Formale Semantik
09. Tempus und Modalität

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Folien in Überarbeitung. Englische Teile (ab Woche 8) sind noch von 2007!
Stets aktuelle Fassungen: `https://github.com/rsling/VL-Semantik`

Inhalt

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- Understand how opaque contexts affect meaning (incl. *believe* type verbs).
- Get a first idea of why we need the *up* operator $^\wedge$.

Tense

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- *What$_i$ **did** you expect t$_i$?* vs. *Nani-o yokishi-**ta**-ka.*

New ps rules

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- $[_{TP}\ NP\ T\ VP] \Rightarrow [_{TP}\ T\ NP\ VP]$ (T raising)

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- U: domain of quantification
- $V(\beta)$: non-relativized function for all β which are not a proper name
- $V(\beta)(\langle w, i \rangle)$: V valuates β to a function from world-time pairs to the denotata of the predicate (sets of individuals, tuples of them, etc.)

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- shifts of evaluation time

Reichenbach

	past (R<S)	present (R,S)	future (S<R)
anterior(E<R)	E<R<S *er war gegangen*	E<R,S *er ist gegangen*	S<E<R S,E<R E<S<R *er wird gegangen sein*
simple(E,R)	E,R<S *er ging*	E,R,S *er geht*	S<E,R *er wird gehen*
posterior(R<E)	R<E<S R<S,E R<S,E R<S<E **er würde gehen*	R,S<E *er wird gehen*	S<R<E **er wird gehen werden*

Embedded tenses and adverbials

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Modality

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- affixes: *Frau Eckardt is recognizable.*

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- modal *Aux* in English is tense-insensitive (evidence for *Infl*)
- $\Box$ and $\Diamond$ in intensional predicate calculi (IPC): exploit the full set of possible worlds
- in NL: evaluation of modal expressions against restricted conversational backgrounds

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- we call the conversationally relevant background the set of $\langle w, i \rangle$ pairs relevant to the interpretation of the sentence

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- statable in propositional form (ten commandments, law, …)

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- such that all possible worlds are: $\bigcap g(\langle w, i\rangle)$

Embedding

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- CP (fully fledged sentence) receives theta role by *believe* under government.

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- PRO, controlled by the subject of *has plans*:
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- belief: $\langle w, i \rangle$ is an element of the proposition of CP

Translating *that* as ^

- value of propositional attitude (PA) verbs: functions $[\langle w, i\rangle \rightarrow \langle u_n, p\rangle]$ with $u_n \in U$, p a proposition (set of $\langle w_n, i_m\rangle$) and compatible to u$_n$'s background

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- *up* ($\hat{}\chi$): an operator which gives the intension of an expression χ
- the full logic of $\hat{}$ and $\check{}$ as designed by Montague next week
- $\hat{}$ rids us of the problem that the belief content looks truth-conditional (a sentence) but doesn't contribute to the embedding sentence's truth-value. PA verbs take intensions as arguments.

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- Only Ralph doesn't know.

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- false: since Ralph doesn't know that and in a way 'doesn't believe it'

de dicto and *de re*

- the Russelian interpretation for *the* like $\exists$ with a uniqueness condition (as a GQ):
  $\lambda Q \lambda P \, [\exists x \, [Q(x) \land P(x)] \land \forall y \, [Q(y) \leftrightarrow y = x]]$

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- makes the sentence true: the *de re* reading
- Ralph believes $[_{CP}$ that $[_{IP}$ the guy from the beach$_i$ $[_{IP}$ x_i is a spy$]]]$
- makes the sentence false: the *de dicto* reading

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- $try(j, {}^\wedge swim)$

Literatur I

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Lizenz