi bought

Arguments for LF Wh-Movement
A. Selectional restrictions can be stated uniformly at LF
(13) a. Zhangsan yiwei Lisi mai-le shenme
Zhangsan think Lisi bought what
‘What does Zhangsan think Lisi bought?’
b. Zhangsan xiang-zhidao Lisi mai-le shenme
Zhangsan wonder Lisi bought what
‘Zhangsan wonders what Lisi bought’

If these sentences undergo LF Wh-Movement, then they will have (essentially) the same structures as the following English sentences:
(14) a. What does John think Mary bought t?
b. John wonders what Mary bought t.

The following impossible readings for (15a-b) will fall out from the same mechanisms as the ungrammaticality of:
(15) a. *John thinks what Mary bought t.
b. *What does John wonder Mary bought t?

B. Interpretations in wh-in-situ languages (often!) obey at least some island constraints. This can be captured if LF Wh-Movement is subject to these constraints (Choe 1987; Nishigauchi 1990; Pesetsky 1987). LF movement in Chinese and Japanese seems to obey ECP (Huang 1982a; Lasnik and Saito 1984):
(16) *Ni xiangxin Lisi weisheme lai de shuofa
you believe [the claim [that [Lisi came why]]]
‘*Why do you believe the claim that Mary came ___?’

(17) *John-wa Mary-ga naze sore-o katta kadooka siritagatte iru no
John wants to know [whether [Mary bought it why]]
‘Why does John want to know whether Mary bought it ___’
Also, in-situ *wh*-words have wide scope with respect to other quantifiers:
\[(18) \text{mei-ge-ren dou mai-le shenme every-CL-person all buy-ASP what} \]
‘What did everybody buy?’

Superiority effects argue for covert Wh-Movement:
\[(19) \text{a. Who hid what?} \]
\[(19) \text{b. *What did who hide?} \]

Pesetsky 1987 argues that some in-situ *wh* undergoes LF movement, some doesn’t. You get superiority effects with non-D(iscourse)-lined *wh (*who, what), but not with D-linked *wh (*which):
\[(20) \text{a. *Mary asked [what, [who read e]]} \]
\[(20) \text{b. Mary asked which book, which man read e,} \]

Subjacency is less clear. In some cases *wh*-in-situ languages obey it:
\[(21) \text{*[Nani-o doko-de katta ka] oboete-iru no (Japanese)} \]
\[(21) \text{what-Acc where-At bought Q remember-Prog Q} \]
‘*What do you remember where we bought?*’

Lakhota (Foley and Van Valin 1984)
\[(22) \text{*wicjaaswa taku ophethu ki he wafaka he man a WH/smthg 3sg-buy the that 2sg-see-3sg Q} \]
‘Did you see the man who bought something?’
\[(22) \text{‘What did you see the man who bought?’} \]

But some interpretations in Chinese and Japanese do seem to be Subjacency-violating (Lasnik 1998):
\[(23) \text{Ni xiangxin Lisi mai-le sheme de shuofa} \]
‘You believe the claim that Lisi bought what’
\[(24) \text{John-wa Mary-ga nani-o katta kadooka siritagatte iru no} \]
‘John wants to know whether Mary bought what’

In general, you do not get Subjacency effects with *wh*-in-situ in English and Chinese, while Japanese and Korean do show Subjacency effects.

The broader question is whether LF rules in general obey Subjacency. Huang 1995 argues that LF movement in English does not obey Subjacency:
\[(25) \text{a. Who remembers where we bought what? -> LF} \]
\[(25) \text{b. [cp what, who, [ip who, remembers where we bought t]]} \]
The movement counterpart of (25b) would be ungrammatical.

But others have argued that QR does obey Subjacency (Longobardi 1991; Reinhart 1991; Simpson 2000). In Italian the negation marker non can have an intervening clausal boundary, but no islands can intervene:
\[(26) \text{a. non credo che lui pensi che io desideri} \]
NEG believe-I that he thinks that I wish
vedere nessuno
to see no one
‘I do not believe that he thinks that I wish to see anyone’

b. *non approverei la tua proposta di vedere nessuno
NEG approve-I the your proposal of to-see no one
‘I would not approve your proposal of seeing anybody’

So why is (25a) grammatical but not (26b)? One possibility: pied-piping in (25)
PRO: Nishigauchi 1986; Choe 1987; Pesetsky 1987
CON: Fiengo, Huang, Lasnik and Reinhart 1988; Stechow 1996

Some alternatives to LF Wh-Movement:

A. Watanabe 1992a. Japanese and Korean have invisible overt Wh-Movement subject to Subjacency (see also Hagstrom 1998)
B. Aoun and Li 1993. A question operator binds the wh-in-situ. Movement of this operator can lead to island violations.
C. Reinhart 1998. There is no movement of any sort. Semantic principles are involved.

What might explain why Wh-in situ is possible and why it tends to correlate with verb-finality?
Some recent accounts:

A. Fukui 1986. Overt Wh-Movement does not apply to OV languages because they lack a Specifier for COMP, thereby denying the wh-element a landing site.

(Pesetsky 2000 handles multiple wh-movement by allowing different languages to have different numbers of specifiers in CP)

B. Kim 1990. The analogs of wh-elements in movementless languages are actually quantifiers and therefore undergo Quantifier Raising at LF, rather than overt Wh-Movement. In many in-situ languages, the quantificational system builds on expressions that are used in wh-phrases (see Watanabe 1992b for development of this idea):

(27) a. ni xiang mai shenme (ne) (Chinese)
you want buy what Q
‘What do you want to buy?’

b. wo shenme dou mai
I everything all buy
‘I want to buy everything’
C. Cheng 1991/1997. Final question particles correlate with the impossibility of syntactic Wh-Movement because (based on the economy principles of the MP), a language must choose one of these two methods of ‘typing’ questions.

D. Tsai 1994. Languages differ as to where the wh/Q feature is generated: the word level (English), the phrasal level (Japanese), or the sentence level (Japanese). So (as with Kim 1990), wh-elements in Japanese and Chinese are not operators.

E. Kayne 1994. When the complementizer is clause final, there is movement of IP into Spec, CP, denying Wh-Movement a landing site:

(28)
\[
\text{CP} \quad \text{C'} \\
\quad \text{IP} \\
\quad \text{C} \quad \text{IP}_1
\]

F. Chomsky 1995. In overt Wh-Movement languages the Q feature in C⁰ is strong. In non-overt movement languages in is weak. (As noted by Cheng 2003, the strength of this feature does not correlate with anything else in the language.)

The problem is that none of the generalizations underlying A-F are exceptionless

*The same language seeming to have different bounding nodes for different constructions*

PROBLEM: Even within a particular language, there appear to be differences in bounding requirements:

English is like Italian when the extracted wh-element is a direct object, especially if the lowest clause is non finite:

(29) This is the car that I don’t know how to fix.
(30) ?This is the car that I don’t know when they fixed.
(31)*Tell me how you wonder which car they fixed.
(32)*Tell me how you wonder which car to fix.

German manifest similar problems. (33a-b) are grammatical, while (33c-d) are bad for some speakers and good for others (Fanselow 1993):

(33) a. den Pfarrer hast du versucht einzuladen
the priest have you tried to invite
‘you have tried to invite the priest’

b. den Pfarrer denke ich hat Maria eingeladen
the priest believe I has Mary invited
‘the priest, I believe Mary has invited’
c. den Pfarrer denke ich dass Maria eingeladen hat  
   ‘the priest believe I that Mary invited has’

d. den Pfarrer weiß ich nicht wer eingeladen hat  
   ‘as for the priest, I do not know who has invited him’

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Szabolcsi, Anna and Marcel den Dikken (1999) 'Islands', *Glot International*, 4-6: 3-8.


12. BINDING

The binding theory of Chomsky 1981

Three-fold division of NPs:
Anaphors (no independent reference) — reflexives, reciprocals, NP traces
Pronominals (independent reference, but no denotation) — simple pronouns, null subjects in ‘pro-drop’ languages
R(eferring)-Expressions — full lexical NPs, WH traces

Definitions:
Bound vs. Free: An element is bound if it is co-indexed with another element in a c-commanding position. An element is free otherwise
A c-commands B if (very roughly) it is higher in the structure than B
Government. Lexical categories (N,V,A,P) govern their complements and specifiers. AGR governs subject position if it is tensed.
Governing category. The minimal category containing a governed node and its governor and has a subject

The three principles:
A. An anaphor must be bound in its governing category.
B. A pronominal must be free in its governing category
C. A referring expression must be free everywhere.

Some consequences (that work pretty well for English):
1. Reflexives and reciprocals have antecedents that are ‘very close’:
   (1) a. Mary saw herself in the mirror.
   b. *Mary i thinks [that John saw herself, in the mirror].

2. NPs can be raised, but not lowered and not too far.

3. Pronouns cannot be ‘too close’ to their antecedents or they need not have any antecedents at all.
   (2) a. *John, saw him, in the mirror.
   b. *John, thinks [that he, will be elected].
   c. pro salió ‘he/she/it left’ (Spanish)

4. Lexical NPs cannot have c-commanding antecedents:
   (3) *he, /John, likes John.

5. Wh-Movement can (but need not) give the appearance of being long-distance:
   (4) Who, do you think that Mary asked Bill to tell Sue to see t\?.

Some problems and later developments

Principle C does not hold universally (Lasnik 1991):
(5) Cён khit waa Cён chalat(Thai)
John thinks that John is smart
(6) John tin John se⁡ tha⁠noun⁠ (Vietnamese)
   John thinks John will win

But Thai and Vietnamese differ clause-internally:
(7) CÓn chẢp CÓn (Thai)
    John likes John

(8) *John thu o n⁠ (Vietnamese)
    John likes John

In neither language can a pronoun precede the R-expression:
(9) *Nó thu o n⁠ John
    he likes John

So Condition-C has to be parameterized. But the following generalization appears to be universal and exceptionless:
(10) A less referential expression may not bind a more referential one.

_Principle B does not hold universally_
There are long-distance applications of Principle B only in very few languages (eg Icelandic and Gothic — see Harbert 1995). In these languages a pronoun is required to be free in a larger domain than the minimal governing category:
(11) ðaï-ei ni wildedun [⁠smik ñiudanon ufar sis.,/(*imï)]
    who, not they-wanted me to-ruleover selves,/*them
    ‘who didn’t want me to rule over them’ (Luke 19:27)

_Principle A does not hold universally_
Long-distance reflexives in many languages!
Russian (Rappaport 1986)
(12) oni ne razreñet mne proizvodit’ optytynad soboj
    he, not permitted me to-perform experiments on self

THREE CLASSES OF SOLUTION TO THIS PROBLEM:

I. Parameterization of the notion ‘governing category’ (Manzini and Wexler 1987; see also Yang 1983; Harbert 1986; Harbert 1991; Koster 1986)

Problem: In many languages the application of Principle A is broader than in English. ‘Long distance’ binding of anaphors is common. So it appears that the notion ‘governing category’ needs to be parameterized:

i. Italian anaphor sé — ‘has a subject’ must be replaced by ‘has an Infl’:
(13) Alice guardò i ritratti di sé, di Mario
    Alice looked at portraits of Refl of Mario
    ‘Alice looked at Mario’s portraits of Refl’
ii. Icelandic anaphor *hann* — ‘has a subject’ must be replaced by ‘has a tense’:

(14) John says that Maria loves (subjunctive) Refl

(15) *Jon ordered me to shave him

iii. Icelandic anaphor sig — ‘has a subject’ must be replaced by ‘has a “referential” tense’ — i.e. an indicative tense whose properties do not depend on some superordinate tense:

(16) John says that Maria loves Refl

(17) John says that Maria loves (subjunctive) Refl

iv. Japanese anaphor zibun — ‘has a subject’ must be replaced by ‘has a root tense’ (where a root tense is a tense in a root (highest) sentence:

(18) John thinks that Bill hates Refl

Manzini and Wexler’s proposal for the parameterization of ‘governing category’

(19) Manzini and Wexler’s proposal for the parameterization of ‘governing category’

What this means:

— There is no absolute definition of ‘governing category’. Choice a, b, c, d, or e has to be taken

— The values of the parameter is associated with a particular lexical item, not with the grammar as a whole (cf. Icelandic). This is known as the Lexical Parameterization Hypothesis (Borer 1984)

Note also that there seems to be a set-theoretical relation of proper inclusion in a-e. The set of categories that have subjects includes the set that have Infl which
includes the set that have Tense, etc. Hence the **Subset Principle** for parameters (with implications for learnability).

However, Bondre 1993 shows that when you look at the sorts of structures proposed in current work, there really is no subset relation here.

II. **There is more than one type of anaphor** — long distance anaphors are in a different category than English-type anaphors and subject to different binding principles (Anderson 1982; Giorgi 1983-84; Reinhart and Reuland 1993).

So for Giorgi long distance anaphors are subject to a thematic requirement — they need to be bound within the ‘P-Domains’ of their antecedents. \[ \] is in the P-Domain of \[ \] if it is (contained in) a coargument of \[ \] and \[ \] is the thematically most prominent argument in the relevant thematic domain).

Note the following contrast in Icelandic (Thráinsson 1976):

(20) *Jón, vē ri glaður ef María kyssti sig, 
    John, would be glad if Mary kissed self

(21) Jón sagði að hann vē ri glaður ef María kyssti sig, 
    Jon said that he would be glad if Mary kissed self

(20) is bad because the ‘if clause’ is an adjunct, not an argument. (21) is good because the if-clause is embedded in the object argument.

NOTE: This proposal alone does not capture all the differences in binding domains.

III. **Long distance ‘anaphors’ are not ‘anaphors’ at all. They are ‘logophors’ and need not have c-commanding binders. They are subject to discourse conditions (Clements 1975; Kameyama 1984; Thráinsson 1991; Zribi-Hertz 1989).**

Ewe (Clements 1975):

(22) kūmi k xō agbaleŋ tso kōfi gbbe 
    wō-a-va Kwami receive letter from Kofi side that Pro-
    T-come me kpe na yèŋk cast block for LOG

‘Kwami got a letter from Kofi, saying that he should cast some blocks for him.’
Kofi is the only possible antecedent, not Komi, even though it is not a subject and
does not c-command yè. However, it is Kofi’s speech that is being
reported.

But there appear to be structural conditions on logophors as well (Clements 1975;
Maling 1984; Enç 1989; Koopman and Sportiche 1989). The latter two
attempt to derive the referential properties of logophors from the
assumption that they are operator-bound anaphors.

IV. Burzio 1996. For Burzio, reflexives are always possible, no matter how far from
the antecedent, unless blocked by some relevant intervening category. There is an
implicational relationship among blockers, going from strongest (on the left) to weakest
(on the right):

(23) Blocking hierarchy for anaphor binding: tensed indicative clauses >
tensed subjunctive clauses > infinitival clauses > noun phrases / perception
verb complements

Some other facts that are built into Burzio’s theory:

(24) Languages that do not have verb agreement, such as Chinese, Japanese,
and Korean, permit anaphors as subjects of tensed clauses:

(25) a. *John said that himself would come.

   b. Zhangsan shuo [ziji, hui lai]
      Zhangsan said [self will come]
      ‘Zhangsan said that he, will come’

(26) Long distance anaphors are consistently monomorphemic, while those
that do have strict locality conditions are bimorphemic:

   a. English has only one (inflected) anaphor, him/her/itself, which must
      be local.
   b. Korean has monomorphemic anaphors, caki and casin, which can be
      long-distance and an compound anaphor, cakicasin, which must be local.

(27) There is a strong correlation between the class of elements that can
serve as antecedents for anaphors and those elements that block anaphor
binding:

(28) Experiencers in Chinese and other languages can serve as antecedents for
anaphor binding, but when they occur between a potential antecedent and an
anaphor, they block binding.

(29) Possessive anaphora are a subcase of long-distance anaphora.

Hence in English there is no form like (30):
(30)  *Mary read herself’s book.

Burzio ties all of these observations/claims together in an optimality-theoretic analysis in Burzio 1998. He proposes four hierarchies of constraints:

1. Referential Economy: \text{REFLEXIVE} >> \text{PRONOUN} >> \text{R-EXPRESSION}
2. Optimal Agreement: \text{*1\textsuperscript{ST}/2\textsuperscript{ND}} >> *\text{3\textsuperscript{RD}} >> *\text{IMPERSONAL}
3. Blocks & Antecedents: \text{INDICATIVE} >> \text{SUBJUNCTIVE} >> \text{INFINITIVE} >> \text{NP}
4. Avoid Structure: *\text{FULL-INTENSIFIER} >> *\text{FULL} >> *\text{CLITIC} >> *\text{Ø}

This analysis has attracted the attention of non-generativists: ‘This is on my view the best analysis of long-distance reflexivization (and related phenomena) within the framework of generative grammar’ (Huang 2000: 127).

But aside from general problems with Optimality Theory, most of Burzio’s descriptive generalizations are incorrect (Martin Haspelmath, class lectures, Düsseldorf, Summer 2002):

1. Some languages without agreement do not permit anaphors as subjects of tensed clauses (Danish) and some languages with agreement do permit anaphors in that position (Kannada; Amritavalli 2000):

   (31) Raama\textsubscript{i} [taanu\textsubscript{i} gedd-anu anta] heeLid-anu
   Rama self won-3SG.M COMP said-eSG.M
   ‘Rama, said that he\textsubscript{i} won’

2. Long-distance anaphors can be inflected:
   Lezgian long-distance anaphors: \textit{wic} ‘3\textsuperscript{rd} singular’
   zuw ‘1\textsuperscript{st}/2\textsuperscript{nd} singular’
   ceb ‘3\textsuperscript{rd} plural’

In the Minimalist Program, new mechanisms are necessary, since indices are not allowed (they are not morphological objects). Reuland 2001 explores how binding principles can be stated in terms of chains formed by movement:

(32) Max\textsubscript{i} voelde[zich\textsubscript{i} weggliden] (Dutch)
Max felt [SELF slide away]

(33) Max
    \begin{tikzpicture}
      \node (EPP) at (0,0) {EPP};
      \node (I) at (1,0) {I};
      \node (V) at (2,0) {V};
      \node (ACC) at (3,0) {ACC};
      \node (zich) at (2.5,-1) {zich};
      \draw[->] (EPP) -- (I);
      \draw[->] (I) -- (V);
      \draw[->] (V) -- (zich);
    \end{tikzpicture}


Kameyama, Megumi 1984. ‘Subjective/Logophoric Bound Anaphor Zibun’, *CLS* 20, 228-238.


13. POLYSYNTHESIS AND NONCONFIGURATIONALITY

One per word

Isolating (e.g. Chinese)

Separate unmodified

Agglutinative (e.g. American Indian)

More than one per word

Modified (e.g. Indo-European)

Synthetic (e.g. Latin)

Inflectional

Analytic (e.g. English)

Elements of meaning

(1) Uniformity of Theta Assignment Hypothesis (UTAH):
Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure. (Baker 1988: 46)

Many languages have a morphological causative with a biclausal causative as a thematic paraphrase. Chichewa:

(2) a. Mtsikana  a-na-chit-its-a  kuti  mtsuko  u-gw-e
girl  SP-PAST-do-cause-ASP  that  waterpot  PAST-fall-ASP

‘The girl made the waterpot fall’

b. Mtsikana  a-na-u-gw-ets-a  mtsuko
girl  SP-PAST-OP-fall-CAUS-ASP  waterpot

‘The girl made the waterpot fall’

The UTAH demands that these two sentences be derived from the same underlying structure, where (2b) is derived by movement of the verb –gw- ‘fall’:

(3)

```
NP  VP  S
   V   S
   make  NP  VP
       pot  V
       fall

NP  VP  S
   V   S
   V   V
   fall  make  pot  V
       t
```
Baker argued that if we assume a movement analysis in such cases, we can appeal to the Empty Category Principle (ECP) and other constraints for an explanation of those situations in which incorporation fails.

Polysynthesis:
(4) ilukpiyumalaktu'a ‘I am anxious to build a house’ (Eskimo)
   iglu-  house
   -kpi-  build
   -yuma- intend
   -laak- anxious
   -tu-  reflexive
   -a  I

(5) Polysynthesis tends to involve a cluster of properties:
   a. Complex incorporations
   b. Fluid word order with free omission of arguments possible
      (‘nonconfigurationality’)
   c. Head marking of arguments

(6) owira’a wahrake’ ne o’wahru (Mohawk)
   baby  ate  the  meat

More likely with noun incorporation:
(7) owira’a waha’wahrake’ (noun incorporation)
   baby  meat-ate

Fluid word order and deletion:
(8) atya’tawi  Sak  ranuhwe’s  ‘Sak likes the dress’
   dress  Sak  likes

(9) ranuhwe’s  Sak  ne  atya’tawi  ‘Sak likes the dress’
    likes  Sak  the  dress

(10) Sak  ranuhwe’s  ‘Sak likes it’
    Sak  likes

Head marking (note — the prefix expresses both the subject and the object):
(11) a. ke-nuhwe’s  ‘I like it’
    b. se-nuhwe’s  ‘you like it’
    c. ra-nuhwe’s  ‘he likes it’
    d. ye-nuhwe’s  ‘she likes it’
    e. yakwa-nuhwe’s  ‘we like it’

First assumption — basic phrase structure contains only verb and obligatory pronominal prefixes — full NPs are dislocated adjuncts like this book, I really like it
Baker says that nonconfigurationality follows from this — the full arguments are just ‘discourse add-ons’ that can be put anywhere.

(13) **Configurationality Parameter** (Jelinek 1984) — ‘The Pronominal Argument Hypothesis’

a. In a configurational language, object nominals are properly governed by the verb.
b. In a W-type non-configurational language, nominals are not verbal arguments, but are optional adjuncts to the clitic pronouns that serve as verbal arguments (A W-type non-configurational language is one that has clitic pronouns that mark verbal arguments — examples are Warlpiri, Lummi, and Papago)

(14) Sak ro-nuhwe’s ‘ro’ (3rd person subject; 3rd person pronominal object) ‘Sak likes him’

There is a separate prefix for reflexives:

(15) Sak ratate-nuhwe’s ‘Sak likes himself’

Impossible if the reflexive is separated from the verb:

(16) *Sak ronuhwe’s rauha
    Sak likes himself

This follows from a general constraint against reflexives occurring dislocated:

(17) *John really likes him, himself.

Likewise, quantified NPs cannot occur dislocated:

(18) a. Chris, I saw her in the market yesterday.
    b. *Nobody, I saw her in the market yesterday.

In Mohawk no quantified NP can occur as a free-standing NP:

(19) *Sak teshakokv yah-uhka
    Sak he/her-saw no+body

(20) a. John, broke his, knife.
    b. *He, broke John,‘s knife.
But superficially you can say something like (20b) in Mohawk:

(21) \[\text{wa’thaye’ke’} [\text{ne thikv Sak raoshare’}]\]
\begin{itemize}
  \item he-broke-it
  \item the
  \item that Sak
  \item his-knife
\end{itemize}

Not a counterexample to the binding theory: [\text{ne thikv Sak raoshare’}] is not technically the direct object — it is in a dislocated topic position.

So (21) is good for the same reason that (22) is good:

(22) John’s knife, he finally broke it.

(Jelinek 1984 gives other arguments for lexical items being dislocated — summarized in Hale 2003; Baker 2003)

(23) **Polysynthesis Parameter**

a. Technical version (Baker 1996: 17);
A phrase X is visible for \(\emptyset\)-role assignment from a head Y only if it is coindexed with a morpheme in the word containing Y via:
(i) an agreement relationship, or
(ii) a movement relationship
   Yes: Mohawk, Nahuatl, Mayali, …
   No: English, French, Chichewa, …

b. Simplified version (Baker 2001a: 111)
Verbs must include some expression of each of the main participants in the event described by the verb (the subject, object, and indirect object).

(24) \[
\text{Polysynthesis} \quad \begin{array}{c}
\text{no} \\
\text{yes}
\end{array}
\]
\[
\text{Head Directionality—Optional Polysynthesis} \quad \begin{array}{c}
\text{first/no} \\
\text{first/yes} \\
\text{last/yes} \\
\text{last/no}
\end{array}
\]
\[
\text{Adjective Neutralize} \quad \begin{array}{c}
\text{verb} \\
\text{noun}
\end{array}
\]
\[
\text{Ergative Case} \quad \begin{array}{c}
\text{*} \\
\text{*}
\end{array}
\]

Chichewa illustrates 'Optional Polysynthesis'

(25) Chichewa has obligatory subject agreement; object agreement is optional

Chichewa (Bresnan and Mchombo 1987)
With and without object agreement:

(26) a. \[\text{njuchi zi-na-luma alenje} \quad \text{(without o. a.)}\]
\begin{itemize}
  \item bees
  \item they-bit
  \item hunters
\end{itemize}
b. njuchi zi-na-"wa"-lum-a alenje (with o. a.)
   bees they-bit-them hunters
   ‘the bees bit the hunters’

The subject NP is always optional; the object NP is optional only when there is object agreement:
(27) zi-na-(wa)-luma alenje
    they-bit-them hunters
    ‘they bit the hunters’

(28) njuchi zi-na-"wa"-lum-a
    bees they-bit-them
    ‘the bees bit them’

(29) *njuchi zi-na-lum-a NOT: object omitted; no object agreement)
    bees they-bit
    ‘the bees bit’

When there is no object-agreement, the position of the object is fixed; it must occur after the verb:
(30) njuchi zi-na-lum-a alenje (SVO)
    bees they-bit hunters
    ‘the bees bit the hunters’

(31) zi-na-lum-a alenje njuchi (VOS)
    they-bit hunters bees

But with object agreement, the order is as free as in Mohawk:
(32) SVO, SOV, VSO, VOS, OSV, OVS are all possible

So Chichewa is ‘optionally polysynthetic’ — it is a head first language when there is no object agreement

Slave (Rice 1989) is also ‘optionally polysynthetic’ — but when there is no object agreement, the order is OV. With no object agreement, the object must be present:
(33) li ‘ehkee kayihihshu (SOV)
    dog boy it-bit
    ‘the dog bit the boy’

With object agreement, the object can occur initially (34) or be left out entirely:
(34) ‘ehkee li kayeihshu
    boy dog it-bit-him
    ‘the dog bit the boy’

(35) li kayeihshu
    dog it-bit-him
    ‘the dog bit him’
Newmeyer Handout #4

Not any kind of ‘optional polysynthesis’ is possible — no language has obligatory object agreement, but optional subject agreement (‘Reverse Chichewa’ does not exist)

(36) Baker’s three possibilities (pp.148-155) for capturing ‘optionally polysynthetic’ languages
   a. Divide the Polysynthesis Parameter in two:
      i. SUBJECT POLYSYNTHESIS PARAMETER (the subject of a verb must be expressed in the verb):
         YES: Mohawk, Chichewa, Slave
         NO: English, Japanese
      ii. OBJECT POLYSYNTHESIS PARAMETER: (the object of a verb must be expressed in the verb):
         YES: Mohawk
         NO: English, Slave, Japanese, Chichewa
   b. Use ranked constraints, as in Optimality Theory:
      i. POLYSYN PARAM >> HEAD DIR PARAM = Mohawk
      ii. HEAD DIR PARAM >> POLYSYN PARAM = Chichewa, Slave
   c. Allow three settings for the Polysynthesis Parameter
      i. All participants must be expressed on the verb (Mohawk)
      ii. Any participant may be expressed on the verb (Chichewa, Slave)
      iii. No participant is expressed on the verb (English, Japanese)

Problems with all of these:
   (36a) demands two separate settings for English
   (36a and 36b) cannot rule out ‘Reverse Chichewa’, with object agreement, but no subject agreement
   (36c) does not capture that subject agreement is required in Chichewa and Slave

Object agreement is typically used for animate definite objects — There seems to be a principle like (37):

(37) AGREEMENT PRINCIPLE: If agreement with a noun phrase X is not required, use the agreement to show that noun phrase X is animate and/or definite in its reference.

By the end of the book Baker uses a fourth solution that he doesn’t discuss earlier, namely there is a single ‘Optional Polysynthesis Parameter’ on an equal level to the ‘Head Directionality Parameter’

Baker’s claim that only polysynthetic languages neutralize adjectives is almost surely false.

Thompson 1988 cites the following as neutralization languages:
(38) a. Adjectives are in the class of verbs: Acehnese, Aghem, Chinese, Lakhota, Noni, Thai, Turkana. W. Makian, Wappo, many Austronesian languages, including Samoan, Indonesian, and Palauan
 b. Adjectives are in the class of nouns: Finnish, Diyari, Arabic, many Bantu and Chadic languages, Dyirbal, Kannada, Malayalam, Hebrew, Persian, Polish, Icelandic, Latin, German
However, it is not clear what her criteria are. And for example, she notes that in many of the (38b) languages, nouns but not adjectives may have inherent gender — i.e. they are distinct categories!

(39) Baker’s explanation for nonconfigurational polysynthetic languages being adjective-less: The job of an adjective is to combine with a noun to make a noun phrase. But nonconfigurational languages do not emphasize phrase construction.

The configurationality parameter one of first to be proposed in GB

(40) Hale 1982; Hale 1983 suggested the following ‘diagnostics’ of nonconfigurality:
   a. free word order
   b. the use of discontinuous expressions
   c. free or frequent pronoun drop
   d. lack of NP movement transformations
   e. lack of pleonastic NPs
   f. use of a rich Case system
   g. complex verb words or verb-cum-AUX systems

Some examples: Warlpiri, Navajo, Winnebago, Japanese

(41) The Configurationality Parameter (Hale 1983: 26)
   a. In configurational languages, the projection principle holds of the pair (Lexical Structure, Phrase Structure)
   b. In nonconfigurational languages, the projection principle holds of Lexical Structure alone

Example from Warlpiri (Speas 1990):

(42) wawirri kap-rna panti-rni yalumpu
   kangaroo AUX I PERSON SUBJ spear NONPAST that

(43) LS PS

Japanese cannot be nonconfigurational (Hoji 1985):
Coreference facts show that the subject c-commands the direct object, but not vice-versa:

(44) *Soitu-ga Taroo-no hon-o mituke-ta
guy-Nom Taro-Gen book-Acc found-past
‘The guy, found Taro’s, book’
When the direct object is scrambled before the subject, acceptability improves dramatically:

(45) Taroo=no hon-o Soitu-ga mituke-ta
Taro-Gen book-Acc guy-Nom found-past
‘Taro’s, book, the guy, found’

(46) Major differences between Mohawk and Warlpiri, both of which are ‘polysynthetic’ for Baker:
Mohawk — lots of incorporations, no overt case marking
Warlpiri — rich case marking

CONCLUSION: the Polysynthesis Parameter needs to be made more fine-grained

REFERENCES