

Donkey Anaphora in Sign Language

(ASL and LSF)

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The Problem of Donkey Anaphora

■ **Indefinites**

- a. John owns a donkey. He beats it.
- b. If John owns a donkey, he beats it.

■ **Non-Indefinites**

- a. John owns fewer than 5 donkeys. He beats them
- b. If John owns fewer than 5 donkeys, he beats them.

■ **Problem**

In each case:

- the pronoun is semantically dependent on the quantifier;
- but it is not c-commanded by it.

E-Type Analyses

(Evans, Ludlow, Schein, Heim, Elbourne...)

■ Pronouns as descriptions

V1. If John owns a donkey, he beats it-~~donkey~~ he has

V2. If John owns a donkey, he beats it-~~donkey~~ (Elbourne)

■ Quantification over situations / events

How are the uniqueness requirements of definite descriptions met? By having fine-grained situations/events.

■ Formal Link

a. Every man who has a wife is sitting next to her.

b. ?* Every married man is sitting next to her (Heim 1982)

Elbourne 2005: link = syntactic ellipsis of the NP

■ Result: Indefinites and Non-Indefinites are treated alike. 3

Dynamic Analyses

■ Pronouns as variables

- a. John owns [a donkey]_i. He beats it_i
- b. If John owns [a donkey]_i, he beats it_i

■ Quantification over assignment functions

Approximation:

- a. $\exists i$ [John owns [a donkey]_i. He beats it_i]
- b. $\forall i$ [John owns [a donkey]_i][he beats it_i]

■ Formal Link: coindexing.

Dynamic Analyses

■ Problem

a. John owns [at least 2 donkeys]_i. He beats them.

Bad: $\exists X$ [John owns X & ≥ 2 donkeys(X) & John beats X]

b. John owns [fewer than 5 donkeys]_i. He beats them.

Bad: $\exists X$ [John owns X & < 5 donkeys(X) & John beats X]

■ Mixed Solution (Kamp & van Eijck)

-Indefinites are treated in the dynamic way.

-Other quantifiers are treated with an E-type account

■ Pure Solution (van den Berg, Nouwen, Brasoveanu)

$\exists X$ [John owns X & $X = \text{Max } Y: \text{donkey}(Y)$ & John owns Y & ≥ 2 donkeys(X) & John beats X]

Debate I: E-type vs. Dynamic Accounts

- In spoken languages, indices are not morphologically realized. But they are in sign languages: pointing.
- **Crucial Cases: Bishop Examples**
 - a. If a bishop meets a bishop, he blesses him.
 - b. **Bad:** he ~~bishop~~ blesses him ~~bishop~~.
 - c. **Bad:** he ~~bishop that meets a bishop~~ blesses him ~~bishop that blesses a bishop~~
- **E-Type Solution** (Elbourne 2008?)
 - a. Super fine-grained situations.
 - b. Extrinsic material he **D** ~~bishop~~ blesses him **N** ~~bishop~~.
- **Dynamic Solution**

$\forall i \forall k$ [[a bishop]_I meets [a bishop]_k] [he_i blesses him_k]

Debate II: Pure vs. Mixed Dynamic Accounts

■ **Indefinites**

- a. John owns a donkey. He beats it.
- b. If John owns a donkey, he beats it.

■ **Non-Indefinites**

- a. John owns fewer than 5 donkeys. He beats them
- b. If John owns fewer than 5 donkeys, he beats them.

■ **Goal**

Determine whether the same kind of indexing is used in both types of cases.

Main Results

■ E-type vs. Dynamic Approaches

- a. dynamic accounts are superior to E-type accounts
- b. or the latter agree with dynamic accounts about indices.

■ Mixed vs. Pure Dynamic Approaches

Pure dynamic approaches are superior to mixed dynamic approaches

■ Spoken vs. Signed Modality?

a. There are fine-grained differences between: overt SL pronouns vs. [null SL pronouns / overt spoken pronouns]

b. **Conjecture:** each type exists in every modality

Type I: Standard pronouns + Null SL pronouns

Type II: SL pronouns + ‘the first’, ‘the second’, etc.

Important Caveat

- There is a debate within Sign Language research to determine whether pointing (= indexing) has, among others, definite determiner uses (Bahan et al. 1995).
- The present discussion is neutral in this debate. It purports to show that indexes have, among others, a function very similar to that of indices in dynamic semantics. It does not exclude that they may also play the role of definite determiners.

Prelude:
Strict and Sloppy Readings

[Pronominal Uses of Indexing]

- Indexing sometimes gives rise to the same strict / sloppy ambiguities as pronouns of spoken languages (SLM 2004)
- Indexing gives rise to:
 - Condition B effects
 - Strong and Weak Crossover effects (SLM 2004)
- **Indexing is a good point of comparison for formal indices carried by pronouns**

[Pronominal Uses of Indexing: Strict / Sloppy]

■ LSF

a. FANTASTIC. PIERRE LIKE WIFE _aPOSS. _bIX
JEAN TOO. (Informant A 369; cf. Informant C, 193)

‘It’s fantastic. Pierre loves his wife, and Jean does too.’

b. COMPLICATED. PIERRE LIKE WIFE _aPOSS. _bIX
JEAN _bIX TOO. (Informant A, 374; cf. Informant C, 201)

‘Things are complicated. Pierre loves his wife, and Jean does too.’

■ LSF

EVERY MOTHER LIKES _aPOSS CHILD. PIERRE TOO.

‘Every mother likes her child. Pierre does too.’

Follow-up: PIERRE LIKES _aPOSS CHILD.

‘Pierre likes his child.’ (Informant B; 353)

[Pronominal Uses of Indexing: Strict / Sloppy]

■ ASL

IX-1 POSS-1 MOTHER LIKE. IX-a TOO. (Inf 1 108)

Ok I like my mother. He too <likes my mother>

Ok I like my mother. He too <likes his mother>

The Simplest Donkey Sentences

Indexing Without C-Command: LSF

- a. ONE_a CL STUDENT COME PARTY. _aIX HAVE-FUN.
‘A student came to the party. He had fun.’ (Informant A; 19)
- b. _aSTUDENT _bPRIEST _{a,b}BOTH DISCUSSED. _bIX
KNOW BIBLE _aIX NOT-KNOW
‘I talked to a student and a priest. The priest knew the Bible
but the student didn’t know it’. (Informant E; 2, 62)

- a. WHEN ONE _aCL STUDENT COME PARTY, _aIX
HAVE-FUN.
‘When a student comes to the party, he has fun.’ (Inf. A; 21)
- b. EACH-TIME _aLINGUIST _bPSYCHOLOGIST _{b,a,1st}ALL-
THREE _{b,a,1st}TOGETHER WORK, _aIX HAPPY BUT _bIX
HAPPY NOT.
‘Whenever I work with a linguist and a psychologist, the
linguist is happy but the psychologist is not happy.’ (E; 2, 63)¹⁵

Indistinguishable Antecedents: Transitive Cases

The Problem

■ Problem for E-type Theories

- a. If a bishop meets a bishop, he blesses him.
- b. **Bad:** he ~~bishop~~ blesses him ~~bishop~~.
- c. **Bad:** he ~~bishop that meets a bishop~~ blesses him ~~bishop that blesses a bishop~~

■ E-Type Solution (Elbourne 2008?)

- a. Super fine-grained situations.
- b. Extrinsic material: he **D** ~~bishop~~ blesses him **N** ~~bishop~~.
=> If **D** and **N** are provided ‘by the context’, ellipsis could target *any* antecedent – including the same one twice.
- c. If two bishops meet, one ~~bishop~~ blesses the other ~~bishop~~.

■ Dynamic Solution

$\forall i \forall k$ [[a bishop]_i meets [a bishop]_k] [he_i beats him_k]

Indistinguishable Antecedents in ASL

- **Prediction of E-type account with enrichment:**
the two pronouns could take the same antecedent
- WHEN _aONE a-MEET-b _bONE...
 - a. IX-a TELL IX-b HAPPY a-MEET-b (Inf 1, 2, 285; 111)
 - b. IX-b TELL IX-a HAPPY a-MEET-b (Inf 1, 2, 285; 111)
 - c. # Any patterns in which both pronominals index the same position.

'When someone meets someone, he tells him that he is happy to meet him'

Indistinguishable Antecedents in ASL: Propositional Conjunction

- IF _aFRENCH MAN HERE OTHER _bFRENCH MAN
HERE IX-a GREET IX-b (Informant 1, 2, 114)
'If a Frenchman were here and another Frenchman were
here, he would greet him'
- IF _aFRENCH MAN HERE OTHER _bFRENCH MAN
HERE OTHER _cFRENCH MAN HERE IX-a GREET
THE-TWO-b, c (Informant 1, 2, 115)
'If a Frenchman were here and another Frenchman were
here and yet another Frenchman were here, the first would
greet the second and the third'.

[Indistinguishable Antecedents in LSF]

- a. PRIEST _aIX _bIX ONE PRIEST a-MEET-b. _bIX BLESS-
a.
'A priest met a priest. He blessed him.' (Informant **B**; 323)

- b. WHEN ONE PRIEST _aCL MEETS OTHER PRIEST
_bCL, a-GIVE-b book
'When a priest meets another priest, he gives him a
book.' (Informant **A**; 28)

[Indistinguishable Antecedents in LSF]

- a. _aPRIEST DISCUSS. ALSO OTHER_b _bPRIEST DISCUSS. BOOK BIBLE _aIX _aGIVE_b
'I talked to a priest. I also talked to another priest. The former gave a Bible to the latter.' (Informant E; 2, 69)

- b. _aPRIEST DISCUSS. ALSO OTHER_b _bPRIEST DISCUSS. _{a,b}BOTH WORK _{a,b}TOGETHER
'I talked to a priest. I also talked to another priest. The two work together' (Informant E; 2, 68)

Indistinguishable Antecedents: Intransitive Cases

Indistinguishable Antecedents in ASL: Quantifier Conjunction

- a. If a bishop meets a bishop, he greets him.
b. #If a bishop and a bishop meet, he greets him (Elbourne)

 - WHEN _aONE AND _bONE a-MEET-b
 - a. IX-a TELL IX-b HAPPY a-MEET-b (Inf 1, 2, 306)
 - b. IX-b TELL IX-a HAPPY a-MEET-b (Inf 1, 2, 306)
- ‘When someone meets someone, he tells him that he is happy to meet him’

Indistinguishable Antecedents in ASL: Quantifier Conjunction

- a. If a bishop meets a bishop, he greets him.
b. #If a bishop and a bishop meet, he greets him (Elbourne)
- WHEN _aONE AND _bONE AND _cONE MEET
 - a. IX-a TELL THE-TWO-b, c HAPPY MEET
 - b. IX-b TELL THE-TWO-a, c HAPPY MEET
 - c. IX-c TELL THE-TWO-a, b HAPPY MEET

‘When someone meets someone, he tells him that he is happy to meet him’ (Inf 1, 2, 307)

Indexing in Spoken Languages

- When a priest meets a student, the former gives a Bible to the latter.
- When a bishop meets a bishop, the former blesses the latter.
- Lorsqu'un prêtre rencontre un étudiant, celui-ci parle de la Bible à celui-là.
'When a priest meets a student, the latter [=celui-ci] asks the former [celui-là] for a Bible'
- Lorsqu'un prêtre rencontre un étudiant et un professeur, le premier dit au second de ne pas écouter le troisième.
'When a priest meets a student and a professor, the first tells the second not to listen to the third'

Anaphora to Negative Quantifiers

The Problem

■ A Problem for Dynamic Approaches

a. Fewer than 5 students came. They got bored.

b. **Bad:**

$\exists X [X \text{ STUDENTS} \ \& \ |X| < 5 \ \& \ X \text{ CAME} \ \& \ X \text{ GOT-BORED}]$

Problems:

(a) entails that fewer than 5 students came. (b) doesn't.

(a) entails that *all* students who came got bored. (b) doesn't

■ E-type approaches are fine

Fewer than 5 students came. They ~~students who came~~ got bored.

Two Solutions

■ Standard Solution : Borrow E-type Analysis

e.g. Kamp & Reyle 1993

Fewer than 5 students came. The ~~students who came~~ got bored.

■ Alternative Solution: Maximality Operators

van den Berg 1996, Nouwen 2003, Brasoveanu 2006

a. Fewer than 5 students came. They got bored.

b. **Good**

$\exists X [X = \text{STUDENT} \cap \text{CAME} \ \& \ |X| < 5 \ \& \ X \ \text{GOT-BORED}]$

LSF and ASL data provide an argument for this solution.

Anaphora to Negative Quantifiers in LSF

- a. LESS FIVE _aSTUDENT COME PARTY. _aIX-plural STAY.
'Less than five students came to the party. They stayed.'
(Informant A; 37)

- b. PIERRE FOUR LESS _bSTUDENTS. _bIX HATE _aIX.
'Pierre has less than 4 students. They hate him.' (Informant B; 328)

[Anaphora to Negative Quantifiers in LSF]

- a. IF LESS FIVE _aSTUDENT COME PARTY, _aIX-plural BE-BORED
‘If less than five students come to the party, they will be bored.’ (Informant C; 210)

- b. IF FOUR _aCL-plural LESS COME CLASS DANCE, _aIX-plural HAPPY NOT
‘If less than four people come to the dance lesson, they won’t be happy.’ (Informant A; 233)

- c. LESSON DANCE IF _aPEOPLE FEW _aIX HAPPY NOT
‘If few people show up at the dance lesson, they won’t be happy’ (Informant E; 2, 73c)

Anaphora to Negative Quantifiers in ASL

■ Basic Pattern

RECENTLY LOTTERY (FINISH).

There recently was a lottery.

a. _(a)ONE WIN. IX-a / Ø WANT NAME ANONYMOUS.
'Someone won. He wanted his name to remain anonymous'

b. * _(a)NOBODY WIN. IX-a / Ø WANT NAME
ANONYMOUS. Inf 1, 2, 217

Anaphora to Negative Quantifiers in ASL

■ Anaphora to ‘No’

RECENTLY LOTTERY (FINISH).

There recently was a lottery.

a. I NOT-THINK NOBODY WIN. I THINK IX-a / ??Ø
WANT NAME ANONYMOUS.

‘I don’t think nobody won. I think he wanted his name to remain anonymous’ (Inf 1, 2, 221; cf. 220).

b. EITHER NOBODY WIN OR IX-a / ??Ø WANT NAME
ANONYMOUS.

‘Either nobody won, or he wanted his name to remain anonymous’ (Inf 1, 2, 218)

■ **Problem:** no clear locus for *nobody*.

Anaphora to Negative Quantifiers in ASL

- a. _a ONE DEMOCRAT PERSON WILL CO SUPPORT HEALTH BILL WITH _b REPUBLICAN PERSON. BUT IX-a WILL a-GIVE-b A-LOT MONEY.

‘Some Democrat will cosponsor the healthcare bill with some Republican, but he [= the Democrat] will give him [=the Republican] a lot of money.’

‘(Inf 1, 2, 225)

- * IX-1 **THINK** NO _a DEMOCRAT CL WILL CO SUPPORT HEALTH BILL WITH _b REPUBLICAN CL. IX-1 THINK IX-a WILL a-GIVE-b A-LOT MONEY.
(Inf 1, 2, 228)

Anaphora to Negative Quantifiers in ASL

- IX-1 **DON'T-THINK** NO_a DEMOCRAT CL WILL CO SUPPORT HEALTH BILL WITH_b REPUBLICAN CL. IX-1 THINK IX-a WILL a-GIVE-b A-LOT MONEY.

‘I don’t think no Democrat will cosponsor the healthcare bill with a Republican. I think he [=the Democrat] will give him [= the Republican] a lot of money.’ (Inf 1, 2, 228, 229)

Follow-up: Who will give money? That Democrat who cosponsors.

Anaphora to Negative Quantifiers in ASL

- EITHER NO_a DEMOCRAT CL WILL CO SUPPORT HEALTH BILL WITH_b REPUBLICAN CL OR IX-a WILL a-GIVE-b A-LOT MONEY.

‘Either no Democrat will cosponsor the healthcare bill with a Republican, or he [=the Democrat] will give him [=the Republican] a lot of money. (Inf 1, 2, 230)

Follow-up: Who will give money? One democrat.

- a. Either there is no bathroom in this house or the bathroom is well hidden.
- b. Either there is no bathroom in this house or it is well hidden (after Partee).

Anaphora to Negative Quantifiers in ASL

- NO_a DEMOCRAT CL WILL INTRODUCE ANY_b INDEPENDENT WITH ANY_c REPUBLICAN OR IX-a
TELL IX-b NOT TRUST IX-c (Inf 1, 2, 150)

‘No Democrat will introduce any Independent to any Republican, or else he will tell him not to trust him’

Analysis

(in the spirit of van den Berg, Brasoveanu...)

- All quantifiers, including negative ones (even *no*) introduce discourse referents.
- Pronouns/indices come with a presupposition that their denotation is non-empty.
- Rules of presupposition projection ensure that the negation of the first disjunct can be assumed when evaluating the second disjunct.

e.g. Either John never smoked or he has stopped.

Indexing in Spoken Languages (Corblin)

- a. If the Presidents appoints fewer than 20 Ministers, the latter will be extremely powerful.

- b. Either the President will appoint no Debt Czar, or the latter will have a tough life.

Indexing in Spoken Languages

- a. Si le Président nomme moins de 6 ministres et moins de 10 secrétaires d'Etat, les premiers se déchargeront de leur travail sur les seconds.
'If the President appoints fewer than 6 ministers and fewer than 10 associate ministers, the former (first) will dump their work onto the latter (last)'

- b. ?Jamais un Démocrate ne codirigera une commission avec un Républicain, ou alors le premier devra faire d'immenses concessions au second.
'No Democrat [lit. never a Democrat] will co-head a commission with a Republican, or the former [= first] will have to make enormous concessions to the latter [= second]'

Anaphora to Disjunctive Antecedents

Disjunctive Antecedents

■ Disjunction of DPs

a. If Mary sees a donkey or a horse, she waves to it.

b. If Mary sees John or Bill, she waves to him.

(Elbourne 2005, (119) and (120)).

■ Disjunction of Propositions

If Mary catches a fish or John traps a rabbit, Bill cooks it

(Stone 1992)

Disjunctive Antecedents

■ 4 Strategies

a. Paraphrase (e.g. ‘one or the other’).

(Note that examples with disjunctive antecedents are somewhat marked in spoken languages)

b. Indexing with no separate loci for the disjunctive antecedents

c. Null pronouns

d. Indexing **between** the locus of the disjunctive elements
(Ok for 1 LSF signer; * for ASL)

Disjunctive Antecedents

- **Generalization** (ASL and LSF minus one signer)
 - a. If no locus (or the same locus) is assigned to the disjuncts, an overt and well as a null pronoun can be used.
 - b. If different loci are assigned to the disjuncts:
 - a null pronoun can be used;
 - an overt pronoun **cannot** be used.
 - c. One LSF signer can use an overt pronoun (pointing ‘in the middle’) when different loci have been assigned.

ASL: Comparison

- ‘An African-American or an Asian-American will win the next presidential election. He will win by a large margin’ (Informant 1, 2, 185)
- **No locus: ok null pronoun, ok overt pronoun**
AFRICAN-AMERICAN OR ASIAN-AMERICAN. IX /
Ø WIN LARGE
- **Different loci: ok null pronoun, * with overt pronoun**
_aAFRICAN-AMERICAN OR _bASIAN-AMERICAN
WILL WIN NEXT PRESIDENT ELECTION. *IX /
Ø WIN LARGE

ASL: Comparison

- ‘An African-American or an Asian-American or a Latino will win the next presidential election. He will win by a large margin’ (Informant 1, 2, 186)
- **No locus: ok null pronoun, ok overt pronoun**
AFRICAN-AMERICAN OR ASIAN-AMERICAN OR
LATINO WILL WIN NEXT PRESIDENT ELECTION. IX
/ Ø WIN LARGE
- **Different loci: ok null pronoun, * overt pronoun**
_aAFRICAN-AMERICAN OR _bASIAN-AMERICAN OR
_cLATINO WILL WIN NEXT PRESIDENT ELECTION.
***IX [any indexing], / Ø WIN LARGE**

[LSF: no loci for a and b]

- a. WILL_{1p} IX INVITE JEAN OR PIERRE. _{1st} IX THINK
_a IX HAPPY.

‘I will invite Jean or Pierre. I think he will be happy.’

(Informant A, 379; cf. Informant C; 214)

- b. _{1p} IX WANT HIRE JEAN OR PIERRE. I WANT _a IX
HELP MY_{1p} WORK

‘I want to hire Jean or Pierre. I want him to help me in my work’ (Informant B; 366)

- c. IF _{1p} IX-PRONOUN HIRE PIERRE OR JEAN, _a IX
WILL HELP MY_{1p} WORK

‘If I hire Jean or Pierre, he will help me in my work’
(Informant B; 335)

[LSF: null pronouns]

- a. $_{1p}$ IX CAN INVITE ONLY CL. IF $_{1p}$ IX INVITE LINGUIST OR CL PSYCHOLOGIST, WILL HAVE-FUN. IF INVITE $_b$ CL SPECIALIST MATHEMATICS, $_b$ IX WILL BE-BORED. (Informant A 53)
'I can only invite one person. If I invite a linguist or a psychologist, [he] will have fun. If I invite a mathematician, he will be bored.'

- b. IF $_{1p}$ IX HIRE STUDENT DEAF OR TEACHER DEAF, HELP WORK
'If I hire a deaf student or a deaf teacher, [he] will help me in my work' (Informant B; 357)

Disjunctive Antecedents

- **Generalization** (ASL and LSF minus one signer)
 - a. If no locus (or the same locus) is assigned to the disjuncts, an overt and well as a null pronoun can be used.
 - b. If different loci are assigned to the disjuncts:
 - a null pronoun can be used;
 - an overt pronoun cannot be used.
- **Representation with maximal sets [good cases]**
 - a. If a linguist_X or a psychologist_Y wins, he_{X+Y} is happy
 - b. If $\exists X \exists Y X = \text{LING} \cap \text{WIN} \ \& \ Y = \text{PSY} \cap \text{WIN}$,
X+Y is happy

Disjunctive Antecedents

■ **Problem: how are the bad cases ruled out?**

- a. Ok: spoken language pronouns, sign language null pronouns, sign language overt pronouns with no locus
- b. *: sign language overt pronouns with different loci

■ **One would expect split antecedents in b.:**

$_a$ NP OR $_b$ NP' WILL WIN... IX-a,b WIN LARGE

■ **Proposal**

Each **overt activation** of an index triggers a non-emptiness presupposition.

- a. Different loci \Rightarrow each index has a non-emptiness pres.
- b. Other cases \Rightarrow non-emptiness pres. on the sum X+Y

[Ruling Out an Alternative Account]

- **Alternative Account: ASL pronouns with split antecedents are morphologically plural.**
- **Prediction:** the case with distinct loci should become good when the disjuncts are plural DPs.
- **Problem** (but further controls are needed)
Context: Several weddings are to take place successively.
_a[JOHN MARY] OR _b[BILL ANN] WILL MARRY FIRST. IX-arc-a,b WILL PROUD MARRY BEFORE OTHERS. (Inf1, 2, 192)
‘John and Mary or Bill and Ann will get married first. **They** [= all 4] will be proud that they married before the others’.

Disjunction of Propositions

- IF _aMARY CATCH _bFISH OR _cJOHN TRAP _dRABBIT,
BILL WILL COOK \emptyset / ?? IX-g
'If Mary catches a fish or John traps a rabbit, Bill will cook it' (Inf 1, 2, 231)
- IF _aMARY CATCHES _bFISH OR _cJOHN TRAPS
_dRABBIT OR _eSAM BUY _fSTEAK, BILL WILL COOK
 \emptyset / ?? IX-g
'If Mary catches a fish or John traps a rabbit, Bill will cook it' (Inf 1, 2, 237)

Disjunctive Antecedents in Spoken Language

- Si McCain ou Giuliani été devenu Président, il / ≠ le premier / ≠ le second / *le troisième serait entré en conflit avec les ultra-conservateurs.

‘If McCain or Giuliani had become President, he / ≠ the first / ≠ the second / *the third would have gotten in fights with ultra-conservatives’.

Conclusion

■ E-type vs. Dynamic Accounts

a. ASL and LSF data provide **initial support in favor of the indexing mechanisms postulated by Dynamic Semantics.**

b. E-type analyses that devise similar mechanisms would come even closer to dynamic accounts (Dekker 2004)

■ Mixed vs. Pure Dynamic Accounts

Evidence in favor of pure dynamic accounts: all quantifiers introduce discourse referents.

■ New Problems

Disjunctive antecedents: different among pronouns or difference among modalities?

Appendix I. Bambi Examples

Bambi Examples: LSF

- If a child is christened ‘Bambi’, and Disney Inc. hear about it, then they will sue Bambi’s parents. (Geurts 1999 p. 205)
- MARIE THERE TWO SONS. ONE _aCL NAME JEAN. _aOTHER_b NAME NICOLAS. _aIX JEAN HATES PRESIDENT SARKOZY. _bIX NICOLAS ADORE-c.
(Informant A 289)
‘Marie has two sons; one is named Jean and a son named Nicolas. Jean hates President Sarkozy but Nicolas loves him.’

Bambi Examples: LSF

- USUALLY FRANCE EVERYWHERE WHEN WOMAN
TWO CHILDREN _a ONE NAME JEAN OTHER_b NAME
NICOLAS _aIX JEAN HATES PRESIDENT SARKOZY
_aOTHER_b NICOLAS ADORE-c. (Informant A 289)

‘Usually, in France, when a woman has two children, one named Jean and the other named Nicolas, Jean hates President Sarkozy, but Nicolas loves him’.

Bambi Examples: ASL

- WHEN _a WOMAN HAVE _b SON NAME JOHN <??>
_b SON NAME PETER, a-IX LIKE b-IX JOHN MORE
THAN? c-IX PETER

‘When a woman has a son named John and a son named Peter, she likes John more than Peter’.

(Inf 1, 2, 245; cf. 246)

Appendix II. Disjunctive Antecedents: Pointing in the Middle

Pointing in the Middle: 1 LSF Signer

■ a. WILL_{1p}IX INVITE_aIX JEAN_bIX PIERRE. _{1st}IX SURE_aIX HAPPY.

‘I will invite Jean or Pierre. I am sure he [= Jean] will be happy.’ (Informant **A**; 389a; cf. Informant **E**, 2, 75a)

b. WILL_{1p}IX HIRE_aIX JEAN OR PIERRE_bIX. _{1st}IX CERTAIN_bIX HAPPY.

‘I will invite Jean or Pierre. I am sure he [= Pierre] will be happy.’ (Informant **A**; 389b; cf. Informant **E**, 2, 75, b)

c. WILL_{1p}IX HIRE_aIX JEAN OR PIERRE_bIX. _{1st}IX CERTAIN_cIX HAPPY.

‘I will invite Jean or Pierre. I am sure he [= whichever one I invite] will be happy.’ (Inf. **A**; 389c; cf. Inf. **E**, 2, 75c)

Pointing in the Middle: One LSF Signer

■ Possibility 1

- The donkey pronoun is not indexed with anything. It refers to an individual made salient by the preceding discourse.
- But it remains to explain 1. how the cross-reference is effected; 2. why indexing has to be *between* the antecedents

■ Possibility 2

- The donkey pronoun is indexed with the disjunction, which is taken to introduce a discourse referent of its own.
- This predicts ungrammaticality for LSF versions of:
I'll give my ticket to John or I'll give it to Peter. He'll be happy.

■ Possibility 3

- The donkey pronoun has 2 indices.
- How does this differ from plurals with split antecedents? 60

Appendix III.
E-type vs. Situation-Theoretic Approaches

‘Chierchia’s Conjecture’

- Are the constraints imposed on situations in situation semantics compatible with an interpretation of them as tuples of individuals?
- **Result 1:** Dekker 2004. By imposing (questionable) constraints on situations, these can be put in 1-1 correspondence with tuples of individuals.
- **Result 2:** (Sketch) It is possible to interpret Elbourne’s situations as tuples of individuals, with the result:
 - that we obtain a notational variant of (some) dynamic semantics **if** the descriptive content of pronouns is unconstrained (the first individual in the sequence... the second individual in the sequence... etc)

Indices

- Can Situation theory emulate the indices of dynamic semantics?
- Even with Dekker's result, it is unlikely that a syntactic procedure (i.e. one in which the descriptive content of pronouns is recovered from the antecedent clause in some non-arbitrary fashion) can emulate all the possible indexings of dynamic semantics.
- But no general results appear to be known.