Introduction to the Philosophy of Language

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Erich Rast
http://akira.ruc.dk/~erast/
Roskilde University
erast@ruc.dk

The big question: What is meaning?

Two main paradigms:

- Truth-Conditional Meaning Theory
  “To understand a proposition means to know what is the case, if it is true. (One can therefore understand it without knowing whether it is true or not.) One understands it if one understands its constituent parts.” (Wittgenstein, Tractatus logico-philosophicus, 4.024)

- Representational Meaning Theory
  “…symbols and mental states both have representational content. …the main joint business of the philosophy of language and the philosophy of mind is the problem of representation. …How can anything manage to be about anything; and why is it that only thoughts and symbols succeed?” (Fodor, Psychosemantics, 1987, p xi)

This course will only cover truth-conditional approaches.

Course Overview

- Session 1 Introduction
- Session 2 Sense and Reference
- Session 3 Proper Names and Rigid Designation
- Session 4 Propositional Attitudes
- Session 5 Speech Act Theory and Implicatures
- Session 6 Introduction to Formal Pragmatics

**Essential Readings**

Session 2: Reference
- Chapter 1 and 2 of Lycan (2000)

Session 3: Reference (continued)
- Chapter 3 and 4 of Lycan (2000)

**Essential Readings**

Session 4: Propositional Attitudes

Session 5: Speech Act Theory and Implicatures
- Chapter 12 and 13 of Lycan (2000)

Session 6: Introduction to Formal Pragmatics

**Historical Overview I**

- Frege (1848–1925) is often picked out as the founder (or grandfather) of analytical philosophy of language.
- There is interaction and correspondence between the young Wittgenstein, Russell and Frege at the beginning of the 19th century.
- Apart from Russell and Frege, members of the Vienna Circle like Rudolf Carnap (from 1926), Moritz Schlick, Otto Neurath propagate a rigorous logical analysis of language.
- After studying under Russell and Moore (1908–1912), and serving voluntarily for the Austrian army in WWI, Wittgenstein publishes the *Tractatus* with the help of Russell. He then associates with the Vienna Circle from 1922–1929.
- The Vienna Circle also has contacts to the Lvov–Warsaw school of polish logicians who are also working on logical analysis of natural language: Ajdukiewicz, Kotarbinski, Bochenski, Lesniewski, Tarski.
What is a Language?

Languages can roughly be sorted into the following categories:

1. Natural Languages
   (a) Spoken Natural Languages: English, French, Tagalog, Warlpiri, Ewe
   (b) Extinct Natural Languages: Ancient Greek, Linear B, Sanskrit

2. Artificial Languages
   (a) Constructed Languages: Esperanto, Solresol, Nevbosh, Klingon
   (b) Formal Languages: λ-Calculus, Predicate Logic, Scheme, ADA, HTML

This classification is problematic. For example: Esperanto is constructed, but also spoken. Predicate Logic and λ-Calculus could be regarded as a family of languages.

Natural Languages differ considerably from most artificial languages.
**How many languages are there?**

Some facts:
- According to the online edition of Ethnologue, there are **6,809 languages**.
- Figures might range from 2500 to more than 7000 spoken languages.
- Exact figures are hard to provide, because there is no clear distinction between language and a spoken variety (~diadect) of a language.
- What counts as a language is often determined by political decisions, and not only by the criterion of mutual intelligibility.
- Mutual intelligibility is a matter of degree.

Some Examples:
- Danish: Danish could be regarded as a variety of one Nordic language.
- Chinese: Speakers of different varieties of Chinese might not be able to understand each other at all.

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**Extinct Languages**

What about extinct languages?
- I haven’t found any estimate on the number of extinct languages.
- From a diachronic perspective, i.e., looking at the evolution of language(s) over time, counting ancestors is difficult and somewhat arbitrary, as the changes in language are continuous.
- For many if not most extinct languages, there has never been any writing system to document the existence of the language.
- From a synchronic perspective, i.e., looking at language(s) at one period and mostly ignoring changes, it still can be said that many languages nowadays are about to die out or have disappeared.
- A language dies when the last native speaker of the language dies.
- Volume 14 of Ethnologue lists 417 languages as being nearly extinct (meaning “only a few elderly speakers are still living”).
- This affects both linguistic and philosophy of language, since the lack of linguistic data might lead to wrong conclusions about phenomena that are **universal** to all languages.
- With each language, a whole culture dies as well.

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**Most commonly spoken languages**

Ranking languages by their population, i.e., their number of native speakers, is less problematic, although controversial as well. Here is a top-ten compilation grabbed from the Web:

<table>
<thead>
<tr>
<th>Language</th>
<th>Population</th>
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<tr>
<td>Mandarin</td>
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<td>English</td>
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<td>Russian</td>
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<tr>
<td>Malay</td>
<td>176</td>
</tr>
<tr>
<td>French</td>
<td>126</td>
</tr>
</tbody>
</table>

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**Typology I**

**Morphological Classification**

Languages can be classified according to their morphology, e.g., by the complexity of their derivation, inflection, or particle systems, the number of affixes, etc. The following four classes define a gradual scale.
- **Isolating / Analytic Languages**: Languages that only or mostly have words that can’t be changed, have almost no inflection. They often have rich particle systems instead, i.e., a lot of small separate words for marking case, tense, topic, etc. For examples: Chinese, Vietnamese
- **Inflected / Fusional / Synthetic Languages**: Languages with words and affixes, where one affix sometimes can have more than one grammatical functions or meanings. Examples: Latin, Greek, Arabic
- **Agglutinative Languages**: Languages that have a rich, but strict inflection system, in which every affix has a fixed grammatical function or meaning. Examples: Finish, Turkish, Japanese
- **Amalgamating / Polysynthetic Languages**: Languages that allow a vast number of morphemes to combine to very complex words such that a word might express what in other languages would be expressed by a sentence. Examples: Inuktit, Mohawk
**Typical II**

**Syntactical Classification by Word Order**
Languages may require or allow different ordering of subject, verb, and (direct) object. Here is a list with a few examples.

1. **SVO frequent**
   Examples: English, French, Danish, Chinese, Swahili (Tanzania)

2. **SOV frequent**
   Examples: German, Turkish, Japanese, Persian, Korean

3. **VSO rare**
   Examples: Gaelic (Ireland), Arabic, Welsh (UK)

4. **VOS rare**
   Examples: Mopán Maya (Belize), Bushi (Madagascar), Fijian (Fiji)

5. **OSV extremely rare**
   Examples: Xavante (Brazil), Yoda-talk—For those of you who have forgotten, Yoda is the little green Jedi knight from the movie *Star Wars*®. Yoda uses OSV word order for simple clauses with «be», otherwise he uses VOS/A) as in: «Drink milk I do, yes»

6. **OVS extremely rare**
   Examples: Panare (Venezuela), Macushi (Guyana), Klíngon

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**Typology III**

**Classification by Case System**
There are two basic ways in which languages assign case to subject and direct object of transitive verbs, affecting how they deal with passive sentences.

1. **Nominative-Accusative Languages.** Danish, English
   - Transitive: NOM ACC
   - Intransitive: NOM

2. **Absolutive-Ergative Languages.** Georgian (Caucasus), Dyirbal (Australia), Basque (Spain)
   - Transitive: ERG ABS
   - Intransitive: ABS

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**Genetic Classification**

**Classification by Family Trees**

This is a [genetic] classification, i.e., concerning the evolution of languages from common origins, thereby assuming a diachronic perspective.

Example of a Family Tree:

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**Note about the term ‘genetic’**

[Genetic argument]: an argument regarding the evolution or acquisition of an object from some origin. In the philosophy of language it is usually an argument based on

- how a language can be learned
- or an argument based on
- how a language has evolved from an earlier origin.
**Formal Languages**

**What are Formal Languages?**

- Formally, a language is just a set of strings over an alphabet. It's a purely syntactic approach.
- A formal language can be interpreted by providing a model.
- Sometimes formal languages are considered already with a certain interpretation in mind.
- This is often the case with logical languages like first-order predicate logic or modal logic.
- Comparing a formal language with natural language requires to take into account some intended interpretation of the formal language that should match an aspect of corresponding natural language expressions.
- This process always involves some degree of idealization. Certain features of natural language are ignored, others are captured.

**Predicate Logic—Syntax**

Here is a Context-free Phrase Structure Grammar (CPSG) for a fragment of predicate logic:

\[
\begin{align*}
\text{Formula} & \rightarrow \text{Pred(Terms)} \mid (\text{Formula} \land \text{Formula}) \mid \lnot \text{Formula} \mid \exists \text{Var Formula} \\
\text{Terms} & \rightarrow \text{Const} \mid \text{Var} \mid \text{Terms}, \text{Terms} \\
\text{Const} & \rightarrow \text{Peter} \mid \text{Mary} \mid \text{John} \\
\text{Var} & \rightarrow x \mid y \mid z \\
\text{Pred} & \rightarrow \text{give} \mid \text{laugh} \mid \text{slap} \mid \text{love} \mid \text{hate} \mid \text{book}
\end{align*}
\]

- This grammar specifies the set of strings that can be produced by starting with the **Formula** rule.
- We assume that predicates like *give* or *laugh* take some fixed number of arguments (=have a fixed arity), although this is not specified by the grammar in the above form.
**Predicate Logic—Derivation Trees**

Here is an example of a derivation tree that corresponds to one specific derivation of a string in PL1.

```
Formula
  \[ \exists x \text{ love} \]
```

**Predicate Logic—Revised Syntax**

The syntax so far only specifies a finite fragment of predicate logic, given that every predicate has only a fixed arity as has been assumed. The following more abstract syntax specifies the whole predicate logic and uses a more common notation:

- **Formula** $\rightarrow$ Pred(Terms) | (Formula $\land$ Formula) | $\neg$ Formula | $\exists$ Var Formula
- **Terms** $\rightarrow$ Const | Var | Terms, Terms
- **Const** $\rightarrow$ $a$ | $b$ | $c$ | $d$ | $\ldots$
- **Var** $\rightarrow$ $x$ | $y$ | $z$ | $\ldots$
- **Pred** $\rightarrow$ $P$ | $F$ | $G$ | $R$ | Pred

- Convention: Let's write $P''$, $P'''$, etc., as $P_2$, $P_3$, and so on. (The same for variables $x_2$, $x_3$, and constants $a_2$, $a_3$, $a_4$, $b_2$, $b_3$, $b_4$, $c_2$, $c_3$, $c_4$, $d_2$, $d_3$, $d_4$, and so on)
- Let's call this language first-order predicate logic (PL1).

**Predicate Logic—Sample Expressions**

Here are some examples of the strings produced:

1. `laugh(Peter)`
2. `hate(John, Peter)`
3. `love(Peter, Mary)`
4. `\exists love(Peter)`
5. `\exists (book(x) \land give(Mary, Peter, x))`
6. `book(x, y, Peter, z, z, y, Mary, Mary, Peter)`
7. `(hate(John, John) \land love(John, John))`
8. `\neg \exists y (love(x, y) \land hate(x, y))`

- Some formulas are not desirable because we already have some intended interpretation in mind.
- Using a CPSG for specifying the syntax, we'd need an extra rule for every arity that predicates may have, i.e. the number of arguments they take. (That's why we have just assumed that every predicate has a fixed arity.)

**Predicate Logic—Semantics**

Model for PL1. A model $M = (D, I)$ for PL1 consists of:

- A non-empty set $D$ of individuals.
- An interpretation function $I$ such that...
  - $I(c) \in D$, for each constant $c$
  - $I(P) \subseteq D^n$, i.e. $D \times \cdots \times D$, for each predicate $P$ of arity $n$

Assignment Function. An assignment $g$ is a function from variables to elements in $D$.

Term Interpretation. Let $T_g(x)$ be a function from variables and constants to elements in $D$ with respect to an assignment $g$, such that...

- $T_g(t) = g(t)$ if $t$ is a variable, and
- $T_g(t) = I(t)$ if $t$ is a constant.

$\forall$-Variant. An assignment $h$ is an $\forall$-variant of an assignment $g$, if $h$ and $g$ agree in all places except possibly $x$. 
Predicate Logic—Truth in a Model

Truth in a Model. Truth in a model $M$ with respect to an assignment $g$ is defined by the following rules.

1. $M, g \models P(t_1, \ldots, t_n)$ iff $(T_0(t_1), \ldots, T_0(t_n)) \in I(P)$
2. $M, g \models A \land B$ iff $M, g \models A$ and $M, g \models B$
3. $M, g \models \neg A$ iff it is not the case that $M, g \models A$
4. $M, g \models \exists v A$ iff there is an $v$-variant $h$ of $g$ such that $M, h \models A$

No Big Surprise. PL1 involves idealizations of various kind. Here are just a few examples:

- Idealization: Truth does only depend on the assignment and model, not on other factors, like e.g. context, knowledge of the speakers, etc.
- Idealization: The conjunction is part of a normalized language. Special cases like e.g. asymmetric interpretations of $\land$ and $\lor$ are ignored!
- Idealization: We can clearly decide of every elementary predication whether it is the case or not (no vague predicates).

Ideal Languages, Adequacy Criteria

Some important notions:

Ideal Language. An ideal language would be a language that eliminates all “deficiencies” of natural language and is suitable for describing any aspect of the world.

Descriptive Adequacy. A scientific model is descriptively adequate iff it correctly describes the data that it is intended to describe. This implies that there are independent means of getting the data, and checking for the correctness of the description.

Explanatory Adequacy. A scientific model is explanatory adequate iff it is descriptively adequate and offers a satisfying explanation for the data.

Summary

- To compare formal languages with natural languages, you need to take their interpretation into account.
- A formal language always ignores certain aspects of a natural language.
- Without this kind of idealization, there would be no use for a formal language at all.
- What one philosopher might regard as a deficiency of natural language that may be ignored, another philosopher might regard as an important aspect.
- In practically all philosophy of language, there’s a tension between an ideal language perspective and the goal of being descriptively and explanatory adequate.
- The question whether there is an ideal language is unsettled. (There is not even agreement on the logical system that should be chosen as a base.)
## Introduction

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  - Singular Terms versus General Terms
  - Existence Presuppositions
  - Reference Theory vs. Identity Theory
  - Extensional vs. Intensional
  - Linguistic Universals vs. Relativism
  - Level of Meaning |

## Common Problems in the Philosophy of Language

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## Proper Names

1. Jones is the murderer of Smith.
2. Jones is Jones.

- Why, how, and in what respect can (1) be informative, but not (2)?
- What's the meaning of a proper name like «Jones»?

## Singular Terms versus General Terms

1. Cats are mammals.
2. Peter is drunk.

- What's the difference between (1) and (2)?
- Is the difference a fundamental one?
- Could there be an ideal language
  - ...without any singular terms like «Peter»?
  - ...without any general terms like «cats»?

## Existence Presuppositions

1. The present king of France is bald. (Russell 1905)
2. Odysseus spent 6 years on an island with Calypso.

3. a. Nothing is better than a steak.
   b. A salad is better than nothing.
   c. Therefore, a salad is better than a steak.

4. We make a bet.
   If you lose, you give me $5.
   If I loose, I'll give you all the money I have in my pocket.

**Situation: My pocket is empty.**

- What's wrong? Do the examples have something in common? Where are the differences?
- Is (1) false or does it have no truth value?
- Can (2) be true if Odysseus never existed?
- Why is (3) a fallacy?
- Did I cheat in (4)?
**Referrential Opacity**

Quine (1956):

1. Ralph believes that Orcutt is a spy.
2. Ralph believes that the man with the brown hat is a spy.
3. Orcutt is a spy.
4. The man with the brown hat is a spy.

- Suppose «Orcutt» and «the man with the brown hat» are co-referential.
- Ralph only assents to (2), but rejects (1).
- Obviously, Ralph doesn’t know that Orcutt is the man with the brown hat.
- But it is a common logical law that we can substitute co-referential expressions for each other wherever they occur.
- Question 1: Can (1) and (2) have different truth values?
- Question 2: Do (1) and (2) have different meanings? In what exactly do their meanings differ?
- Question 3: Under which circumstances can we use (1) and (2) alike?
- Question 4: How does the meaning of (3) combine with the meaning of «Ralph believes» in (1), and likewise for (4) and (2)?

**Social Externalism**

Burge (1979):

- Scenario 1: A person thinks that he has has arthritis for years, that arthritis in the wrists and fingers is more painful than in the ankles, and so on. One day he comes to believe that he has arthritis in the thigh. He visits the doctor, and the doctor tells him that you can’t have arthritis in the thigh, “since arthritis is specifically an inflammation of joints”. The patient accepts this.
- Scenario 2: This is a counterfactual situation that is exactly the same as Scenario 1, but here physicians, lexicographers, and informed laymen also apply the term «arthritis» to other parts of the body like the thigh.

Conclusion: There’s a social labor division in fixing the extension of terms like «arthritis». A complete understanding of such terms is not required in order to master the language. Instead, experts may fix the meaning of expressions, and other speakers in the community rely on this kind of labor division. The internal state of speakers doesn’t in general individuate meaning.

- The crucial question is whether speakers like the patient in the example really understand the term in question.
- Do these speakers know the truth conditions of utterances containing «arthritis»?

**Semantic Internalism vs. Externalism**

Putnam (1975), *Twin Earth*: Suppose there was a twin earth that is exactly like the earth except that water there consists of XYZ instead of H₂O. Two speakers A and B could be in exactly the same physical state (except that one was partly composed of XYZ and the other of H₂O) yet the one on earth would refer to H₂O when he utters «water», but the other one would refer to XYZ when he utters «water». Conclusion: The meaning of natural kind terms like «water» is not solely determined by the internal state of the speakers.

- This position is called semantic externalism as opposed to semantic internalism.
- Semantic externalism supports truth-conditional theories of meaning, but rejects representational theories of meaning aka psychological/conceptual/computational role semantics or cognitive semantics.
- The validity of thought experiments like *Twin Earth* is still disputed, and there’s also a vast number of variations of this ‘experiment of thought’.
- Semantic internalism and externalism are only positions about how meanings of natural language expressions are determined. Slogan: Is meaning in our head or not?
- Therefore, the problem of semantic externalism versus semantic internalism is relatively independent from the traditional philosophical contrast between epistemic realism and anti-realism (=idealism).

**Linguistic Universalism vs. Relativism**

**Principle of Linguistic Relativity** (Sapir-Whorf Thesis): Language influences how the persons in the speaker community understand and experience the world.

- The thesis can be interpreted in different degrees, depending on how strong the influence of language on thinking is supposed to be.
- Various connections to other domains:
  - Political philosophy & Ethics: attempts to change thinking by influencing the use of language (Orwell’s 1984: Newspeak; political correctness movement).
  - Connection linguistic relativism—cultural relativism—ethical relativism (e.g. incommensurability of ethical concepts because they can’t be translated into each other).
  - Psychology: structure of experience in general, which methodology to use, foundations of psycholinguistics.
  - Anthropology & Ethnology: descriptions of other cultures could be inappropriate, insufficient because the languages aren’t intertranslatable.
- Most of the empirical psycholinguistic research on this topic was in the field of color recognition and color terms across languages.
Literal Meaning

Question: Do expressions have a literal meaning?

- If there is no literal meaning, semantics (in the traditional sense) is no longer feasible.
- That's probably why literal meaning is more often rejected by radical pragmatists than semanticists.
- How would meaning have to be described without recurring to some literal meaning?
- How would communication be possible without literal meaning?
- Metaphors are very frequent in actual discourse.
- Sometimes it is hard to say what's a metaphor and what is lexicalised meaning.
- Can metaphors be explained without recurring to literal meaning?