

Final review

1 Key terms and concepts

Key terms and concepts, roughly in the order they were introduced.

- The Principle of Compositionality
- truth value, truth condition, models
 - contradiction, tautology
- entailment (\Rightarrow), presupposition ($\sim\rightarrow$)
 - tests for entailment vs presupposition: embedding tests, “Hey! Wait a minute!” (Handout 1)
- set notation: $\{x : x \text{ is a cat}\}$ \in \subseteq $=$ \cap \cup \setminus
- other mathematical notation: \forall \exists \wedge \vee $f \parallel g$ $[i \mapsto x]$
- the denotation/interpretation function $\llbracket \dots \rrbracket$
- types: $e, t, \langle \sigma, \tau \rangle$ D_τ is the domain of type τ
- λ -notation: $f = \lambda \underbrace{x}_{\text{argument variable}} : \underbrace{x \in \mathbb{R}}_{\text{domain condition}} . \underbrace{x + 1}_{\text{value description}}$
- characteristic functions of sets
- The Triangle Method; Binary Branching
- Quantifiers: (Handouts 2, 5)
 - Generalized Quantifier Theory
 - quantificational determiners
 - type $\langle \langle e, t \rangle, t \rangle$
 - the problem of quantifiers in object position; QR
- NPIs and downward-entailment: (Handout 2)
 - A quantificational determiner D is *left downward-entailing* (DE; or downward monotone) if and only if for all $A_1 \subseteq A_2 \subseteq D_e$ and $B \subseteq D_e$, $D(A_2, B) \Rightarrow D(A_1, B)$. (and similarly for *right DE*)
 - NPIs are allowed in *downward-entailing* environments. (Ladusaw, 1979)
- Modifiers: (Handout 4)
 - Intersective, non-intersective

- Definite descriptions: (Handout 4)
 - [[the]]
 - Presupposition calculation
- The interpretation of movement: (Handouts 5, 6, 7)

Pick an arbitrary index i .

 1. The base position of movement is replaced with a *trace* with index i : t_i .
 2. A *binder index* i is adjoined right under the target position of the movement chain.
- Pronouns and variable binding: (Handouts 6, 7)
 - bound vs free variables; binders
 - *such that* relatives
 - index, assignment function, Pronoun & Traces rule
 - vacuous binding
- Grammatical architecture: (Handouts 6, 7, 8)
 - T/Y-model: Syntax, Logical Form (LF), Phonological Form (PF)
 - overt and covert movement; islands
 - Quantifier Raising (QR); reconstruction
- Ellipsis: (Handout 8)
 - LF Identity Condition on Ellipsis (H&K p. 250)
 - scope parallelism
 - strict and sloppy readings of pronouns
 - Antecedent-Contained Deletion (ACD); Sag-Williams generalization
- Degree semantics: (Handout 9)
 - gradable predicates, degrees
 - three “vague” properties of gradable predicates: context-sensitivity, borderline cases, Sorites Paradox
 - pos, contextual standard, comparative constructions
 - scale structure: open, closed, compatible degree modifiers
- Tense and aspect: (Handout 10)
 - English tense vs aspect morphology
 - time as an evaluation parameter
 - PAST and FUTURE as existential quantifiers; problems for this approach
 - Tense vs aspect according to Reichenbach/Klein:
 - * Tense relates Utterance Time and Topic Time

- * Aspect relates Topic Time and Event Time
- Lexical aspect / Aktionsarten: states, achievements, accomplishments, semelfactives, activities
- Intensional semantics: (Handout 11)
 - substitution property, intensional contexts
 - extension, intension
 - possible worlds; type s
 - modals bases: epistemic (EPIST), deontic (DEONT), “root”
 - modal forces: possibility (\exists), necessity (\forall)
 - Intensional Functional Application
 - conditionals: material implication (\rightarrow), modal restrictor view

2 Basic composition rules

(1) **Terminal Nodes (TN):**

If α is a terminal node, $\llbracket \alpha \rrbracket$ is specified in the lexicon.

(2) **Non-branching Nodes (NN):**

If α is a non-branching node, and β is its daughter node, then $\llbracket \alpha \rrbracket = \llbracket \beta \rrbracket$.

(3) **Functional Application (FA):** (Handout 4 version; based on H&K)

If α is a branching node, $\{\beta, \gamma\}$ is the set of α 's daughters, then

- $\llbracket \alpha \rrbracket$ is defined if and only if: $\llbracket \beta \rrbracket$ and $\llbracket \gamma \rrbracket$ are both defined and $\llbracket \beta \rrbracket$ is a function whose domain contains $\llbracket \gamma \rrbracket$;
- if defined, $\llbracket \alpha \rrbracket = \llbracket \beta \rrbracket(\llbracket \gamma \rrbracket)$.

(4) **Predicate Modification (PM):**

If α is a branching node, $\{\beta, \gamma\}$ is the set of α 's daughters, and $\llbracket \beta \rrbracket$ and $\llbracket \gamma \rrbracket$ are both in $D_{\langle e,t \rangle}$, then $\llbracket \alpha \rrbracket = \lambda x \in D_e . \llbracket \beta \rrbracket(x) = 1$ and $\llbracket \gamma \rrbracket = 1$

(5) **Traces and Pronouns Rule (T&P):**

If α is a pronoun or trace, g is a variable assignment, and $g(i)$ is defined, then $\llbracket \alpha_i \rrbracket^g = g(i)$.

(6) **Predicate Abstraction (PA):**

Let α be a branching node with daughters β and γ , where β dominates only a numerical index i . Then, for any assignment g , $\llbracket \alpha \rrbracket^g = \lambda x . \llbracket \gamma \rrbracket^{[i \mapsto x]} \llbracket \beta \rrbracket^g$.

References

- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Malden, Massachusetts: Blackwell.
- Ladusaw, William A. 1979. Polarity sensitivity as inherent scope relations. Doctoral Dissertation, University of Texas at Austin.