RECONSTRUCTION: A PLEA FOR DYNAMIC SYNTAX

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Abstract: The aim of our study is to show that Reconstruction, known as the interaction between displacement and interpretation, is best analysed within Dynamic Syntax (DS), which directly reflects dynamics of incremental parsing. We provide novel reconstruction data that can hardly be handled under traditional approach proposed in Generative framework (GG), whereas the notion of underspecification in DS provides a straightforward account.

I. Traditional account for Reconstruction

Reconstruction: interaction between displacement (dislocation, topicalization, interrogation, relativization) and interpretation procedures such as the evaluation of referential expressions (proper names, pronouns, anaphora) or scope statements.

(1) (a) Which patient did each doctor examine?
(b) Mary saw the picture of him that each man prefers.

➔ (1a) and (1b) both have a 'reconstructed' reading (functional/distributive).

(1a) ➔ a different *patient* for *each doctor*.
Scope-only reconstruction: narrow scope of *patient* with respect to *each doctor*.

(1b) ➔ a different *picture* for *each man*.
Binding reconstruction: *him* is interpreted as a variable bound by the quantifier;
Scope reconstruction: narrow scope of *picture* with respect to *each man*.

GG/minimalist account for reconstruction: the copy theory of movement.

➔ Syntactic mechanism proposed in [2], [4] and [5] among others, to allow interpretation of a displaced constituent in the base position:

(2) Which patient did each doctor examine patient?

A skolemized choice function *f* takes two arguments, an entity *x* and a set of entities (*patient*), and returns one individual of that set.

➔ Interpretation of the copy in (2) as an indefinite (see [5] for arguments, and [6] for the analysis of indefinites as skolemized choice functions):

(3) *Partial LF: λp. true(p) & p = each doctor$_x$ examined f$_x$(patient)]*

Conclusion: Reconstruction seems to require movement.

Prediction: Reconstruction should not hold when movement is banned (i.e. islands = opaque domains).

II. Problem: Reconstruction with Resumption in Islands

Reconstruction holds with resumption, as (4) from Lebanese Arabic (see [1]) is grammatical with the `reconstructed' functional reading (similar in other languages):

(4) [telmiiz-**[a]$_1$** l-kesleen]$_2$ ma baddna nxabbir [**wala mçallme**]$_1$?inno
student-her the bad *neg* want-*1pl* tell-*1pl* no teacher that
huwwe$_2$ / ha-l-majduub$_2$ zaçbar b-l-faħiş.
he / this-the-idiot.*sm* cheated.*3sm* in-the-exam
"**Her** bad student, we don't want to tell ***any teacher*** that he/this idiot cheated on the exam."

GG/minimalist account of resumption: apparent vs true, proposed in [1]

- When resumption displays reconstruction ➔ Apparent resumption
  -resumption based on movement (presence of a copy);
  -no island intervenes.
- When resumption occurs in islands ➔ True resumption
  -base generation of resumption (no copy);
  -an island intervenes.

But reconstruction also holds within islands (novel data from French, similar in Jordanian Arabic):

(5) Quelle photo$_1$ de lui$_2$ es-tu fâché parce que chaque homme$_2$ l$_1$'a déchirée?
"Which picture of him are you furious because each man tore it?"
➔ `reconstructed' functional reading: a different *picture* for *each man*.
➔ possible answer: la photo de son mariage (*the picture of his wedding*).

(6) La photo$_1$ de sa$_2$ classe, tu es fâché parce que chaque prof$_2$ l$_1$'a déchirée.
"The picture of his class, you are furious because each teacher tore it.'
➔ `reconstructed' functional reading: a different *picture* for *each teacher*.

➔ **Paradox: if reconstruction is only a consequence of syntactic movement, how is it available within islands (where movement is banned and true resumption is required)?**

III. Dynamic Syntax: the basics (see [3])

Functional trees based on semantic types and tree-node addresses:
Tn(0),Ty(t)
Tn(00), Ty(e) — Tn(01), Ty(e→t)

Modality, on a node *n*:
-(↓0)X means X holds at an argument-daughter node of *n*.
-(↑*)X means X holds at a node that dominates *n*.

Words as lexical actions on the tree (programs):

Joan	IF	?Ty(e)
	THEN	put(Ty(e), Fo(*Joan*))
	ELSE	ABORT

Dynamic Syntax (DS): incremental formalism in which parsing and grammar interact.

Requirements, written *?X*: initial triggers for the parsing of words.

Formulas, written Fo(*word*): semantic contribution of lexical items.

(8) Parsing *which patient did each doctor examine?*

which patient……(did)……..each doctor……examine

Tn(0),?Ty(t),◊, Ty(e),(↑*)Tn(0), Fo(*patient(WH)*)
➔ Tn(0),?Ty(t)
➔ Tn(0),?Ty(t)

Tn(00),Ty(e), ◊,Fo(τ,*x*, *doctor(x)*), Ty(e),(↑*)Tn(0), Fo(*patient(WH)*) — Tn(01), ?Ty(e→t)

Tn(00),Ty(e), Fo(τ,*x*, *doctor(x)*) — Tn(01), ?Ty(e→t)

Tn(010), ?Ty(e),◊, Ty(e),(↑*)Tn(0), Fo(*patient(WH)*) — Tn(011), Ty(e→(e→t)), Fo(*Examine*)

Pointer ◊ = node under process.

Structural underspecification: creation of an unfixed node (following the pointer) that will be further updated.

WH = metavariable.

Possible update of the unfixed node through **unification** process.

➔ Movement in DS = structural underspecification + update.

IV. Dynamic Reconstruction

Our Claim: reconstruction corresponds to a **delay of evaluation** on a constituent, and is licensed by two kinds of underspecification in language.
➔ structural underspecification of the displaced constituent (movement)
➔ lexical underspecification on the displaced constituent (base generation)

Movement ➔ reconstruction through structural unification

(9) Parsing *which patient did each doctor examine?*

Creation of an unfixed node allows for a delay in evaluation of *which patient* (see step 1 in (8)).

The *wh-* constituent can be evaluated as an indefinite within the scope of the universal quantifier (see step 3 in (8)).

Base-generated resumption ➔ reconstruction through anaphoric unification

(9) Parsing *la photo$_1$ de sa$_2$ classe, tu es fâché parce que chaque prof$_2$ l$_1$'a déchirée.*

Fo(ι,*photo (classe(U))*) Tn(0),?Ty(t),◊ ➔ Fo(ι,*photo (classe(U))*) Tn(0),?Ty(t)

Ty(e),Fo(*V*) ⇑ Fo(*Jean*) — ?Ty(e→t) — … — Ty(e),Fo(τ,*x*, *prof(x)*) — ?Ty(e→t)

Ty(e),◊, Fo(*W*) ⇑ Fo(ι,*photo (classe(U))*) — Ty(e→(e→t)), Fo(*Déchirer*)

Anaphoric unification of the pronoun *tu* with the hearer.

No structural underspecification (the displaced item is just **linked** to the proposition).

Resumption = metavariable *W*.

In DS, pronoun = underspecified variable. Lexical underspecification allows for a delay in evaluation of *photo de sa classe*.

Evaluation of linked item can be postponed until it semantically combines with its functor.

Evaluation occurs when it anaphorically unifies with *W*. *U* is bound by the universal quantifier.

Perspectives: -predicts absence of functional reading in (10), compared to (5).

(10) Quelle photo$_1$ es-tu fâché parce que chaque homme l$_1$'a déchirée? (*functional)
"Which picture are you furious because each man tore it?"

➔Presence of resumption allows for unification process with the linked displaced item (*photo(WH)*), but definite feature of resumption blocks evaluation as an indefinite.

-predicts the following contrast within indefinite relatives.

(11) (a) The secretary called a patient that each doctor will examine. (*functional)
(b) Mary saw a picture of him that each man has brought. (✓functional)

➔In (11a), no underspecification to delay evaluation of *a patient* (as it combines with the functor *call*). In (11b), underspecification (*him*) triggers a delay of evaluation.

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