

Reconstructing functional relatives...or not*

Nicolas GUILLIOT

University of ~~Toronto~~ Nantes — LLING EA3827

nicolas.guilliot@univ-nantes.fr / nico.guilliot@gmail.com

September 25, 2009

Overview

The Topic: distributive readings of relative clauses, such as in the following example

- (1) *Nous avons contacté le patient que chaque médecin s'est vu attribuer.*
'We contacted the patient each doctor was assigned.'

Two main goals:

Goal #1: to present empirical limits to traditional generalizations on distributive readings of relative clauses.

- empirical arguments against Sharvit (1999)'s account of the distinction between **pair-list** and **functional** readings of relative clauses
- empirical arguments against Alexopoulou and Heycock (2002)'s generalization on the distinction between **definite** and **indefinite** relative clauses

Goal #2: to present my analysis of distributive readings of displaced constituents (interrogation or dislocation), and to show and it could be extended to relative clauses.

- distributive reading of a displaced constituent follows from syntactic reconstruction of that constituent, i.e. presence of a copy resulting either from movement or ellipsis;
- a copy can be interpreted as definite (see Fox (2003)), giving rise to an individual or functional reading, with presupposition accommodation constraints (property of the definite);
- a copy can also be interpreted as indefinite, more precisely a skolemized choice function (see Kratzer (1998) and Agüero-Bautista (2001)), giving rise to a pair-list reading.

*I would like to thank Nouman Malkawi for the data in Jordanian Arabic, and the following persons (among others) for their help/comments: David Adger, Ash Asudeh, Ronnie Cann, Hamida Demirdache, Danny Fox, Orin Percus, Alain Rouveret and Uli Sauerland. I also thank for their comments the audience of the 2nd workshop of European Research Net in Linguistics, where part of this talk was given.

1 Reconstruction and distributive readings

Reconstruction as an analysis: mechanism by which movement is ‘deconstructed’.

- (2) *Which picture of his₁ did every man₁ tear?*
⇒ Literal reconstruction: *Every man₁ tore which picture of his₁?*

Reconstruction as a problem: interaction between displacement (dislocation, interrogation, relativisation) and structural constraints on interpretation (binding or scope).

1.1 Binding Reconstruction

- (3) Condition C:

- (a) **Which picture of John₁ did he₁ tear?*
(b) **The picture of John₁, he₁ tore.*

- (4) Condition on Bound Variable Anaphora (BVA):

- (a) *Which picture of his₁ daughter did every man₁ tear?*
(b) *The picture of himself₁, every man₁ tore.*
(c) *I tore the picture of his₁ that every man₁ chose.*

⇒ (27) and (4) argue for literal reconstruction to account for the fact that BVA is satisfied and Cond. C violated, if we assume that both result from structural constraints:

- Condition C based on c-command
- Bound Variable interpretation through c-command

1.2 Scope reconstruction: distributive reading of an indefinite

- (5) *Which woman do you think that each man will invite?*

Traditional assumption: distributive (multiple individual) reading of an indefinite is tied to its narrow scope with respect to a universal quantifier in syntax.

- Two major readings:*
- individual reading (wide scope of the indefinite)
⇒ a unique *woman/patient* for the set of *men/doctors*;
 - distributive reading (narrow scope of the indefinite)
⇒ a different (and specific) *woman/patient* for each *man/doctor*.

⇒ Suggests presence of an indefinite under the scope of the universal quantifier in (5): a job for reconstruction, the *wh-* constituent (*which woman* in (5)) being traditionally considered as an indefinite.

1.3 distributivity: functional or pair-list (PL)

Further distinction within distributive readings:

(6) *Which woman do you think that each man will invite?*

(a) functional: *His mother.*

(b) PL: *(for) Paul, (it will be) Mary; John, Suzann;...*

2 Relative clauses: generalisations and paradoxes

Our main topic: distributive (multiple individual) readings of relative clauses

(7) *Nous avons contacté le patient que chaque médecin s'est vu attribuer.*

'We contacted the patient each doctor was assigned.'

Two readings:

- individual reading
⇒ a unique *patient* for the set of *doctors*;
- distributive reading
⇒ a different (and specific) *patient* for each *doctor*.

Two major generalisations about distributive (multiple individual) readings of relatives:

- for Sharvit (1999), it corresponds to a pair-list interpretation in predicative sentences (contrasting with equative sentences);
- for Alexopoulou and Heycock (2002), it is tied to presence of the definite determiner.

2.1 Pair-list vs functional readings

Based on Sharvit (1999)'s work on multiple individual readings of relative clauses in Hebrew:

(8) *ha-iSa₂ Se kol gever₁ hizmin ₂ hodeta lo₁.*
the-woman *Op* every man invited thanked him
'The woman every man₁ invited thanked him₁.'

⇒ the relative clause in (8) can have a distributive reading (a different 'woman' for 'every man', on a par with a covarying interpretation of the pronoun *lo* 'him' (referring to 'every man'))

Generalisation #1 (given by Sharvit (1999)): multiple individual reading of the relative clause corresponds to a pair-list interpretation of that relative, and not a functional one.

- First argument for Generalization #1: the case of **resumption**

(9) *Ezyo iSa kol gever hizmin ota?*
 which woman every man invite.past-3s her
 (lit.) ‘Which woman did every man invite her?’

(a) *Et im-o.*
acc mother-his
 ‘His mother.’

(b) **Yosi et Gila; Rami et Rina...*
Yosi acc Gila Rami acc Rina
 *‘Yosi, Gila; Rami, Rina’

⇒ the PL reading disappears with resumption (compare with (6) without resumption)...

(10) *??/*ha-iSa₂ Se kol gever₁ hizmin ota₂ hodeta lo₁.*
 the-woman *Op* every man invited her thanked him
 ??/*‘The woman every man₁ invited (her) thanked him₁.’

⇒ and so does the multiple individual reading of the relative clause!

• Second argument for Generalization #1: the case of negative quantifiers

(11) *Quelle femme est-ce qu’aucun homme n’a invitée?*
 ‘Which woman did no man invite?’

(a) *Marie.*

(b) *Sa mère.*
 ‘His mother.’

(c) **Jean, Marie; Fred, Justine; Benoît, Valérie*

⇒ the PL reading disappears with negative quantifiers...

(12) (a) *J’ai déchiré la photo qu’aucun homme n’avait choisie.*
 ‘I tore the picture that no man had chosen.’

(b) **ha-iSa₂ Se af gever₁ lo hizmin ₂ higia bil’ad-av₁.*
 the-woman *Op* no man *neg* invited arrived without-him
 *‘The woman no man₁ invited arrived without him₁.’

⇒ and so does the multiple individual reading of the relative clause!

Generalisation #1 (from Sharvit (1999)) seems to be confirmed.

Prediction #1 ⇒ distributive readings of relatives should **never** occur with resumption and/or negative quantifiers.

2.2 Definite vs indefinite relative clauses

Based on Alexopoulou and Heycock (2002)'s work on multiple individual readings of relative clauses¹:

- (13) (a) *The secretary called the two patients that every doctor will examine tomorrow.*
(b) *The secretary called two patients that every doctor will examine tomorrow.*

⇒ Only (13a) allows for a multiple individual reading of the relative clause (*two* different *patients* for *every doctor*).

Previous account (Bianchi (1995)): reconstruction of *two* via raising analysis

⇒ reconstruction available only in (13a), as *two* is the external determiner in (13b)

Alexopoulou and Heycock (2002) argue against such account, as the same contrast holds in the following examples:

- (14) (a) *We contacted the patient each doctor was assigned.*
(b) *?We contacted a patient each doctor was assigned.*

⇒ Only (14a) allows for a multiple individual reading of the relative clause (a different *patient* for *every doctor*).

Generalisation #2 (from Alexopoulou and Heycock (2002)): distributive reading of a relative clause is crucially tied to presence of the definite determiner.

Prediction #2 ⇒ **only** definite relative clauses should allow for a distributive (multiple individual) reading.

2.3 Paradoxes: binding reconstruction

Empirical data suggest that both generalisations and their predictions are not borne out

• Empirical data against Prediction #1 that distributive readings of relatives should never occur with resumption and/or negative quantifiers²:

- (15) (a) *J'ai déchiré la photo de lui₁ qu'aucun homme₁ n'avait choisie.*
'I tore the picture of him(self) no man had chosen.'
(b) *The picture₂ of himself₁ which no candidate₁ liked __₂ ruined his₁ career.*

¹Examples in (13) correspond to English translations to similar examples from Italian introduced by Bianchi (1995).

²(15b) is given by Alexopoulou and Heycock (2002) as a challenge for Sharvit (1999)'s analysis.

- (c) *S-Surah₂ tabaʕat ʔibin-ha₁ illi kul mwazaʕaf₁ ʕab-ha₂*
 the-picture of son-his that every employee bring.past.3s.-it
riʕʕat l-uh₁.
 give-back.passive to-him.
 ‘The picture of his₁ son that every employee₁ brought (it) was given back to him₁.’

⇒ A distributive reading of the relative clause is available in (15a) from French and (15b) from English, despite presence of negative quantifiers in both cases;

⇒ A distributive reading of the relative clause is available in (15c) from Jordanian Arabic, despite presence of resumption in the relativised site.

- Empirical data against Prediction #2 that only definite relative clauses should allow for a distributive reading:

- (16) *Marie a vu une photo de lui₁ que chaque homme₁ avait choisie.*
 ‘Mary saw a picture of him(self)₁ each man₁ had chosen.’

⇒ A distributive reading of the relative clause is available in (40) from French, although the relative is indefinite.

- *A common point:* all the problematic data can be seen as cases of binding reconstruction

3 The Account...

Our claim: distributive readings of displaced constituents correspond to reconstructed readings of that constituent (even in relative clauses!)

- *Step 1:* to present a general account of reconstruction
- *Step 2:* to show how it can be extended to relative clauses

3.1 ...of Reconstruction...

Two strategies for reconstruction, depending on the displacement strategy (see Guillot (2006) or Guillot and Malkawi (2009) for more details):

(17) Gap strategy (with interrogation here):

- (a) *Quelle photo₁ de lui₂ chaque homme₂ a-t-il déchirée _1?*
 ‘Which picture of his did each man tear?’
 (b) *Which woman₁ did each man invite _1?*

(18) Resumptive strategy (with dislocation here):

- La photo qu’il₂ avait choisie, chaque homme₂ l’a déchirée.*
 ‘The picture that he had chosen, each man tore it.’

3.1.1 Syntax: building on copies

- (19) *Reconstruction of a displaced XP requires presence of a copy of that XP, resulting either from **movement**, or crucially from an **ellipsis** phenomenon.*
- (20) *A resumptive pronoun can be interpreted as e-type in the sense of Elbourne (2002), i.e. as a determiner followed by an NP complement deleted under identity with its antecedent.*
- (21) (a) *Quelle photo de lui chaque homme₁ a-t-il déchirée ~~quelle photo de lui₁~~?*
 ‘Which picture of his did each man₁ tear ~~which picture of his₁~~?’
- (b) *Which woman did each man invite ~~which woman~~?*

⇒ For (21a), presence of *lui* ‘his’ within the c-command domain of *chaque homme* ‘each man’ via the copy.

⇒ For (21b), presence of the indefinite *which woman* within the syntactic scope of *each man* via the copy.

- (22) *La photo qu’il avait choisie, chaque homme₁ a déchiré [DP **l(a)** [NP_Δ ~~photo qu’il₁ avait choisie~~]].*
 ‘The picture that he had chosen, each man tore it.’

⇒ For (22), presence of *il* ‘he’ within the c-command domain of *chaque homme* ‘each man’ via the elided copy.

3.1.2 Semantics: definite vs indefinite copies

- (23) *Syntactic copies are interpreted either as **indefinite** descriptions (see Sauerland (1998) or Aguero-Bautista (2001)), or as **definite** ones (see Fox (2003) or Heim and Jacobson (2005)).*

Indefinite Copy: based on Sauerland (1998) and Aguero-Bautista (2001); more precisely, interpretation of the copy as a *skolemized choice function* f , which takes two arguments, a set of individuals (i.e. a property) P and an individual x , and returns one element of the set ($f(P)(x)$, where $f(P)(x) \in P$)³.

- (25) (a) *Which ~~woman~~₁ did each man₂ invite ~~f₁(woman)~~?*

³First introduced by Kratzer (1998) to account for distributive and specific readings of the indefinite:

- (24) Every man loves **a** (certain) woman.
 ⇒ one different & specific woman for each man
 LF: every man₁ loves f_1 (woman).
 $\forall x.[man(x) \rightarrow [loves(x, f_x(woman))]]$

- (b) *What is the skolemized choice function $f_{(et,ee)}$ such that each man_x invited $f(woman)(x)$?*
 \Rightarrow PL reading: the *man-woman* relation can be different with respect to each man (a set of arbitrary pairs).
- (c) *What is the function $g_{(ee)}$ ranging over women such that each man_y invited $g(y)$?*
 \Rightarrow Functional reading: the *man-woman* relation is the same for each man⁴.

Conclusion: Indefinite copy \Rightarrow PL reading or functional reading without presupposition

Definite Copy: based on Fox (2003) or Heim and Jacobson (2005); more precisely interpretation of the copy as an ‘individual’ or ‘functional’ definite description.

- (26) (a) *Which ~~the~~ man_1 did each man_2 invite ~~the~~ $woman$?*
 (b) *What is the x such that each man_y invited ~~the~~ $woman$?*
 \Rightarrow Individual reading with presupposition that x is a woman.
 (c) *What is the function $g_{(ee)}$ such that each man_y invited ~~the~~ $woman$?*
 \Rightarrow Functional reading with presupposition that g maps men to women.

\Rightarrow Definite copies add a presupposition condition on the individuals or functions considered within the context, hence requiring accommodation of that presupposition.

Conclusion: Definite copy \Rightarrow individual or functional reading (with presupposition accommodation)

Further Prediction: without any context, the individual reading of the definite copy should prevail \Rightarrow easier to accommodate

3.2 ...in Relative Clauses

What about Relative clauses? Two major assumptions about:

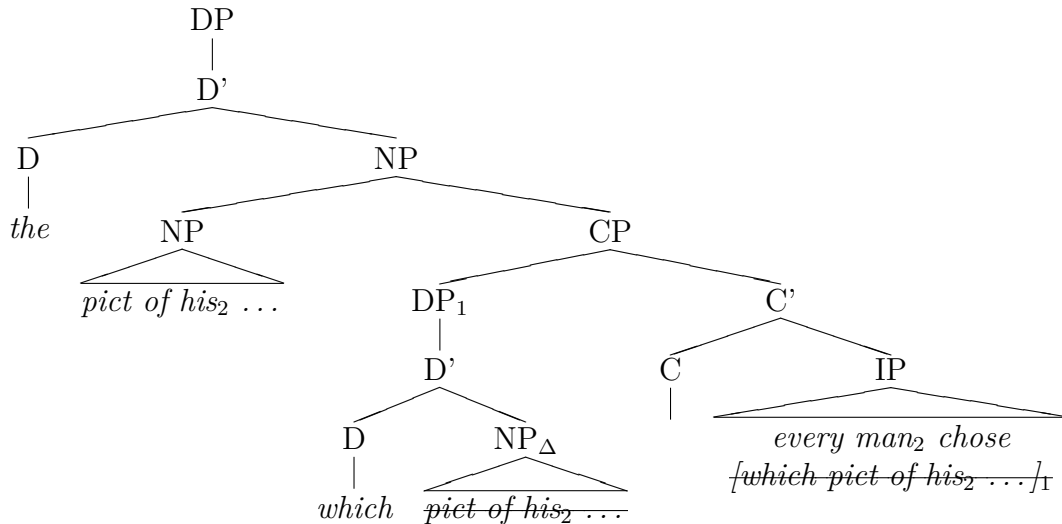
- structure \Rightarrow to get binding reconstruction in relative clauses;
- copy interpretation \Rightarrow to get scope reconstruction in relative clauses.

3.2.1 Structure of relative clauses

How to get binding reconstruction in relative clauses: by analyzing a relative pronoun like a (resumptive) pronoun, i.e. as inducing a similar ellipsis phenomenon (deletion under identity with its antecedent)

⁴Follows from a logical implication: A ‘skolemized’ choice function f ($CH_s(f)$) such that $f(P)$ corresponds to a Skolem function g such that $range(g) = P$.

- (27) *J'ai affiché la photo de sa₂ fille que chaque homme₂ a choisie.*
 'I stuck up the picture of his₁ daughter which every man₁ chose.'



⇒ the relative pronoun *which* is associated with an elided NP restriction

- First argument for this structure: reconstruction for Bound Variable interpretation
 ⇒ presence of a copy (resulting from both ellipsis and movement) accounts for Bound Variable interpretation of *sa* 'his' in examples like (27), hence accounting for multiple individual reading of the relative.

- Second argument for this structure: condition C obviation similar to the one observed with resumption

- (28) (a) *J'ai apporté la photo de Jean₁ qu'il₁ avait choisie.*
 'I brought the picture of John that he had chosen.'
- (b) *Le crayon₂ de Laila₁, je pense qu'elle₁ b₂'a acheté aux Galeries.*
 (lit.) 'Laila's pen, I think she bought it at the shopping mall.'

⇒ No condition C violation in both cases provides an argument for a similar approach to resumptive and relative pronouns based on ellipsis, as classical examples of ellipsis also obviate condition C:

- (29) *I kissed the sister of John₁, and he₁ did [_Δ __] too.*

⇒ Coreference available between *John* and *he*⁵.

⁵See for example the analysis given by Fiengo and May (1994) in terms of *Vehicle Change*

3.2.2 Copy interpretation in relative clauses

How to get scope reconstruction: by assuming that the copy in the relativised site can be interpreted as indefinite

- (30) (a) *the ~~patient~~₁ each doctor₂ was assigned ~~f₁~~(patient).*
 (b) *the unique choice function $f_{\langle et, ee \rangle}$ such that each doctor_x was assigned f_x (patient).*
 (c) *the unique function $g_{\langle ee \rangle}$ ranging over patients such that each doctor_y examined $g(y)$.*

⇒ Interpretation of the copy as indefinite, i.e. as a skolemized choice function, accounts for the distributive reading of the relative clause.

Independent argument for indefinite interpretation of the copy in the relativised site (see Kayne (1994) or Sauerland (1998)): the availability of existential constructions in relatives

- (31) *les erreurs qu'il y a dans cette copie*
 'the mistakes that there are in this exam sheet'

4 Accounting for the paradoxes

Extension of our analysis of reconstruction to relative clauses sheds light on the paradoxical data provided in section 2

4.1 Resumption limits distributive readings

Why is the distributive reading so limited with resumption?

- (32) *??/*ha-iSa₂ Se kol gever₁ hizmin ota₂ hodeta lo₁.*
 the-woman Op every man invited her thanked him
 ??/*'The woman every man₁ invited (her) thanked him₁.'

Answer: because resumption forces a definite interpretation of the copy (the functional reading without presupposition given by the indefinite copy is no longer available)

- (33) (a) *the unique x such that each man_y invited the_x woman*
 ⇒ Individual reading with presupposition that x is a woman.
 (b) *the unique function $g_{\langle ee \rangle}$ such that each man_y invited the_{g(y)} woman*
 ⇒ Functional reading with presupposition that g maps men to women.

⇒ the individual reading will prevail over the functional one as it is easier to accommodate the presupposition linked to the former.

4.2 Negative quantifiers limit distributive readings

Why is the distributive reading so limited with negative quantifiers (the individual reading being favored)?

- (34) *J'ai déchiré la photo qu'aucun homme n'avait choisie.*
'I tore the picture that no man had chosen.'

Answer: skolemized choice function's analysis of indefinites (for pair-list reading) must independently be restricted or banned under negative quantifiers, so as to exclude readings such as the one in (35).

- (35) *No man kissed a woman.*
 $\# \exists f. \neg \exists x. [man'(x) \wedge kiss'(x, f(woman')(x))]$

Consequence: only the definite interpretation of the copy will be available

- (36) (a) *the unique x such that no man_y had chosen the $_x$ picture*
 \Rightarrow Individual reading with presupposition that x is a picture.
(b) *the unique function $g_{(ee)}$ such that no man_y had chosen the $_{g(y)}$ picture*
 \Rightarrow Functional reading with presupposition that g maps men to pictures.

\Rightarrow presupposition accommodation linked to the definite copy favors the individual reading (easier to accommodate).

4.3 Indefinite relatives limit distributive readings

Why is the distributive reading so limited with indefinite relatives (the individual reading being favored)?

- (37) *?We contacted a patient each doctor was assigned.*

Answer: because indefinite relatives also force a definite interpretation of the copy, as the ungrammaticality of (38) shows

- (38) (a) **Des erreurs qu'il y a dans cette copie sont impressionnantes.*
*'Some mistakes that there are in this paper are amazing.'
(b) **Mary praised a headway that John made.*

Consequence: presupposition accommodation linked to the definite copy will then favor the individual reading (easier to accommodate).

4.4 Binding reconstruction as rescuer

Why is the distributive reading suddenly available in the problematic cases of binding reconstruction?

- (39) (a) *J'ai déchiré la photo de lui₁ qu'aucun homme₁ n'avait choisie.* 'I tore the picture of him(self) no man had chosen.'
- (b) *The picture₂ of himself₁ which no candidate₁ liked __₂ ruined his₁ career.*
- (c) *S-Surah₂ tabaʕat ʔibin-ha₁ illi kul mwazaʕa₁ ʕab-ha₂*
the-picture of son-his that every employee bring.past.3s.-it
riʕʕat l-uh₁.
give-back.passive to-him.
'The picture of his₁ son that every employee₁ brought (it) was given back to him₁.'
- (40) *Marie a vu une photo de lui₁ que chaque homme₁ avait choisie.*
'Mary saw a picture of him(self)₁ each man₁ had chosen.'

Answer: copy interpreted as definite (due to resumption, the negative quantifier or the indefinite relative), but *binding reconstruction* via presence of a syntactic copy of the antecedent in the relativized site.

⇒ Presence of a bound variable within the definite copy excludes the individual reading, and hence straightforwardly accounts for the functional reading (no competition anymore between the two possible readings and the presuppositions associated to them).

4.5 What about specificational/equative sentences?

Generalisation: all the restrictions that appear in predicative sentences (with resumption, negative quantifiers, and indefinite relatives) disappear in equative sentences (in contrast with predicative sentences).

As pointed out in Sharvit (1999), resumption **does** allow distributive readings (without binding) in specificational/equative sentences:

- (41) *ha-iSa₂ Se kol geve₁ hizmin ota₂ hayta iSt-o₁.*
la-femme Op chaque homme a-invité la était épouse-sa
'La femme que chaque homme₁ a invitée était son₁ épouse.'

and so does a negative quantifier:

- (42) (a) *ha-iSa₂ Se af geve₁ lo hizmin __₂ hayta iSt-o₁.*
la-femme Op aucun homme neg a-invité était épouse-sa
'La femme qu'aucun homme₁ n'a invitée était son₁ épouse.'

- (b) *la photo qu'aucun homme₁ n'a déchirée est celle de son₁ épouse.*
 Lit. 'The picture that no man₁ tore was his₁ wife's.'

and/or an indefinite relative:

- (43) *Une femme qu'aucun homme₁ n'a invitée était son₁ épouse.*
 'A woman that no man₁ invited was his₁ wife.'

Answer (intuition): copy interpreted as definite (due to resumption, the negative quantifier or the indefinite relative), but the presupposition linked to the functional reading does not require accommodation, as it is provided by the context (the *wife* or *picture of wife* function).

5 Conclusion

A general account of Reconstruction:

- distributive reading of a displaced constituent follows from syntactic reconstruction of that constituent, i.e. presence of a copy resulting either from movement or ellipsis;
- a copy can be interpreted as definite (see Fox (2003)), hence giving rise to an individual or functional reading, with presupposition accommodation constraints (property of the definite) favoring the individual reading;
- a copy can also be interpreted as indefinite, and more precisely a skolemized choice function (see Kratzer (1998) and Aguero-Bautista (2001)), hence giving rise to a pair-list reading or functional reading without presupposition.

Consequences about distributive readings of relative clauses:

- the relativized site of relative clause can also be interpreted as indefinite, hence giving rise to a distributive reading of the relative clause.
- resumption, negative quantifiers, and indefinite relatives generally block the distributive reading as they force an definite interpretation of the copy (and the individual reading prevails)
- distributive reading of relative clauses suddenly reappears with resumption, negative quantifiers and indefinite relative clauses when binding reconstruction is at stake, as the individual reading is no longer available (no competition in the accommodation process).
- distributive reading of relative clauses also reappears in equative sentences, as the presupposed function (which would require accommodation) is given by the context.

Further issue: other possible accounts of the data

- a variable-free perspective (Jacobson (1999), Heim and Jacobson (2005), Guillot (2008))
 - combinatorial rules (**z** or **m**) to implement binding
 - functional resumptive as a kind of coreference over functions (similar to regular pronouns)
 - no reconstruction mechanism necessary
- a psycholinguistic perspective – Dynamic Syntax (Cann et al. (2005), Guillot (accepted, under review))
 - left to right evaluation (unifying grammar and parsing)
 - functional resumptive as a case of lexical underspecification + update (similar to regular pronouns)
 - reconstruction as delay of evaluation (late update of underspecification)

Comments and Questions Welcome!

References

- Calixto Aguero-Bautista. *Cyclicity and the scope of wh-phrases*. PhD thesis, MIT, 2001.
- Dora Alexopoulou and Caroline Heycock. Relative clauses with quantifiers and definiteness. In Kempson von Heusinger and Meyer-Viol, editors, *Choice functions and natural languages semantics*, 2002.
- Valentina Bianchi. *Consequences of Antisymmetry for the syntax of headed relative clauses*. PhD thesis, Scuola Normale Superiore, Pisa, 1995.
- Ronnie Cann, Ruth Kempson, and Lutz Martens. *The Dynamics of Language*. Oxford, 2005.
- Paul Elbourne. *Situations and individuals*. PhD thesis, MIT, 2002.
- Robert Fiengo and Robert May. *Indices and Identity*. MIT Press, 1994.
- Danny Fox. On Logical Form. In Randall Hendrick, editor, *Minimalist Syntax*. Blackwell, 2003.
- Nicolas Guillot. To reconstruct or not to reconstruct: that is the question. In *Proceedings of the Workshop on What Syntax feeds Semantics*. FoLLI, 2008.
- Nicolas Guillot. Reconstruction as update of underspecification. In *Dynamic Syntax Volume*. CSLI, accepted, under review.

- Nicolas Guillot. *La reconstruction à l'interface entre syntaxe et sémantique*. PhD thesis, University of Nantes, 2006.
- Nicolas Guillot and Nouman Malkawi. When movement fails to reconstruct. In J. Brucart, editor, *Merging Features*. Oxford University Press, 2009.
- Irene Heim and Pauline Jacobson. Direct compositionality: binding and ellipsis. Lecture notes (unpublished), LSA Summer Institute, MIT, 2005.
- Pauline Jacobson. Towards a variable-free semantics. *Linguistics and Philosophy*, 22: 117–184, 1999.
- Richard Kayne. *The antisymmetry of syntax*. MIT Press, 1994.
- Angelika Kratzer. Scope or pseudoscope? Are there widescope indefinites? In S. Rothstein, editor, *Events in Grammar*. 1998.
- Uli Sauerland. *The meaning of chains*. PhD thesis, MIT, Cambridge, 1998.
- Yael Sharvit. Resumptive pronouns in relative clauses. *Natural Language and Linguistic Theory*, 17:587–612, 1999.