A Persian lesson on periphrasis, typology and formal grammar

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PER-GRAM Project
DFG (Germany) / ANR (France)
http://hpsg.fu-berlin.de/Projects/PerGram/

Typology of Periphrasis
Guidlford, June 7, 2009
Introduction

- Two goals
  - Discuss how typological and formal points of view on periphrasis diverge
  - Advertise an interesting case: the Persian progressive periphrase

(1) Maryam dâr-ad in tâblo=râ mi-foruš-ad.
   Maryam have.PRS-3SG this painting=DDO IPFV-sell.PRS-3SG
   ‘Maryam is selling the painting.’

- General project: PER-GRAM
  An implemented HPSG grammar and lexicon for Persian
  DFG (Germany) / ANR (France)
  http://hpsg.fu-berlin.de/Projects/PerGram/

- See Bonami & Samvelian (2009) for periphrases in Persian in general; here we focus on the progressive.
Outline

1 The general issue: periphrasis in typology and formal grammar

2 The progressive in Persian

3 A reductionist analysis

4 Conclusions
The view from typology

- Periphrasis occupies a typological space between ordinary inflectional morphology and ordinary syntactic construction.
- This space is structured along many dimensions:
  - Degree of syntagmatic cohesion (single word ↔ ‘free’ syntax)
  - Types of features expressed
  - Degree/Mode of integration in the inflectional paradigm
  - etc.
- To study that typological space, we need to be inclusive.
  - Any construction
    - which can be seen as multiword
    - which expresses what can be conceived as a morphosyntactic feature
  counts as a periphrase.
The view from formal grammar

- Two ways of dealing with periphrases:
  - Reductionist approach: the periphrase is really an instance of ‘normal’ syntax
  - Inflectional integration: the periphrase is a multiword combination filling a cell in the inflectional paradigm

- Although a growing body of evidence shows that inflectional integration exists, there are good reasons to be skeptical
  - We have good tools to deal with synthetic inflection
  - We have good tools to deal with ‘normal’ syntax
  - Existing approaches to inflectional integration treat it as unusual inflection (Ackerman and Stump, 2004; Bonami and Samvelian, 2009) and/or unusual syntax (Ackerman and Webelhuth, 1998; Blevins, to appear).

☞ The most elegant analysis from a formal, synchronic, monolingual perspective is often a reductionist analysis.

- Our contribution: this alternative should be evaluated case by case, on the basis of empirical evidence.
Example: the Persian perfect

<table>
<thead>
<tr>
<th></th>
<th>PERFECTIVE</th>
<th>IMPERFECTIVE</th>
<th>PERFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRESENT</strong></td>
<td>***</td>
<td>mi-xar-ad</td>
<td>xarid-e-ast</td>
</tr>
<tr>
<td><strong>DIR.</strong></td>
<td>xarid</td>
<td>mi-xarid</td>
<td>xarid-e bud</td>
</tr>
<tr>
<td><strong>PAST IND.</strong></td>
<td>xarid-e-ast</td>
<td>mi-xarid-e-ast</td>
<td>xarid-e bud-e-ast</td>
</tr>
<tr>
<td><strong>SUBJUNCTIVE</strong></td>
<td>be-xar-ad</td>
<td></td>
<td>xarid-e bâš-ad</td>
</tr>
</tbody>
</table>

- The red forms are periphrastic (noncohesive),
- Costs of reducing the periphrastic forms to ‘normal’ syntax:
  - lexemes would be systematically defective for nonpresent [PRF +] forms (except budan)
  - budan would be defective for all [PRF −] forms
  - either budan would be defective for the present perfect or its use would be blocked by the existence of a synthetic form
  - budan would use [PRF −] morphology to express [PRF +]

☞ In this instance the cost of a reductionist approach is too high
☞ See (Bonami and Samvelian, 2009) for an inflectional analysis
Outline

1. The general issue: periphrasis in typology and formal grammar
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Ways of expressing progressivity

• Imperfective forms are compatible with any imperfective aspect; for telic verbs we get progressive or habitual readings

(2) Maryam madrase mi-raft.
Maryam school IPFV-go.PST[3SG]
‘Maryam was going to school.’/‘Maryam used to go to school.’

• The progressive periphrase: dâštan+finite verb

(3) Maryam dâšt madrase mi-raft.
Maryam have.PST[3SG] school IPFV-go.PST[3SG]
‘Maryam was going to school.’

• Lexical progressives: noun/adjective+noun or infinitive

(4) a. Maryam dar hâl-e madrase raft-an ast.
Maryam in mood-EZ school go-INF COP.PRS.3SG
‘Maryam was going to school.’

b. Maryam mašqul-e madrase raft-an ast.
Maryam occupied-EZ school go-INF COP.PRS.3SG
‘Maryam was going to school.’
Why a periphrase (1/3)

- No subjunctive use of dâštan+finite verb

(5) * Fekr mi-kon-am ke Maryam dâr-ad be-dav-ad. (intended) ‘I think that Maryam is running.’

(6) Fekr mi-kon-am ke Maryam mašqul-e davidan bâš-ad. (intended) ‘Maryam is not running.’

- No negative use of dâštan+finite verb

(7) a. * Maryam na-dâr-ad (ne-)mi-dav-ad. (intended) ‘Maryam is not running.’
   b. *Maryam (na-)dâr-ad ne-mi-dav-ad.

(8) Maryam mašqul-e davidan nist.

(9) Maryam ne-mi-dav-ad.
Why a periphrase (2/3)

• *dâštan*+finite verb is incompatible with the perfect

(10)  
  Maryam certainly have.PRS.PRF-3SG run.PRS.PRF-3SG  
  (intended) ‘Maryam must have been running.’  
  b. *Maryam hatman dâr-ad davide-ast.*  
  Maryam certainly have.PRS-3SG run.PRS.PRF-3SG  
  c. *Maryam hatman dâšte-ast dav-ad.*  
  Maryam certainly have.PRS.PRF-3SG run.PRS-3SG

(11) Maryam hatman mašqul-e david-an bude-ast.  
     Maryam certainly occupied-EZ run-INF be.PRS.PRF-3SG

• *dâštan*+finite verb is incompatible with the future

(12)  
  a. *Maryam xâh-ad dâst xâh-ad david.*  
  Maryam FUT-3SG have FUT-3SG run  
  (intended) ‘Maryam will be running.’  
  b. *Maryam xâh-ad dâst david.*  
  Maryam FUT-3SG have run  
  c. *Maryam dâr-ad xâh-ad david.*  
  Maryam have.PRS-3S FUT-3SG run

(13) Maryam mašqul-e david-an xâh-ad bud.  
     Maryam occupied-EZ run-INF FUT-3SG COP
Why a periphrase (3/3)

- Our account:
  - **Dâštan** + finite verb realizes a morphosyntactic feature [PROG +]
  - Restrictions on the use of **dâštan** + **finite verb** follow from FCRs:
    - ASP ⊃ [MOOD ind]
    - PROG ⊃ [ASP ipfv]
    - [TNS fut] ⊃ [PROG −]
  - By contrast, **mašqul** expresses ‘progressive’ as its lexical meaning but does not realize a [PROG +] feature
    - ⇒ not constrained by the FCRs
  - Synthetic imperfective forms are underspecified with respect to the PROG feature
    - ⇒ possible wherever ASP is possible.
  
- Typologically speaking, **dâštan** + **finite verb** qualifies as a periphrase
Why is it interesting

- Both the auxiliary and main verb are finite forms
- Systematic cumulative multiple exponence

<table>
<thead>
<tr>
<th>PRESENT</th>
<th>DIR. IPFV. PAST</th>
<th>IND. IPFV. PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S dår-am</td>
<td>mi-dav-am</td>
<td>dâšt-am</td>
</tr>
<tr>
<td>2S dår-i</td>
<td>mi-dav-i</td>
<td>dâšt-i</td>
</tr>
<tr>
<td>3S dår-ad</td>
<td>mi-dav-ad</td>
<td>dâšt</td>
</tr>
<tr>
<td>1P dår-im</td>
<td>mi-dav-im</td>
<td>dâšt-im</td>
</tr>
<tr>
<td>2P dår-id</td>
<td>mi-dav-id</td>
<td>dâšt-id</td>
</tr>
<tr>
<td>3P dår-and</td>
<td>mi-dav-and</td>
<td>dâšt-and</td>
</tr>
</tbody>
</table>

- NB: dâštan is irregular in not taking the imperfective prefix *mi-*. This is general and has nothing to do with the progressive.

(14) Omid sešanbe-hâ madrase *raft/ mi-raft.
Omidi went to school on Tuesdays.'

(15) Omid sešanbe-hâ kelâs-e piâno dâšt/ *mi-dâšt.
‘Omid took piano lessons on Tuesdays.'
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Clausal complements in Persian

- Clausal complements always follow the head, whereas other complements tend to precede the head.

(16) Maryam mi-dân-ad [ ke Omid ketâb=râ be Sârâ dâd].
Maryam IPFV-know.PRS-3SG Omid this book=DDO to Sara give.PST[3SG]
'Maryam knows that Omid gave the book to Sara.'

(17) * Maryam [ ke Omid ketâb=râ be Sârâ dâd] mi-dân-ad.
    Maryam that Omid book=DDO to Sara give.PST[3SG] IPFV-know.PRS-3SG

(18) a. Maryam madrase raft.
    Maryam school go.PST[3SG].
    'Maryam went to school.'

b. Maryam raft madrase.
    Maryam go.PST[3SG] school

- There is a single complementizer *ke*, which is always optional

(19) Maryam mi-dân-ad [ Omid ketâb=râ be Sârâ dâd].
Maryam IPFV-know.PRS-3SG Omid book=DDO to Sara give.PST.3SG
'Maryam knows that Omid gave the book to Sara.'
Raising verbs in Persian

• There are very few raising verbs in Persian. In most cases where one would use a raising verb in English, Persian uses an impersonal verb with a clausal complement.

(20) Bây-ad (ke) bačče-hâ madrase be-rav-and].
    must-3SG that child-PL school SBJV-go-3PL
   ‘The kids must go to school.’

• The few true raising verbs take a finite complement.

(21) a. Bačče-hâ mi-tavân-and (ke) madrase be-rav-and].
    child-PL IPFV-can.PRS-3PL that school SBJV-go-3PL
   ‘The kids can go to school.’
      
    b. * Mi-tavân-ad (ke) bačče-hâ madrase be-rav-and].
        IPFV-can.-PRS.3SG that child-PL school SBJV-go-3PL

• Ke is not used with such verbs outside of litterary usage.

NB: In (22), bačče-hâ is topicalized, and is not the subject of bâyad: witness the absence of agreement.

(22) Bačče-hâ bây-ad/ *bây-and (ke) madrase be-rav-and].
    child-PL must-3SG must-3PL that school SBJV-go-3PL
   ‘The kids must go to school.’
HPSG analysis: complementizers

• Standard HPSG analysis of complementizers as *markers*.
  • All signs carry a MARKING feature.
  • Markers change the marking value of the head they combine with.

☞ There is no empty complementizer. Bare clauses are just bare.
• In Persian, verbs taking complement clauses do not care whether the clause is marked or not.

'SMaryam knows that Omid is running.'
In HPSG, raising amounts to subject inheritance.
  - Raising verbs take a VP (unsaturated) complement.
  - Both verbs share the same subject.

Persian is special in that raising verbs take a finite complement.

\[ S \]
\[ \text{NP} \]
\[ \text{bačče-hâ} \]
\[ \text{VP} \]
\[ \text{mitavânand} \]
\[ \text{NP} \]
\[ \text{madrase} \]
\[ \text{V} \]
\[ \text{beravand} \]

‘The kids can go to school.’
HPSG analysis: raising verbs

- In HPSG, raising amounts to subject inheritance.
  - Raising verbs take a VP (unsaturated) complement.
  - Both verbs share the same subject.
- Persian is special in that raising verbs take a finite complement

'The kids can go to school.'
Progressives vs. Raising structures

• The word order is the same

(23)  a. Maryam dâšt madrase mi-raft
     Maryam have.PST[3SG] school IPFV-go.PST[3SG]
     ‘Maryam was going to school.’

     b. * Maryam madrase mi-raft dâšt
        Maryam school IPFV-go.PST[3SG] have.PST[3SG]

• Complementizers are excluded in the progressive periphrase; but remember that complementizer absence is the default with raising verbs.

(24)  * Maryam dâšt ke madrase mi-raft.
       Maryam have.PST[3SG] that school IPFV-go.PST[3SG]

• Even the scrambling possibilities are the same

      Maryam this book=DDO have.PRS-3SG IPFV-read.PRS-3SG
      ‘Maryam is reading this book.’

     b. Maryam in ketâb=râ mi-tavân-ad be-xân-ad.
        Maryam this book=DDO IPFV-can.PRS-3SG IPFV-read.PRS-3SG
        ‘Maryam is reading this book.’
Analysis for the progressive

- The progressive auxiliary is just another raising verb

‘Maryam was going to school.’
Lexical entry for the auxiliary

A raising verb where:

- Aspect is restricted to being imperfective \(\Rightarrow\) defective in the subjunctive, perfect, future, nonfinite forms
- Morphosyntactic features shared with those of the complement \(\Rightarrow\) systematic cumulative multiple exponence
- The complement is constrained to be unmarked \(\Rightarrow\) no complementizer
- The semantics is identified to that of the complement
Analysis for the progressive: the details

'maryam was going to school.'
Discussion

• This is a rather reasonable syntactic reduction
  ☞ The progressive auxiliary is just a particular case of a raising verb
    • The set of contexts where the auxiliary can be used is a subset of the set of contexts where raising verbs in general can be used
    • There is defectivity, but only defectivity that follows from what features are expressed
    • No disjunction or default violation

• In addition, an inflectional analysis would be challenging
  ☞ Overspecification function of the periphrase:
    • The progressive periphrase expresses a feature that can be expressed without it
    • Thus there isn’t a feature set that the progressive periphrase uniquely realizes
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Conclusions

- The Persian progressive
  - is a periphrase, in contrast to other ways of expressing the progressive in Persian
  - is best analyzed without using inflectional integration

We should not look for a single, unitary formal analysis for periphrasis.

- This should not be very surprising: interesting typological categories often call for diverse formal analyses. Compare clitics, person markers, etc.

- Criteria for periphrasis (Haspelmath, 2000; Ackerman and Stump, 2004; Spencer, 2006, 2008) should be distinguished from criteria for inflectional integration.
Selected references


NB1: les progressifs lexicaux marchent même avec des N prédicatifs:

(26) Maryam dar hâl-e gardeš ast
    Maryam in mood-EZ walk.N is
    Maryam is having a walk.

NB2: on n'a pas besoin de la copule, ça marche avec d'autre V à complément prédicatif

(27) Maryam Omid-râ dar hâl-e davidan did
    Maryam in mood-EZ run see
    Maryam saw Omid running.

NB: on pourrait arguer que bâyad est défectif, mais on a le même phénomène avec des adjectifs+budan:

(28) a. momken=ast ke bačče-hâ madrase be-rav-and.
    possible=COP.3S that child-PL school SBJV-go-3P
    ‘The kids might go to school.’

b. bačče-hâ momken=ast ke madrase be-rav-and.
    child-PL possible=COP.3S that school SBJV-go-3P

c. * bačče-hâ momken=and ke madrase be-rav-and.
    child-PL possible=COP.3P that school SBJV-go-3P