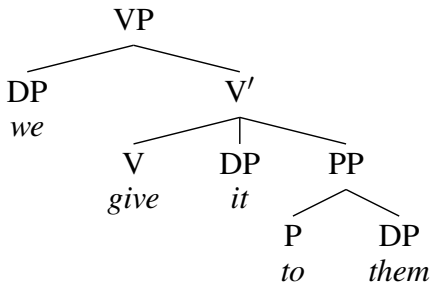
1 Giving trees to ditransitives

1.1 Three arguments

Ditransitives

Ditransitives are verbs like *give* or *introduce*, that have three participants.

In earlier forays into syntax, we might have drawn these like this, with a ternary branch. That makes sense, the verb has subcategorization influence over its sisters.

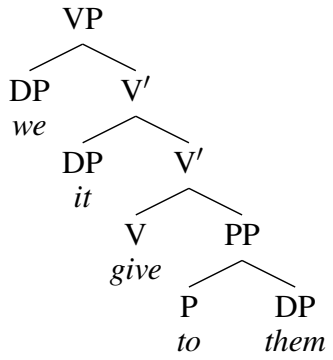


Ditransitives

Except Merge doesn't make ternary branches.

We could say that *give* is a verb that has [*u*D, *u*D, *u*P] features, and just Merge things together in binary fashion.

Except that doesn't get the order right. The verb should be after the subject, not after the object.



Idioms

But something like that seems right.

Idioms are idiosyncratic meanings assigned to complex structures. Often verb and object.

(1) Bill threw a baseball

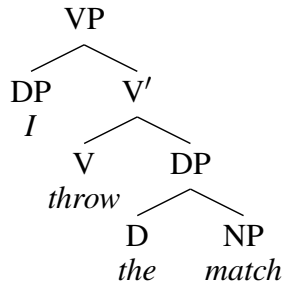
(2) Bill threw his support behind the candidate

(3) Bill threw the boxing match

You can't derive what *throw the boxing match* means even knowing what *throw*, *the*, *boxing*, and *match* mean. It is noncompositional meaning. And it is very lexically specific, synonyms do not preserve the idiomatic meaning.

Verb+object idioms

The hypothesis is that the while the V′ would normally have a compositional semantic meaning (derived from its component parts and how they are put together) in this case, the meaning of the V′ is defined separately.



It's rather like saying that you have a V′ in your lexicon, that you can just insert in place of a V′ you construct out of parts.

Which also constitutes a kind of evidence that verb and object form a constituent in the structure.

Idioms in ditransitives

(4) a. Beethoven **gave** the Fifth Symphony **to the world**.
b. Beethoven **gave** the Fifth Symphony **to his patron**.

(5) a. Lasorda **sent** his starting pitcher **to the showers**.
b. Lasorda **sent** his starting pitcher **to Amsterdam**.

(6) a. Mary **took** Felix **to task**.
b. Mary **took** Felix **to the cleaners**.
c. Mary **took** Felix **to his doctor's appointment**.

In ditransitives, it seems that idioms are formed with the V and the PP, even though the object DP is between them.

Which also constitutes a kind of evidence that verb and PP form a constituent in the structure. How could this be?

Detour to Malawi

Two ways to say "The girl made the waterpot fall" in Chichewa.

(7) Mtsikana ana-chit-**its**-a kuti mtsuku u-**gw**-e
girl AGR-do-**cause**-ASP that waterpot AGR-**fall**-ASP
'The girl made the waterpot fall.'

(8) Mtsikana ana-**gw**-**its**-a kuti mtsuku
girl AGR-**fall**-**cause**-ASP that waterpot
'The girl made the waterpot fall.'

Suppose that in both cases, the starting point is like the first example.

- [[that waterpot] fall]
- [CAUSE [[that waterpot] fall]]
- [girl [CAUSE [[that waterpot] fall]]]

Raising *fall*

- [[that waterpot] fall]
- [CAUSE [[that waterpot] fall]]
- [girl [CAUSE [[that waterpot] fall]]]

If you can now move *fall* over to attach to CAUSE, we derive the second variant.

- [girl [CAUSE+fall [[that waterpot] <fall>]]]

And we've seen movement that's kind of like this before, for example when you move an auxiliary up to C in a yes-no question like *will auxiliaries move?*.

Ditransitives again

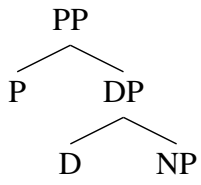
So we could analyze English ditransitives as being quite parallel to the Chichewa causatives. That would make sense of the constituency (shown by idioms) of V+PP, it would be binary branching, and it gets the order right. We just need to assume there is something like a CAUSE, and a movement.

- [go [to Mary]]
- [[the book] [go [to Mary]]]
- [CAUSE [[the book] [go [to Mary]]]]
- [John [CAUSE [[the book] [go [to Mary]]]]]
- [John [CAUSE+go [[the book] [<go> [to Mary]]]]]
- = *John gave the book to Mary*

Un peu de français

(9)	a.	à la bibliothèque	'to the library (fem.)'
	b.	* à le cinéma	'to the movies (masc.)'
	c.	au cinéma	'to the movies (masc.)'
(10)	a.	de la mayonnaise	'of mayonnaise (fem.)'
	b.	* de le lait	'of milk (masc.)'
	c.	du lait	'of milk (masc.)'

So is *au* a preposition or an article?

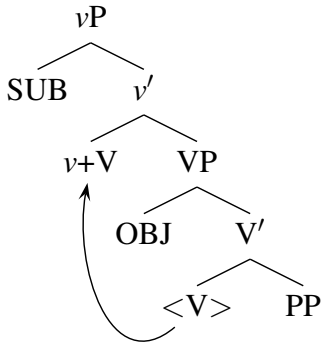


No reason to think *au cinéma* has a different syntactic structure from *à la bibliothèque*. It's just about how it's pronounced.

Au = *à* + *le*. *Give* = CAUSE + *go*.

Larsonian shell

Larson (1988) proposed essentially this. Binary branching, three positions for argument XPs, with a "*v*P-shell" containing the main VP. The higher verb correlates with a meaning of causation. It is a "light verb" (signified by *v*P)—it assigns the θ-role to the subject. The lower V assigns θ-roles to the OBJ and PP.



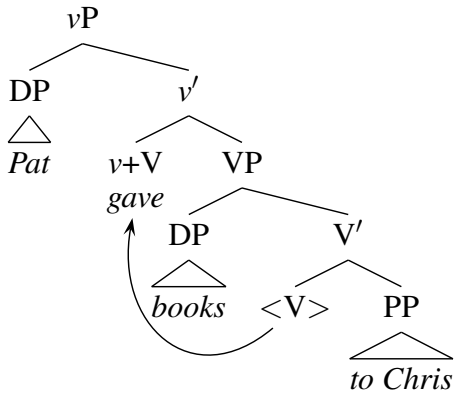
V has [*u*P, *u*D] features, and *v* has a [*u*D] feature.

Hierarchy of Projections

$v >$ V "V comes with *v*"

θ-roles for *give*

- The PP gets a GOAL θ-role
- The lower DP gets a THEME θ-role
- The higher DP gets an AGENT θ-role

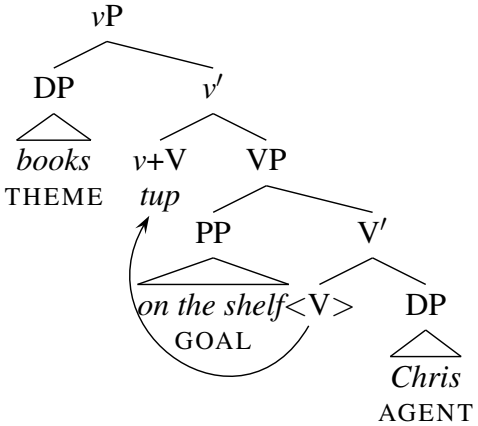


How did we derive this? How did kids come to know this? Did they memorize this list for each verb they learn?

θ-roles for *tup*?

If kids memorize which θ-role goes where for each verb, there should be some verbs that do it in other ways. Like *tup*.

to tup: Books tup on the shelf Chris. ('Chris put books on the shelf.')



Spoiler: this just never happens. The θ-roles seem pretty uniform. If there is an AGENT, it's the first (uppermost) DP. If there is a THEME, it's down close to the verb.

UTAH

The Uniformity (of) Theta-Assignment Hypothesis
Identical thematic relationships between predicates and their arguments are represented syntactically by identical structural relationships when items are Merged.

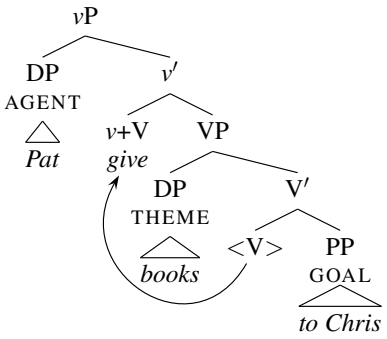
That is, all AGENTs are structurally in the same place (when first Merged). All THEMEs are structurally in the same place, etc.

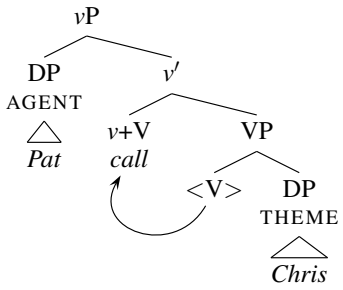
We can take this to be a property of the *interpretation*. When a structure is interpreted, the θ-role an argument gets depends on where it was first Merged.

Great! So the AGENT (*Pat*) in *Pat gave books to Chris* is in the specifier of *v*P, because that's where AGENTs go. But what about structures for simple transitives like *Pat called Chris*?

Transitive verbs

Well, given UTAH & the Hierarchy of Projections…





DP daughter of *v*P = AGENT
PP daughter of V′ = GOAL

DP daughter of VP = THEME

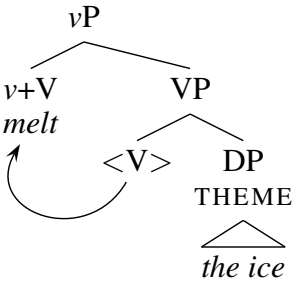
Unaccusatives

The ice, door, and boat are all THEMEs: DP daughter of VP.

(11) The ice melted.

(12) The boat sank.

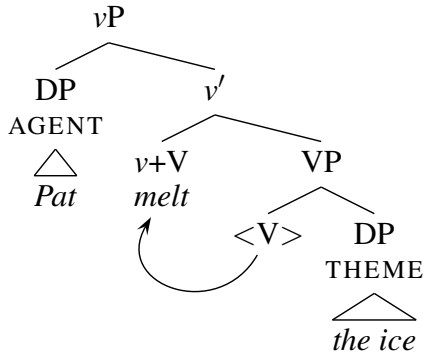
(13) The door closed.



No real "causal" meaning here. So assuming there is a *v* (HoP), this must be a fairly "inert" *v*. There need to be two kinds of *v* (at least), one that needs a DP (AGENT) and one that does not.

Transitives from unaccusatives

What if we swap out the unaccusative *v* for the causal *v*? Often that's possible; often unaccusatives have a transitive variant.



(14) Pat melted the ice.

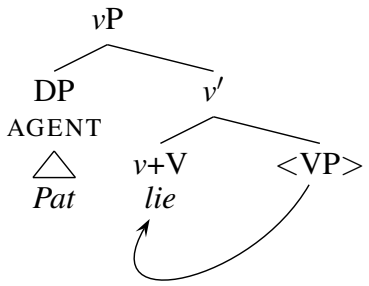
(15) Pat sank the boat.

(16) Pat closed the door.

The causal *v* adds an AGENT. Pat was the agent/instigator of a melting event that affected the ice.

Unergatives

An unergative is the other kind of intransitive. Has just an AGENT, but no THEME. We know what this has to look like now.



(17) Pat lied.

(18) Pat danced.

Part of why it looks weird is that it appears to be moving an XP to a head position. Syntacticians of the past have been raised to think that's not possible. However, it is also a head, and moving a head to a head position *is* fine. But it's a complement, so it is necessarily a maximal projection. So I just write it as VP in complement position and as V when it has moved to the head position. But it's the same lexical item.

Double object constructions

Don't (19a) and (19b) mean the same thing? If so, how does that line up with the UTAH? Sure seems like the θ-roles are going in different orders. But it turns out, they don't *quite* mean the same thing.

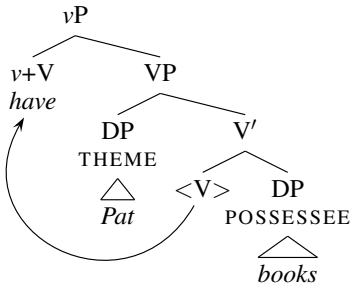
(19) a. Pat gave Chris a book.
b. Pat gave a book to Chris.

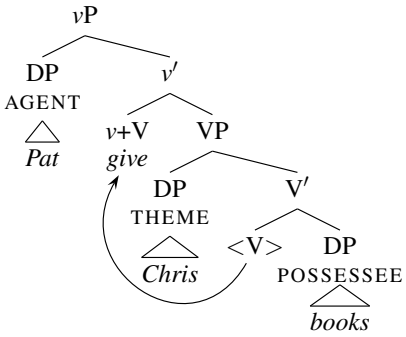
(20) a. Pat gave Chris a headache.
b. * Pat gave a headache to Chris.

(21) a. Pat sent a letter to Chicago.
b. * Pat sent Chicago a letter.

(22) a. Pat taught French to the students.
b. Pat taught the students French.

To have





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DP daughter of *v*P = AGENT
PP daughter of V′ = GOAL

DP daughter of VP = THEME
DP daughter of V′ = POSSESSEE