The clause structure of “the olden days” (say, 1986):

```
  CP
   IP
  VP
CP: force (declarative, interrogative)
IP: functional morphology (tense, agreement)
VP: lexical/thematic elements
```

But this doesn’t seem to be quite good enough to describe/explain the data—progressively, they have been split up into further functional projections.

More modern clauses tend to look more like this (at least):

```
(2) ForceP
   TopP*
   FocP
   TopP*
   FinP
   "CP"

   AgrSP
   TP
   NegP
   AgrOP
   vP
   VP
   "IP"
   "VP"
```

**Syntactic argumentation:**
- Present the puzzle (recalcitrant data)
- Present a hypothesis to account for the data.
- **Consider what else your hypothesis predicts.**
- Check to see if the predictions are met.
  —if so, celebrate them; if not, speculate as to why not (or revise your hypothesis).
The road to (2) began in 1989…


Basic tasks:

- Present data showing that there needs to be another position in the clause structure between negation and adverbs (named: AgrP).
- Explain the special behavior of *have* and *be* both in French and in English.
- (The paper contains a couple of other points concerning NegP as well…)

1. **French: V moves to I; English: *have/be* move to I (I lowers to other verbs).**

Assume: French and English share a common D-structure.

Adverbs and *not* can’t move to the right.

(3) $IP$

subject $I'$

$I$ (Neg)

not/pas $VP$

(adverb) $VP$

$... V ...$

(4) a. * John likes not Mary.
b. Jean (n’) aime pas Marie.

(5) a. * John kisses often Mary.
b. Jean embrasse souvent Marie.
c. John often kisses Mary.
d. * Jean souvent embrasse Marie.

French negative object *rien* ‘nothing/anything’—must move, marks left edge of $VP$.

(6) $VP$

$rien$

$VP$

$... V t_1$
(7) a. Pierre n’a rien mangé.
Pierre ne has nothing eaten
‘Pierre hasn’t eaten anything.’


c. Pierre ne mange rien.
Pierre ne eats nothing
‘Pierre doesn’t eat anything.’

d. * Pierre ne rien mange.

*beaucoup* ‘lots’ moves optionally.

(8) a. Pierre a lu beaucoup de livres.
‘Pierre has read lots of books.’

b. Pierre a beaucoup lu de livres.

c. Pierre lit beaucoup de livres.

d. * Pierre beaucoup lit de livres.

Conclusion: All (finite) verbs move to I in French; English finite *have* and *be* do too.

2. (Some) infinitives (can) move in French.

Assume: • Finite and non-finite sentences are the same except for \[±\text{finite}\] on I.
• *not* and *ne*...*pas* stand in the same structural position in tensed clauses and infinitives.

(9) a. Ne pas être heureux est une condition pour écrire des romans.
‘*Ne* to not be happy is a prerequisite for writing novels.’

b. N’être pas heureux est une condition pour écrire des romans.
‘*Ne* to be not happy...’

c. Ne pas avoir eu d’enfance heureuse est une condition pour écrire des romans.
‘*Ne* not to have had a happy childhood is a prerequisite for writing novels.’

d. N’avoir pas eu d’enfance heureuse est une condition pour écrire des romans.
‘*Ne* to have not had a happy childhood...’

Conclude: Verb movement to I is optional for infinitives in French.
But wait…

(10) a. Ne pas sembler heureux est une condition pour écrire des romans. ‘*Ne* not to seem happy is a prerequisite for writing novels.’

b. * Ne sembler pas heureux est une condition pour écrire des romans. (‘*Ne* to sem not happy…’)  
c. Ne pas regarder la télévision consolide l’esprit critique. ‘*Ne* not to watch television strengthens one’s independence.’

d. * Ne regarder pas la télévision consolide l’esprit critique. (‘*Ne* to watch not television…’)

So: Only infinitives of have (avoir) and be (être) can (optionally) move in French. Lexical infinitives cannot move in French.

Quelle coïncidence! Both English and French have restrictions on moving lexical verbs, but not on moving *havelavoir* and *belêtre*.

(11) a. Not to be happy is a prerequisite for writing novels.
b. ? To be not happy is a prerequisite for writing novels.
c. Not to have had a happy childhood is a prerequisite for writing novels.
d. (?) To have not had a happy childhood is a prerequisite for writing novels.

(12) a. Not to seem happy is a prerequisite for writing novels.
b. * To seem not happy is a prerequisite for writing novels.
d. Not to get arrested under such circumstances is a miracle.
e. * To get not arrested under such circumstances is a miracle.

3. Verb movement to I isn’t really always verb movement to I.

Verb movement for French infinitives is never obligatory.
Predicts that we can see *adverb verb NP* sequences (never allowed with finite verbs).

*Et voilà.*

(13) a. Souvent paraître triste pendant son voyage de noce, c’est rare.  
often to.look sad during one’s honeymoon that’s rare.  
‘To often look sad during one’s honeymoon is rare.’

b. Presque oublier son nom, ça n’arrive pas fréquemment.  
almost to.forget one’s name that *ne* happens not frequently.  
‘To almost forget one’s name doesn’t happy frequently.’
(14) * Pierre presque oublié son nom.
Pierre almost forgets his name.

Ok, now infinitives can move, but only avoir and être, right?
Predicts that lexical infinitives preceding adverbs should be ungrammatical

But…

(15) a. Paraître souvent triste pendant son voyage de noce, c’est rare.
‘To look often sad...’

b. Oublier presque son nom, ça n’arrive pas fréquemment.
‘To forget almost one’s name...’

So: Any old infinitive verb seems to be able to move past adverbs.
But: Remember from before, only avoir and être can get past negation.

(16) a. * Ne paraître pas triste pendant son voyage de noce, c’est normal.
‘Ne to look not sad...’

b. * N’oublier pas son nom, ce n’est pas un explot.
‘Ne to forget not one’s name isn’t worth writing home about.’

Summary of the puzzle.

<table>
<thead>
<tr>
<th>French:</th>
<th>V[+fin] pas adverb</th>
<th>English:</th>
<th>V[+fin]i* not adverb</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V[–fin]* pas adverb</td>
<td></td>
<td>not V[–fin]* adverb</td>
</tr>
<tr>
<td></td>
<td>pas V[–fin] adverb</td>
<td></td>
<td>not V[–fin] adverb</td>
</tr>
<tr>
<td></td>
<td>pas adverb V[–fin]</td>
<td></td>
<td>not adverb V[+fin]</td>
</tr>
</tbody>
</table>

*Only have/avoir and être.
‡Lexical verbs (verbs other than have/avoir and être).

French: All finite verbs raise past pas.
All nonfinite verbs can raise past adverbs.
Only nonfinite avoir/être can raise past pas.

English: Only finite have/be can raise past not.
Only nonfinite have/be can raise past adverbs. (see below)
Hypothesis:
There is a position *between* negation and the adverbs at the left edge of VP where French verbs move to. This is “short” verb movement. Not all the way to I.

French: Short verb movement is *not* lexically restricted (to *être* and *avoir*)—any old nonfinite verb can undergo short verb movement.

(17)  
\( \begin{align*} 
\text{a.} & \quad \text{To often look sad during one’s honeymoon is rare.} \\
\text{b.} & \quad \text{To almost forget one’s name doesn’t happen frequently.} 
\end{align*} \)

(18)  
\( \begin{align*} 
\text{a.} & \quad \ast \text{To look often sad during one’s honeymoon is rare.} \\
\text{b.} & \quad \ast \text{To forget almost one’s name doesn’t happen frequently.} 
\end{align*} \)

(19)  
\( \begin{align*} 
\text{a.} & \quad \text{I believe John to often be sarcastic.} \\
\text{b.} & \quad \text{I believe John to often sound sarcastic.} \\
\text{c.} & \quad (\?) \text{I believe John to be often sarcastic.} \\
\text{d.} & \quad \ast \text{I believe John to sound often sarcastic.} 
\end{align*} \)

**Conclude:** English short verb movement is lexically restricted to *have* and *be*.

So, we have a correlation:

English: Short verb movement of infinitives—only *have* and *be*.  
\( V \rightarrow I \) of finite verbs—only *have* and *be*.

French: Short verb movement of infinitives—any old verb.  
\( V \rightarrow I \) of finite verbs—any old verb.

We can say this like this:  
\( V \rightarrow I \) is lexically restricted iff short verb movement is.

This would be predicted if \( V \rightarrow I \) contained an instance of short verb movement:  
That is, \( V \rightarrow I \) is not a one-step jump, it’s short movement to a middle position, and then a movement from there to I.
5. Verb movement and θ-theory—what’s special about have and be?

What differentiates have and be from other verbs?
Pollock’s suggestion: other verbs have θ-roles to assign; have and be do not.

What’s the difference between V→Agr/T and affix hopping?
One adjoins V to Agr/T, the other adjoins Agr/T to V:

(21) a. V  b. Agr
    V  Agr₁

Suppose V needs to assign θ-roles. What might be the problem in (21b)?

Pollock’s hypothesis: French Agr is “rich” enough to transmit V’s θ-role.
In French, (21b) can assign a θ-role.
French Agr is “transparent”

English Agr is “not rich” enough to transmit V’s θ-role.
In English, (21b) cannot assign a θ-role.
English Agr is “opaque”

So, if V has a θ-role to assign, and Agr is opaque (English), V can’t move to Agr.
(if V doesn’t have a θ-role to assign, V can happily move to Agr: have, be)

And, if Agr is transparent (French), no problem, move away.
What about the French restriction on nonfinite lexical verb movement to I? Pollock’s hypothesis here: [–finite] tense is (perhaps universally) opaque.

**Summary:**
- There is a head position between negation and the VP (where adverbs are).
- Pollock proposes this is Agr (hence, AgrP).
- “IP” is more perspicuously renamed “TP” (TenseP) now, since it just has tense features.
- Agr can differ in “opacity”—transparent Agr (rich inflection) allows θ-transmission.
- [–finite] T is always opaque.

Quick mention of Pollock’s proposal about NegP:

(22) NegP NegP NegP

\[
\begin{align*}
\text{pas} & \quad \text{Neg'} \\
\text{Neg} & \quad \ldots \\
\text{ne} & \quad \text{Neg'} \\
\end{align*}
\]

\[
\begin{align*}
\text{not} & \quad \text{Neg'} \\
\text{Neg} & \quad \ldots \\
\text{Ø} & \quad \text{Neg'} \\
\end{align*}
\]

\[
\begin{align*}
\text{or maybe} & \quad \text{Neg'} \\
\text{Neg} & \quad \ldots \\
\text{not} & \quad \text{Neg'} \\
\end{align*}
\]

*ne* is a “clitic” (like French pronominal clitics *le, la*) and has to move to (lean on) T.

---


Hold on there, Tex. Sure, we need to split up INFL. But why that way?

(23) French

\[
\begin{align*}
a. & \quad \text{je parl ai s} \\
b. & \quad \text{tu parl ai s} \\
c. & \quad \text{il parl ai t} \\
\text{spea k} & \quad \text{PAST person+number}
\end{align*}
\]

(24) French

\[
\begin{align*}
a. & \quad \text{je parl er ai} \\
b. & \quad \text{tu parl er as} \\
c. & \quad \text{il parl er a} \\
\text{spea k} & \quad \text{FUT person+number}
\end{align*}
\]

(25) Italian

\[
\begin{align*}
a. & \quad \text{Legg-eva-no} \\
& \quad \text{‘they read (read-imperfect-3pl).’}
\end{align*}
\]

\[
\begin{align*}
b. & \quad \text{Parl-er-ò} \\
& \quad \text{‘I will speak (speak-fut-1sg).’}
\end{align*}
\]
(26)  a.  ...werk-t-en
     (they) work-past-3pl

     b.  ...werk-t-e
     (she) work-past-3sg

**Conclude:** In general, *tense* is closer to the verb root than *subject agreement*.

If the finite verb moves to one and then the other, it would look like this:

(27)  \[
      F_1 \rightarrow P \\
      F_1' \\
      F_1 \rightarrow F_2 \rightarrow P \\
      F_2' \\
      V+F_2 \rightarrow VP \\
\]

(28)  \[
      F_1' \\
      [V+F_2]+F_1 \rightarrow F_2 \rightarrow P \\
      F_2' \\
      t \rightarrow VP \\
\]

So, in \([V+F_2]+F_1\), \(F_2\) is closer to the verb and is the head that was moved to first. \(F_2\) is the lower head. \(F_2\) is closer to the verb. The tense affix is closer to the verb. \(F_2 = T\). TP is below AgrP.

**Mirror Principle.** Morphological derivations (suffixation, prefixation, etc.)
   *directly reflect syntactic derivations...* (Baker 1985, 1988)

So, we should really have clauses that look like this:

(29)  \[
      CP \\
      AgrP \\
      TP \\
      VP \\
\]
You’re both right.
Pollock’s AgrP is actually \textit{object} agreement. Belletti’s AgrP is \textit{subject} agreement.

(30) \[
\text{AgrSP} \\
\downarrow \text{subject} \\
\text{AgrS'} \\
\downarrow \text{AgrS} \\
\downarrow \text{TP} \\
\downarrow \text{T} \\
\downarrow \text{(NegP)} \\
\downarrow \text{Neg} \\
\downarrow \text{AgrOP} \\
\downarrow \text{AgrO} \\
\downarrow \text{VP} \\
\downarrow \text{(adverb)} \\
\text{VP}
\]


(31)  
\begin{align*}
\text{a. Combiend de tables Paul a repeintes?} \\
\text{b. Combiend de tables Paul a repeint?} \\
\text{‘How many tables did Paul repaint?’}
\end{align*}

Idea: On the way up \textit{combien de tables} (feminine, plural) can (or not) stop in SpecAgrOP.

(32) \[
\ldots \\
\downarrow \text{AgrOP} \\
\downarrow (t'_{i}) \\
\downarrow \text{AgrO'} \\
\downarrow \text{AgrO} \\
\downarrow \text{VP} \\
\downarrow \text{repeint- } t_{i}
\]

(33)  
\begin{align*}
\text{a. Paul a repeint les tables.} \\
\text{b. * Paul a repeintes les tables.}
\end{align*}