Some Constraints on Anaphoric Reference to Events in French

André Bittar, Université Paris 7, Lattice

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1. The questions and the objective

- **Questions**

  *Marie est tombée en sortant du labo. Ceci est arrivé hier soir. Marie fell over while leaving the lab. This happened last night.*

  - What indicates anaphoric reference to an event?
  - What constraints exist on the anaphoric relation?

- **Objective**

  - Answer these questions by...
    - adopting established linguistic theory
    - making observations from the judgments of native speakers
1. Background theoretical notions

1.1 Anaphora: individual vs. abstract

- **Individual anaphora**
  - 3rd person pronoun with nominal (NP) antecedent
  - Preference ("salience") for an antecedent based on
    - morphology (gender, number)
    - syntax (GB)
    - grammatical function
    - "recency"

  1) \textit{John} can't come to Jane's party. \textit{He} has a cold.

- **Abstract anaphora**
  - Demonstrative pronoun with sentential (S, CP) antecedent
  - Very limited morphological indicators (neuter pronoun)
  - Antecedents often don't have a grammatical function
  - When interphrastic, outside the domain of syntax
  - Antecedent may be arbitrarily distant from an anaphor
  - So, entities which are not salient in the same respect

  2) [\textit{John can't come to Jane's party}]\textsubscript{i}. \textit{This} disappoints him.
1. Background theoretical notions
1.2 Abstract anaphora in French

- Neuter demonstrative pronouns

- *ça, cela, ce (that), ceci (this)* : when used anaphorically, almost exclusively have sentential antecedents

- rarely used to refer to individual (NP) antecedents, although there are some exceptions, e.g. Generic, especially in informal speech:

3) *Un enfant, ça grandit.*  
A child, NeutDemPro grows up.

4) *Picasso, c'était un artiste.*  
Picasso, NeutDemPro was an artist.

- 3rd person subject pronouns *il, elle (he, she)* never used to refer to sentential antecedents, although direct object pronoun “*le*” or indirect “*en*” or “*y*” (*it*) can be:

5) *Jean croit que [Marie est tombé], Pierre l’a vu.*  
Jean thinks that [Marie fell over], Pierre saw it.

6) *Jean croit que [Marie est tombé], Pierre en est certain.*  
Jean thinks that [Marie fell over], Pierre is sure of it.
1. Background theoretical notions

1.3. Events & containers

- 1.3.1. Events: Donald Davidson (1967)
  - have spatio-temporal properties
  - causal properties = imply a change
  - existentially quantified variable in logical form
  - sound theoretical basis for treating events as individuals available for anaphoric reference
  - important: distinguish event verbs from stative verbs (no change, no distinct start or finish)

- In language

<table>
<thead>
<tr>
<th>Event</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max <em>eats</em> the apple</td>
<td>Max <em>knows</em> the apple is rotten</td>
</tr>
<tr>
<td>Max <em>goes skiing</em></td>
<td>Max <em>enjoys</em> skiing</td>
</tr>
<tr>
<td>Max <em>climbed</em> Everest</td>
<td>Max <em>has</em> some good hiking boots</td>
</tr>
</tbody>
</table>
### 1.3. Background theoretical notions

#### 1.3.2. Containers: Z. Vendler (1957), N. Asher (1993)
- Predicative context which requires the presence of a certain type of entity (proposition, fact, event, situation, state etc.)

<table>
<thead>
<tr>
<th>Propositional</th>
<th>Factual</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>to believe that</em> X</td>
<td><em>to know that</em> X</td>
<td><em>X to happen</em></td>
</tr>
<tr>
<td><em>to think that</em> X</td>
<td><em>to be true that</em> X</td>
<td><em>X to take place</em></td>
</tr>
<tr>
<td><em>to imagine that</em> X</td>
<td><em>X to be true</em></td>
<td><em>X to occur</em></td>
</tr>
<tr>
<td><em>X to be false</em></td>
<td><em>X to be a fact</em></td>
<td><em>to witness X</em></td>
</tr>
</tbody>
</table>
1. Background theoretical notions

1.4. Event containers in French

- **Subject event containers**
  - subcategorize an event subject, in nominal or pronominal form
  - *arriver, se passer, se produire* = to happen/occur
  - *avoir lieu* = to take place

7) [La chute du mur de Berlin] _a eu lieu_ en 1989.

8) [Le mur de Berlin est tombé], _ça_, _a eu lieu_ en 1989.
   [The Berlin Wall fell], _That_, _took place_ in 1989.

- **Object event containers**
  - subcategorize an event object or oblique object
  - *rater, manquer* = to miss
  - *assister à* = to be (present) at, to attend
  - *être témoin de* = to witness

9) **Paul a assisté à [la chute du mur de Berlin].**
   **Paul was present at [the fall of the Berlin Wall].**

10) **[Le mur de Berlin est tombé en 1989]., _ça_, _Paul a assisté à _ça_.**
    **[The Berlin Wall fell in 1989]., _Paul was present at _that_.**
2. Linguistic data

- How to interpret my examples

  event verb \( \text{John eats an apple} \)

  stative verb \( \text{John knows Mary} \)

  event container \( \text{The fight took place this morning} \)

  anaphoric demonstrative \( \text{Cela}_i, \text{That}_i \)

  \[ \text{[antecedent]}_i, \text{[John eats an apple]}_i \]

- Method

  - create a situation which enforces anaphoric reference to an event and test...
    ...judgment of naturalness
    ...which antecedent is preferred for the demonstrative
2. Linguistic data

2.1 Counterfactual conditionals
- “Si” (if) followed by imperfect & conditional.
- Logical antecedent and consequent are false or hypothetical

11) Si la France gagnait, on irait dans la rue.
   If France won we'd go and dance in the street.

Anaphoric Reference

12) Si [la France gagnait, on irait dans la rue], c'est arrivé en '98.
   If [France won, we'd go and dance in the street], that happened in '98.

- in 12) logical antecedent (event) and consequent (event) are indissociable, anaphoric reference possible, but demonstrative c’ must refer to both
- causal relationship
2. Linguistic data

2.1 Counterfactual conditionals

13) Si Max savait lire, [Léa lui offrirait un livre]. Pourtant c’est arrivé alors qu’il est analphabète.
   If Max knew how to read, [Léa would give him a book]. That happened nonetheless even though he’s illiterate.

- in 13) logical antecedent contains a state “savait lire” (“knew how to read”)
- the second sentence denies the logical antecedent

14) Si [Léa lui rendait visite], Max serait content. C’est arrivé hier et il était ravi.
   If [Léa came to visit him], Max would be happy. That happened yesterday and he was delighted.

- in 14) logical consequent contains a state “serait content” (“would be happy”)
- the second sentence affirms the consequent
- anaphoric reference to the event is possible
2. Linguistic data

2.2 Coordination
- et, mais, virgule... (and, but, comma...)

15) Les manifestants se sont rassemblés, le syndicat a appelé à la grève et le patron a fait un discours.

The protesters met up, the union called for a strike and the boss made a speech.

Anaphoric Reference

16) [Les manifestants se sont rassemblés, le syndicat a appelé à la grève et le patron a fait un discours]. Jean a assisté à ça.

[The protesters met up, the union called for a strike and the boss made a speech]. John was present at that.

- coordinated events form a single antecedent
2. Linguistic data

2.3 Subordinate complementizer phrases
- Introduced by complementizer “que” (that)

- subject: Que Kennedy ait été assassiné a choqué tout le monde. 
  That Kennedy was assassinated shocked everyone.

  direct object: Paul sait que Pierre arrivera en retard. 
  Paul knows (that) Pierre will come late.

  oblique object: Le peuple s’attendait à ce que le mur tombe. 
  The people expected the wall to come down.

Anaphoric Reference

17) Que [Kennedy ait été assassiné], était un gros choc. Max a raté ça. 
 That [Kennedy was assassinated] was a big shock. Max missed that.

18) Paul sait que [Pierre arrivera en retard], Cela arrive souvent. 
 Paul knows that [Pierre will come late]. That often happens.

19) Le peuple s’attendait à ce que [le mur tombe], On a tous été témoin de cela.
 The people expected [the wall to come down]. We all witnessed that.
2. Linguistic data

2.4 Relative clauses
- introduced by relative pronoun que, qui, où (which, who, where...)
- may contain event descriptions

L'homme qui [ti a tué Kennedy]...
The man who [ti killed Kennedy]...

Anaphoric Reference


- barrier for anaphoric reference in subject relative

   Paul knows the man who [ti killed Kennedy]. That happened in 1963.

- no barrier for object relative
2. Linguistic data

- **Subordinates & Relatives**
  - Pronoun nested in relative or subordinate clause cannot refer to matrix event

  22) # [Max est allé à l'endroit où c'est arrivé],
      # [Max went to the place where that happened].

  23) # [Max a dit que Marie a été témoin de cela],
      # [Max said that Mary witnessed that].

- **Are there other constraints similar to this obvious one?**

- **Difficult to find examples of event anaphora which are intraphrastic**

- **Carried out tests on other types of abstract entities...**
  - C-command from Reinhart (1983)

- **Results not conclusive...**
  - Often same structural conditions for acceptable anaphoric reference and unacceptable
3. Conclusion

- What indicates anaphoric reference to an event?
  - Event verb
  - Neuter demonstrative pronoun = sentential antecedent in FR
  - Event containers, which constrain reference of anaphoric demonstrative pronouns

- What constraints exist on the anaphoric relation?
  - Some constructions impose a collective reading of an event antecedent (counterfactuals & coordination)
  - These constructions present few constraints or barriers to *interphrastic* anaphoric reference to events (subject relative)
  - Impossibility of *intraphrastic* event anaphora (subordinate, relative)

- Future leads:
  - tense, quantification, negation, modality
  - complement this data with information on discourse structure
  - adopt a discourse formalism designed to cope with abstract antecedents (e.g. SDRT (Asher 1993)), BUT is this “implementable”? 
  - theory of salience for neuter demonstratives