

V-Raising — Auxiliaries (English)

English vs. French

In English, auxiliary verbs (*have*, *be*, and modals) precede adverbs and negation:

1. a. John has always eaten chocolate.
 b. John is always eating chocolate.
 c. John should always eat chocolate.
2. a. John has not eaten chocolate.
 b. John is not eating chocolate.
 c. John should not eat chocolate.

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V-Raising — Main Verbs (English)

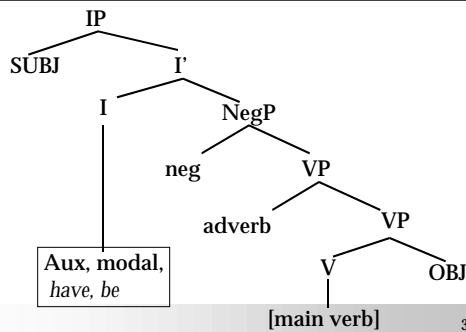
Main verbs, on the other hand, follow adverbs and negation:

3. a. John always eats chocolate.
 a'. *John eats always chocolate.
 b. John does not eat chocolate.
 b. *John eats not chocolate.

CONCLUSION: In English, *have* and *be* are in I, and main verbs are in V

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Clause Structure (English)



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V-Raising — Both Auxiliaries and Finite Main Verbs (French)

In French, auxiliaries precede adverbs and negation:

1. Jean a **toujours** mangé du chocolat.
 John has always eaten of chocolate
2. Jean n' a **pas** mangé de chocolat.
 John has not eaten of chocolate

Unlike in English, in French main verbs do as well:

3. Jean mange **toujours** du chocolat.
 John eats always of chocolate
4. Jean ne mange **pas** de chocolat.
 John eats not of chocolate

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V-Raising — Infinitival Main Verbs (French)

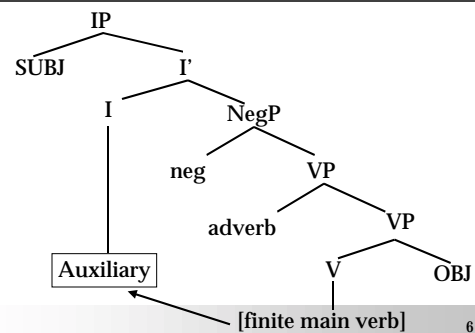
However, infinitival main verbs **follow** adverbs and negation:

5. **toujours** manger du chocolat.
 always to-eat of chocolate
 (*manger toujours du chocolat)
6. ne **pas** manger de chocolat.
 not to-eat of chocolate
 (*ne manger pas de chocolat)

CONCLUSION: In French, main verbs raise from V to I, but only when finite.

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Clause Structure (French)



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Child Negation Structures

English vs. French

1. No I see truck.
'I don't see the truck.'
2. **Pas** attrape papillon.
not to-catch butterfly
'I can't catch the butterfly.'

Tentative conclusion: In both French and English early language, there is no IP. Hence verbs cannot raise from V.

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V-Raising and Functional Categories

Some more French data (data from Deprez and Pierce, 1993)

3. **Pas** manger la poupée.
not to-eat the doll
4. **Pas** casser.
not to-break
5. **Pas** attraper papillon.
not to-catch butterfly
6. **Pas** rouler en vélo.
not to-roll on bike

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V-Raising and Functional Categories

Some even more French child language data

7. Veux **pas** lolo.
want not milk **WHAT IS GOING ON?**
8. Marche pas
works not
9. Me plaît **pas** monsieur là.
me pleases not man there
10. Ça tourne **pas**
that turns not
11. Elle roule **pas**.
it rolls not

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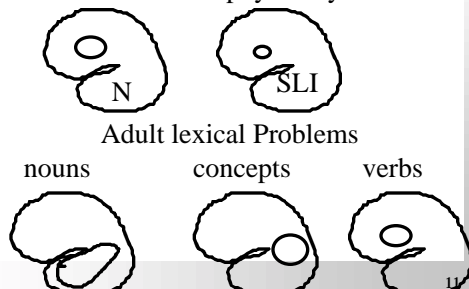
Some things to think about

- What advantages are there for human language to have phrase structure (as opposed to simple linear order)?
- What advantages are there for human language to have "movement"?
- What advantages are there for grammar to restrict how this movement operates?

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Neuroanatomic Evidence

SLI Broca's area is physically smaller



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Josh: A child with SLI

- At 3:8 -- mostly says single words
 - > Difficulty with speech
 - > Understands word and sentences
 - > Chooses to remain silent in all situations
 - > Clearly intelligent and socially aware
- At 5:6 -- mostly says short sentences
 - > Has learned functional category words
 - > Often omits them in speech
 - > Difficulty with speech remains
 - > Is learning to read slowly

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Language Teaching: Imitation

T: Here the dog is walking on the grass and here is the dog afterwards. Again, here the dog is walking on the grass, say "the dog is walking"

C: The dog walking

T: And here is the dog after that, say, "the dog walked"

C: The dog walked

T: Ask me if the dog walked on the grass. Say "Did the dog walk there?"

C: Did the dog walk there

T: Ask me if the dog is walking on the grass. Say "Is the dog walking there?"

C: Is the dog walking there

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Language Teaching: modeling

T: Here the dog is walking on the grass and here is the dog afterwards. Here the dog is walking on the grass. Is this dog walking the grass?

C: yes

T: And here is the dog afterwards. Did this dog walk on the grass?

C: yes

T: Could you walk on the grass?

C: yes

T: Can a tree walk on the grass?

C: no

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Focusing the Child's Attention

Clinician: Let's pretend we are farmers. We're taking our animals to the fair. Here they are in the barn. I'll put them in the truck. OK now the cow is in the truck. The horse is in the truck. The sheep is in the truck. What about the chicken?

Client: Chick in truck.

Clinician: Yes she is. The chicken is in the truck. Look the pig is in the truck. Can a chick be in the truck? Is the chick in the truck? Is the pig is in the truck?

Client: Pig is in truck.

Clinician: Good. Now everyone is in the truck. Now we can go to the fair.

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