Acting intentionally in Frames

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Adverbs of intentionality

- Adverbs expressing intentionality are:
  - in English: intentionally, deliberately, consciously, purposely, a.o.
  - in German: absichtlich (‘intentionally’), bewusst (‘consciously’), versehentlich (‘accidentally’)

- These modifiers contribute to agentivity distinctions

(1) a. Mary coughed.
    b. Mary coughed intentionally.

- They are a subclass of mental-attitude adverbs.
- They behave like VP-adverbs, and seem to function as Davidsonian event adverbs (e.g. Landman 2000).
- We concentrate for the moment on German absichtlich.
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1. Why adverbs of intentionality?

2. A semantics for ‘absichtlich’/‘intentionally’

3. A Frame model for ‘acting absichtlich’
   3.1 History of the idea: Goldman (1970) on action-plans and level-generation
   3.2 A Frame version: cascades, and action-plans as attributes

4. Going for the opposite: ‘versehentlich A’
Why adverbs of intentionality?
• Reason: We see intentional adverbials as activating components of an event which otherwise remain hidden.

• Goal:
  • to explain the behavior of modifiers, like e.g. the adverb *absichtlich*;
  • to uncover structures in the meaning of action verbs.
Reason, Goal and Achievement Plan 1

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A semantics for
‘absichtlich’/‘intentionally’
The meaning of ‘absichtlich’

- *A is done intentionally* is **not** true by virtue of *x having the (previous) intention to do A*

(2) I have the intention to turn on the light. Therefore I flip the switch. – In the end...
   a. I have turned on the light ✓ as I had planned / # intentionally.
   b. I have flipped the switch intentionally.

(3) Ich habe die Absicht das Licht anzumachen. Daher betätige ich den Schalter. – Am Ende...
   a. Ich habe das Licht ✓ wie geplant / # absichtlich angemacht.
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- **intentionally** is not the opposite of **spontaneously**

\[(4)\] a. I intend to apply for that position – #I applied intentionally
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b. I didn’t intend to buy chocolate – #I didn’t buy it intentionally
   (does not refer to your shopping list)

→ Hence, an action A is **absichtlich** if it is done in a connection to an intention. However, A is not the content of the intention, it is a means to realize the intention.
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Difference between ‘intentionally’ and German ‘absichtlich’

- *absichtlich* A is **not** true by virtue of *x is doing A consciously* (but this seems possible for *intentionally*)

(5) a. During the 45-minute session, we stretched and lengthened, relaxed and extended, focused and let go. And we breathed – *intentionally* and deeply – as our instructor encouraged us to.¹

b. *Und wir atmeten  *absichtlich/* ✓ bewusst*...
and we breathed intentionally/consciously

→ *Absichtlich* cannot apply to ‘idle behavior’, whereas *intentionally* may.

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  • However, *absichtlich* refers to a different section of the global concept ‘intentionality’.

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A Frame model for ‘acting absichtlich’

History of the idea: Goldman (1970) on action-plans and level-generation
Goldman’s (1970) theory of action

- Goldman (1970) organizes context dependent categorizations of a doing in *act-trees*.

- *Level-generation* is a conceptual relation which, under circumstances, relates two acts $A$ and $A'$, if $A'$ is done *by* or *in* doing $A$ (Goldman 1970, Lübner ms.).

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Action-plans:

- are Goldman’s (1970) mechanism to capture intentional actions;
- consist of the action-want of the agent and her beliefs concerning the realization of the target of the action-want (1970: 56)
  - The action-want (desire or aversion) of an agent is the want to do a certain act (1970: 50).
  - Beliefs are hypothetical acts of an agent (1970: 56).
- “Whatever act is performed [...] as long as it is performed in the way conceived in the action-plan, is intentional” (Goldman 1970: 59)
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Intentional action

Figure 1: *Projected act-tree* (left) and an *Act-tree* (right) which do not replicate each other completely
How to use Goldman (1970) for the analysis of intentional adverbials

- Intentional adverbs fix the interpretation of verbs which otherwise can be understood as intentional or not (cf. Buscher 2016).
- Whenever the agent has an action-plan matching the execution of the action, the latter is intentional.
- If the plan does not match the execution of the action on all levels, then the respective events on the act-tree are not intentional.

→ Intentional adverbs introduce the action-plan of the agent of an action. They also provide information with respect to the matching relation between the plan and the action.
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A Frame version: cascades, and action-plans as attributes
**Frames**

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- the universal format of representation in human cognition (cf. Barsalou 1992, LÖbner 2017);
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- is a general term capturing Goldman’s act-structures;
- are seen as a simultaneous categorization in a hierarchical structure;
- make use of the c-constitution relation (a conceptual relation between types);
- are second-order structures based on first-order frames.

(6) John winkt Mary zu.
‘John waves at Mary.’

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Cascades, action-plans, and intentional adverbs

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- Intentional adverbs:
  - introduce the action-plan of the agent;
  - state whether there is a matching between levels of the action-plan tree and the act-tree of the agent.

→ We need a representation of actions which provides an action cascade as well as an action-plan cascade.
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- It involves a new type for actions inspired by the idea of Dowty’s (1979) \texttt{DO}.

- That the action-plan and the execution match is modeled via comparators (2-place attributes returning comparison values, cf. L"obner (2017)).
Modeling ‘absichtlich A’

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Figure 4: Generalized frame representation of intentional action
Ich habe ihm absichtlich zugewunken.
‘I waved at him intentionally.’
Summary

- **Absichtlich** A (an execution-cascade) is true if A is a proper part of the plan value.
- In this *absichtlich* has a meaning that is narrower than English *intentionally* as argued above.
- **Absichtlich** is an event modifier, but not a manner modifier.
- Manner modifiers are assumed to enforce changes in the execution track only.
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Going for the opposite: ‘versehentlich A’
The meaning of ‘versehentlich’

- **Versehentlich** is difficult to translate in English.
  - unintentionally? No, there is also *unabsichtlich*.
  - accidentally? Yes, but a responsible agent is needed, i.e. we need an action.
  - inadvertently? Yes, but it does not cover the sense of *unexpectedly*.
- Given the frame for *absichtlich* A, how can we represent *versehentlich* A:
  → A plan is involved but is not congruent with the execution.
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In the elevator Bill and John are having a discussion. Bill pushes the button for the 3rd floor and turns around to face John. While turning around:

Bill hat versehentlich die Knöpfe mit seinem Rucksack gedrückt. 'Bill pushed the buttons with his backpack accidentally.'
We hypothesize that *versehentlich* A generally means that A is embedded in a larger action concept.

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‘Bill pushed the 6th floor button accidentally.’
Summary

- **Differences:**
  - In (8) the *versehentlich* A differs from the planned one in the value of an attribute.
  - This corresponds to the placement of focus in the example.

- **Commonalities:**
  - In both case the *versehentlich* A is generated by an act which is executed as planned.
  - However, *versehentlich* A itself is outside the scope of that plan.
Summary

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- Commonalities:
  - In both case the *versehentlich* A is generated by an act which is executed as planned.
  - However, *versehentlich* A itself is outside the scope of that plan.
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Summary

- **Differences:**
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  - In both cases the *versehentlich* A is generated by an act which is executed as planned.
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Some References

