



German Particle Verbs and Pleonastic Prepositions

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Prepositions





Outline

- Introduction
- Classification of Particle Verbs with Pleonastic Prepositions
- Description of Particle Verbs with Pleonastic Prepositions in LFG
- Conclusion



German Two-Way Prepositions

an, auf, hinter, in, neben, über, unter, vor, zwischen

at, by at, on behind in beside above below before between

- can either govern the accusative or the dative
- case determines semantic interpretation

(1) *Das Bild hängt [PP an der Wand].*

Det picture hang-3Sg [PP on Det wall].

'The picture hangs on the wall.'

⇒ *static localisation*

(2) *Sie hängt das Bild [PP an die Wand].*

She hang-3Sg Det picture [PP on Det wall].

'She hangs the picture on the wall.'

⇒ *directional movement*



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Two-way Prepositions as Verb Particles

Two-way preposition + Verb => Particle Verb

Base verb:

'hängen <X>'

'to hang <X>'

Preposition + Base Verb

auf + ***hängen***

on + to hang

'aufhängen <X, Y>'

'to hang on <X, Y>'

⇒ Particle includes directional information

⇒ Particle can change argument structure of the base verb



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Particle Verbs with Pleonastic Prepositions

- (1) ***Sie steigt [PP in das Auto].***
 She climb-3SG [PP into Det car].
 'She gets into the car.'
- (2) ***Sie steigt ein.***
 She climb-3SG Particle.
 'She gets in.'
- (3) ***Sie steigt [PP in das Auto] ein.***
 She gets [PP into Det car] Particle.
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The Pleonastic Directional (Olsen, 1998)

Olsen (1998):

- Particle saturates directional requirement of the verb
 - ⇒ PP can be omitted

Wunderlich (1983):

- Particle verbs require stereotype or contextually given object
- Object is equal to internal argument of the PP
- Object can be reconstructed from the context
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But why aren't they always omitted?



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The Pleonastic Directional (contin.)

Some particle verbs allow for pleonastic prepositions governing

- accusative PPs only (Group A)
 - dative PPs only (Group B)
 - either accusative or dative PPs (Group C)
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- Directionality triggers accusative PPs
 - Lack of directional meaning triggers the dative

But why can some particle verbs combine with both cases?



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Classification: Overview

Semantic verb classes influencing case assignment:

- Group A (accusative PPs)
 - (static) Verbs of **Localisation**
 - intransitive Verbs of **Motion**
 - transitive Verbs of Motion (**Transport Verbs**)
 - Verbs of **Perception**
 - **Change of State Verbs**
- Group B (dative PPs)
 - (static) Verbs of **Localisation**
 - intransitive Verbs of **Motion**
 - causative Verbs of **Position**
- Group C (either acc. or dat. PPs)
 - intransitive Verbs of **Motion**
 - transitive Verbs of Motion (**Transport Verbs**)
 - **Inclusion** into an Environment, Institution, Abstract Area
 - Effects of **Action**



Classification: Group A (accusative)

- e.g. intransitive Verbs of Motion:

auf den Wagen aufspringen

on Det.Acc cart Part.jump 'to jump on the cart'

- e.g. transitive Verbs of Motion (Transport Verbs):

in die Tasse eingießen

in Det.Acc cup Part.pour 'to pour into the cup'



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⇒ **directional reading**



Classification: Group B (dative)

- e.g. (static) Verbs of **Localisation**:
auf dem Brett aufliegen
 on Det.Dat board Part.lie 'to lie on the board'
- e.g. causative Verbs of **Position**
im Haus einquartieren 'to accomodate in the house'
 in.Det.Dat house Part.quarter



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- e.g. causative Verbs of **Position**
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 in.Det.Dat house Part.quarter

- ⇒ **non-directional**, static interpretation
- ⇒ or **directional** interpretation, if theme referent and relatum may be positioned in the same specified region



Classification: Group C (acc. or dat.)

- e.g. (static) Verbs of **Localisation**:

im Zimmer einsperren 'to imprison in the room'
 in.Det.Dat room Part.imprison

in das Zimmer einsperren 'to imprison into the room'
 in Det.Acc room Part.imprison

- e.g. transitive Verbs of Motion (**Transport Verbs**):

auf der Leine aufhängen 'to hang on the
 on Det.Dat clothesline Part.hang clothesline'

auf die Leine aufhängen 'to hang onto the
 on Det.Acc clothesline Part.hang clothesline'



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on Det.Acc clothesline Part.hang clothesline'

- ⇒ either **directional** interpretation (acc.)
- ⇒ or **non-directional** interpretation /
directional movement without **intrusion** (dat.)



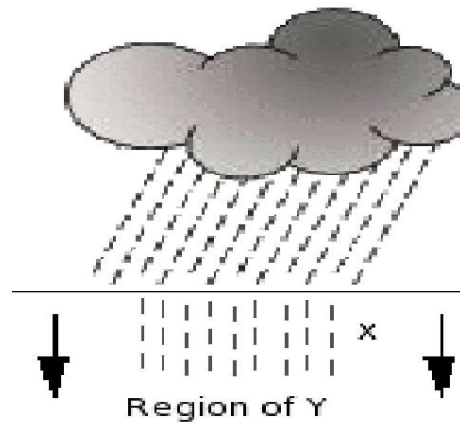
Classification: Motivation

sickert in die Erde ein
soak.3.Sg in Det.**Acc** soil Part
'soaks into the soil'



Region of Y

sickert in der Erde ein
soak.3.Sg in Det.**Dat** soil Part
'soaks the soil'



Region of Y



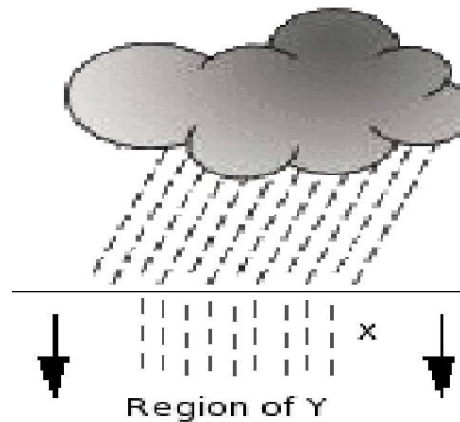
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X undergoes a directed motion during which it enters into the region of the reference object Y.

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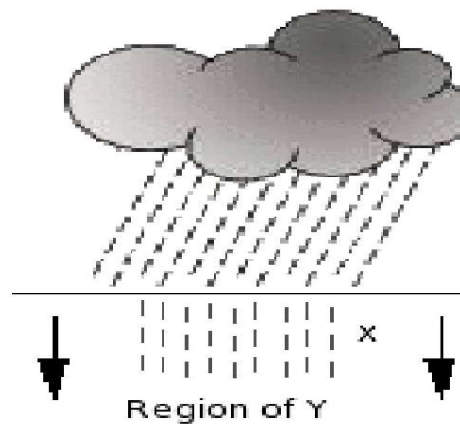
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Region of Y

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Region of Y

X is already located in the region of Y and now is in the process of soaking through that region.



Lexical Functional Grammar: Short Overview

- 2 Layers of Representation (minimum):
 - Constituent Structure (c-structure)
CFG trees
 - Functional Structure (f-structure)
Grammatical functions (subject, object, focus, ...)
- ⇒ non-transformational
- ⇒ syntactic phenomena are treated locally through specification of rules and constraints in the lexicon



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CFG trees
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LFG: Short Overview

- C-structure is determined by Phrase Structure Rules:

(1) $S \rightarrow NP \quad VP$

- Functional Annotation links c-structure categories to corresponding grammatical functions in f-structure:

(2) $S \rightarrow NP \quad VP$
 $(\uparrow \text{SUBJ}) = \downarrow \quad \uparrow = \downarrow$



LFG: Formalisation of Particle Verbs

- Lexical entry for ***einfahren*** ‘to drive in’
(Berman & Frank, 1996)

Fahren V

(↑ PRED) = ‘EINFAHREN <(↑ SUBJ), (↑ OBL_DIR)>’

(↑ FORM) = c EIN

(↑ VERBTYPE) = PARTICLE VERB

...

ein PART

(↑ FORM) = ein



LFG: Formalisation of Prepositions

- Lexical entry for *auf* ‘on, at’ (Berman & Frank, 1996)

auf P *adjunct subcategorized by the verb*
 (↑ PRED) = ‘LOC <(↑ OBJ)>’
 (↑ PCASE) = LOC
 (↑ PDET) =-.

auf P *free adjunct*
 (↑ PRED) = ‘OBLLOCAL <(↑ OBJ)>’
 (↑ ROLE) = LOCAL
 (↑ OBJ AGR CAS GOV) = +
 (↑ OBJ AGR CAS OBL) = +
 (↑ PDET) =-.



LFG: Formalisation of Group C Verbs

- F-structure for *sickert [PP in die Erde]_{ACC} ein*
‘soaks into the soil’

$$\left[\begin{array}{l}
 \text{PRED } X - \text{sickern} < \text{SUBJ}, \text{OBL_DIR} > \\
 \text{PART - TYPE } \textit{particle verb} \\
 \text{PART - FORM } \textit{ein} \\
 \text{PART - SEM } + \\
 \text{PART - CASE } \textit{DIR} \\
 \\
 \text{OBL_DIR} \left[\begin{array}{l}
 \text{PRED } \textit{DIR} < (\uparrow \text{OBJ}) > \\
 \text{PCASE } \textit{OBL_DIR} \\
 \text{PSEM } + \\
 \text{OBJ} \left[\begin{array}{l}
 \text{PRED } \textit{Erde} \\
 \text{SPEC } \textit{die} \\
 \text{CASE } \textit{acc}
 \end{array} \right]
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LFG: Formalisation of Group C Verbs

- F-structure for *sickert [PP in der Erde]_{DAT} ein*
‘soaks into the soil’

$$\left[\begin{array}{l}
 \text{PRED } X - \textit{sickern} < \text{SUBJ}, \text{OBL_DIR} > \\
 \text{PART - TYPE} \quad \textit{particle verb} \\
 \text{PART - FORM} \quad \textit{ein} \\
 \text{PART - SEM} \quad + \\
 \text{PART - CASE} \quad \textit{LOC} \\
 \\
 \text{OBL_DIR} \quad \left[\begin{array}{l}
 \text{PRED } \textit{in} \\
 \text{PART - FORM } \textit{ein}
 \end{array} \right] \\
 \\
 \text{ADJ} \left\{ \begin{array}{l}
 \left[\begin{array}{l}
 \text{PRED} \\
 \text{OBL_LOC} < (\uparrow \text{OBJ}) > \\
 \text{PCASE } \textit{OBL_LOC} \\
 \text{PSEM } + \\
 \text{ROLE } \textit{OBL_LOC}
 \end{array} \right] \\
 \text{OBJ} \left[\begin{array}{l}
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LFG: Formalisation of Group C Verbs

- Lexical entry for *einsickern* ‘to soak’

einsickern V

(↑ PRED) = ‘EINSICKERN <(↑ SUBJ), (↑ OBL_DIR)>’

(↑ OBL_DIR:PART-FORM) = ein

(↑ OBL_DIR:OBJ:CASE) = **acc**

- Acc PPs only can fill the OBL_DIR argument
- But: the pleonastic PP can be omitted

*Something has to fill in the argument
OBL_DIR*



LFG: Formalisation of Group C Verbs

Particle *ein* can fill the argument position

- Lexical entry for Particle *ein*:

ein Part

(↑ PRED)	= 'in <(↑ OBJ)>'
(↑ PART-FORM)	= ein
(↑ PCASE)	= DIR
(↑ PSEM)	= +
(↑ OBJ PRED)	= PRO

- Object position is not lexically filled
 ⇨ (↑ OBJ PRED) = PRO

*But how can we model the locative PP
in the dative?*



LFG: Formalisation of Group C Verbs

- Lexical entry for *einsickern* ‘to soak’ prevents dative PP to fill in the OBL_DIR argument:

einsickern V

(↑ PRED) = ‘EINSICKERN<(↑ SUBJ), (↑ OBL_DIR)>’

(↑ OBL_DIR:PART-FORM) = ein

(↑ OBL_DIR:OBJ:CASE) = **acc**

- Locative dative PP is attached to the adjunct set:

VP →	V	↑ = ↓		<i>(grammar rule)</i>
	PP*	↓ ∈ (↑ ADJ)		
		(↓ OBJ CASE)	≠ acc	
	(PP	(↑ OBL_DIR)	= ↓)	
	PART	(↓ OBL_DIR)	= ↓.	



LFG: Formalisation of Group C Verbs

- Formalisation catches idea that reference object of particle is identical to object of pleonastic PP
- Formalisation gives adequate description of behaviour of Group C Verbs
- But: does not suppress pleonastic accusative PPs for Group B Verbs (dative only)

vorfahren V ‘to drive up’
 (↑ PRED) = ‘vorfahren<(↑ SUBJ), (↑ OBL_DIR)>’
 (↑ OBL_DIR:PART-FORM) = vor
 (↑ OBL_DIR:OBJ:CASE) = acc
 (↑ OBL_DIR:OBJ:PRED) =c PRO

⇒ Constraint in lexical entry checks that PRED of OBL_DIR:OBJ has value PRO



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Conclusions

- Verbs which always have a directional reading including an intrusion into a new region combine with ***accusative*** only
- Verbs whose semantics do not include an intrusion into a new region combine with ***dative*** only
- Verbs offering both readings can combine with **acc.** and **dat.** PPs
- The semantic differences can adequately be modeled on the syntactic level using the framework of LFG



References

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Thank You!

Questions?