A cartographic approach

to the second language acquisition

of German weak pronouns

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In this paper I discuss some structures that involve use and
placement of weak pronominal objects in German as a
second language acquired by adult Italian native speakers at
different levels of proficiency. I will show that pronominal
objects are placed in positions dedicated to maximal
projections that are either topics or foci in the target
language. This leads to the conclusion that second language
grammars are not wild grammars but are interlanguage
grammars that can be accounted for with a cartographic
approach to language structure.

Thanks for suggesting the structures of the OGJT

1. Introduction

Several hypotheses have been developed in the last thirty years concerning the role of
Universal Grammar (UG), i.e. the system of innate principles and parameters with
which the human language faculty is endowed, in second language acquisition. Three
main hypotheses have been developed. According to the Fundamental Difference
Hypothesis (FDH) (Clahsen and Muysken, 1986, 1989, Bley-Vroman, 1990), the
acquisition of a second language in adulthood differs from the acquisition of a first
language by children and it is not constrained by the same principles that guide the
acquisition of a first language. Instead, L2 acquisition is claimed to be driven by
general cognitive mechanisms like problem solving. On the opposite side is the
Direct-Access Hypothesis (Flynn, 1987) according to which L2 grammars are fully
constrained by UG and the knowledge of a first language plays a marginal role in the
acquisition of a second language. At an intermediate position are the Indirect Access
Hypothesis (White 1985, 1989) and the Full Transfer/ Full Access (FT/FA)
Hypothesis (Schwartz and Sprouse, 1994, 1996) according to which the knowledge of
a first language plays a crucial role in the earliest stages of acquisition of a second
language and UG can be accessed via the L1. In developing grammars, restructuring
and parameter resetting are guided by UG as a result of the exposure to the target
language.

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Enjoy Linguistics! Papers offered to Luigi Rizzi on the occasion of his 60th birthday
This paper is an attempt to show that the grammars of Italian learners of L2 German are constrained by UG and are not wild grammars. In particular, I will try to show that pronominal objects are not placed randomly, but they surface in positions dedicated to foci or topics in the target language.

2. Cartographic approach to language structure
In his cartographic approach to language structure (Rizzi, 1997), Luigi Rizzi proposed that the complementizer layer is constituted by two different systems: The system of Force and Finiteness, which delimits the complementizer layer upward and downward, and the system of Topic and Focus, which is sandwiched between the higher and the lower complementizer position. The Force-Finiteness system satisfies selectional criteria, i.e., it is responsible for the selection of the type of the sentence and the content of the sentence it selects. The Topic-Focus system has interpretative properties, i.e., it conveys information about the information structure status of preposed elements. The structure proposed by Rizzi is sketched in (1):

(1) Force….(TOP*) (FOC) (TOP*) Finiteness IP

The Topic projection is articulated in Topic, the preposed element expressing old information, and Comment, the part of the sentence introducing new information. The Focus projection is articulated in Focus, the preposed element bearing focal stress, and Presupposition, the part of the sentence expressing the information shared by the discourse participants. Depending on their interpretative content, preposed elements target the specifier position of one of the two projections.

3. The German prefield and middlefield
Since works on the Split-CP have been developed (Rizzi, 1997), more structured CP and IP layers have been proposed also for German (Frey 2000, 2004a, 2004b, 2004c Grewendorf 2005). In particular, both the German left periphery and the middlefield have been shown to be split into different projections that can host focalized and topicalized elements.

3.1. The German prefield
Frey (2004c) proposed that the left periphery of the German clause is composed of different functional projections that can host contrastively focused and topical elements. He proposed a layered structure for the German prefield that can account for the different types of elements occurring there. The structure proposed by Frey (2004c) is sketched in (2):

(2) [CP…[KontrP…[FinP…[FP…]]]]

3.2. The German middlefield
Evidence has been provided for the existence in the German middlefield of dedicated positions for topicalized and focalized elements. On the basis of work by Belletti (2004) for Italian and by Frey (2004b) for German, Grewendorf (2005) developed a much richer layered structure for the German middlefield, which somehow parallels
the structure proposed by Rizzi (1997) for the left periphery of the clause in Italian. Grewendorf (2005) individuated both a higher and a lower focus-topic field in the area between the complementizer and the VP. The higher topic-focus field is located above the Case position of the subject whereas the lower topic-focus field is situated in the area between the Case position of the subject and the Case position of the object.

3.2.1 The higher topic-focus field
Similarly to Frey (2000, 2004b), Grewendorf (2005) provided evidence for the existence of a designated position for topics and contrastively focused elements directly above the base position of sentential adverbs such as *vermutlich* (presumably) and *wahrscheinlich* (probably). Examples in (2) and (3) show evidence for the existence of dedicated positions for topic and contrastively focused elements in the portion of the clause above the position of the derived subject.

- The clause-internal higher Topic position
According to Grewendorf (2005), given the context in (1), the most appropriate continuation is (2a), in which the accusative DP precedes the sentential adverb *wahrscheinlich*. (2b), in which the accusative DP follows the sentential adverb, seems inappropriate here:

(1) Es gibt etwas Neues über den amerikanischen Präsidenten.
   'There is something new about the American president.'

   'Next year a friend from Europe will probably propose the American president for the Nobel Peace Prize.'

b. # Nächstes Jahr wird wahrscheinlich den Amerikanischen Präsidenten ein Freund aus Europa für den Friedensnobelpreis vorschlagen.
   'Next year a friend from Europe will probably propose the American president for the Nobel Peace Prize.'

- The clausal internal higher Focus position
Grewendorf (2005) provided evidence for the existence of a focus position in the higher topic-focus field targeted by contrastively focused elements, as exemplified in (3a-c).
(3) a. weil in MÜNchen die besten Fußballer spielen (und nicht in Bremen).
   since in Munich the best soccer-players play (and not in Bremen)
   ‘since the best players play in Munich (and not in Bremen).’

b. weil den StudENten Maria geküsst hat (und nicht den Professor).
   since the student-ACC Maria-NOM kissed has and not the professor
   ‘since Maria has kissed the student (and not the professor).’

c. Heute wird Anna NeTREBko erfreulicherweise die Violetta singen
   Today will Anna Netrebko fortunately the Violetta sing
   (und nicht Katia Ricciarelli).
   (and not Katia Ricciarelli)
   ‘today will fortunately Anna Netrebko sing the Violetta (and not Katia 
   Ricciarelli).’

According to Grewendorf (2005), the higher portion of the clause between the
complementizer position and the surface position of the subject is then split into topic
and focus positions, as sketched in (3d):

(3) d. C (TOP) (FOC) (TOP) Subject

➢ The clause-internal lower focus position

On the basis of the proposal made by Belletti (2004) for the left-periphery of vP in
Italian, Grewendorf (2005) also showed the existence of a lower focus position in the
left periphery of the VP/AgroP in German. Frey and Pittner’s (1998) findings about
the canonical position of certain adverbials located between the agreement area of the
subject and the agreement area of the object provided a good test in order to define
the locus of the lower focus position. Among these adverbials, there are subject-
related adverbs such absichtlich (intentionally), freiwillig (voluntarily) and gerne
(with pleasure), which are claimed to be base generated between the subject and the
object. The portion of the clause situated below these classes of adverbials can be
understood as the area in which the lower focus is situated:

(4) weil Hans absichtlich den Computer zerstörte.
   since Hans intentionally the computer destroyed
   ‘since Hans destroyed the computer intentionally.’

One piece of evidence provided by Grewendorf for the existence of a lower focus
position is given by the fact that focalized elements precede the negative polarity item
je (ever), which in its unmarked position precedes the Case position of the direct
object, as shown in (5):

(5) a. Wen hat Ede je beleidigt?
   Who-ACC has Ede ever offended
   ‘Who has Ede ever offended?’

b. Ede hat erfreulicherweise NIEMANDEN je beleidigt.
   Ede-NOM has fortunately nobody-ACC ever offended
   ‘Ede has fortunately ever offended anybody.’
As shown by the example in (5b), there is a position dedicated to focalized objects which is higher in the structure than SpecAgroP but lower than the position of the sentence adverbiais. The relevant structure on the lower focus position argued for by Grewendorf (2005) for the German *middlefield* is provided in (5c):

(5) c. [FocP [AgroP]]

➢ **The clause-internal lower topic position**

Grewendorf (2005) claimed that the lower focus phrase is surrounded by topic projections, as shown in (6), in which a topic phrase follows the lower focus projection:

(6)a. Wer wird heute die Violetta singen?
   Who-NOM will today the violetta-ACC sing
   ‘Who will sing the violetta today?’

b. Heute wird erfreulicherweise Anna Netrebko die Violetta singen.
   Today will fortunately Anna Netrebko-NOM the Violetta-ACC sing
   ‘Today will fortunately Anna Netrebko sing the Violetta.’

A further piece of evidence provided by Grewendorf (2005) for the existence of low topics is given by the position of the accusative and dative pronouns in (7b), which have to be considered as topical due to the question (7a):

(7)a. Wer hat den Hans über das Ergebnis informiert?
   Who has the Hans-ACC of the result informed
   ‘Who has informed Hans of the result?’

b. (Ich glaube), dass offenbar seine Mutter es ihm mitgeteilt hat.
   I think that obviously his mother it him told has
   ‘I think that obviously his mother told it to him.’

### 4. The study

In order to test knowledge of pronoun use and pronoun placement in German, I ran two tests: an elicited production task (henceforth EPT) and an oral grammaticality judgment task (henceforth OGJT).

#### 4.1 The EPT

#### 4.1.1 Participants

20 Italian native speakers participated into the experiment. They were all learning German at a university at the time of testing. Their proficiency in German was classified on the basis of the Common European Framework of Reference for Language (CEFR). According to the CEFR, they were divided into intermediate (15 speakers), namely those attending classes at B1/B2 level and advanced (5 speakers), namely those attending classes at C1/C2 level. Participants’ age ranged between 19 and 26 years old. 14 German native speakers served as a control group.
4.1.2 The task
Participants taking part into the EPT were required to listen to a statement such as (8) made by a girl (Lydia) and to answer the question (9) that was asked 500ms after the statement had been uttered. Both the statement and the question were auditory and visually presented. In order to answer the question, participants were instructed to use the complementizer ...dass introducing declarative subordinate clauses in German, which appeared on the PC screen immediately after the question had been asked (10). They were also instructed to pronominalize the object whenever they felt it natural.

(8) Lydia:    Ich lese jeden Abend das Buch.
             I read every evening the book
             ‘I read the book every evening.’

(9) Question:    Was hat Lydia über das Buch gesagt?
                 What has Lydia about the book said?
                 ‘As for the book, what has Lydia said?’

(10) a. Expected answer: . dass sie es jeden Abend liest.
       that she it every evening reads
       ‘(She has said) that she reads it every evening.’

       b. Non target answer:  *dass sie jeden Abend es liest
                               that she every evening it reads
                               ‘(She has said) that she reads it every evening’

       c. Non felicitous answer: dass sie das Buch jeden Abend liest.
                                  that she the book every evening reads
                                  ‘(She has said) that she reads the book every evening.’

Participants were given 8000 ms. to answer the question. 24 items were used. 34 fillers were also inserted.

4.2 The OGJT

4.2.1 Participants
20 Italian Native Speakers took part into the experiment. Three levels of proficiency were individuated: Beginners (4 speakers), Intermediate (9 speakers) and Advanced (7 speakers). A classification according to CEFR as in the EPT was possible only for some speakers because some of them attended courses at universities that do not adopt the CEFR classification but a different criterion. Such speakers were divided into Level 1, Level 2 and Level 3, instead. I considered Speakers of level 2 as intermediate (B1/B2 of CEFR) and speakers of level 3 as advanced (C1/C2 of CEFR). The beginners were attending classes at a university that adopt the classification proposed by the CEFR. The speakers’ age ranged between 19 and 35 years old.
4.2.2 The task
The oral grammaticality judgment task was run in order to test weak object pronoun placement in German tensed main clauses. The experimental subjects were presented with two pictures. In the first picture the main character either performed an action or introduced some objects or people. In the second picture the same character always performed an action on the object/person introduced in the first picture. Each picture was accompanied by a sentence in which the main character auditory introduced the object on which the action was then performed or described what was happening. At the end of the second sentence, the same pictures appeared on the PC screen. At this point participants were required to either repeat the second sentence if they judged it target consistent or to reformulate it in the way they felt most natural if they judged it non target or inappropriate in the given context. Participants were given 10000 ms. time to provide their answers. 48 items and 24 fillers were used. An example of an item proposed in the OGJT is provided in the following. The structure that I give as an example will be called Type1-S structure:

- Context sentence (uttered in correspondence of the picture on the left)
  
  Das ist mein Mann.  
  This is my man  
  ‘This is my man.’

- Structure to be repeated or corrected according to the participants’ judgment (uttered in correspondence of the picture on the right)

  *Ungrammatical*  
  *Ich ihn heiratete im Jahr 2000.*  
  *I married him in the year 2000*  
  ‘I married him in 2000.’

  *Grammatical*  
  I married him in the year 2000  
  ‘I married him in 2000.’
Four different types of structures were proposed in the OGJT:

**Type 1-P:**

*Ungrammatical*
*Ich ihn habe um fünfzehn Uhr darauf gesetzt.*
I him have at-the fifteen hour on-it seated
‘I seated him there at 3p.m.’

*Grammatical*
Ich habe ihn um fünfzehn Uhr darauf gesetzt.
I have him at-the fifteen hour on-it seated
‘I seated him there at 3p.m.’

**Type 2:**

*Ungrammatical*
*Um neun Uhr badete es ich.*
At-the nine hour bathed it I
‘I bathed him at nine.’

*Grammatical*
Um neun Uhr badete ich es.
At-the nine hour bathed I it
‘I bathed him at nine.’

**Type 3:**

*Ungrammatical*
*Ich kaufte am Sonntag sie.*
I bought on-the Sunday her
‘I bought it on Sunday.’

*Grammatical*
Ich kaufte sie am Sonntag.
I bought her on-the Sunday
‘I bought it on Sunday.’

### 5. Results

In the EPT, the Italian native speakers did not produce target answers in all the cases. In fact, some of the speakers placed pronouns in the ungrammatical post-adverbial position, as shown in Table (1):

<table>
<thead>
<tr>
<th>Experimental subjects</th>
<th>C S pr Adv V</th>
<th>*C S Adv pr V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>(139/263)</td>
<td>(124/263)</td>
</tr>
<tr>
<td>Controls</td>
<td>99%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>(300/301)</td>
<td>(1/301)</td>
</tr>
</tbody>
</table>

Similarly, in the OGJT the Italian Native Speakers did not perform native-like in all the cases. In fact, instances of non-target production were found for all the structures investigated, as shown in Table (2) through (5).
Table 2: Type1-S structure

<table>
<thead>
<tr>
<th>Experimental subjects</th>
<th>Repeated</th>
<th>Properly changed</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical</td>
<td>21%</td>
<td>68%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>(25/120)</td>
<td>(81/120)</td>
<td>(0/42)</td>
</tr>
<tr>
<td>Grammatical</td>
<td>92.5%</td>
<td>1%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(111/120)</td>
<td>(1/120)</td>
<td>(42/42)</td>
</tr>
</tbody>
</table>

Table 3: Type1-P structures

<table>
<thead>
<tr>
<th>Experimental subjects</th>
<th>Repeated</th>
<th>Properly changed</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical</td>
<td>5%</td>
<td>55%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>(6/120)</td>
<td>(66/120)</td>
<td>(0/42)</td>
</tr>
<tr>
<td>Grammatical</td>
<td>66%</td>
<td>1%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(79/120)</td>
<td>(1/120)</td>
<td>(42/42)</td>
</tr>
</tbody>
</table>

Table 4: Type2-structures

<table>
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<tr>
<th>Experimental subjects</th>
<th>Repeated</th>
<th>Properly changed</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical</td>
<td>33%</td>
<td>58%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>(40/120)</td>
<td>(70/120)</td>
<td>(0/42)</td>
</tr>
<tr>
<td>Grammatical</td>
<td>79%</td>
<td>1%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(95/120)</td>
<td>(1/120)</td>
<td>(42/42)</td>
</tr>
</tbody>
</table>

Table 5: Type3-structures

<table>
<thead>
<tr>
<th>Experimental subjects</th>
<th>Repeated</th>
<th>Properly changed</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical</td>
<td>27.5%</td>
<td>59%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>(33/120)</td>
<td>(71/120)</td>
<td>(0/42)</td>
</tr>
<tr>
<td>Grammatical</td>
<td>89%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>(107/120)</td>
<td>(7/120)</td>
<td>(42/42)</td>
</tr>
</tbody>
</table>

6. Discussion

The Italian native speakers did not produce target answers in all cases but instead they produced ungrammatical structures both in the EPT and in the OGJT. The cartographic approach to language structure as developed for German allows us to show that the Italian native speakers did not produce wild grammars but they placed the pronominal objects in positions that are dedicated to maximal projections in German. For the post-adverbial placement of the pronominal object in subordinate and main clauses in German (see Table 1 and Table 5, respectively), the claim can be made that pronouns occupy one of the positions that characterizes the lower topic-
focus area. The relevant part of the structures is sketched in (11a-b) for subordinate and main clauses respectively:

(11)a. [C dass [AgrSP ich[AdvP gestern [FocP/TopP ihn…[VP …]]]]]

b. [CP ich [C kaufte [AdvP am Sonntag [FocP/TopP sie [VP…]]]]]

As for the pre-subject placement of the pronominal objects in tensed main clauses (see Table 4), the claim can be made that the pronominal objects surface in one of the focus or topic positions of the higher topic-focus field. The relevant structure is shown in (12):

(12) [CP Um neun Uhr [C badete [FoP/TopP es [AgrSP ich …]]]]

In the case of the pre-subject pronominal placement, it can be alternatively claimed that the subject itself targets one of the positions of Focus and Topic of either the higher or the lower field. In fact, it has been shown that the pronominal object can precede the pronominal subject in German when the subject is focalized as shown in (13) below (example taken from Frey 2006):

(13) weil’ s ihm ER nicht geglaubt hat.
    ‘Since he has not believed it him.’

Finally, as far as preverbal placement of the pronominal objects is concerned (see Table 2 and Table 3), the claim can be made that pronominal objects target the focus position of the left periphery in the German pref. The relevant structure is sketched in (14):

(14) [CP Ich [KontrP ihn [FinP heiratete [VP…]]]]

7. Concluding remarks
In this paper I have shown that the non-target placement of pronominal objects in German as a second language can be accounted for in a cartographic approach to language structure. I have shown that the Italian native speakers do not produce wild grammars but rather use positions dedicated to maximal projections (either Foci or Topics) in the target language.

References