Processing and representation of clitic doubling and scrambling

PhD project Paul Compensis – 19/03/2019 Thessaloniki
Clitic doubling: The phenomenon
Clitic doubling – The phenomenon

THE classical examples (Jaeggli 1986: 32; 12-13):

Lo vimos a Juan.  
Him.CLIT.Acc see-PRET.1ST.PL to Juan  
‘We saw Juan.’

Miguelito (le) regaló un caramel a Mafalda.  
Miguelito her.CLIT.Dat donate-a candy to Mafalda  
‘Miguelito gave Mafalda a candy.’

Definition:

“Clitic doubling is a construction in which a clitic co-occurs with a full DP in argument position forming a discontinuous constituent with it [...].” (Anagnostopoulou 2006: 520).

Possible associates: full pronoun, non-pronominal referring expressions (DP), CP  
[> not every language exhibits all the possibilities]
Clitic doubling – The phenomenon

**Bulgarian clitic doubling**

Knigata Ivan ja pročete.
book-ART.DEF Ivan her.ACC read-PRS.3SG
‘The book, Ivan finished reading it.’

> Obligatory

Decata (gi) bojadisaha *stenite*.
children them.ACC paint-PRF.3PL wall-ART
‘The children painted the wall.’

> Optional

Oštė kato stana văpors za prepabotkata mu kazah *na kolegata*, če...
More as stay.AOR-3SG question to processing-DET him.DAT tell-AOR.1SG to colleague
‘As far as processing was concerned I told my colleague that...’

> Optional
Clitic doubling: Classical approaches
Clitic doubling – Classical approaches

Movement hypothesis (Kayne 1975, 1989; Rizzi 1986)

- Clitics are pronominal heads projecting NPs
- Generated in canonical position of verbal arguments
- Then moved to another position

Example:
Pierre la a vue t.
French
Pierre CL-3SG have-3SG seen
‘Pierre has seen her.’

Problem: Clitic doubling (and also ethical datives)

Lo vimos a Juan.
Rioplatense Spanish
‘We saw Juan.’

➢ Violates the theta-criterion (Chomsky 1981)
➢ Alternative: Reinterpretation as dislocated element (but CD is subject to subjacency; and other evidence for distinguishing CLLD and CD; see below)
Clitic doubling – Classical approaches

Base-generation hypothesis (Aoun 1979; Borer 1984; Jaeggli 1982, 1986; Suñer 1988; Strozer 1976; Rivas 1977)

- Clitic is generated as affix/ infl element attached to its verbal host (in its surface position)
- Clitics absorb the case feature of the head

Kayne’s generalization: An object NP may be doubled only if it is preceded by a special (case-assigning) preposition (otherwise case-filter violation)

Miguelito (le) regaló un caramel a Mafalda. > a as clitic doubling parameter

Problem:
- Animacy restrictions on a in Spanish or humaneness on pe in Romanian (interplay with DOM) > Yo la tenía prevista esta muerte. I have foreseen this death. (Rioplatense)

>> general discussion of the clitic doubling parameter: animacy, specificity, definiteness...
Clitic doubling – Classical approaches

**Determiner head hypothesis (Torrego 1994; Uriagereke 1992, 1995)**

- $D^\circ$ can select for null NP-compl
- Doubled DPs are spec in complex DPs with $D$ and null compl
- Clitics are determiner (with null NP-compl)

**Problem**

- Cannot explain position/ movement of the clitic without additional assumptions (massive raising)
Clitic doubling – Classical approaches

Clitic voice hypothesis (Sportiche 1992/1996)

- Clitics are functional heads heading their own projection (clitic voice) in the domain of IP
- Overt or covert XP* moves to XP^ (at overt syntax or LF)
- Spec/head relation between clitic and XP*
- Movement is triggered by a feature [F]

Clitic Criterion

At LF
a. A clitic must be in a spec/head relationship with a [+F] XP
b. A [+F] XP must be in a spec/head relationship with a clitic

Generalized Licensing Criterion

At LF
a. A [+F] head must be in a spec/head relationship with a [+F] XP
b. A [+F] XP must be in a spec/head relationship with a [+F] head

Clitic Constructions Parameters

Movement of XP* to XP^ occurs overtly or covertly
Head is overt or covert
XP* is overt or covert

Problems:

- Requires the assumption of an additional functional category
- Accusative clitic is treated differently than dative clitics (not necessarily a problem)
- Large variation with regard to the feature (here: specificity)
Clitic doubling – Classical approaches

Clitic voice hypothesis (Sportiche 1992/1996)

➢ Advantage: Accounts for different construction types (as XP movement)

<table>
<thead>
<tr>
<th>Construction</th>
<th>XP*</th>
<th>Movement</th>
<th>clitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undoubled clitic (French, Italian)</td>
<td>Covert</td>
<td>Overt/covert</td>
<td>Overt</td>
</tr>
<tr>
<td>Clitic doubling (Spanish, Balkan)</td>
<td>Overt</td>
<td>Covert</td>
<td>Overt</td>
</tr>
<tr>
<td>Scrambling (German, Dutch)</td>
<td>Overt</td>
<td>Overt</td>
<td>Covert</td>
</tr>
</tbody>
</table>
Clitic doubling – Classical approaches

Additional dimensions:

- Full pronoun vs. full DP (some languages only pronoun doubling)
- Person assymetries (sometimes 1 person more frequent)

Illustration of variance:

Macedonian: all [+def] direct objects, all [+spec] indirect objects
Banat Serbian: only with 1\textsuperscript{st} and 2\textsuperscript{nd} person full pronouns (optional)

Macedonian > Albanian > Romanian > Greek > Bulgarian
+ <--- grammaticalization of clitic doubling --> -

What triggers the doubling (esp. in optional contexts)?
Views on Bulgarian clitic doubling
Clitic doubling – Classical approaches


• Observation: Objects in first position must be doubled
• Clitic doubling facilitates case identification (semantic role assignment) in non-canonical word order

Example:
Cenata ja plaštat bălgarite.
bill-DET cl.acc pay-3pl Bulgarians
The Bulgarians pay the bill. (http://sport.blagoevgrad24.bg/210240.html)

Problem:
• Gender and number can also disambiguate referents
• Only applies to object first
• Clitic doubled sentences can also be ambiguous (Leafgren 1997: 124)
• Ambiguous referents (same gender, number, animacy) are not frequent (Guentchéva 2008: 208)
Clitic doubling – Classical approaches

Definiteness marker hypothesis (Cyxun 1962: 289-290; Minčeva 1969: 3; Ivančev 1957: 139; Georgieva 1974: 75)

• Observation: mostly definite NPs are doubled

Counterexample:
Edno dete go vidjaj pluva (indefinite specific)
One child it.ACC see-AOR.1SG fall-PRS.3SG
‘I saw a child falling down.’
Clitic doubling – Classical approaches

Specificity marker hypothesis (Avgostina 1997: 92-95)

- Only specific referents can be doubled

Example
*Njakoja po-nova kola iskam da si ja kupja. > any new car
Any newer car want-PRS.1SG to REFL her.ACC buy-PRS.1SG
‘I want to buy a new car.’

Problem: Generics and interrogatives

Banani ne običam da go jam
Banana not like-I to it eat
‘I don’t like bananas’) [...].’

Kogo kog go običa?
whom.ACC who him.ACC love-PRS.3SG
‘Who loves whom?’

>> Refined version: [-generic], [-specific] cannot double
Clitic doubling – Classical approaches


• Doubled objects must be topical
• In line with observation that topic is prototypically [+def] or [+spec]

Counterexample: Contrast njakolko vs. malko (Jaeger, Gerassimova 2002)

Ima njakolko spisanija koito mnogo xora (gi) xaresvat. [+spec]
Ima malko spisanija koito mnogo xora (*gi) xaresvat. [-spec]
have few journals which many people them.ACC like-PRS.3PL
‘There are a few (certain) / a small numbers of journals that a lot of people like.’

[Ošte kato stana văpros za prepabotkata]TOP [mu kazah na kolegata, če...]FOC
More as stay.AOR-3SG question to processing-DET him.DAT tell-AOR.1SG to colleague
As far as processing was concerned I told my colleague that...’

General problem: topics and topicality are not well-defined
Clitic doubling – Classical approaches


En lieu of an example (analysis by Leafgren 2002 based on corpora):

<table>
<thead>
<tr>
<th>Discourse process</th>
<th>Grammatical effect</th>
<th>Explicitness</th>
</tr>
</thead>
<tbody>
<tr>
<td>New discourse referent</td>
<td>Reduplicated or non-reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Reintroducing a participant absent over some time</td>
<td>Reduplicated or non-reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Indicating DO status of a referent who could be mistaken as subject</td>
<td>Reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Indicating DO status (rather than IDO) in “na-drop”</td>
<td>Reduplicated pronoun or reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Conveying additional information about the referent</td>
<td>Reduplicated or non-reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Focus on a referent (contrastive and non-contrastive)</td>
<td>Red. and non-red. long form pronoun or red. and non-red. NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Heavy emotion</td>
<td>Reduplicated and non-reduplicated full NP</td>
<td>Promoted</td>
</tr>
<tr>
<td>Topicality at the clause level</td>
<td>Reduplicated pronoun or reduplicated full NP</td>
<td>Promoted</td>
</tr>
</tbody>
</table>
Subclassification and crosslinguistic comparison
General problem: very often different constructions in Bulgarian are classified as clitic doubling in the literature

First claim: three different constructions (cf. Guentchéva 1994; Krapova, Cinque 2008)

Na Marija, ti s ništo ne si ć pomognal. (Clitic left dislocation)
to Marija you with nothing NEG be.PRS.2.SG her.DAT.SG.F help.PFV-PTCP.SG.
‘Marija, you didn’t help her at all.’

Knigata Ivan ja pročete. (Clitic topicalization)
book.SG.F-ART.DEF.SG.F Ivan her.ACC.SG.F read.PFV-PRS.3SG
‘The book, Ivan finished reading it.’

Decata (gi) bojadisaha stenite. (Clitic doubling proper)
child.PL.N them.ACC.PL.F paint.PFV-PRF.3PL wall.PL.F-ART.DEF.PL.F
‘The children painted the wall.’

with different triggers/ [F] features (?)

NOTE: CLLD and CD-TOP could be the same phenomenon (cf. Krapova, Cinque 2005: 360)
Evidence for subclassification

Anagnostopoulou 1994; Alexiadou, Anagnostopoulou 1996

Clitic doubling (case/agreement marker)
- Clitic as nominal agreement morpheme on the verb
- doubled DP in complement position of the verb
- clitic and full DP form a chain for case checking

CLLD (topic marker)
- clitic as topic marker
- full DP base generated in IP adjuncts
- operator-variable chain expressing topichood
Evidence for subclassification

**Clitic doubling vs. clitic left dislocation/clitic topicalization**

**Basic observation:**
- case ambiguation role possible in CLLD/ CD-TOP (redundant in canonical order)
- Clitic obligatory in CLLD/CTOP; optional in CDprop

**Guentchéva 1994:** Fronted vs post-verbal object in CD: different degrees of object topicality

**Anagnostopoulou 2012:** CD and CLLD should always be distinguished (but sometimes problematic e.g., for Catalan)

- **Spanish: CD is sensitive to Kayne’s Generalization, CLLD not**

Bulgarian: **na-drop phenomenon** (Vakareliyska 1994; Krapova, Cinque 2005)
- Preverbal IO DPs: preposition na can be dropped; Post-verbally not

(Na) men sa mi kazali, če... CLLD
To me.DAT are me.DAT say-PRF.3SG that
Tozi film mi haresva samo *(na) mene. CD
This film me.DAT appeal-PRS.3SG to me.DAT
Evidence for subclassification

- **CLLD any maximal phrase; CD only DP**
  Bulgarian: only CLLD (Krapova, Cinque 2008: 263)

  
  \[
  \text{[cp Če 
  \text{Russia ni e osvobodila ot turcite],}
  \text{That Russia us.cl.acc be.3sg liberated.part from Turc.art}
  \]
  \[
  \text{go znajat i decata,}
  \text{it.cl.acc know.3pl also children.art}
  \]

  ‘Even children know that Russia has liberated us from the Turks.’

- **Semantics: Psych verbs/experiencer objects/ ima (to have): CD (Krapova/ Cinque 2008)**

- **Indefinite specific referents:** only CLLD, not CLRD (Krapova, Cinque 2005)
  Also claimed for CD (see above) > however, only examples for object first (arguebly not for CDprop>; requires testing)

  >> in CLLD: position causes uptake via resumptive clitic (Krapova, Cinque 2008; Radeva-Bork 2012)

  >> in CD: other factors

  (alternative view: Radeva-Bork 2012: not fully separate categories)
Clitic doubling proper

If the assumption is correct, that clitic doubling proper is a construction of its own kind and not necessarily topic marking, what then motivates its occurrence?

Crosslinguistic examination

Clitic doubling is a syntactic counterpart of scrambling (Sportiche 1996, Alexiadou und Anagnostopoulou 1997)

> Structural similarities

Based on this diagnosis:

> Functional similarities?

(> Empirical similarities?)
Structural similarities


> One single parameter:

- Move XP to Spec, AgrOP: Scrambling languages
- Move X° to AgrO: Doubling language

>> AgrOP instead of Clitic Voice

>> CD and SC for checking of a categorial feature in AgrO

CLLD/ Contrastive left dislocation correspondence (Anagnostopoulou 1994)

- CLLD corresponds to German Contrastive Left Dislocation (marking aboutness topic)
Structural similarities

**Binding evidence: SC and CD yield anti weak crossover effects**

*Peter hat seinen_{i} Nachbarn [jeden Gast]_{i} vorgestellt.
Peter has his neighbour every guest introduced
Peter hat [jeden Gast]_{i} gestern seinem_{i} Nachbarn t_{i} vorgestellt.
Peter has every guest yesterday his neighbour introduced

*O Petros epestrpse [tu idioktiti tu]_{i} [to kathe aftokin}o{t}o]_{i} xtes to vradi.
The-Peter-NOM returned-3S the-owner-GEN his the every car-ACC yesterday the night
O Petros toi epestrpse [tu idioktiti tu]_{i} [to kathe aftokin}o{t}o]_{i} xtes to vradi.
‘Peter returned his owner every car last night.’

Majku mu*[i/j] običa Ivan_{i}.
Ivan_{i} go_{i} običa majka mu*[i/j].
‘His mother loves Ivan.’ (Gerassimova, Jaeger 2002: exp. 26)
Structural similarities

**Binding evidence: Principle C**

*Hans hat ihr_{i} [Marias_{i} Buch] zurückgeben.
?Hans hat [Marias_{i} Buch] ihr_{i} zurückgegeben.

*O Janis tis_{i} epestrapse [to vivlio tis Marias_{i}]_{j} simiomento
?O Janis tis_{i} to epestrapse [to vivlio tis Marias_{i}]_{j} simiomento
The-John him.DAT it.ACC gave back [the book of Mary]-ACC with notes
‘John gave her back Mary’s book full of notes.’

*Hristo ì_{i} dade [knigata na Marija]_{j}.
Hristo her.DAT give-PRS.3SG book-ART of Marija.
‘Hristo gives her Marija’s book.’

Kotkata, s kojato Todor_{i} živeeše, go_{i} napusna.
The cat who Todor lived with left him.
*Toj_{i} napusna kotkata, s kojato Todor_{i} živeeše.
(Gerassimova, Jaeger 2002: exp. 21)
Structural similarities

Binding evidence: Quantifier floating:
Hans hat die Bücher seinem Bruder alle zurückgegeben.
Hans has the books his brother all given back

I María *(ta) epestrepse ola ston idioktiti tus.
The-Mary them.ACC gave back all to-the owner-ACC theirs
‘Mary returned all to their owner.‘

Not in Bulgarian (?)
Structural similarities

- **Interpretational evidence**
  Sensitive to referentiality (definiteness): in German, Greek and Bulgarian
  Strictly anaphoric: in German, Greek and Bulgarian

- **Prosodic evidence**
  Destress of scrambled/doubled NP: in German, Greek and Bulgarian

- **Experiencer object: systematic occurrence of CD and SC**

  [...] dass meinem Bruder deine Geschichte gefiel.
  [...] that my brother your stories appeal to

  To vivlio *(tu) aresi tu Petru.
  The book him.DAT appeal-3SG the-Peter-DAT
  'The book appeals to Peter.'

  Tozi film **mu xaresa na Ivan**.
  This film him.ACC appeal-3SG to Ivan
  This movies appeals to Ivan.'

Requires further testing on Bulgarian
Excursus: German word order alternations

Neutral/ canonical word order (SUBJ > IO > DO)
Heute hat der Vater dem Sohn einen Hund geschenkt.
Today the father gave the son a dog.

Clause-initial word order alternation (> object first)
What about the son? (son = topic)
Dem Sohn hat der Vater heute einen Hund geschenkt.
To the son the father gave a dog today.
What about the dog? (father = topic)
Den Hund hat der Vater dem Sohn heute geschenkt.

German left dislocation

Dem Sohn | dem hat der Vater heute einen Hund geschenkt.
Concerning the son, the father gave him a dog today.

NOTE: German also requires a resumptive pronoun in dislocation

Very likely:
SUBJ = NOM = TOP (=+def)

Sensitive to topicality

NOTE: German also requires a resumptive pronoun in dislocation
**Excursus: German word order alternations**

**Clause-medial word order alternation (> scrambling)**

Heute hat der Vater dem Sohn einen Hund geschenkt.
Heute hat geschenkt.

- der Vater einen Hund dem Sohn
- dem Sohn der Vater einen Hund
- dem Sohn einen Hund der Vater
- einen Hund der Vater dem Sohn
- einen Hund der Sohn dem Vater

However: **clear preferences** (similar to overall agent-first preference)

- Indirect object > direct object
- definite > indefinite
- Animate > inanimate
- Actor > undergoer
Excursus: German word order alternations

<table>
<thead>
<tr>
<th>Construction type</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>German left dislocation</td>
<td>Dem Sohn, <strong>dem</strong> hat der Vater heute einen Hund geschenkt. Concerning the son, the father gave him a dog today.</td>
</tr>
<tr>
<td>(GLD)</td>
<td></td>
</tr>
<tr>
<td>Topicalization (G-TOP)</td>
<td>Dem Sohn hat der Vater heute einen Hund geschenkt.</td>
</tr>
<tr>
<td>Scrambling (G-SC)</td>
<td>Heute hat dem Sohn der Vater einen Hund geschenkt.</td>
</tr>
</tbody>
</table>

>> Scrambling determined by prominence-based principles (cf. Schlesewsky et al. 2003, Struckmeier 2014)
Clitic doubling proper: prominence features?

Research question: Is clitic doubling proper in Bulgarian determined by preferences along prominence features?

Indirect object > direct object >>> IO more frequent
definite > indefinite >>> only [+def] or [+spec]
Animate > inanimate >>> at least in Spanish and Romanian clear effect
Actor > undergoer

- Anagnostopoulou 1994: “[...] clitic doubling constructions are subject to various morphological and semantic restrictions which are beyond specificity and which are open to parametric variation.“ (Anagnostopoulou 1994: 217)
  >> parameterization along hierachies (definiteness, animacy)
- Research on Balkan languages: “other semantic properties such as prominence, specificity, presuppositionality, familiarity, definiteness and topicality have increasingly been scrutinized as to their relevance for the phenomenon of clitic doubling.” (Kallulli und Tasmowski 2008, S. 10)
- Aissen 2003; Gavaró,Torrens, Wexler 2010 : CD is sensitive to prominence scales
Clitic doubling proper: prominence features?

Animacy/agentivity effects:

- CD prop with Psych and physical perception predicates (Krapova, Cinque 2008)

Tozi film mu xaresa na Ivan.
This film him.ACC appeal-3SG to Ivan
‘This movies appeals to Ivan.’

Agentivity vs object first interpretation

Dvete nevinni žertvi *(gi) izjali vălzi tazi sutrin.
Two-ART innocent victims them.ACC ate wolves this morning
‘The two innocent victims were eaten by wolves this morning.’

However:
Dvamata mesari (gi) izjali pracetata tazi sutrin.
Two-ART butchers them.ACC ate pigs-ART this morning
‘The two butchers ate the pigs this morning.’
My project
Idea

Correspondence hypothesis:

STRUCTURAL ASPECT:
CD and SC are very similar syntactic operations (clause-medial operations)

FUNCTIONAL ASPECT:
CD and SC contrasted with CLLD/CD-TOP and LD/G-TOP might exhibit a comparable functional split (topic vs. prominence based)

PROCESSING ASPECT:
Is there a similar difference visible in the processing of the constructions?

➢ Behavioural measures
➢ Neurophysiological measures
Literature


Thank you very much for your attention!