We give trees to ditransitives

You may recall our discussion of θ-theory, where we triumphantly classified verbs as coming in (at least) three types:

- Intransitive (1 θ-role)
- Transitive (2 θ-roles)
- Ditransitive (3 θ-roles)

- Theta roles go to obligatory arguments, not to adjuncts.

We give trees to ditransitives

Fantastic, except that these things just don’t fit together.

We know what to do with transitive verbs.

- But what do we do with ditransitive verbs? We’re out of space!

Problems continue...

1) I showed Mary to herself.
2) *I showed herself to Mary.
3) I introduced nobody to anybody.
4) *I introduced anybody to nobody.

- This tells us something about the relationship between the direct and to-object in the structure. (What?)

Problems continue...

The OBJ c-commands the PP.
But how could we draw a tree like that?

- Even if we allowed adjuncts to get θ-roles, the most natural structure would be to make the PP an adjunct, like this, but that doesn’t meet the c-command requirements.
Some clues from idioms

• Often idiomatic meanings are associated with the verb+object complex—the meaning derives both from the verb and the object together.

• Suppose that this is due being Merged into the structure together initially.
  Bill threw a baseball.
  Bill threw his support behind the candidate.
  Bill threw the boxing match.

Idioms in ditransitives

In ditransitives, it seems like this happens with the PP.

Beethoven gave the Fifth Symphony to the world.
Beethoven gave the Fifth Symphony to his patron.
Lasorda sent his starting pitcher to the showers.
Lasorda sent his starting pitcher to Amsterdam.
Mary took Felix to task.
Mary took Felix to the cleaners.
Mary took Felix to his doctor’s appointment.

So V and PP are sisters...

Larson (1988) took this as evidence that the V is a sister to the PP “originally.”
Yet, we see that on the surface the OBJ comes between the verb and the PP.
Mary sent a letter to Bill.

Where’s the V? The OBJ?

We can paraphrase John gave a book to Mary as John caused a book to go to Mary.

Chichewa:
Mtsikana ana-chi-chi-tits-a kuti mtsuku u-gw-e
‘The girl made the waterpot fall.’
Mtsikana anau-gw-its-a kuti-mtsuku
‘The girl made the waterpot fall.’

Suppose that in both cases Merge puts things together in the same way initially:
[[that waterpot] fall]

Causatives

[[that waterpot] fall]
Then it’s merged with cause (basically transitive: needs a causer and a causee):
[cause [[that waterpot] fall]]
And then it’s Merged with the Agent
[girl cause [[that waterpot] fall]]
At which point, one can move fall over to cause.
[girl [cause+fall [[that waterpot] <fall> ]]]

Ditransitives again

The proposal will be that English ditransitives are really a lot like Chichewa causatives.

Starting with
[[the book] [go [to Mary]]]
Merging cause and an Agent
[John [cause [[the book] [go [to Mary]]]]]

One then moves go over to cause to get:
[John [cause+go [[the book] <go> [to Mary]]]]

John “gave” the book to Mary.
Un peu de français

- If you’ve tried to learn any French at all, you’ve come across this phenomenon:
  - de ‘of’ le ‘the (masc.)’
  - à ‘at’ la ‘the (fem.)’
  - à la bibliothèque ‘to the library (fem.)’
  - *à le cinéma ‘to the movies (masc.)’
  - au cinéma ‘to the movies (masc.)’
  - de la mayonnaise ‘of mayonnaise (fem.)’
  - *de le lait ‘of milk (masc.)’
  - du lait ‘of milk (masc.)’

This is usually taught as:
- au = à + le
- du = de + le

If your underlying intent is à ‘at’ + le ‘the’, say au.

So is au a preposition or an article?

There’s no reason to believe that au cinéma has a different syntactic structure from à la bibliothèque.

This is just about how it is pronounced.

Au = à + le.

Where’s the V? The OBJ?

- Larson’s proposal was basically this.
  - Logically, if we’re going to have binary branching and three positions for argument XP’s (SUB, OBJ, PP), we need to have another XP above the VP.
  - Since the subject is in the specifier of the higher VP, that must be a VP too.
  - Ditransitive verbs really come in two parts. They are in a “VP shell” structure.
  - Furthermore, the higher part seems to correlate with a meaning of causation.

Where we are

We’ve just come up with an analysis of sentences with ditransitive verbs, such as Pat gave books to Chris that accords with the constraints of the syntactic system we have developed so far.

- Merge is binary
- θ-roles are assigned to specifiers and complements.

The solution is to assume a two-tiered structure, with a little V in addition to the VP.

Where we are

The three θ-roles for give are assigned like this:

- The PP gets a Goal θ-role.
- The lower NP gets a Theme θ-role.
- The highest NP (in the specifier of vP) gets an Agent θ-role.

But how did we know that?

More importantly, how do kids come to know that?

Do they memorize this list for each verb they learn?
Uniformity of Theta Assignment

If kids are really memorizing which θ-role goes where for each verb, there should be some verbs that do it in other ways.

- For example, there might be a ditransitive verb with Theme in the specifier of VP, Goal in the complement of VP.

E.g., to *tup*:
Books *tup* on the shelf Chris

‘Chris put books on the shelf.’

UTAH

The Uniformity of Theta-Assignment Hypothesis (UTAH): 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 Patients 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.

θ-roles and structure

- Great. So, the Agent (Pat) in *Pat gave books to Chris* is in the specifier of vP. Because that’s where Agents go.
- But... What about structures like the ones we had before for things like *Pat called Chris*?

θ-roles and structure

- Well, if we’re serious about working within the constraints of UTAH, we need a v there too— to host the Agent.
- Hierarchy of Projection: v > V
**θ-roles and structure**

- NP, daughter of vP = Agent
- NP, daughter of VP = Theme
- PP, daughter of V' = Goal
  - That seems to work, and it seems a reasonable interpretation of UTAH.

**Unaccusatives**

The ice, the boat, the door, all Themes: NP daughter of VP.

- The ice melted.
- The boat sank.
- The door closed.

Unaccusatives have a relatively "inert" v, no "causal" meaning.

There are two kinds of v, the causal one that needs an NP (Agent), and a non-causal one.

What if we pick the causal v (and provide an Agent NP)?

**Transitives**

Bill melted the ice.

- The causal v adds an Agent.
- Bill was the agent/instigator of a melting that affected the ice.

**Unergatives**

- Bill lied.

That's got an Agent, and Agents must be NP daughter of v.

- So, it would look like this.

**Double object constructions**

Pat gave a book to Chris.

- Agent: Pat; Theme: a book; Goal: to Chris

Pat gave Chris a book.


Don't these mean the same thing?
Two kinds of giving

- The two forms of give are not quite equivalent, though:
  1) Pat gave a book to Chris.
  2) Pat gave Chris a book.
  3) *Pat gave a headache to Chris.
  4) Pat gave Chris a headache.
- Try paraphrasing…
  5) Pat sent a letter to Chicago.
  6) *Pat sent Chicago a letter.
  7) Pat taught French to the students.
  8) Pat taught the students French.

To have

- NP, daughter of vP = Agent
- NP, daughter of VP = Theme
- PP, daughter of V' = Goal
- NP, daughter of V' = Possessee

On beyond v

Our trees have now expanded beyond being mere VPs to being vPs.

- The Hierarchy of Projections: v > V
  Once you have finished the VP (uninterpretable selection features are checked), if there’s a v on the workbench, Merge it.

  The UTAH:
  - NP, daughter of vP: Agent
  - NP, daughter of VP: Theme
  - PP, daughter of V': Goal
  - NP, daughter of V': Possessee

- But this is only the beginning.