Antje Roßdeutscher
Institute for Computational Linguistics (IMS), University of Stuttgart
antje@ims.uni-stuttgart.de

Hidden universal quantification and change of argument structure in particle-verb constructions
Sinn und Bedeutung 19, Göttingen 15th of September, 2014

(1) a.

Er	*strich*	*Farbe*	*an eine*	*Wand*	
he	painted	paint$^{F}_{acc}$	at a	wall$^{G}_{P\text{-}cs}$	

’he painted paint on a wall’

Er	*strich*	*Farbe*	*von*	*einem*
he	wiped	paint$^{F}_{acc}$	off	a
	Pinsel			
	paint-brush$^{G}_{P\text{-}cs}$)			

’he wiped paint off a paint-brush’

b.

$\emptyset$

Er	*strich*	*Farbe*	*(von*	*einem*
he	wipd	paint$^{F}_{acc}$	(from	a
	Pinsel)			*ab*
	paint-brush$^{G}_{P\text{-}cs}$)			off.prtc.

’he wiped paint from a paint-brush’

c.

Er	***strich***	***eine***	***Wand***	***(mit***
he	**painted**	**a**	**wall$^{G}_{acc}$**	**(with**
	Farbe)	***an***		
	paint)	**at.prct.**		

’he covered a wall with paint’

Er	***strich***	***einen***	***Pinsel***
he	**wiped**	**a**	**paint-brush$^{G}_{acc}$**
	ab		
	off.prtc		

’he rid the brush of paint’

(2) a.

Wein	*lief*	*aus*	*einem*	*Fass*	
wine$^{G}_{nom}$	ran	out of	a	barrel$_{P\text{-}cs}$	

’wine ran out of a barrel’

Wasser	*lief*	*in*	*eine*	*Wanne*	
water$^{G}_{nom}$	ran	into	a	tub$_{P\text{-}cs}$	

’water ran into a tub’

b.

Wein	*lief*	*(aus*	*einem*	
wine$^{G}_{nom}$	ran	(out of	a	
Fass)	*aus*			
barrel$_{P\text{-}cs}$)	out.prtc.			

’wine ran out (of a barrel)’

Wasser	*lief*	*(in*	*eine*	*Wanne)*
water$^{G}_{nom}$	ran	(into a	barrel$_{P\text{-}cs}$)	
ein				
in.prtc.				

’water ran into a tub’

c.

ein	***Fass***	***lief***	***aus***
a	**barrel$^{G}_{nom}$**	**out.prtc.**	

’a barrel emptied’

eine	***Wanne***	***lief***	***(mit Wasser)***
a	**tub$^{G}_{nom}$**	**ran**	**(with water)**
ein			
in.prtc.			

’a tub filled (with water)’

Introduction

- I propose an analysis of so-called 'ground promotion' constructions (McIntyre 2007) or 'unpredicated particles' (Levin and Sells 2007) (see bold-faced (1c) and (2c)) at the syntax-semantics interface.

- The constructions we will compare are built from the same prepositional and verbal roots. The central difference between the examples on p. 1 is that between (1c) and (2c) on the one hand and (1a), (1b), (2a) (2b) on the other.
  In (1a), (1b), (2a) and (2b) the figure DP gets structural case, (accusative or nominative) and the ground argument is part of the PP and gets prepositional case.
  In (1c) the figure argument is 'demoted' — it is absent or part of a *mit*-PP — and the ground DP is promoted to receive structural case.

- The experts agree that ground promotion constructions such as (1c) and (2c) are holistic, as indicated in the translations. (1a), (1b) and (2a), (2b) are activities. (1c) and (2c) are accomplishments.

- Except for sentence aspect the "alternates" share entailments: fluid changes location: onto a surface; into an interior; from a surface; out of an interior.

the alleged alternates express different predicates

- Thinking of the constructions, say (1a), (1b) vs. (1c), they are *not* simple alternations. The constructions in (1a) and (1b) describe change of location of the paint, (1c) does not (s. (3b), (4b)).
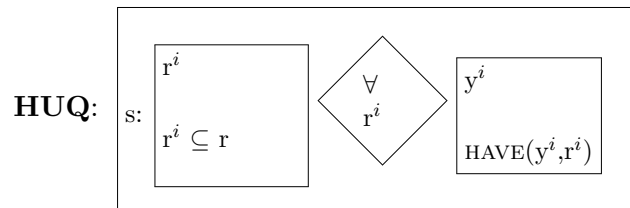

(3) a. *eine Büchse   Farbe   an   eine Wand streichen*
         a   tin   of paint onto a   wall paint

         'to paint a tin of paint onto a wall'

     b. * *eine Wand aus   einer Büchse anstreichen*
          a   wall out of a   tin   at.prtc.paint

          'to cover a wall out of a tin of paint'

(4) a. *eine Menge Öl war aus   dem Tank in   das Erdreich   ausgelaufen*
         a   lot   of oil was out of the tank into the soil   out.prtc.run

         'a lot of oil had run out of the tank into the soil'

     b. * *der Öltank   war in   das Auffangbecken   ausgelaufen*
          the oil   tank was into the catch   basin out.prtc.run

          'the oiltank had emptied into the catch basin'

- (1c) and (2c) differ from (1a) and (2a) and (2b) as follows:
  (1a) and (2a) and (2b) involve **spatial** relations between the *eigenregion* of the fluid and a region associated with the ground object (the surface or *at*-region of the wall or the interior of the barrel).

- (1c) and (2c) express *application* relations between a region and stuff: in (1c) the region (the surface of the wall) comes to stand in the application state of 'having' the paint that is put on it; in (2c) the barrel first stands in the application relation of having the wine and then after the event, it does no longer.

- Intuitively *application* makes itself felt in HAVE- paraphrases: *die Wand hat (keine) Farbe (dran)* (the wall has (no) paint on it), *der Pinsel hat (keine) Farbe (dran)* (the paint-brush has (no) paint on it), *das Fass hat (keinen) Wein (drin)* (the barrel has (no) wine in it, etc.

- In 'ground-promotion' constructions like (1c) and (2c) an application relation HAVE(y,r) holds between the figure y, i.e. the stuff to be applied or removed, and a 2D or 3D-region r, i.e. surface or interior of the ground-argument.

Logical form and figure demotion

- In (1c) and (2c) the ground argument (the wall, the barrel) is overtly realised in a description containing $\sqrt{}$an and *die Wand* (or $\sqrt{}$aus and *ein Fass*), but the figure argument is not. The interpretation involves *existential* quantification of the variable representing the figure argument y, within the scope of a *universal* quantification. I refer to this complex quantification operation as *Hidden Universal Quantification*, **HUQ**.

HUQ: s:
$$
\boxed{\begin{array}{l} r^i \\[4pt] r^i \subseteq r \end{array}} \quad \diamond\begin{array}{c} \forall \\ r^i \end{array} \quad \boxed{\begin{array}{l} y^i \\[4pt] \text{HAVE}(y^i,r^i) \end{array}}
$$

- **HUQ** accounts for the holistic interpretation of ground-promotion constructions; s in **HUQ** represents the resultant state in which all sub-regions of the surface of the wall have stuff in them.

the alternates are alternatives for production

- 'ground-promotion' constructions have *two strictly incremental themes* (cf.(Krifka 1998)) i.e. the bounded region and the stuff that is applied or removed ('de-applied'). The two themes are mutually dependent: the incrementality of the described events e' manifests itself as a succession of sub-events e^i each of which involves the filling (or emptying) of a sub-region r^i with the portion of stuff y^i that ends up in r^i (or its removal from it).

- Ignoring subtleties of truth conditions the speaker who wants to describe an incremental applying or removing has the choice: either verbalise the change of state as (i) a change of location of the stuff or (ii) as a change of application state of the region.

challenging data

- 'ground promotion' constructions are restricted. E.g. there is no ground promotion construction (5c) that corresponds to (5a) and (5b). Neither do we find (6b) corresponding to (6a).

(5) a. *Papier an eine Wand kleben*
     paper at a   wall   glue

     'glue paper on a wall'

   b. *Papier (an eine Wand) ankleben*
     paper (at a   wall)   at.prtc.glue

     'glue paper on a wall'

   c. * *eine Wand (mit Papier) ankleben*
     a   wall   (with paper) at.prtc.glue

     'cover a wall with paper'

(6) a. *Farbe auf eine Wand streichen*
     paint on a   wall   paint

     'paint paint on a wall'

   b. * *eine Wand (mit Farbe) aufstreichen*
     a   wall   (with paint) on.prtc.paint

     cover a wall with paint

- The contribution of the P-elements is not always the same: in (1) $\sqrt{}$an +*eine Wand* contributes a surface and in (2) $\sqrt{}$aus + *ein Fass* contributes an interior, $\sqrt{}$ein (=in) + *eine Tapete* contributes a surface in (7a) but an interior in (7b). (McIntyre 2007) dubs pairs like (7a), (7b) 'fake'-alternations.

(7) a. *eine Tapete   (mit Kleister) einstreichen*
     a   wall-paper (with glue)   in.prtc.paint

     to cover a wall-paper with glue

   b. *Kleister in   eine Tapete   streichen*
     glue   in(to) a   wall-paper paint

     'to rub /smear glue into a wall-paper'

Plan for the remainder of the talk

- I will present a semantic construction algorithm belonging to a syntax-semantics-interface architecture that combines principles of Mimimalist Syntax used in *Distributive Morphology* (DM) with *Discourse Representation Theory* (DRT). (cf. (Roßdeutscher 2010), (Roßdeutscher and Kamp 2010), (Roßdeutscher appear), (Roßdeutscher 2012))

- the construction algorithm accounts for the phenomena illustrated by (1) to (7).
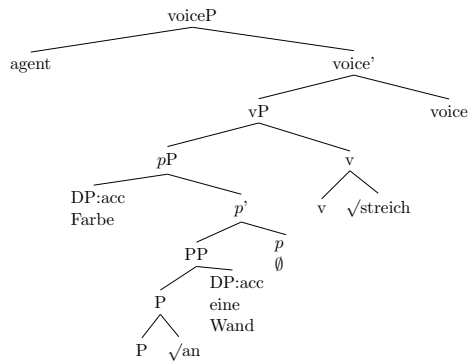

1 Semantics construction on the basis of word-syntax

- German has four syntactic construction types: verb + PP (s. (8)); particle-construction (s. (9)); 'ground-promotion'-construction (s. (10)); prefix-verb (s. (11)). Prefixes head-move to the verb and incorporate, particles don't; particles are adjacent to the verb in base position and stay in situ when the verb moves to V2.
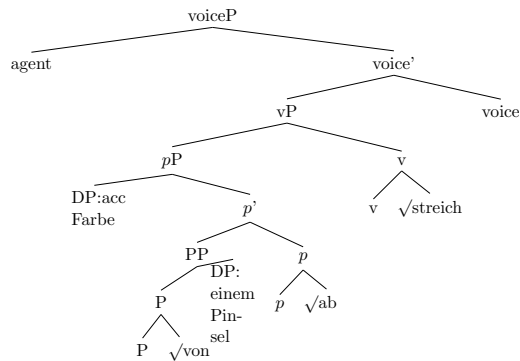
Syntactic background assumptions

- *one* syntactic engine for words and phrases (cf. (Rossdeutscher 2013a), (Rossdeutscher 2013b).)

- Split-P hypothesis (cf. (Svenonius 2003), (Svenonius 2004),(Svenonius 2007)) with the commitment to the parallelism of the prepositional and the verbal domain.

- Head movement constraint (cf. (Baker 1988).

- P-elements incorporate if and only if there is no intervening p-level, i.e. when we have an unaccusative P-projection. (cf. *pere*-verbs in (Svenonius 2004))
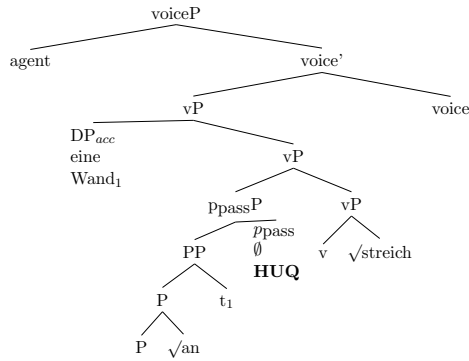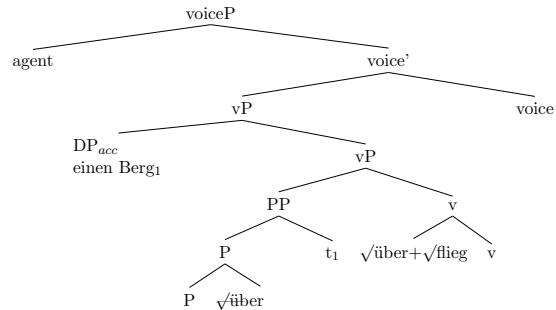
(8) Farbe an eine Wand streichen

```
              voiceP
       agent          voice'
                   vP        voice
               pP      v
          DP:acc   p'    v  √streich
          Farbe  PP   p
                      ∅
                 P  DP:acc
                    eine
                    Wand
                 P  √an
```

(9) Farbe von einem Pinsel abstreichen

```
                 voiceP
         agent            voice'
                       vP        voice
                   pP       v
             DP:acc    p'     v  √streich
             Farbe   PP    p
                          
                    P  DP:    p  √ab
                       einem
                       Pin-
                       sel
                    P  √von
```

(10) **eine Wand anstreichen**

```
              voiceP
       agent          voice'
                   vP        voice
          DP_acc       vP
          eine
          Wand_1   PpassP      vP
                  PP   p_pass  v  √streich
                        ∅
                   P  t_1  HUQ
                   P  √an
```

(11) einen Berg überfliegen

```
              voiceP
       agent          voice'
                   vP          voice
          DP_acc       vP
          einen Berg_1
                    PP          v
                  P   t_1  √über+√flieg  v
                  P  √über
```

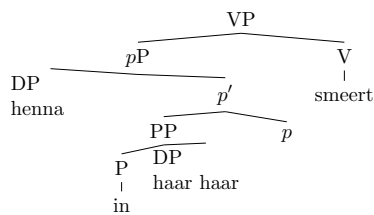## Parallelism in Split-P Hypothesis: $\frac{p}{P} = \frac{voice}{V}$

- Recall (Svenonius 2003), (Svenonius 2007)

Ingrid smeert henna in haar haar

```
              VP
        pP          V
     DP    p'     smeert
     henna
        PP      p
      P    DP
      |    haar haar
      in
```
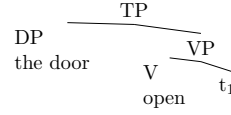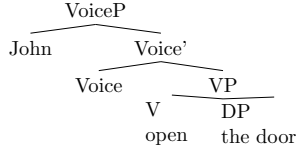
Ingrid smeert haar haar in (met henna)

```
              VP
     DP_1        V'
     haar haar  PP     V
              P   t_1  smeert
              |
              in
```

John opens the door

the door opens

VoiceP: John, Voice' (Voice, VP (V: open, DP: the door))

TP: DP the door, VP (V: open, t₁)
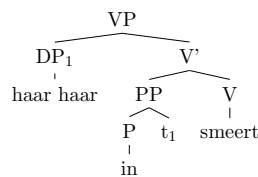
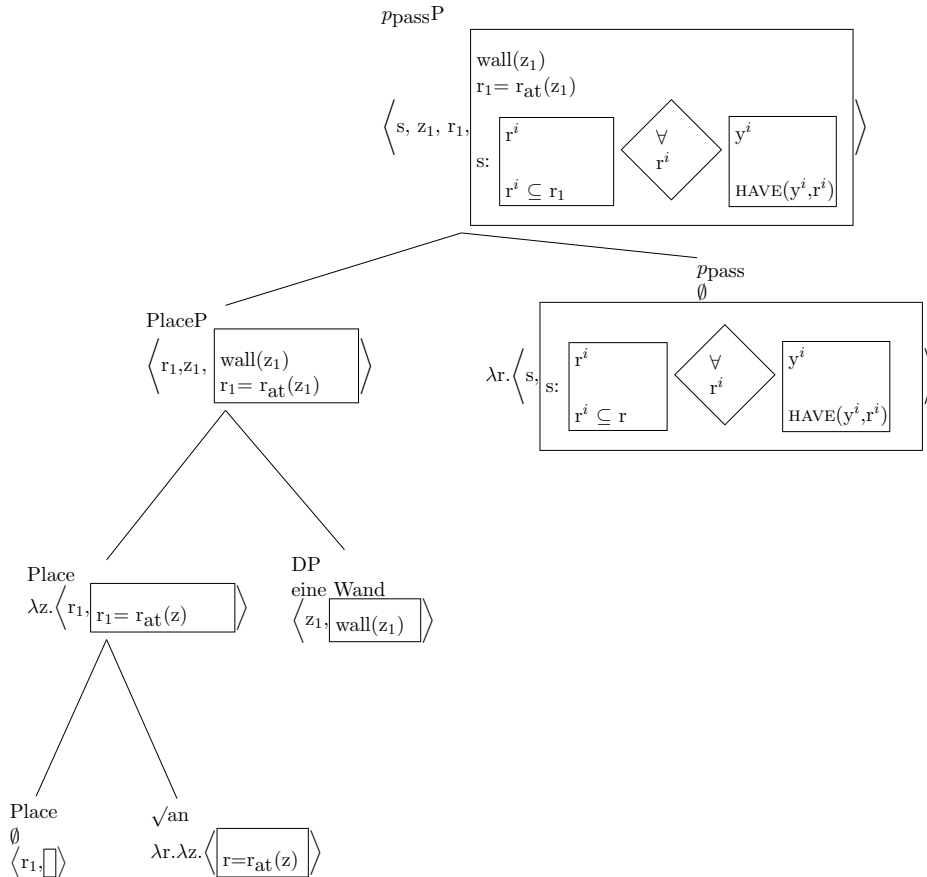## Comparison of Svenonius' and the present analysis

- (Svenonius 2003): no p ; unaccusative P, analogously to unaccusative VP: ground argument leaves PP;

- no analogy in logical form

- doesn't account for any of the semantic properties of the construction under discussion

- present paper: p yes; p silent; p passive, analogously to passive voice: ground argument leaves PP.(compare (Romanova 2007))

- There is an analogy in logical form between p_{pass} and voice$_{pass}$: binding figure variable in spec$p$ is analogous to binding the agent variable in specVoice. (The analogy has its limitations: DPs governed by *mit*-phrases must be cumulative; agent *von*-phrases need not.)

- p houses the operator of hidden quantification **HUQ**

Semantics construction algorithm for *eine Wand anstreichen* (cover a wall with paint)

- Focus on p_{pass}P in (10). In (12) the ground arument *eine Wand* is still in situ, before 'ground promotion' movement. Note the **HUQ** semantics of the p_{pass}-head.
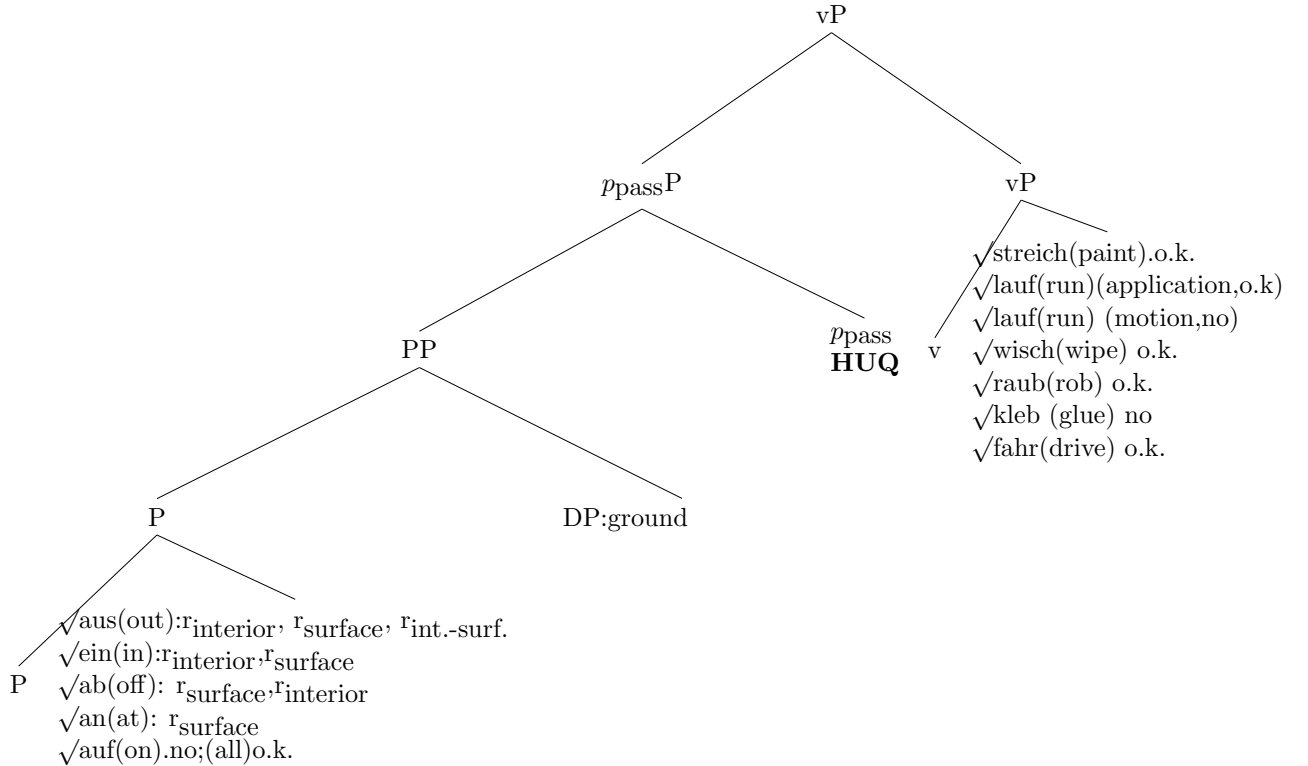
(12)   (preliminary)

p_{pass}P

$\left\langle s, z_1, r_1, \begin{array}{l} \text{wall}(z_1) \\ r_1 = r_{at}(z_1) \\ s: \boxed{\begin{array}{l} r^i \\ r^i \subseteq r_1 \end{array}} \quad \diamond\!\!\begin{array}{c} \forall \\ r^i \end{array}\!\!\diamond \quad \boxed{\begin{array}{l} y^i \\ \text{HAVE}(y^i, r^i) \end{array}} \end{array} \right\rangle$

PlaceP $\left\langle r_1, z_1, \boxed{\begin{array}{l} \text{wall}(z_1) \\ r_1 = r_{at}(z_1) \end{array}} \right\rangle$

p_{pass} $\emptyset$

$\lambda r. \left\langle s, s: \boxed{\begin{array}{l} r^i \\ r^i \subseteq r \end{array}} \quad \diamond\!\!\begin{array}{c} \forall \\ r^i \end{array}\!\!\diamond \quad \boxed{\begin{array}{l} y^i \\ \text{HAVE}(y^i, r^i) \end{array}} \right\rangle$

Place $\lambda z. \left\langle r_1, \boxed{r_1 = r_{at}(z)} \right\rangle$

DP eine Wand $\left\langle z_1, \boxed{\text{wall}(z_1)} \right\rangle$

Place $\emptyset$ $\left\langle r_1, \boxed{} \right\rangle$

√an $\lambda r. \lambda z. \left\langle \boxed{r = r_{at}(z)} \right\rangle$

- The region r_1 over which the **HUQ** semantics quantifies is provided by PlaceP; r_1 is the surface-region r_{at} of the wall z_1

- The representation **HUQ** introduced by p_{pass} contributes the information that each part of the region r has some stuff y. Combining this representation with that of PlaceP yields that there is stuff on each part of the surface of the wall.

Interlude: HUQ, selector and selectee

- **HUQ** is subject to various selection restrictions. On the one hand this concerns the particle, which provides the argument to **HUQ**. On the other hand it concerns the nature of the event specified by the verbal root with which p_{pass} combines.

```
                              vP
                  ┌────────────┴────────────┐
              p_pass P                      vP
          ┌──────┴──────┐              ┌─────┴─────┐
         PP          p_pass           v    √streich(paint).o.k.
     ┌────┴────┐      HUQ                  √lauf(run)(application,o.k)
     P     DP:ground                       √lauf(run) (motion,no)
┌────┴────┐                                √wisch(wipe) o.k.
P   √aus(out):r_interior, r_surface,       √raub(rob) o.k.
            r_int.-surf.                    √kleb (glue) no
    √ein(in):r_interior,r_surface          √fahr(drive) o.k.
    √ab(off): r_surface,r_interior
    √an(at): r_surface
    √auf(on).no;(all)o.k.
```

vP

p_{pass}P

PP

P

DP:ground

P

p_{pass} **HUQ**

v

$\sqrt{}$streich(paint).o.k.
$\sqrt{}$lauf(run)(application,o.k)
$\sqrt{}$lauf(run) (motion,no)
$\sqrt{}$wisch(wipe) o.k.
$\sqrt{}$raub(rob) o.k.
$\sqrt{}$kleb (glue) no
$\sqrt{}$fahr(drive) o.k.

$\sqrt{}$aus(out):$r_{interior}$, $r_{surface}$, $r_{int.-surf.}$
$\sqrt{}$ein(in):$r_{interior}$,$r_{surface}$
$\sqrt{}$ab(off): $r_{surface}$,$r_{interior}$
$\sqrt{}$an(at): $r_{surface}$
$\sqrt{}$auf(on).no;(all)o.k.

range of verbal kernels that combine with HUQ

- $\rightarrow$ *eine Wanne lief ein / aus* (a tub filled / emptied)
  $\rightarrow$ *ein Stadion lief *ein / *aus* (a stadion filled emptied)
  $\rightarrow$ *Er fuhr die Reifen ab* (he wore out the tyres)
  expected verbal kernels: manner roots that contribute incremental application, e.g. $\sqrt{}$streich (paint) or removal $\sqrt{}$wisch (wipe) (cf. (Levin and Sells 2007), (Stiebels 1996)) or properties of events that bring about states of application or removal.

- $\rightarrow$ **eine Wand (mit Papier) ankleben.*
  expected rejections: verbal kernels that contribute SUPPORT. SUPPORT is a relation between entities: 'glue papers on a wall' entails 'for each of the papers the wall as whole supports that paper' and not 'for each part of the wall there is a paper such that that part supports that paper'.

range of P-elements

- $\rightarrow$ * *Er strich eine Wand (mit Farbe) auf* ;
  * we smeared the baby on (Levin and Sells 2007)

prepositional elements contributing SUPPORT are rejected.

- $\rightarrow$ fake alternation
  p_{pass}, which involves HAVE, is a 'generous' selector. It accepts P-elements as long as they contribute 2D- or 3D- regions qualifying for the ground-argument r in the application relation HAVE(y,r).

Examples of 'p_{pass} selects P':

eine Tapete **ein**streichen
ein Fass **aus**laufen lassen
ein Bild **aus**malen (fill **in** a picture)
ein Backblech **aus**streichen
(butter a baking tin)
den Fußboden **auf**wischen
(to wipe the whole ground)

Examples of '$p+\sqrt{}$ selects P':

Kleister **in** eine Tapete (hin)**ein**streichen
Farbe **von** einem Pinsel **ab**streichen
Farbe **an** eine Wand **an**streichen
Wein **aus** dem Fass **aus**laufen lassen

Semantics-construction for 'eine Wand anstreichen' continued

(13)   (preliminary)
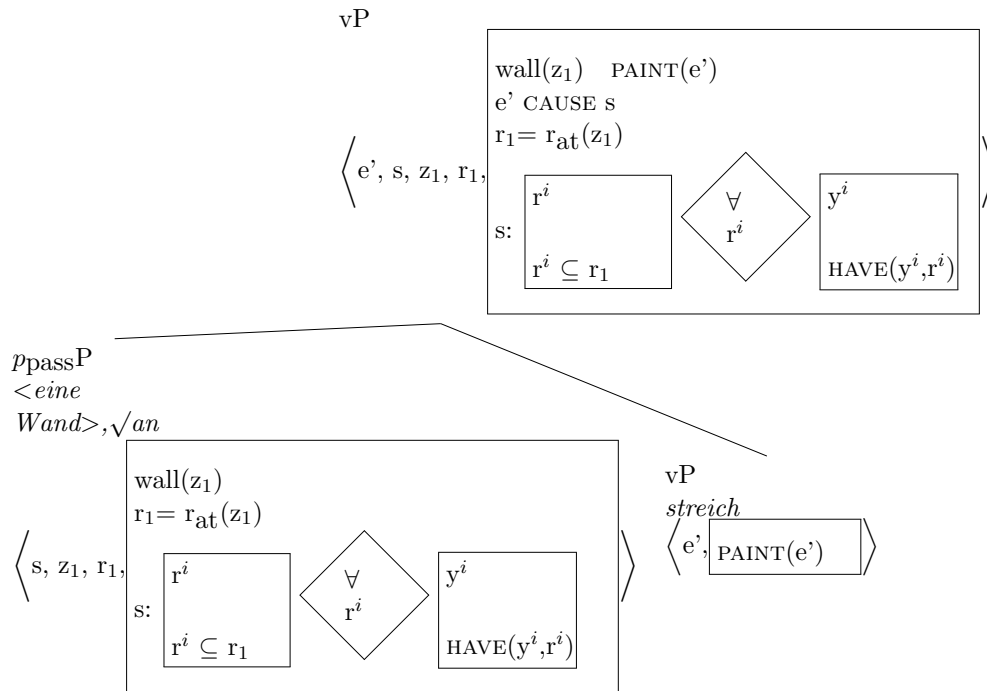
- Merge of the prepositional projection with vP contributes the information that the painting activity brings about the state of the surface of the wall being (fully) applied with paint. (s.' e'CAUSE s ' in the semantic representation of the upper vP.)

- A more refined construction yields the upper vP-representation shown in (14)

$$\text{vP}$$

(14) $\left\langle \text{e', } z_1, r_1, \text{s,} \right.$

P n P'
P= Partition(e') $\|P\|$=n   P'= Partition(r_1) $\|P'\|$=n
wall(z_1) $r_1 = r_{at}(z_1)$
PAINT(e')
$e' = \sum_{e^i \in P} e^i:$ $\boxed{\begin{array}{l} y^i\ e^i\ s^i \\[4pt] s^i:\text{HAVE}(y^i,r^i) \\ e^i \supset\subset s^i \end{array}}$
e' CAUSE s
s: $\boxed{\begin{array}{l} r^i\ s^0 \\[4pt] r^i \subseteq r_1 \\ r^i \in \text{P'} \\ s^0:\neg\text{HAVE}(y^i,r^i) \end{array}}$ $\big\langle \forall\ r^i \big\rangle$ $\boxed{\begin{array}{l} y^i\ e^i\ s^i \\[4pt] e^i \in \text{P} \\ s^i:\text{HAVE}(y^i,r^i) \\ s^0 \supset\subset e^i \supset\subset s^i \end{array}}$

$\left. \vphantom{\begin{array}{c}a\\a\\a\end{array}} \right\rangle$
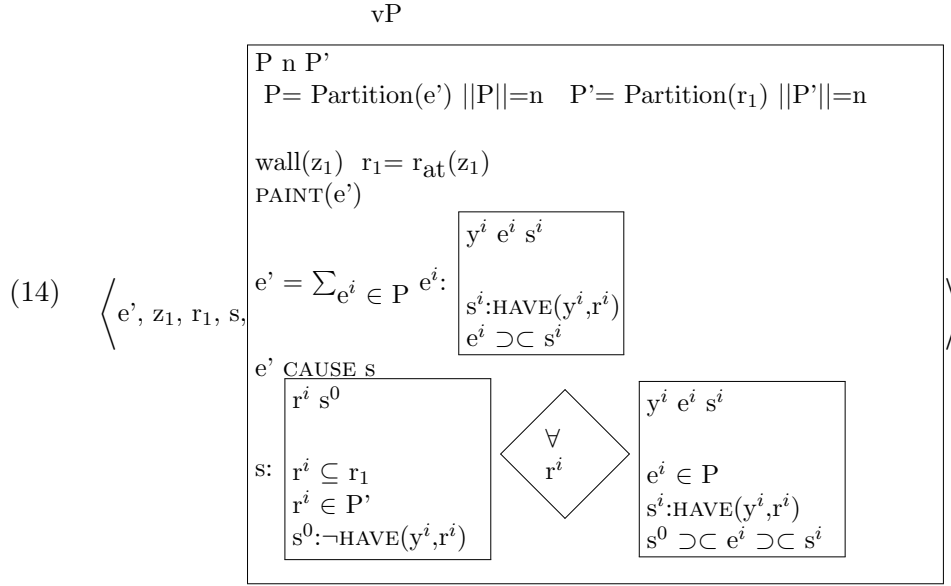
- (14) is to be read as follows: the binding list on the left of the DRS contains discourse referents for the event e', state s, region r_1 and wall z_1. These will be existentially bound at the higher levels Voice, Tense, Comp. The universe of the DRS contains discourse referents for a Partition P of the event e' described by the clause, a Partition P' of the surface region r_1 of the wall and the size n of these two partitions. As always in DRT the presence of these discourse referents in the universe of the DRS means that they are locally existentially quantified.

- The event e' is a finite mereological sum of sub-events e^i (the members of the partition P), where each e^i is the event of some stuff y^i being applied to the region r^i from the partition P' of the region r^i.

- The surface of the wall is a *strictly incremental theme* in the sense of (Krifka 1998).

- There is a (one-one)-mapping between the mereological Event structure P and the mereological Part structure P' of bounded sub-regions of the bounded space r_1: every unique sub-event corresponds to a unique sub-region of the bounded surface (and vice versa) [1].

- **predictions for 'ground promotion' structures:**

   - the event description is telic if the ground object DP describes a bounded region of space, (s. (15a))

   - the event description is atelic when the ground reference object is a bare plural contributing an unbounded set of bounded regions; in this case we have an iterative, distributive reading: for each bounded region there is an event e' of 'covering', 'filling' or 'emptying' the region, where each e' is of the form (14) (s. (15b))

   - descriptions ground DPs that are bare mass terms trigger a special activity reading based on incorporation of the sortal predicate contributed by the DP. (s. (15c))

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[1] ignoring the complication that a sub-region of the wall's surface can be applied with stuff twice (just as a paragraph of a book can be read twice); see (Krifka 1998) for dealing with this complication. The problem doesn't arise with verbs of removal.

(15) a. *Er strich   eine Wand an*
       he painted a   wall   at.prtc.

       'he covered a wall (by painting)'

   b. *wir haben den ganzen Tag Wände   angestrichen; Gläser abgewischt*
      we have the whole   day walls$_{bare.plur}$ at.prtc.paint; glasses off.prtc.wipe

      'we spent the whole day covering walls with paint; with wiping glasses clean'

   c. *wir haben den ganzen Tag (?) Holz   angestrichen; (?) Glas*
      we have the whole day   wood$_{bare.sg}$ at.prtc.paint;   glass$_{bare.sg}$

      abgewischt
      off.prtc.wipe

Summary: HUQ at its syntactic position in (10)

- My analysis deals with ground-promotion constructions at the syntax-semantics interface

- The semantic contributions of the verbal and prepositional roots and of the operator are determined by their position in sub-lexical syntax.

- Likewise sub-lexical syntax is determined by the semantic contribution of the roots.

HUQ:
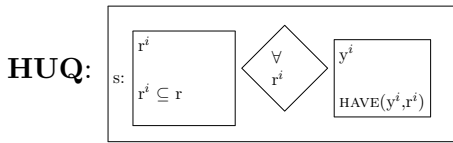
(16) = (10) eine Wand anstreichen
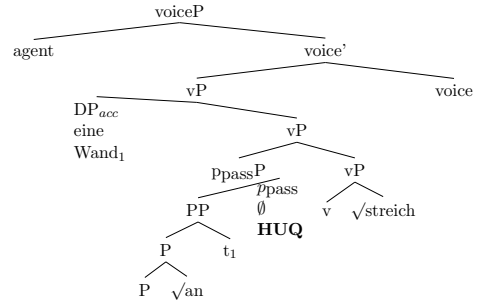
- the analyisis at the syntax-semantics-interface allows s to explain

  - linguistic form as logical form, in terms of variable binding;

  - Aktionsart, i.e. accomplishments, in terms of quantification;

  - restrictions on lexical roots in terms of selection restrictions of verbal kernels on **HUQ**, and of **HUQ** on P-elements.

Afterthought 1. Two mutually dependent incremental themes

- In ground-promotion constructions the two incremental themes, i.e. the bounded region and the implicit applicandum in the HAVE-relation, are mutually dependent in a way that is fundamentally different from the relation between figure and path in a Figure-Path-Relation discussed in (Beavers inpress) and (Beavers 2009).

Some of Beavers' examples are (17a), (17b) and (17c).

(17) a. a. A ball rolled down to bottom of the hill
          b. A litre of wine flowed from the jar to the floor (*for /in three minutes)

      b. a. Balls rolled down to the bottom of the hill
          b. Wine flowed from the jar to the floor (for/* in three minutes)

      c. a. A ball rolled further
          b. A litre of wine flowed (for/* in three minutes)

- The events described by these motion descriptions have two kinds of participants: The moving theme and the path along which it moves. The descriptions in (17) are examples of such descriptions. Both participants can play a cumulative role and Beavers argues that the event description is telic only if both participants are quantized.

  (One way in which this condition can be satisfied: the theme argument is realised by the singular count DP 'a ball', and the path is given by the goal phrase 'to the floor'.)

- Thus (17a) is a telic description and both (17b) and (17c) are atelic.

- 'Ground'-promotion descriptions are *not* of this general form. In these constructions the figure DP (denoting the stuff that is being applied or being removed) is typically *non*-quantised (if it is present at all). Despite their non-quantised or fully absent figure constituents these descriptions are telic.

  Reason: these descriptions are application descriptions, not motion descriptions. Their semantics does not involve a path along which the denotation of the figure-DP is said to move.

- I have analysed event descriptions with 'ground-promotion' descriptions as involving quantification over both sub-regions (of the regions associated with the ground-object) and portions of stuff (denoted by the DP of a *mit-*(*with-*) PP when such a PP is present and accommodated when there is no such constituent). But note well: conceptually this is not a case of *two* quantifications, one over regions and one over portions of stuff, but of a *single* quantification over regions (see the semantics construction above), or alternatively as quantification over pairs of a region and portions of stuff, but where each portion of the stuff is uniquely determined by the corresponding region.

- In other words: the semantics of 'ground-promotion' constructions does *not* involve two distinct event participants that can be separately realised by a phrase that can be either quantised or non-quantised. There is only one participant whose quantisation status is determinative of the telicity of the description and that is the ground argument. When the ground argument contributes a bounded region as the universal quantificational domain the description is telic; otherwise it is not.

- In fact, quantised DPs in *mit-*-PPs of ground-promotion constructions are not felicitous. (Compare # *die Wand mit einem Topf Farbe anstreichen* (to cover a wall with a tin of paint)). The intuitive reason is that the amount of paint needed to cover the wall is fixed twice over in such a description, first as the amount of stuff in the tin and then again as the sum of all portions y^i in the pairs $<y^i, r^i>$ that are bound variables by the quantification contributed by p_{pass}.

Afterthought 2. New puzzle: HUQ in achievement descriptions

- Hidden universal quantification over participants in event descriptions is a wide-spread phenomenon.

- Hidden universal quantification explains the aspectual properties of certain particle constructions with *aus-*, as in (18). (An analysis of (18a) and (18b) at the syntax-semantics-interface is presented in (Roßdeutscher 2012)).

- The semantics involves strengthening of the algebraic notion of a *strictly incremental theme* in the sense of (Krifka 1998) to that of a *sequential theme*. A *sequential theme* is a theme argument that comes with a partition P' the cells of which stand in a predetermined linear order with a distinguished last element. The contribution of a sequential theme to the event description of which it is a part is that the event has a partition P whose temporally final cell is the sub-event that involves the last cell of P'.

- I assume that (18c), (18d) instantiate the same constructions, w.r.t. both syntax and semantics.

(18) a. *weil   Jussi ein Buch auslas*
         because Jussi a   book out.prtc.read

         'because Jussi read a book to its end

      b. *weil   Jussi einen Song ausspielte*
         because Jussi a   song out.prtc.play

         'because Jussi played a song to its end'

      c. *weil Jussi den Wein austrank*
              Jussi the wine out.prct.drank

         'because Jussi finished the wine'

      d. *weil Jussi sein Glas austrank*
              Jussi his   glass out.prct.drank

         'because Jussi finished his glass'

- The outstanding semantic property of these verbal constructions is that they are 'sequential achievements'. Sequential achievements presuppose an initial segment of the described event in progress and assert the final segment.

- Achievements reject the adverb *weiter* close to the verb (*weiter*+V is 'continue to') (cf. (Kratzer 2004)); accomplishments don't. E.g. *weil er das Buch weiter las* (o.k) — *weil er das Buch weiter auslas* (no).

- As shown in (19a) and (19b), descriptions involving ground promotion admit *weiter*, and so does (19c). In contrast, *weiter* cannot be added to the event descriptions in (19d), (19e) = (18c),(18d), and neither to (19f).

(19) a. o.k. *weil   er die Wand weiter   anstrich*
              because he the wall   continued at.part.paint

              he carried on with covering the wall

      b. o.k. *weil   das Fass   weiter   auslief*
              because the barrel continued out.part.run

              ' the barrel went on emptying itself'

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c. o.k. *weil   Jussi das Zimmer weiter   absuchte*
because Jussi the room   continue ab.prtc.search

because Jussi went on to search the room

d. no. *weil   Jussi den Wein weiter   austrank*
because Jussi the wine continued out.drink

'because Jussi went on finishing the wine'

e. no. *weil   Jussi das Glas weiter   austrank*
because Jussi the glass continued out.drink

'because Jussi went on finishing his glass'

f. no *weil   Jussi die Strecke weiter   abfuhr*
because Jussi the distance continued ab.fuhr

'because Jussi went on covering the distance'

- The differences between 'ground-promotion' and the descriptions in (19d) and (19e) needs further investigation and formal reconstruction. But among them the following differences are crucial:

  - The direct objects in the accomplishments in (19) are ground-arguments; the direct objects in the achievements (19d) and (19e) are not, they are themes of consumption.

  - The direct objects in the accomplishments provide 2D or 3D regions to be quantified over; none of the sequential achievements (19d), (19e), (19f), have 2D- or 3D-regions as their domain of quantification.

  - 2D or 3D regions involved in application or removal are not temporally ordered.

- **Hypothesis**: No temporal order in the domain of quantification $\Rightarrow$ No sequential achievements.

1.1   Conclusion and Prospects

- The central points of the paper: We have looked at different event descriptions built from the same P-elements and the same verbal roots. We have seen that constructions involving ground promotion are importantly different both syntactically and semantically from constructions using the same basic ingredients but with overt figure-phrases and no ground-promotion.

- In particular, as I have discussed in detail, ground promotion constructions involve a special kind of universal quantification over regions, triggered by an empty p_{pass}-head.

- These ground-promotion cases involving event descriptions are on the one hand different from constructions that do not include ground-promotion, including the examples (1a), (1b) and (2a),(2b) and the examples (17) from Beavers, and on the other from the examples in (19). They differ from the former in being telic in spite of having non-quantized or absent figure DPs. They differ from the latter in being accomplishment descriptions, which admit *weiter*.

- Universal quantification is part of the semantics of many more event description constructions than those we have considered. The universal quantifications involved in these various constructions can differ in at last three ways: in the part of the underlying syntax that triggers them, in terms of the kinds of entities that are being quantified over and in

what determines the domain of quantification. There is a great deal more here that needs investigation; and that investigation is part of the wider project of coming to understand how the aspectual properties of verbs and their projections depend on their sub-lexical syntactic and semantic structure.

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