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Two moving parts (at least):

- A model of certain mental states—intention, planning.
- An account of the meaning of plan and intention ascriptions.

I want to focus on their story about plan talk.

MOTIVATING THEIR ACCOUNT

Three motivating observations:

- (1) a. John plans to hop on the bus to go the store to get groceries to make dinner.
 b. Mary plans to wake up early to get on her bike early enough to make it to work in time for the meeting.
- (2) a. $S \text{ plans } \sigma_1$ entails $S \text{ plans } \sigma_2$ whenever σ_2 is a contiguous subsequence of σ_1 .
 b. If σ_2 is not a contiguous subsequence of σ_1 , $S \text{ plans } \sigma_1$ does not entail $S \text{ plans } \sigma_2$.
 c. If σ_1 is a non-trivial permutation of σ_2 , $S \text{ plans } \sigma_1$ does not entail $S \text{ plans } \sigma_2$.
- (3) a. If $\phi_1\phi_2$ is a contiguous subsequence of σ , then $S \text{ plans } \sigma$ entails that ϕ_1 is the answer to the *how* question corresponding to ϕ_2 .
 b. If $\phi_1\phi_2$ is a contiguous subsequence of σ , then $S \text{ plans } \sigma$ entails that ϕ_2 is the answer to the *why* question corresponding to ϕ_1 .

For the record, I find their model of planning states quite appealing.

This list is not intended to be exhaustive.

PLAN DISTRIBUTIVITY

NO SKIPPING

NON-COMMUTATIVITY

PLAN-HOW LINK

PLAN-WHY LINK

CLIFF NOTES

Simplifying quite a lot:

- (4) A *teleology* is a finite list of centered propositions of increasing strength (perhaps modulo background assumptions).

The intended interpretation, roughly: if pq is a contiguous subsequence, p is a means to q .

So, e.g., a teleology could be:

$$\{\langle x, w \rangle : x \text{ goes to the store in } w\}, \{\langle x, w \rangle : x \text{ goes to the store and gets groceries in } w\}$$

A *planning state* is a (suitably closed) set of such lists,

Again, I'm simplifying a lot here—strictly, on their view, a teleology has more structure than this, and there's some subtle issues about how to handle closure that I will not get into here.

- (5) A list of sentences σ is *exactly settled* by a teleology τ iff τ and σ are of equal length and for each $i \leq |\sigma|$, $[\![\sigma_i]\!]$ is entailed by τ_i . A list of sentences σ is *settled* by τ iff there is a continuous subsequence of τ which exactly settles σ .
- (6) S plans σ is true in w iff there is a teleology in S's planning state in w which settles σ .

NESTED STRUCTURES

MY suggest that we use a variadic operator to understand planning ascriptions. But a flat list approach makes two things hard to explain.

First:

- (7) ?John plans to visit the museum to see the painting with the screaming guy. Mary does so too: she plans to see the painting on her computer at home.

Second: contrast

- (8) I plan to go the store to get groceries to make dinner.
- (9) I plan to go to the store to get groceries to get some exercise.

Note that (9) has two readings, but MY's story makes only one structure available:

- (10) I plan [PRO to go the store] [PRO to get groceries] [PRO to get some exercise].

Alternatives, we're told, would make these sentences too hard to parse. But consider:

- (11) John visited the city with the museum with the painting with the screaming guy.

Similarly, it seems natural to think of the infinitival clauses in (12a) as having a structure like (12b).

- (12) a. John plans to visit the city to go to the museum to see painting with the screaming guy.
- b. John plans [to visit the city [to go to the museum [to see the painting with the screaming guy.]]]]]]

Compare:

- (13) John plans to visit the city, the reason for which is to go to the museum, the reason for which is to see the painting of the screaming guy.

No-one would want to treat this as having the structure of a flat list of prepositional phrases. It would be natural to think of the following structure, here:

John visited [the city [with the museum [with the painting [with the screaming guy.]]]]]

This suggests that some kind of event semantics may be a way to handle these. But I feel like I'm setting myself up here: "We don't think this more conventional approach is misguided [...] It's just that when we have tried doing things that way, we have found that the compositional semantics gets inordinately complicated."

which is not unlike

- (14) John is standing by a table, the leg of which touches a chair, the back of which touches a wall.

WHENCE THE STRUCTURE?

As MY point out, these ‘multiclausal complements’ can be found in many places.

- (15) a. I plan to go the store to buy ice cream to bring to the party
 b. I agreed to go the store to buy ice cream to bring to the party
 c. I expect to go to the store to buy ice cream to bring to the party.
 d. I am afraid to go the store to buy ice cream to bring to the party.
 e. I hope to go the store to buy ice cream to bring to the party.
 f. I remembered to go the store to buy ice cream to bring to the party.
 g. I should go to the store to buy ice cream to bring to the party.

Also:

- (16) To go the store to buy ice cream to bring to the party is a bad idea.
 (17) I expect to get numbed to have my tooth removed to be free of pain.

Note that the source of the structure need not come from the control subject.

- (18) *Context:* I asked my students: “please go to the talk”. I know they’re very strong students and I know they will impress the speaker, but not if they try to impress.
 a. I asked my students to go to the talk to impress the speaker.

A hint this may be come from the prejacent: in Spanish, for instance, we cannot just stack infinitives without prepositions (*para* or *a*) in between.

DISTRIBUTIVITY

Consider:

- (19) I am afraid to go the store to buy ice cream.

This does not entail either of

- (20) a. I am afraid to buy ice cream.
 b. I am afraid to go the store.

Why then does (21a) entail (21b)?

- (21) a. I plan to go the store to buy ice cream.

As they put it, “[p]retty much any verb that as assigns an agent θ -role will license telic infinitivals. (And stacks of them.)”

But even this, as they acknowledge, understates the extent to which these constructions are widespread: stacked infinitivals can be bound by “non-sentient beings and artifacts” (cf. their dishwasher example).

Admittedly, these could be explained away as anthromorphizations of sorts. But the range of examples involving sentient subject with verbs that do not assign an agent θ -role is quite long.

An interesting question is whether the source of this structure must be realized syntactically. Consider: “My students were told to go to the talk to impress the speaker.”

French is a bit in between, varying with the verb: *Je vais au marché acheter des légumes pour préparer le dîner.*

Similarly “I should go the store to buy ice cream” does not entail “I should buy ice cream”—I may simply want to buy ice cream, and it is only given that desire that I should go to the store.

- b. I plan to buy ice cream.

How could the adverbial story I have sketched account for Plan Distributivity?

Perhaps it comes from how the prejacent is being interpreted? Consider:

- (22) I was a fool to go to the store to buy ice cream.

This does not imply, to be sure, that I was a fool to buy ice cream. But it does imply that I *intended* to buy ice cream by going to the store.

Contrast:

- (23) I was brainwashed to go to the store to buy ice cream.

Indeed, it seems to me we can get a similar phenomenon under ‘plan’ as long as the plan ascription is suitably embedded:

- (24) His advisors told him to plan to ask a question to impress the speakers, and he did as he was told.

If this is right, then it is a mistake to expect to derive Plan Distributivity as a corollary of our semantics for ‘intend’. Rather, the story will come from understanding what these sequences of infinitival clauses mean.

MY’s proposal of course easily accounts for this, since (21a) says *inter alia* that I plan to go to the store and that I plan to buy ice cream.

Or go back to (19)—the thing I am afraid to do is something which, were I to do it, I would do with the intention of buying ice cream.

I get a reading of this—don’t you?—on which he planned to ask a question, the purpose of his asking the question was to impress the speaker, but the purpose wasn’t, as it were, his own. Rather, it was *his advisor’s* purpose that he impress the speaker by planning to ask a question, and what he told them to do was just to plan to ask a question.