

# A Persian lesson on periphrasis, typology and formal grammar

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<http://hpsg.fu-berlin.de/Projects/PerGram/>

Typology of Periphrasis  
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# 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  $\longleftrightarrow$  '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

		PERFECTIVE	IMPERFECTIVE	PERFECT
PRESENT		***	mi-xar-ad	xarid-e-ast
PAST	DIR.	xarid	mi-xarid	xarid-e bud
	IND.	xarid-e-ast	mi-xarid-e-ast	xarid-e bud-e-ast
SUBJUNCTIVE		be-xar-ad		xarid-e bâš-ad

- 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

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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: *dâšťan*+finite verb

(3) Maryam dâšť 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 *dâšťan*+finite verb

- (5) \* Fekr mi-kon-am ke Maryam dâr-ad be-dav-ad.  
thought IPFV-do-.PRS-1SG that Maryam have-PRS-3SG SBJV-run.PRS-3SG  
(intended) 'I think that Maryam is running.'
- (6) Fekr mi-kon-am ke Maryam maščul-e davidan bâš-ad.  
thought IPFV-do-1.SG that Maryam occupied-EZ run-INF be.SUBJ-3.SG

- No negative use of *dâšťan*+finite verb

- (7) a. \* Maryam na-dâr-ad (ne-)mi-dav-ad.  
Maryam NEG-have.PRS-3SG NEG-IPFV-run.PRS-3SG  
(intended) 'Maryam is not running.'
- b. \*Maryam (na-)dâr-ad ne-mi-dav-ad.  
Maryam NEG-have.PRS-3SG NEG-IPFV-run.PRS-3SG
- (8) Maryam maščul-e davidan nist.  
Maryam occupied-EZ run-INF NEG.COP.PRS.3SG
- (9) Maryam ne-mi-dav-ad.  
Maryam NEG-IPFV-run.PRS-3SG

## Why a periphrase (2/3)

- *dâšťan*+finite verb is incompatible with the perfect

- (10) a. \* Maryam hatman *dâšte-ast* *davide-ast*.  
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

- *dâšťan*+finite verb is incompatible with the future

- (12) a. \* Maryam *xâh-ad* *dâšt xâh-ad* *david*.  
Maryam FUT-3SG have FUT-3SG run  
(intended) 'Maryam will be running.'
- b. \* Maryam *xâh-ad* *dâšt* *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:
- ☞ *Dâšťan* + finite verb realizes a morphosyntactic feature [PROG +]
- Restrictions on the use of *dâšťan* + *finite verb* follow from FCRs:
  - ASP  $\supset$  [MOOD *ind*]
  - PROG  $\supset$  [ASP *ipfv*]
  - [TNS *fut*]  $\supset$  [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, *dâšťan* + *finite verb* qualifies as a periphrase

## Why is it interesting

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

	PRESENT		DIR. IPFV. PAST		IND. IPFV. PAST	
1S	dâr-am	mi-dav-am	dâšt-am	mi-david-am	dâšt-e-am	mi-david-e-am
2S	dâr-i	mi-dav-i	dâšt-i	mi-david-i	dâšt-e-i	mi-david-e-i
3S	dâr-ad	mi-dav-ad	dâšt	mi-david	dâšt-e-ast	mi-david-e-ast
1P	dâr-im	mi-dav-im	dâšt-im	mi-david-im	dâšt-e-im	mi-david-e-im
2P	dâr-id	mi-dav-id	dâšt-id	mi-david-id	dâšt-e-id	mi-david-e-id
3P	dâr-and	mi-dav-and	dâšt-and	mi-david-and	dâšt-e-and	mi-david-e-and

- 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.  
 Omid tuesday-PL school go.PST[3SG] IPFV-go.PST[3SG]  
 'Omid went to school on Tuesdays.'

(15) Omid sešanbe-hâ kelâs-e piâno dâšt/ \*mi-dâšt.  
 Omid tuesday-PL lesson-EZ piano have.PST[3SG] IPFV-have.PST[3SG]  
 '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) Bâ-y-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 literary usage.

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

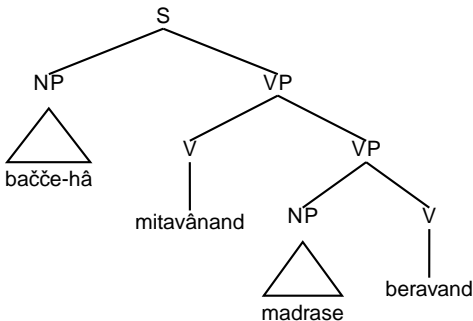
(22) Bačče-hâ bâ-y-ad/ \*bây-and [ (ke) madrase be-rav-and].  
child-PL must-3SG must-3PL that school SBJV-go-3PL  
'The kids must go to school.'





# HPSG analysis: raising verbs

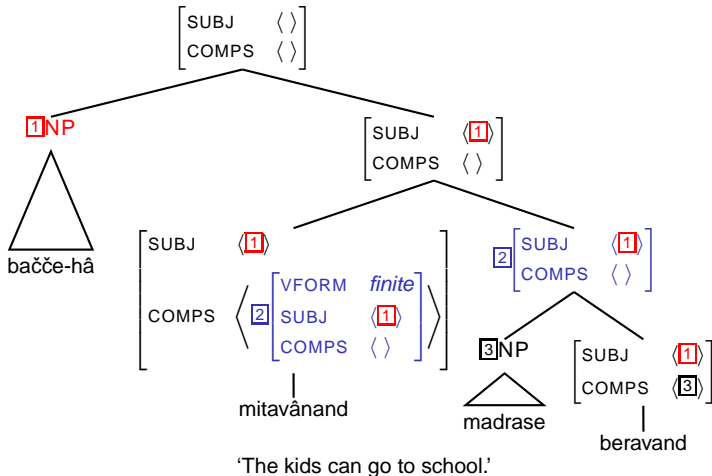
- In HPSG, raising amounts to subject inheritance.
  - Raising verbs take a VP (unsaturated) complement.
  - Both verbs share the same subject.
- Persian is special in that raising verbs take a finite complement



'The kids can go to school.'

# HPSG analysis: raising verbs

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'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.

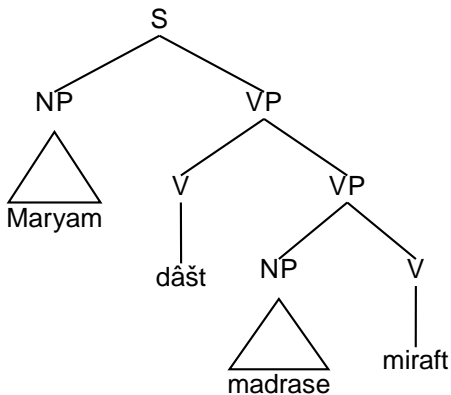
- (24) \* Maryam dâšt                      ke madrase mi-raft.  
Maryam have.PST[3SG] that school    IPFV-go.PST[3SG]

- Even the scrambling possibilities are the same

- (25) a. Maryam in ketâb=râ dâr-ad                      mi-xân-ad.  
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.'

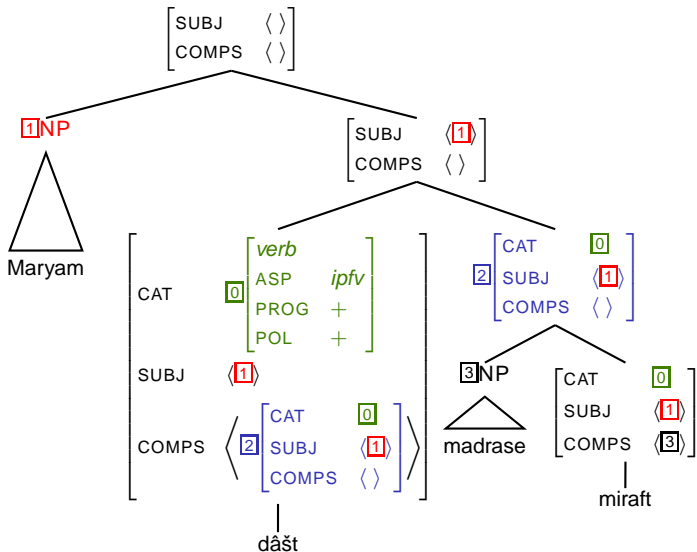
## Lexical entry for the auxiliary

CAT	[0]	<table border="1"> <tr><td><i>verb</i></td></tr> <tr><td>ASP <i>ipfv</i></td></tr> <tr><td>PROG +</td></tr> <tr><td>POL +</td></tr> </table>	<i>verb</i>	ASP <i>ipfv</i>	PROG +	POL +						
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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

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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 bâyard 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