# Formale Semantik 09. Tempus und Modalität

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Achtung: Folien in Überarbeitung. Englische Teile sind noch von 2007! Stets aktuelle Fassungen: https://github.com/rsling/VL-Semantik

#### Inhalt

- - Priorian operators
    - Tense raising
    - Interpretation Some problems
- - Modality

    Realizations of modality

- Types of modality
- Modeling the background
- Embedding
  - Syntax
  - Believe semantics

  - AmbiguitiesInfinitives and gerunds

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- Get a first idea of why we need the up operator ^.

# Tense

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- it was always the case... ( $\mathbf{H} = \neg \mathbf{P} \neg \phi$ )

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- What<sub>i</sub> did you expect t<sub>i</sub>? vs. Nani-o yokishi-ta-ka.

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

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- $V(\beta)(\langle w, i \rangle)$ : V valuates  $\beta$  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

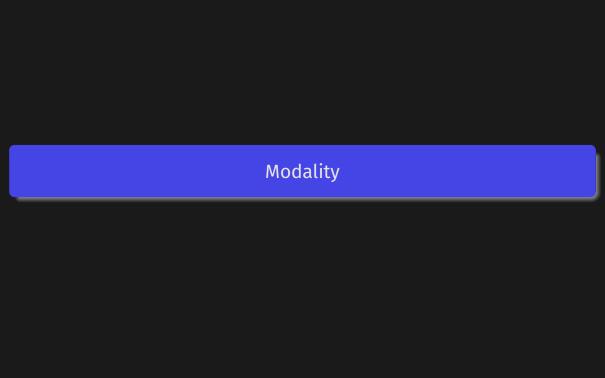
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- affixes: Frau Eckardt is recognizable.

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- 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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- known facts narrow down the root background

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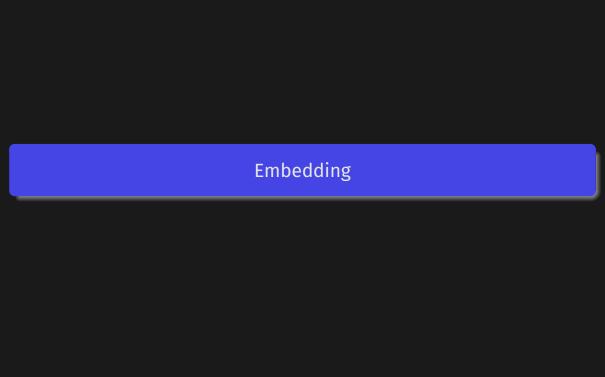
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- statable in propositional form (ten commandments, law, ...)

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



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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

• 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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- 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.

# Is Ralph insane?

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- What's the truth value of...
- Ralph believes that the guy from the beach is a spy.
- true: since Ortcutt and the guy in the hat are one individual
- false: since Ralph doesn't know that and in a way 'doesn't believe it'

• the Russelian interpretation for *the* like  $\exists$  with a uniqueness condition (as a GQ):  $\lambda Q \lambda P \left[\exists x \left[Q(x) \wedge P(x)\right] \wedge \forall v \left[Q(y) \leftrightarrow v = x\right]\right]$ 

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- makes the sentence false: the <u>de dicto</u> reading

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- \( \rightarrow \text{THE(first-man-in-space)(not-be-Gagarin)} \)
- at some  $\langle w_n, i_m \rangle$  the first individual in space is not Y.G.
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- at some  $\langle w_n, i_m \rangle$  the first individual in space is not Y.G.
- THE(first-man-in-space)(\(\rightarrow\)[not-be-Gagarin])
- at  $\langle w, i \rangle$  the first individual in space (definitely Y.G.) is not Y.G. in an accessible world

- Yuri Gagarin might now have been the first man in space.
- some Mickey Mouse LFs:
- \( \rightarrow \text{THE(first-man-in-space)(not-be-Gagarin)} \)
- at some  $\langle w_n, i_m \rangle$  the first individual in space is not Y.G.
- THE(first-man-in-space)(\(\rightarrow\)[not-be-Gagarin])
- at  $\langle w, i \rangle$  the first individual in space (definitely Y.G.) is not Y.G. in an accessible world
- Names are rigid designators across world-time-pairs, definite descriptions aren't.

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- John tries to sing.

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- infinitive embedding verbs: functions from world-time pairs to sets of individuals which have a certain property, the intension of a predicate P
- John tries to sing.
- try(j, ^swim)

# Literatur I

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