One size fits all: prefixes, particles, adpositions and cases as members of the category P

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1 Introduction

Some history:

Recent research on adpositions:
- focuses on division of labour between direction and location heads in the extended projection of the PP
- general consensus (give or take functional structure) \[ pP \ [PathP \ [PlaceP \ [DP \]]]\]

Work uniting prefixes/particles and prepositions:
- particles/prefixes and prepositions belong to one category

Work uniting prepositions and cases:
- Fillmore 1968, Emonds 1985
- prepositions and cases belong to one category
- Fillmore: cases involve an empty P, Emonds: Alternative Realisation

Aims of this paper:
- build on past work on specific languages, which unites particles, prefixes, adpositions & cases
- show that particles, prefixes, adpositions & cases belong to the category P in a cross-linguistic perspective
- integrate the additional elements (prefixes/particles and cases) into the structures found in research on adpositions
- show how the different orders and meanings can be accounted for in such structures
- account for morphological differences in the spell-out of the different items

What we will not talk about:
- nominative and accusative case (structural cases)
- Germanic inseparable prefixes (e.g. German ver-, ent-, etc.)
- other non-spatial items with an overlapping distribution with the items discussed here (e.g. Hungarian particles, meg, el, etc.)
Structure of the talk:

2. Evidence that prefixes/particles, adpositions & cases belong to one category; possible problems
3. Structural Analysis
4. Conclusion

2 Evidence

2.1 Prefixes/Particles and Adpositions

Prefixes/particles and prepositions/postpositions often have similar forms and interpretations.

(1) Dutch particles
   a. Hij wou een aanvraag in-dienen
   he wanted an application in-serve
   ‘He wanted to make an application.’
   b. Hij diende een aanvraag in.
   he served an application in
   ‘He made an application.’

(2) Dutch postpositions & prepositions
   She wanted the lake in-swim
   ‘She wanted to swim into the lake.’ (directional)
   b. Zij zwom het meer in.
   she swam the lake in
   ‘She swam into the lake.’ (directional)
   c. Zij zwom in het meer.
   she swam in the lake
   ‘She swam into the lake.’ (locative)

(3) German prefixes, prepositions & postpositions
   a. Sie wollte auf den Berg hin-auf-lauf en.
   she wanted on the,ACC mountain there-on-run
   ‘She wanted to run up the mountain.’
   b. Sie lief auf den Berg hin-auf.
   she ran on the,ACC mountain there-on
   ‘She ran up the mountain.’

(4) Modern Greek prefixes & prepositions
   Ton ap-e -val-an apo to sxolio.
   him-CL from-PAST-throw-3PL.PAST from the school
   ‘They expelled him from school.’

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1 The following abbreviations are used in the example glosses: ABL=ablative, ACC=accusative, ADESS=adessive, ADJ=adjective, AGR=object agreement, AGR=subject agreement, APPL=applicative, CL=clitic, DAT=dative, DEL=delative, DIR=directional, ELAT=elative, ESS=essive, FUT=future, GEN=genitive, ILL=illative, INESS=inessive, INSTR=instrumental, PERF=perfect, PFX=prefix, PL=plural, POSS=possessive, POSTESS=postessive, PREP=prepositional case, SG=singular, SUB=sublative, SUP=superessive, T/A=tense/aspect, TERM=terminative.
(5) Ancient Greek prefixes & prepositions

*eis*-e-bal-on  eis  ten  Attike-n.
into-PST-throw-3PL into the.ACC Attica-ACC

‘They invaded Attica.’

(6) Russian prefixes & prepositions

On ot-prygnul  ot  okna.
he from-jumped from window

‘He jumped away from the window.’

➢ Case study: Slavic prefixes & prepositions

(7) Russian goal and source prepositions and prefixes:

<table>
<thead>
<tr>
<th>Prepositions</th>
<th>Verbal Prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>do (+ GEN), k (+ DAT)</td>
<td>do-, pri-, *k-</td>
</tr>
<tr>
<td>k (+ DAT)</td>
<td>*k-</td>
</tr>
<tr>
<td>v (+ ACC) / (+ PREP)</td>
<td>v-, za-</td>
</tr>
<tr>
<td>na (+ ACC) / (+ PREP)</td>
<td>(na-)^2</td>
</tr>
<tr>
<td>ot (+ GEN)</td>
<td>ot-, u-</td>
</tr>
<tr>
<td>iž (+ GEN)</td>
<td>iž-, vy-</td>
</tr>
</tbody>
</table>

(8) Czech goal and source prepositions and prefixes:

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>do (+ GEN), k (+ DAT)</td>
<td>do-, při-, *k-</td>
</tr>
<tr>
<td>k (+ DAT), vůči (+ DAT)</td>
<td>*k-, *vůči-</td>
</tr>
<tr>
<td>do (+ GEN)</td>
<td>do-</td>
</tr>
<tr>
<td>na (+ ACC) / (+ PREP)</td>
<td>(na-)^3</td>
</tr>
<tr>
<td>od (+ GEN)</td>
<td>od-, u-</td>
</tr>
<tr>
<td>z (+ GEN)</td>
<td>vy-</td>
</tr>
</tbody>
</table>

(9) Prepositional counterparts of additional prefixes:

a. pri (při) (+ PREP) ‘at, by’
b. za (+ ACC) / (+ INSTR) ‘within’ / ‘behind, at, with, …’
c. u (+ GEN) ‘at’
d. Old Slavonic věn (+ GEN) > Mod. Russ. / Czech adverbial von / ven ‘outside’

Interim conclusion:

- prepositions/postpositions are closer to the noun and prefixes/particles to the verb
- the identity of form and meaning between prepositions/postpositions and prefixes/particles in different languages constitutes evidence that they belong to the same category

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2 The prefix *na-* is only found on the motion verb *idti / jít* ‘go’. *Najti* and *najít*, however, do not convey the meaning of a motion on foot onto something but have the different lexical meaning of ‘find’. To describe a motion onto something, other prefixes are used depending on the particular perspective such as Russian *so-ji* ‘descend’ (lit. down-go) or Czech *vze-stoupit* ‘ascend’ (lit. up-step).
3 See previous footnote.
2.2 Tying in Cases
Spatial meanings can be expressed by both case and adposition forms:

(10) Latin cases vs English prepositions
a. Neapoli-m cras iter faciemus. Naples-ACC tomorrow journey make.FUT.1PL
   ‘We will travel to Naples tomorrow.’
b. loc-o idone-o place-ABL suitable-ABL
   ‘in a suitable place’

(11) German case contributing to spatial meaning
a. auf den Berg
   ‘onto the mountain’ (directional)
b. auf dem Berg
   ‘on the mountain’ (locative)

➢ Case study: Hungarian case suffixes & adpositions/particles
Case is not always easily separable from the other P categories. In Hungarian the picture is
more blurred.

No clear semantic distinction between case suffixes and postpositions.

(12) Hungarian case suffixes and postpositions in spatial expressions
a. Imre el-ment Olaszország-ba. (case)
   Imre away-went Italy-ILL
   ‘Imre went to Italy.’
b. Géza olvas a kert-ben. (case)
   Géza read the garden-INESS
   ‘Géza is reading in the garden.’
c. Négy szék van az asztal körl. (postposition)
   four chair be the table round
   ‘There are four chairs around the table.’
d. Fel-akasztotta a festmény-t a két ablak közé. (postposition)
   up-hung the painting-ACC the two window between
   ‘She hung up the painting between the two windows.’

Potential morphological diagnostics for distinguishing cases and postpositions conflict with

(13) Pronominal agreement: cases and inflecting postpositions pattern together
a. Case agrees with pronoun
   (én) vel-em
   (I) INSTR-1SG
   ‘with me’
b. Inflecting postposition agrees with pronoun
   \[(\text{én}) \quad \text{mögőt}-\text{em}\]
   \[(\text{I}) \quad \text{behind}-\text{1SG}\]
   ‘behind me’

c. Non-inflecting postposition carries no agreement
   \[(\text{én}) \quad \text{rajt}-\text{am} \quad \text{át}\]
   \[(\text{I}) \quad \text{SUP}-\text{1SG} \quad \text{over}\]
   ‘over me’

(14) Demonstrative copying: cases and inflecting postpositions pattern together
   a. Case is copied after the demonstrative
      \[\text{en-nél} \quad \text{a} \quad \text{ház-nál}\]
      ‘at this house’
   b. Inflecting postpositions are copied after the demonstrative
      \[\text{az} \quad \text{alatt} \quad \text{a} \quad \text{fa} \quad \text{alatt}\]
      ‘under that tree’
   c. Non-inflecting postpositions are not copied
      \[\text{az-zal} \quad \text{a} \quad \text{fiú-val} \quad \text{együtt}\]
      ‘together with that boy’

(15) Degree modification: cases and inflecting postpositions pattern together
   a. Case: degree modifier precedes whole phrase
      \[\text{majdnem} \quad \text{az} \quad \text{utcá-}\text{ban}\]
      ‘almost in the street’
   b. Inflecting postposition: degree modifier precedes whole phrase
      \[\text{majdnem} \quad \text{a} \quad \text{ház} \quad \text{mellett}\]
      ‘almost by the house’
   c. Non-inflecting postposition: degree modifier intervenes between N and postposition
      \[\text{az} \quad \text{út-on} \quad \text{majdnem} \quad \text{végig}\]
      ‘almost to the end of the road’

(16) Preposing: cases and inflecting postpositions pattern together
   a. Case: cannot prepose
      \[*\text{val} \quad \text{Jáno}\text{s} \quad \text{INSTR}\]
      ‘with John’
   b. Inflecting postposition: cannot prepose
      \[*\text{mellett} \quad \text{Jáno}\text{s} \quad \text{near}\]
      ‘near John’
   c. Non-inflecting postposition: can prepose
      \[\text{együtt} \quad \text{Jáno}\text{s-sal} \quad \text{together}\]
      ‘together with John’
(17) Vowel harmony: inflecting and non-inflecting P pattern together

a. Case harmonises
   a ház-*ba
   the house
   ‘the house’
   /  a zseb-*be
   the pocket
   ‘into the pocket’

b. Inflecting postposition, no harmony
   a ház mellett/*mallatt
   the house near
   ‘near the house’
   /  a zseb mellett/*mallatt
   the pocket near
   ‘near the pocket’

c. Non-inflecting postposition, no harmony
   a ház-zal szemben/*szamban
   the house-INST opposite
   ‘opposite the house’
   /  a zseb-bel szemben/*szamban
   the pocket-INSTR opposite
   ‘opposite the pocket’

(18) Combination with adjectival suffix -i: postpositions pattern together

a. Case, no addition of -i
   *?a kert-*ben-i
   the garden-INESS-ADJ
   ‘the flower in the garden’

b. Inflecting postposition allows addition of -i
   a híd mőgött-i út
   the bridge behind-ADJ road
   ‘the road behind the bridge’

c. Non-inflecting postposition allows addition of -i
   a ház-on kívül-i virágok
   the house-SUP outside-ADJ flowers
   ‘the flowers outside the house’

(19) Sublative/delative case marking: postpositions pattern together

a. Case, no addition of sublative/delative
   *a híd-*on-ról
   the bridge-SUP-DEL
   ‘by after three o’clock’

b. Inflecting postposition allows addition of sublative/delative
   három óra után-ra
   three hour after-SUB
   ‘by after three o’clock’

c. Non-inflecting postposition allows addition of sublative/delative
   a híd-on túl-ról
   the bridge-SUP beyond-DEL
   ‘from behind the bridge’

(20) Ellipsis under conjunction: postpositions pattern together

a. Noun ellipsis in coordinated PPs:
   a ház előtt és (a ház) mőgött
   the house before and (the house) behind
   ‘before and behind the house’

b. P-ellipsis in coordinated PPs:
   a ház (előtt) és a garázs előtt
   the house (before)and the garage before
   ‘before the house and the garage’

c. Unacceptability of noun ellipsis with coordinated case marked NPs:
   a ház-tól és *(a ház)-ból
   the house-ABL and (the house)-ELAT
   ‘from outside and from inside the house’
Unacceptability of case suffix ellipsis with coordinated NPs:

a ház-*nál) és a garázs-nál
the house-(ADESS) and the garage-ADESS
‘at the house and the garage’

Summary of the morphological behaviour of Hungarian affixes and Ps

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Affix</th>
<th>Inflecting postposition</th>
<th>Non-inflecting postposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) pronominal agreement</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>(b) demonstrative copying</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>(c) degree modification intervening</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>(d) preposing</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>(e) vowel harmony with N</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(f) combines with adjectival suffix -i</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>(g) sublative/delative case marking</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>(h) ellipsis under conjunction</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

BUT There are borderline cases even for these groupings.

Non-inflecting Ps that do not prepose (mixed behaviour on (a) and (d)): kezdve, fogva, nézve
??kezdve hétfő-től
from Monday-ABL
‘from Monday’

kívül behaves variably with respect to pronominal agreement (cf. (a))

kívül-em / rajt-am kívül
outside-1SG / SUP-1SG outside
‘outside me’

Case affixes with no vowel harmony: -ért, -ként, -ig, -nként, -kor (cf. (e))

a. épület-ig
   bread-TERM
   ‘as far as the building’

a’. épület-ben/*-ban
   building-INESS
   ‘in the building’

b. város-ig
   town-TERM
   ‘as far as the town’

b’. a város-ban/*-ben
   the town-INESS
   ‘in the town’

Cases with no pronominal form: -va/ve, -ként, -ig, -nként, -kor, -nta/-nte, -stul/-stül (cf. (e))

a. *(én)-ként-em
   (1SG)-ESS-1SG
   ‘as me’

b. *(én)-ig-em
   (1SG)-TERM-1SG
   ‘as far as me’

Ellipsis is acceptable in restricted circumstances with certain case suffixes (c.f. (h))

feleség- és anya-ként
wife and mother-ESS
‘as wife and mother’

Furthermore, in Hungarian, both cases and postpositions can surface as verbal prefixes/particles.
Identity of cases and postpositions and verbal particles

a. Cases as verbal particles

János rá-lépett a láb-am-ra.
János SUB-stepped the foot-1SG.POSS-SUB
‘János stepped on my foot.’

Be-le-tette a cukr-ot a kávé-ba.
ILL-3SG-put the sugar-ACC the coffee-ILL
‘He/She put the sugar into the coffee.’

Nek-i-mentem a fal-nak.
DAT-3SG-went the wall-DAT
‘I bumped into the wall.’

b. Inflecting postpositions as verbal particles

Alá-írta az oklevel-et. az autó alá / (én)-alá-m
under-wrote the document-ACC the car under / (1SG)-under-1SG
‘She signed the document.’ ‘under the car’ / ‘under me’

Körül-néztünk az üzlet-ben. az üzlet körül / (én)-körülött-em
round-looked the shop-INESS the shop round / (1 SG)-round-1SG
‘We looked around the shop.’ ‘round the shop’ / ‘round me’

c. Non-inflecting postpositions as verbal particles

Keresztül-mentek a mező-n. a mező-n keresztül
across-went the field-SUP the field-SUP across
‘They went across the field.’ ‘across the field’

The connection between adpositions and cases is not restricted to Hungarian.
Similar arguments have been made for:

• German (Vogel & Steinbach 1998, Bayer, Bader & Meng 2001)
• Finnish (Nikanne 1991, Kracht 2002)
• Lezgian (van Riemsdijk & Huybregts 2001)

Interim conclusion:

• In Hungarian it is impossible to draw a neat line between case suffixes and postpositions on the basis of the diagnostics previously used.
• In languages where the morphological distinction is clearcut, the semantic overlap still constitutes evidence that cases belong to the category P

2.3 Problems

Some reasons for making categorial distinctions between these elements:

A. Ps as case assigners:

Latin combinations of prepositions and cases

a. Milites ad Rhen-um castra posuerunt.
soldiers to Rhine-ACC camp.ACC place.PERF.3PL
‘The soldiers pitched camp near the Rhine.’

b. Ab urb-e discessit.
from city-ABL leave.PERF.3SG
‘He left the city.’
(29) German combinations of prepositions and cases

a. **durch** die Stadt
   through the town
   ‘through the town’

b. **aus** dem Haus
   out the house
   ‘out of the house’

**BUT** not all Ps visibly combine with cases on the noun, and those that do could be seen as analogous to combinations of Ps and combinations of cases.

(30) Case combinations in Lezgian and P combinations in English

a. **sewre-qh**
   bear-POSTESS
   ‘behind the bear’

b. **sewre-qh-aj**
   bear-POSTESS-ELAT
   ‘from behind the bear’

c. **sewre-qh-di**
   bear-POSTESS-DIR
   ‘to behind the bear’

(from van Riemsdijk & Huybregts 2001:4)

B. **There is a split between true Ps and adverbs (É. Kiss 2002, Marácz 1989)**

**BUT**
- no category adverb is recognised in the Principles & Parameters framework
- category P may play a fundamental part in making other categories into adverbs in many contexts

C. **Not all elements subsumed here under P can appear in all P-positions**
   (see section 3)

D. **Some elements subsumed here under P seem to interact with aspect whilst others do not**
   (see section 3)

3 **Structural Analysis**

(31) \[[I P I V P V P P Path P Path P Place P Place P Place[DP]]\]]]]

**Overview**
- each individual lexical item P has its own core semantics
- P is merged in the extended projection of the noun phrase as either a Place, Path or p head, depending on its core semantics
- final position with respect to N/V and detailed directional/spatial semantics are determined by syntactic movement
- core semantics of certain individual Ps make them incompatible with certain positions, preventing them from becoming particles/prefixes
(32) Locative P
behind the house

PlaceP
Spec | Place’
Place behind DP
the house

(33) Directional P
from behind the house

PathP
Spec | Path’
Path from PlaceP
Spec | Place’
Place behind DP
the house

**Difference between prepositions & postpositions:**

- universal Spec-Head-Comp ordering: P always precedes DP in its initial position
- postpositions (e.g. Hungarian and Dutch) are the result of DP-raising to Spec-p/Path/Place as appropriate

(34) Dutch postposition (directional)
het meer in
the lake in
‘into the lake’

PathP
Spec | Path’
DP1 | Path
het meer PlaceP
Spec | Place’
Place in ti
(35) Hungarian postposition

a. a ház mögött
   the house behind
   ‘behind the house’ (locative)

   \[ \text{PlaceP} \]
   \[ \text{Spec} \]
   \[ \text{DP}_1 \]
   \[ \text{Place} \]
   \[ a \text{ ház} \]
   \[ \text{mögött} \]

b. a ház mögül
   the house behind.from
   ‘from behind the house’ (directional)

   \[ \text{PathP} \]
   \[ \text{Spec} \]
   \[ \text{DP}_1 \]
   \[ \text{Path} \]
   \[ a \text{ ház} \]
   \[ \text{mögül} \]
   \[ \text{PlaceP} \]
   \[ \text{Spec} \]
   \[ t_i \]
   \[ \text{Place} \]
   \[ \emptyset \]
   \[ t_i \]

**Difference between case suffixes and postpositions:**

- result of phonological processes after Spell-Out, at PF
- morphological merger between DP and P after movement

(36) pP in Hungarian
ki a ház mögött-re
out the house behind-SUB
‘out (to) behind the house’
Verbal particles and prefixes:  
- created by further movement of the pP to Spec,PredP  
- link the verbal domain and the nominal domain  

(37) German prefix
Sie ist auf den Berg hin-auf-gelaufen.  
She is on the mountain there-on-run  
‘She ran up the mountain.’

Difference between verbal prefixes (affixes) and particles (independent words):  
- result of phonological processes after Spell-Out, at PF  
- morphological merger between P and verbal projection after movement of P to Spec,PredP

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4 See Ürögdi 2003 for a copy theory account of particle formation in Hungarian.
4 Conclusion

We have:

- presented semantic and morphological evidence that prefixes, particles, adpositions & cases belong to one category, P
- explained some of the apparent counterevidence
- proposed a structural analysis whereby
  - different adposition-noun ordering and combination phenomena are accounted for by movements within the extended projection above the noun
  - particles/prefixes are formed by movement to PredP

Possible extensions to account for Ps with non-spatial meaning:

- metaphorical extensions from spatial Ps (e.g. temporal at, up to; general metaphorical use, prices go up) can probably be accounted for under the same analysis
- Ps selected by specific verbs (e.g. believe in, phone up), where P would normally have spatial meaning but does not in specific P-verb combinations
- Ps which never seem to have spatial meaning (e.g. with, without, as; comitatives, instrumentals etc.)
- applicatives

(38) Chi-Mwí:ni applicative (from Svenonius 2006, citing Marantz 1984:236)
    Mutí u-m-tuluk-il-ile mwa:limu.
    tree AGR АGR r-fall-APPL-T/A teacher
    ‘The tree fell on the teacher.’
References
Riemsdijk, Henk van. 1978. A case study in syntactic markedness; the binding nature of prepositional phrases. Amsterdam.