

On Split Islands

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1 Introduction

Discontinuous constituents as for example DPs and PPs are common cross-linguistically, see the examples (1–6) in Fanselow and Cavar (2002):

(1) Who did you see a photo of _ ?

(2) a. German:

[*Interessante Bücher*] *hat sie mir* [*keine _ aus Indien*]
interesting.pl book.pl have.3s she.nom me.dat none from India
empfohlen.
recommend.ptc

‘She has not recommended any interesting books from India to me.’

b. Croatian:

[*Knjige*] *mi je Marija* [*zanimljive _*] *preporučila.*
book.pl me.dat be.3s Mary.nom interesting.pl recommend.ptc

‘Mary has recommended interesting books to me.’

c. Polish:

[*Książki*] *mi Marek* [*interesujące _*] *zapropnował.*
book.pl me.dat Marek.nom interesting.pl suggest.ptc

‘Mark has recommended interesting books to me.’

The Complexity

Challenging: so called XP-split constructions

(3) a. German:

[*Mit was für Frauen*] *hast du gesprochen?*
with what for woman.pl have.2s you.nom speak.ptc
'With what kind of women did you speak?'

b. Croatian:

[*Na kakvo stablo*] *se Ivan penje?*
on what-kind-of tree self I. climb.3s
'On what kind of tree does Ivan climb?'

c. Polish:

[*Na jakie drzewo*] *się Marek wspina?*
on what-kind-of tree self M. climb.3s
'On what kind of tree does Marek climb?'

(4) a. German:

[*Mit was*] *hast du* [*für Frauen*] *gesprochen?*
with what have.2s you for women speak.ptc
'With what kind of women did you speak?'

b. Croatian:

[*Na kakvo*] *se Ivan penje* [*stablo*] ?
on what-kind-of self I. climb.3s tree

[*Na kakvo*] *se Ivan* [*stablo*] *penje?*
on what-kind-of self I. tree climb.3s
'On what kind of tree does Ivan climb?'

c. Polish:

[*Na jakie*] *się Marek wspina* [*drzewo*] ?
on what-kind-of self M. climb.3s tree

[*Na jakie*] *się Marek* [*drzewo*] *wspina?*
on what-kind-of self M. tree climb.3s
'On what kind of tree does Marek climb?'

- Underlying SVO in Polish and Croatian, i.e. canonical position for PPs is post verbal in (4), possible solution: fronting of right subpart and subsequent topicalization of a remnant? If so, the first operation would be impossible without the second necessarily being triggered subsequently.
- Split-PPs in German (SOV) confined to *wh*-constructions as in (4), compare to (5a).

(5) a. German:

* [*hübschen Frauen*] *hast du* [*mit* _] *gesprachen*
 beautiful women have.2s you with speak.ptc

* [*Frauen*] *hast du* [*mit hübschen* _] *gesprachen*
 women have.2s you with beautiful speak.ptc

b. Croatian:

* [*veliko stablo*] *se Ivan penje* [*na* _]
 large tree self I. climb.3s on

* [*stablo*] *se Ivan penje* [*na veliko* _]
 tree self I. climb.3s on large

* [*stablo*] *se Ivan* [*na veliko* _] *penje*
 tree self I. on large climb.3s

c. Polish:

* [*wielkie drzewo*] *się Marek wspina* [*na* _]
 large tree self M. climb.3sg on

* [*drzewo*] *się Marek wspina* [*na wielkie* _]
 tree self M. climb.3sg on large

* [*drzewo*] *się Marek* [*na wielkie* _] *wspina*
 tree self M. on large climb.3sg

Multiple splits

More than two sup-parts distributed over the clause, (6a-b) with contrastive focus on the head-noun in Polish and Croatian:

(6) a. Croatian:

[*Kakve*] *je* *Ivan* [*zanimljive*] *kupio* [*knjige*] ?
what-kind-of be.3s I. interesting buy.ptc book.pl
'Which interesting books did Ivan buy?'

b. Polish:

[*Jakie*] *Marek* [*interesujące*] *kupił* [*książki*] ?
what-kind-of M. interesting buy.ptc book.pl
'What kind of interesting books did Marek buy.'

c. German:

Bücher hat man damals interessante in den Osten keine mitnehmen dürfen.
books has one then interesting in the East no with take may
'As for books, one could not take any interesting ones to the East then.'

Island-split conditions

Island-split licensed:

- in interrogative context, fronting of left parts of the island that contain the morphological *wh*-cue, as in (4)
- topicalization or focalization may license island-splits as well, as in (7)

(7) a. Croatian:

[*na veliko*] *se* *Ivan* [*stablo*] *penje*
on large self I. tree climb.3s
'Ivan climbs on a large tree.'

b. Polish:

[*na wielkie*] *się* *Marek* [*drzewo*] *wspina*
large tree self M. tree climb.3sg
'Marek climbs on a large tree.'

Note:

- The focus-background structure of (7a-b) is such that the examples cannot serve as an answer to the question: *What happened?*

Splits to topic/focus positions in German:

- Arguments for operator movement in German (cf. Frey (2000) cited in Fanselow and Cavar (2002)), position preceding sentential adverbs in German is topic/focus-position

- (8) a. *dass er teure Bücher wahrscheinlich der Frau keine*
that he.nom expensive book.pl.acc probably the woman.dat no
schicken wollte
give.inf want.past
'... that he probably did not want to give expensive books to the woman'
- b. ?* *dass er wahrscheinlich teure Bücher der Frau keine*
that he.nom probably expensive book.pl.acc the.dat woman.dat no
schicken wollte
give.inf want.past

Note:

- Split XPs coincide with operator-based contexts or constructions, or with specific information theoretic properties, i.e. topic or (contrastive) focus constructions.

Scope: collective and distributive reading

- See *combien*-split XP examples in French in Obenauer (1976), or split NPs in Japanese in Nakanishi (2007).¹
- Example (10a), in which there is no split, has two readings, the wide and the narrow one, while in the split construction (10b) there is only one reading. See Cook and Payne (2006) for the assumption that only topics allow for distributed reading.

See De Swart (1998) for the following discussion:

- (9) a. [*Combien de chansons*] *les enfants ont-ils tous chanté(s)?*
how many of songs the children have-they all sung
- ?n: $\exists x \text{ song}(x) \ \& \ \forall y [\text{child}(y) \rightarrow \text{sing}(y,x)]$
How many songs exist, such that all children sung them?
(wide reading)
- ?n: $\forall y [\text{child}(y) \rightarrow \exists x \text{ song}(x) \ \& \ \text{sing}(y,x)]$
What is the number, such that all children sung that number of songs?
(narrow reading)

¹ Thanks to Maribel Romero for these hints, and a fruitful discussion of the semantic and pragmatic properties of split constructions.

- b. [*Combien*] *les enfants ont-ils tous chanté* [*de chansons*] ?
 how many the children have-they all sung of songs

?n: $\forall y$ [children(y) \rightarrow $\exists nx$ song(x) & sing(y,x)]

What is the number, such that all children sung that number of songs?
 (narrow reading)

(10) For Croatian (and Polish) we can observe similar effects:

- a. [*Koliko članaka*] *su svi ti studenti pročitali*?
 how many articles be.3pl all these students read.ptc

?n: $\exists nx$ article(x) & $\forall y$ [student(y) \rightarrow read(y,x)]

How many articles exist, such that all students read them?

?n: $\forall y$ [student(y) \rightarrow $\exists nx$ article(x) & read(y,x)]

What is the number, such that all students read that number of articles?

- b. [*Koliko*] *su svi ti studenti pročitali* [*članaka*] ?
 how many be.3pl all these students read.ptc articles

?n: $\forall y$ [student(y) \rightarrow $\exists nx$ article(x) & read(y,x)]

What is the number, such that all students read that number of papers?

Clitic second constructions

Even in constructions with apparent clitic split:

- Clitics cannot be placed after the first prosodic word or left part of a split island in an answer to the question “What happened?”, as can be seen in (11a-b) for an oblique argument and in (11c) for a subject.

(11) **While grammatical in other contexts, these examples are not possible answers to: *What happened?***

- a. Croatian:

?* *U velikom je Petar gradu živio.*
 in big be.3sg Peter city live.ptc

‘Peter lived in a big city.’

?* *U velikom je gradu Petar živio.*
 on big be.3sg tree Peter climb.ptc

‘Peter lived in a big city.’

?* *Taj nepoznati je čovjek nazvao Mariju.*
 this unknown be.3sg man call.ptc Maria

b. Polish:

?* W wielkim ście ty i Ania mieście zamieszkały.
in big be.2pl you and Ania city perf.meet.ptc

'You and Ania started to live in a big city.'

?* W wielkiem śmy mieście zamieszkali.
in big be.1p city perf.live.ptc

'We started to live in a big city.'

?* Ten nieznanym go człowiek spotkał.
this unknown him.acc man meet.ptc

Thus this effect can be observed in apparent prosodic NP-splits too (see Halpern (1995) on Prosodic Inversion):

(12) Koliko su članaka svi ti studenti pročitali?
how-many be.3pl articles all these students read.ptc

* ?n: $\exists x$ article(x) & $\forall y$ [student(y) \rightarrow read(y,x)]

?n: $\forall y$ [student(y) \rightarrow $\exists x$ article(x) & read(y,x)]

2 Suggested solutions

Possible solution: Base-generation of split-island sub-parts

- Problems: Theta-theoretic aspects, i.e. linking two NPs to one Θ -role
- Formal aspects in LFG and with f-structures: linking of two or more NPs to one argument slot of the predicate argument structure (see Kuhn (1999) for a possible solution for German)
 - Cavar and Seiss (2011) suggest to analyze all split-off NP/DP-parts that do not contain the N-head as headless NPs or DPs, thus these have no *pro*-PRED-value that needs to be linked to a predicate argument slot

3 Our proposal (Fanselow and Cavar 2002)

Copy and deletion with partial deletion in special cases:

(13) Croatian:

mi je Marija [zanimljive knjige] preporučila
 me be.3s M. interesting books recommend.ptc

[*zanimljive knjige*] *mi je Marija [zanimljive knjige] preporučila*
 interesting books me be.3s M. interesting books recommend.ptc

[*zanimljive knjige*] *mi je Marija [~~zanimljive~~ knjige] preporučila*
 interesting books me be.3s M. interesting books recommend.ptc

Problems for base-generation theories:

- Island-split across island boundaries is ungrammatical, even in Polish and Croatian:

(14) a. Croatian:

Ivan je vidio [NP auto [CPRel koji je Marija svojoj sestri kupila]]
 I. be.3s see.ptc car that be.3s M. her sister buy.ptc
 'Ivan saw the car that Maria bought for her sister.'

* [*svojoj sestri*] *Ivan je vidio [NP auto [CPRel koji je Marija _*
 her sister I. be.3s see.ptc car that be.3s M. _
kupila]]
 buy.ptc

* [*svojoj*] *Ivan je vidio [NP auto [CPRel koji je Marija _ sestri*
 her I. be.3s see.ptc car that be.3s M. _ sister
kupila]]
 buy.ptc

b. Polish:

Marek zobaczył [NP samochód [CPRel który Asia kupiła dla swojej siostry]]
 M. see.ptc car that A. buy.ptc for her sister
 'Marek saw the car that Asia bought for her sister.'

* [*dla swojej siostry*] *Marek zobaczył [NP samochód [CPRel który Asia kupiła*
 for her sister M. see.ptc car that A. buy.ptc
 _]]

* [dla swojej] Marek zobaczył [NP samochód [CPRel który Asia kupiła —
 for her M. see.ptc car that A. buy.ptc —
 siostry]]
 sister

4 Related previous analyses

There has been extensive work on second position clitics in Croatian (Bosnian, Serbian) and clitic placement in Polish, and in the recent years in particular e.g. Anderson (2005), Franks and King (2000), Halpern and Zwicky (1996), van Riemsdijk (1999).

Assumptions and hypotheses related to so called second position clitics in Croatian (and other Neo-Shtokavian variants) can be roughly divided into:

- Purely Phonological Accounts: O'Connor (2002), Radanović-Kocić (1988, 1996)
- Purely Syntactic Accounts: Cavar and Wilder (1992), Progovac (1996)
- Mixed Phonological-Syntactic Accounts: Bögel et al. (2010), Halpern (1995), Schütze (1994), Zec and Inkelas (1990)
- Some work on such clitics has hinted at implications for information structure (e.g. Diesing et al. 2009)

Prosodic Inversion Accounts (Halpern 1995):

- In syntax clitics are enclitics and placed either after the first syntactic constituent or sentence initially.
- If placed sentence initially, the enclitics cannot prosodically attach to a host.
- Prosody moves the clitics after the first prosodic word ("prosodic inversion") as a last resort operation.
- Based on this type of operation and the related assumptions and stipulations, some approaches have to rely on a complex prosody-syntax interface, e.g. Bögel et al. (2010).

5 Copy and Deletion and Partial deletion

German reduplication of interrogative pronouns (see Fanselow and Cavar (2001)):

(15) *wer denkst du denn wer du bist*
 who think you ptc who you are
 'Who do you think you are?'

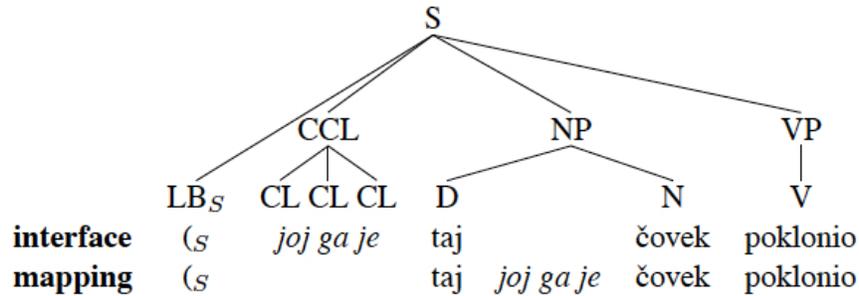


Figure 1: Complex prosody-syntax interface (Bögel et al. 2010)

Possibilities:

- Just copy: ... α ... α ...
- Copy and deletion of the c-commanded copy: ... α ... ~~α~~ ...
- Copy and deletion of the c-commanding copy: ... ~~α~~ ... α ...

Extension for the Island-split cases

Restriction to operator functions and scope: Split islands have two or more operators that are phonetically realized at different locations of each copy.

Criticism of Fanselow and Cavar (2002):

- Unrestricted syntactic operation of partial deletion

Suggestion in Fanselow and Cavar (2002):

- Observation: one constituent contains two or more information-theoretic features, e.g. topic, focus, wh
- Feature strength determines, which of the features is spelled-out, copy (movement) takes place as soon as possible
- spell out determines, which parts to realize

Problems still are:

- How to restrict the pull- (or stretching-) split constructions, and exclude crossing-splits of PPs?

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