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**Explaining matrix/subordinate domain discrepancies**

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**Explanations through UG:**

Emonds 1970/1976: Local, structure-preserving and root transformations; root transformations apply to items in a root position (i.e. in a matrix clause).

1. Subject NP Postposing: Two cities were visited by everyone.
2. Subject-Auxiliary Inversion: Will they support us?

Ross 1973: Penthouse Principle: More goes on upstairs than downstairs.

1. No syntactic process can apply only in subordinate clauses.

**Explanations through acquisition:**

Roeper & Weissenborn 1990: Subordinate clause strategy – embedded clauses uniformly manifest the correct generalizations and the partial, exceptional generalizations manifested in main clauses are not a function of parameter setting.

1. (It is) raining out today.
2. \*I think that raining out today.
3. Il est où, papa?
4. Où il est, papa?
5. Il me demande où je vais.
6. \*Il me demande je vais où.

Degree-x learnability

PLD (UG 🡪 grammar)

1. Jay said [that Kay asked [if Ray was home]]
2. Kay asked [if Ray was home]
3. Ray was home.

Wexler & Culicover 1980: Degree-2 learnability, if children encounter (*b*, *s*) pairs, where *b* is a base structure (in which transformational and phonological rules have not applied) and *s* is a surface string, and follow an error detection procedure.

Morgan 1986: Degree-1 learnability, if children encounter *b*, *s* pairs AND a surface string with constituent structure assigned (cf. Culicover & Wilkins 1984).

Lightfoot 1989/1991/1994: Degree-0 learnability, if children encounter data from unembedded binding domains.

1. Kim expected [her to win].
2. Kim expected [(that) she would win].
3. … CP[Spec C [(DP) I …]

connection points with embedded clauses: elements featuring in subcategorization frames, selectional restrictions, or linking time reference.

**Apparent counterexamples**:

Selectional restrictions

1. \*The ice served to melt.
2. The ice served to chill the beer.
3. \*Edison served [PRO to invent the lightbulb]

Lower I

1. If I were the boss, I would …

Bounding nodes

1. Tuo fratello, [a cui IP[ mi domando CP[che storie IP[abbiano raccontato ~~che storie~~ ~~a cui~~]]]], era molto preoccupato. ‘your brother, to whom I wonder which stories they told, was very troubled’
2. C’est à mon cousin [que IP[je sais CP[lequel IP[offrir ~~lequel~~ ~~à mon cousin~~]]]] ‘it’s to my cousin that I know which one to offer’
3. Combien as IP[tu vu DP[ ~~combien~~ de personnes]]] ‘how many people have you seen?’

Licensing a deleted subject

1. \*Who did Jay say CP[~~who~~ that **~~who~~** saw Kay]
2. Wie denk je CP[[~~wie~~ dat] IP[**~~wie~~** het boek gelezen had]]? ‘who do you think had read the book?’
3. Wie heeft IP[**~~wie~~** het boek gelezen ~~heeft~~] ‘who has read the book?’
4. Who IP[~~who~~ has read the book]?
5. \*Who did IP[~~who~~ ~~did~~ read the book]?

**Nothing to be learned only from embedded domains:**

*ha* deletion in Swedish

1. Han hade sett henne. ‘he had seen her.’
2. \*Han ~~hade~~ sett henne.
3. … at han (hade) sett henne. ‘… that he had seen her.’
4. Allan kanske redan (har) skrivit sin bok. ‘Allan perhaps already has written his book.’
5. Jay can greet Fay and Ray ~~can~~ treat Kay.
6. \*Who did Jay greet and who ~~did~~ Ray treat?
7. \*Who can Jay visit and who ~~can~~ Ray eat with?

**Problems**

Long-distance anaphors

1. Johni xiangxin [Billj dui Samk shuo [zijii/j/\*k taoyan Mary]] ‘John believes that Bill said to Sam that self hated Mary.’
2. \*Johni xiangxin [wo shuo [zijii taoyan Mary]] ‘John believes that I said that self hated Mary.’
3. Zhangsani shuo [zijii/\*j de shu [Lisij zui xihuan]]. ‘Zhangsan said that self’s books, Lisi likes most.’

Resumptive pronouns

1. John is too tired to invite [him] for dinner.
2. The woman who we met [her] lives in DC.

**Arguments for Degree-0 acquisition**

Dutch and German word order

1. Jan bezoekt Amsterdam. ‘John visits Amsterdam.’
2. Margo denkt [dat Jan Amsterdam bezoekt] ‘Margo thinks that Jan visits Amsterdam.’
3. Jan belt de hoogleraar op. ‘John calls the professor up’
4. Jan moet de hoogleraar opbellen. ‘John must the professor up-call’
5. Jan bezoekt de hoogleraar niet/soms/morgen/vaak. ‘John visits the professor not/sometimes/tomorrow/often.’
6. En ik maar fietsen repareren. ‘I ended up repairing bicycles.’
7. Hand uitsteken. Hand outstretch = ‘signal.’
8. Jantje koekje hebben? ‘Johnnie has a cookie?’
9. Ik de vuilnisbak buiten zetten? Nooit! ‘me put the garbage out? Never!’

Stage 1 (25-29 months): All verbal elements (including verbal complexes) occur in first/second and final position, with a preference for final position.

Stage 2 (31-33 months): Verbal elements with particles occur regularly in final position; other finite verbs occur in both first/second and final positions.

Stage 3 (36-39 months): All and only finite verbs occur in first/second position; verbal complexes with finite and non-finite parts appear in discontinuous positions.

Stage 4 (41-42 months): As soon as embedded sentences are produced, their finite verbs are in final position.

Change in word order

Word order change affects matrix domains before embedded and it affects embedded domains catastrophically. For example, the loss of object-verb order in 13th century English.

Creolization

The Guyanese creole Berbice Dutch has subject-verb-object order despite being based on two languages that are object-verb and verb-second (Dutch and Eastern Ijo).

1. á nimi-γá

**Conclusion**

The problem of matrix/subordinate domain discrepancies is now re-formulated: if all operations can be learned only from unembedded binding Domains, then the explanatory challenge is to show why certain operations do not occur in embedded domains.

The Penthouse Principle is reformulated: everything happens upstairs but some things do not happen downstairs, because syntactic enabling conditions are not met.

Verb-second

1. CP[SpecJan Cbezoekt IP[~~Jan~~ Amsterdam ~~bezoekt~~]]
2. Ik denk CP[dat IP[Jan Amsterdam bezoekt]]
3. Will John do it?
4. I wonder CP[whether IP[John will do it]]
5. Pou pije o Yanis? ‘where went John?’
6. Anarotjeme CP[pjon idhe IP[o Yanis ~~idhe pjon~~]] ‘I wonder whom John saw.’
7. Pjon nomizi o Yanis CP[oti idhe IP[i Maria ~~idhe~~ ~~pjon~~]]? ‘whom does John think that Maria saw?’
8. Vrika to vivlio CP[pou erapse IP[o Yanis ~~erapse~~ ~~pou~~]] ‘I-found the book that John wrote.’

**Consequences**

There are two ways, in principle, to explain matrix/embedded domain discrepancies: through principles of UG or principles of language acquisition. UG approaches in the past have not been successful.

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