SEMANTICS WITHOUT SEMANTIC CONTENT

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1 TWO CONCEPTS OF SEMANTIC VALUES

THE STANDARD VIEW
SEMANTIC VALUES AS CONTENTS

$$[\![\text{He}_1 \text{ smokes}]\!]^{g}_{¢} = \lambda w_s \,.\, g(1) \text{ smokes at } w$$

(presupposition: g(1) is male)

Heim & Kratzer (1998)
von Fintel & Heim (2011)

Heim & Kratzer (1998), p.243:

"...let us think of assignments as representing the contribution of the utterance situation. The physical and psychological circumstances that prevail when an LF is processed will (if the utterance is felicitous) determine an assignment to all the free variables occurring in this LF."

$$[\![\text{He smokes}]\!]^{c,g}_{¢} = \lambda w_s \,.\, [\![\text{He}]\!]^{c} \text{ smokes at } w$$

$[\![\text{He}_1]\!]^{c}$ = The male being demonstrated in c

$[\![\text{He}_1]\!]^{c}$ = The most salient male in c

$[\![\text{He}_1]\!]^{c}$ = The male whom the speaker intends to refer to (etc.) in c

$[\![\text{He}_1]\!]^{c}$ = The male about whom the speaker has such-and-such commitment in c

$[\![\text{He}_1]\!]^{c}$ = The male who bears such-and-such relation to the discourse referent 1 in c

THE METASEMANTIC QUESTION

For any context-sensitive expression **e**, any context **c**, and assignment function **g** such that $[\![\mathbf{e}]\!]^{\mathbf{g},\mathbf{c}} = \mathbf{X}$:

In virtue of what about **g** and/or **c** is $[\![\mathbf{e}]\!]^{\mathbf{g},\mathbf{c}} = \mathbf{X}$?

SECOND OPTION
SEMANTIC VALUES AS CONSTRAINTS

- Sentences' semantic values do not determine truth conditions!
- The metasemantic question and the idea of semantic content are category mistakes!
- An expression's semantic value gives incomplete evidence of what a speaker can (literally) means with it.

Sperber & Wilson (1986/94); Bach (1987); Carston (2002); Neale (2004); Schiffer (2003)

"...the semantics of an expression gives the information that a competent speaker can glean from it independently of any context of utterance. ...

That this information is independent of contexts is a consequence of the fact that grammar, semantics in particular, is concerned with linguistic types, not tokens. ..."

—**Kent Bach, *Thought and Reference*, p.5**

gap that can be filled only by a male

$$[\![\textbf{He smokes}]\!] = \langle \underline{\qquad}_{\text{MALE}}\ , \textbf{SMOKES} \rangle$$

"propositional radical"

"propositional template"

"gappy proposition"

...a semantic theory for a language *L* will provide, for each sentence *X* of *L*, a *blueprint* for (a *template*, a *schematic* or *skeletal* representation of) what someone will be taken to be saying when using *X* to say something. The blueprint associated with X is its *semantics*, and the set of such blueprints, one for every sentence of a language *L*, is the *semantics* for *L*. (The study of the these blueprints is also called *semantics*. The study of the rôle of word meanings is called *lexical* semantics; the study of the rôle of syntax is called *compositional* semantics.)

—Neale, 'Pragmatism and Binding', p.189

I propose that we represent the character* of a sentence by an ordered pair ⟨A, P⟩, where A is the kind of speech act that must be performed in a literal utterance of the sentence, and P is the kind of propositional content that speech act must have. The character* of a sub-sentential expression will be a kind of propositional content, and we should expect the character* of a complex expression to be determined by its syntax and the characters* of its component expressions.

—Schiffer, *The Things We Mean*, p.112

a type of act that can be tokened by assertions (etc.?)

type that can be tokened by propositions that *x* smokes (where x is male)

$$[\![\text{He smokes}]\!] = \underbrace{\langle \mathbf{A}, \mathbf{P} \rangle}_{\text{“character*”}}$$

OKAY BUT...

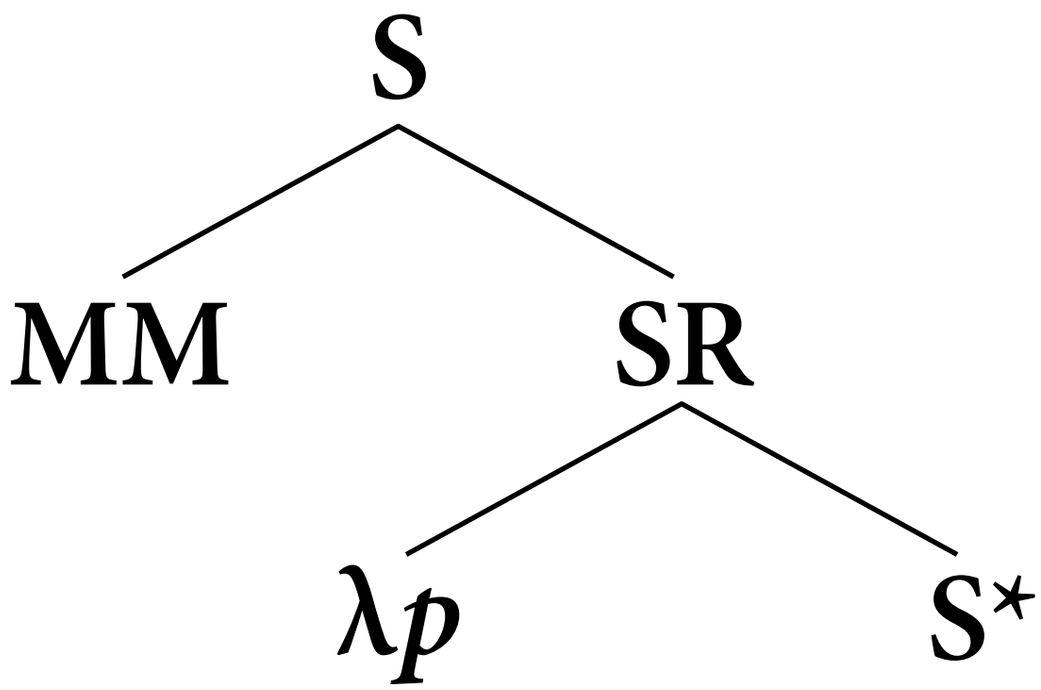
- What about compositional semantics?
- What about entailment?
- And what's so much better about this alternative idea?

2 COMPOSITIONAL SEMANTICS

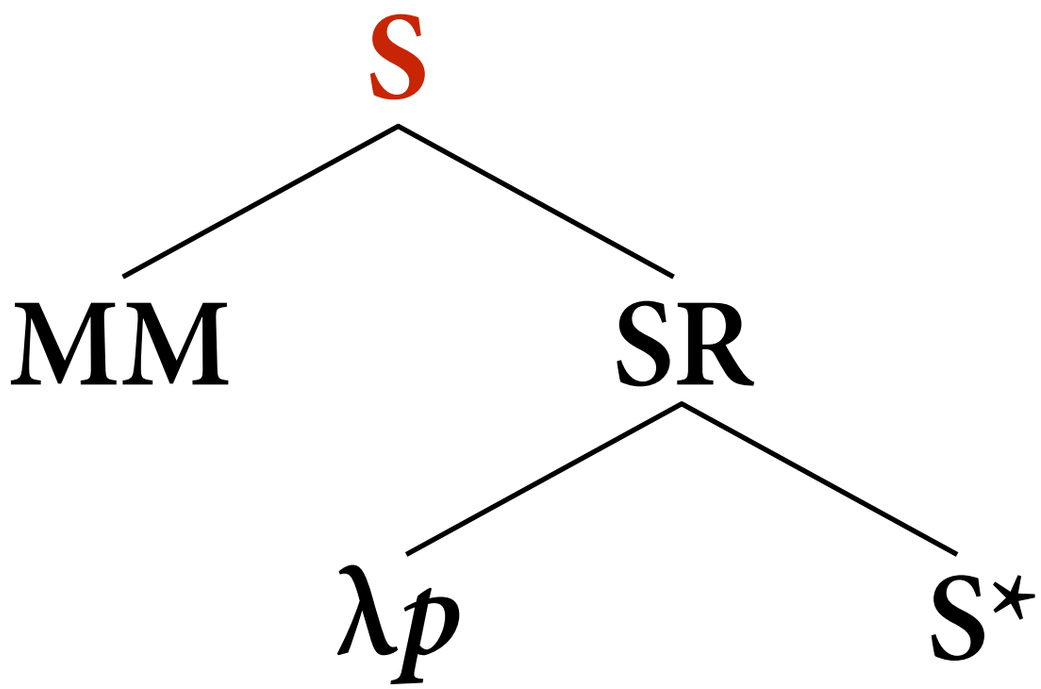
THE PLAN

- Adopt Schiffer's idea that a sentence's semantic value is a type of speech act.
- Show how to derive this type compositionally.
- Stick as close to orthodoxy as possible.

SOME ASSUMPTIONS ABOUT LF



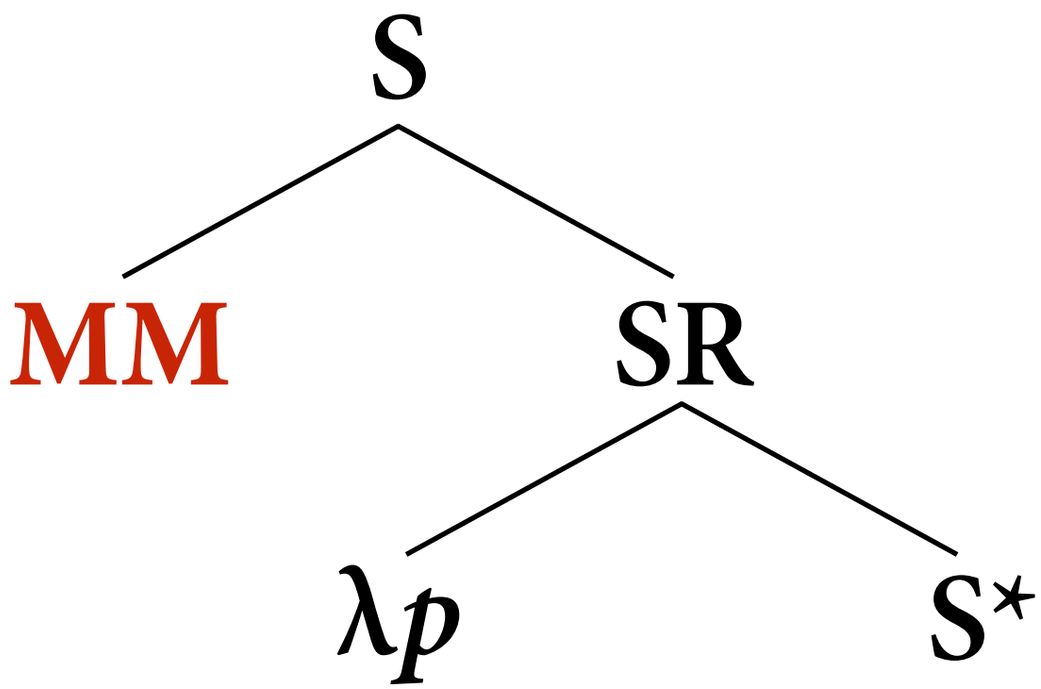
SOME ASSUMPTIONS ABOUT LF



Sentence

Encodes a kind of illocutionary act.

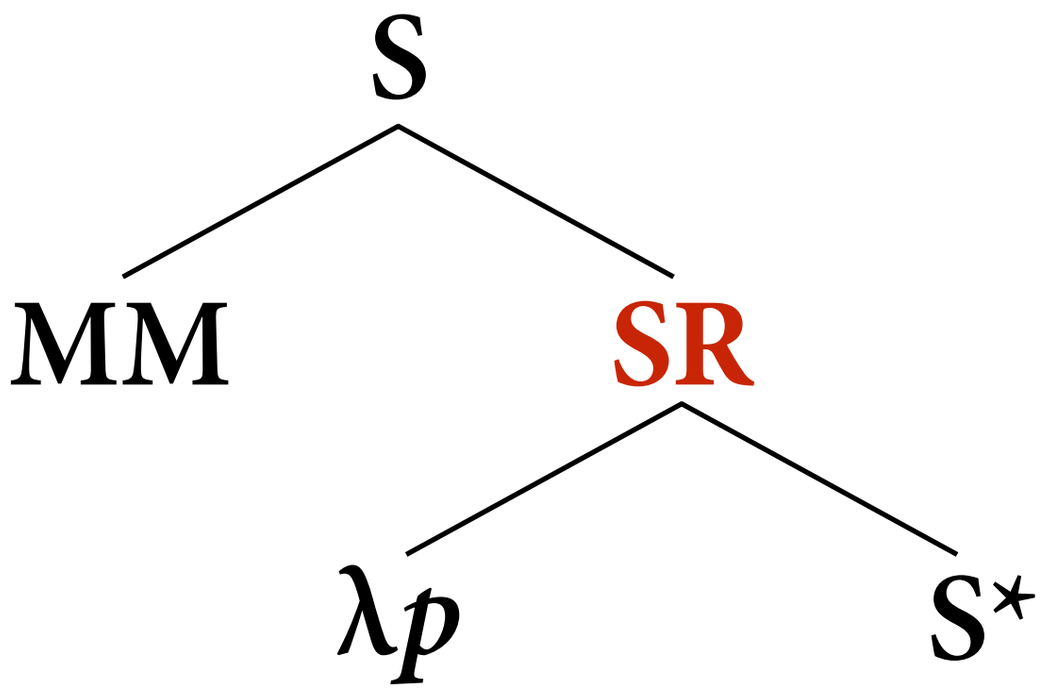
SOME ASSUMPTIONS ABOUT LF



Mood Marker

Encodes a kind of illocutionary force.

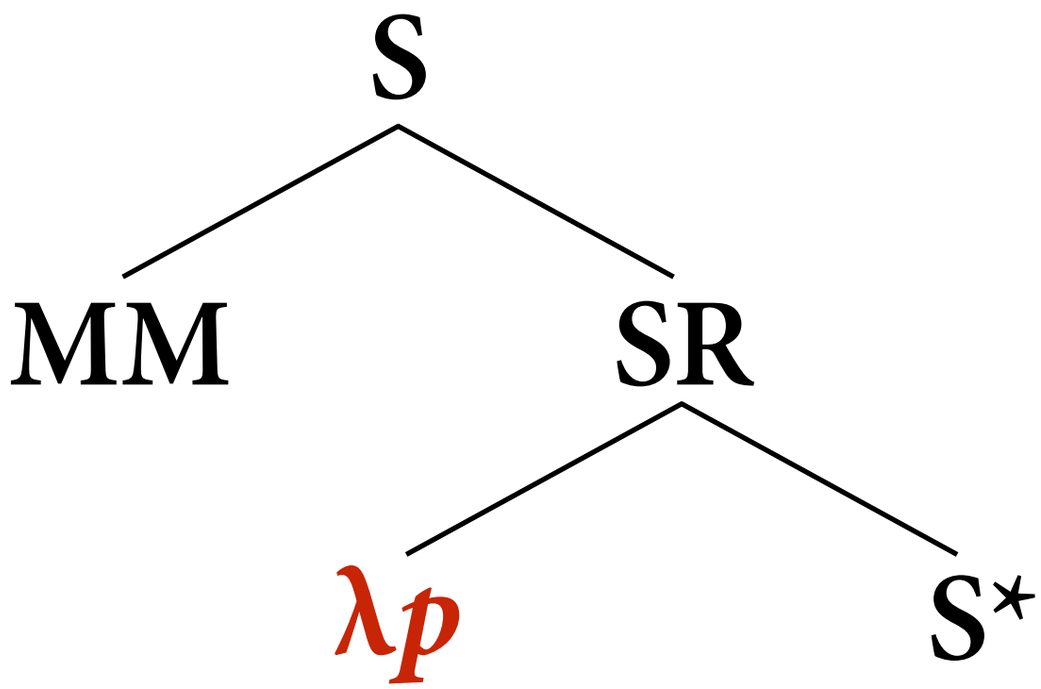
SOME ASSUMPTIONS ABOUT LF



Sentence Radical

Encodes a property of propositions.

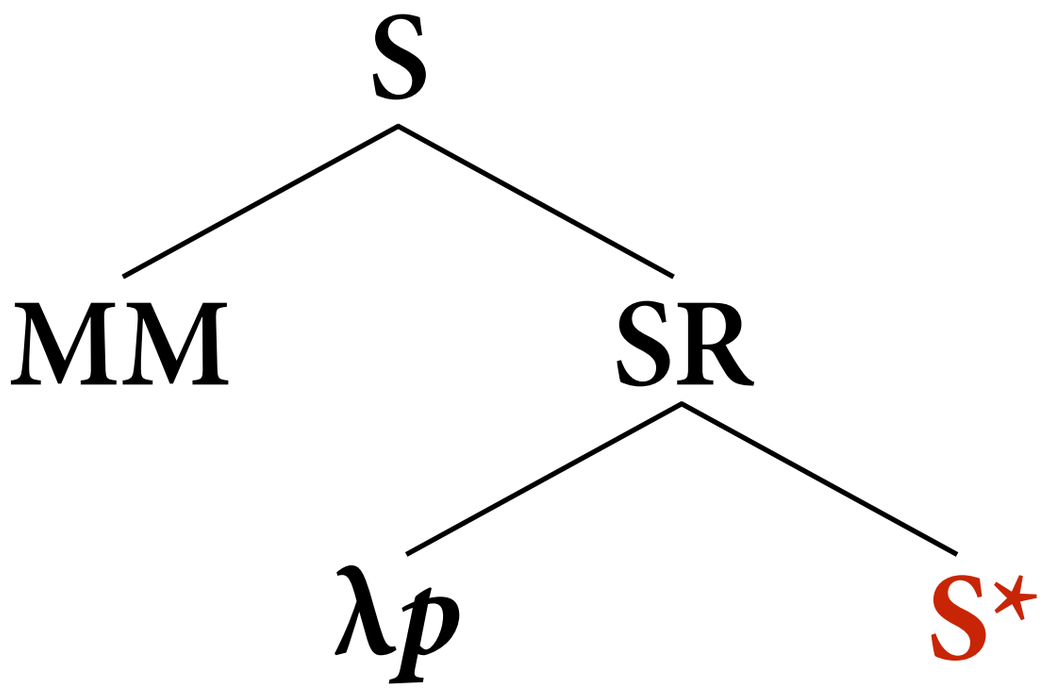
SOME ASSUMPTIONS ABOUT LF



Proposition-Type Abstractor

A variable binder to be explained momentarily.

SOME ASSUMPTIONS ABOUT LF

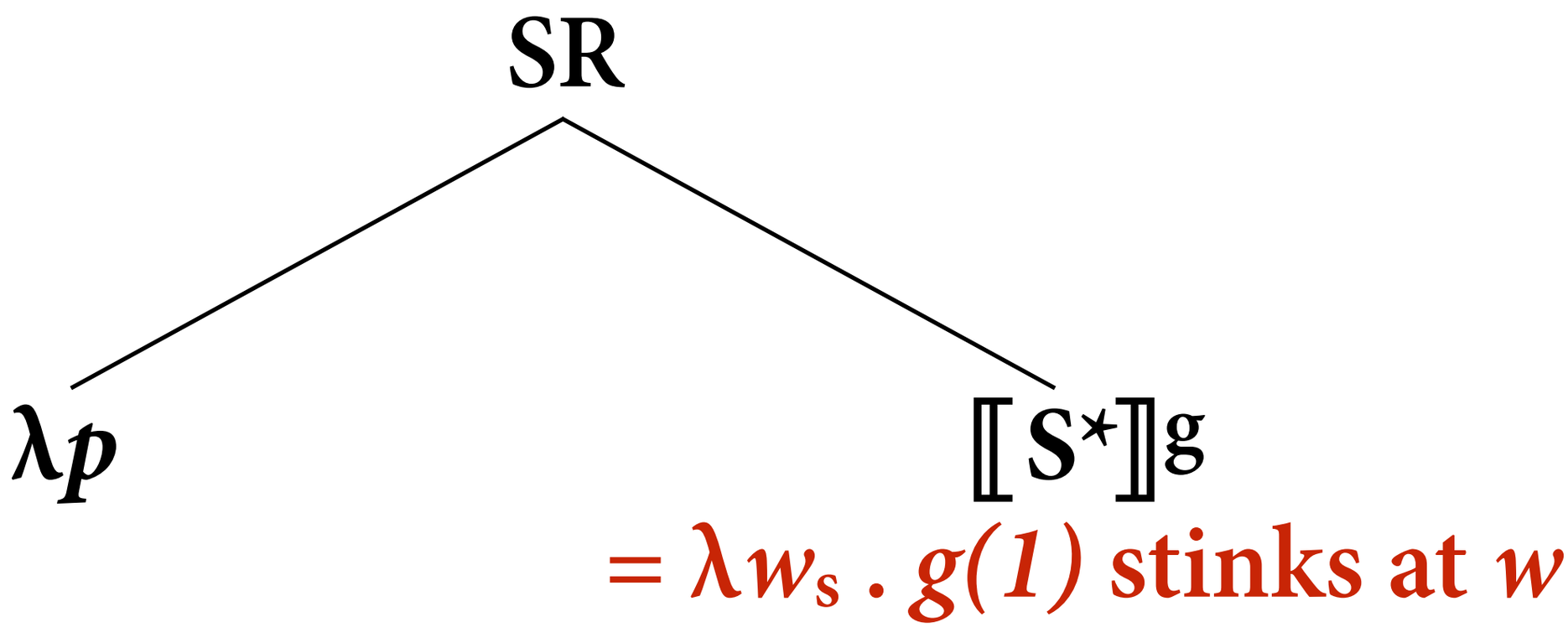


Unabstracted Sentence

Nodes with sentences' usual semantic values.


It stinks!

Semantics of ‘It$_1$ stinks.’



Assumption:

$[\![S^*]\!]^g$ is the usual, assignment-relative intension.

Semantics of ‘It$_1$ stinks.’

$[\![\text{SR}]\!]$

$= \lambda p_{\langle s,t\rangle} \,.\, (\exists x)\; p = [\lambda w_s \,.\, x \text{ stinks at } w]$

λp

$[\![\text{S}^\star]\!]^g$

$= \lambda w_s \,.\, g(1) \text{ stinks at } w$

Question:

How to get from $[\![\text{S}^\star]\!]^g$ to $[\![\text{SR}]\!]$?

(PTA) Proposition-Type Abstraction

Let α be a branching node with daughters β and $\gamma_{i \ldots n}$, such that:

(a) β dominates only λp, and

(b) γ contains unbound variables $v_i \ldots v_n$.

Then:

$$[\![\alpha]\!] = \lambda p_{\langle s,t \rangle} \,.\, (\exists x_i) \ldots (\exists x_n)\; p = [\![\gamma]\!]^{g[x_i/i \ldots x_n/n]}$$

Semantics of ‘It$_1$ stinks.’

$[\![\mathbf{SR}]\!]$

$= \lambda p_{\langle s,t\rangle} \,.\, (\exists x)\; p = [\lambda w_s \,.\, x \text{ stinks at } w]$

λp

$[\![\mathbf{S^*}]\!]^g$

$= \lambda w_s \,.\, g(1) \text{ stinks at } w$

Note 1:

How to get from $[\![\mathbf{S^*}]\!]^g$ to $[\![\mathbf{SR}]\!]$?

ENTAILMENT

The g-closure of SR

Let $[\![\mathrm{SR}]\!]$ be $\lambda p_{\langle s,t\rangle} . (\exists x_i) \ldots (\exists x_n)[\lambda p . p = \varphi]$

Then $g(\mathrm{SR}) = [\![\varphi]\!]^g$

Sentence-Radical Entailment

$\{\mathrm{SR}_i \ldots \mathrm{SR}_m\} \vdash \mathrm{SR}_n$ iff $(\forall g)\{g(\mathrm{SR}_i) \ldots g(\mathrm{SR}_m)\} \vdash g)\mathrm{SR}_n)$

QUESTIONS

- What's the semantic difference between 'he' and 'she'?
- What about other context-sensitive expressions: 'that', 'I', 'here', 'you', etc?
- What about context-sensitive expressions that aren't type *e*?

A PROPOSAL

- The semantic values of context-sensitive expressions are constraints on what we can do with them.

- These constraints can be represented as ordered pairs:

$$[\![e]\!]^{g} = \langle \tau, \varphi \rangle$$

τ is *e*'s semantic type

φ is *e*'s *constraint property*

SOME EXAMPLES

$[\![\text{he}]\!]^g = \langle e, \lambda x \,.\, x \text{ is male} \rangle$

$[\![\text{she}]\!]^g = \langle e, \lambda x \,.\, x \text{ is female} \rangle$

$[\![\text{that}]\!]^g = \langle e, \lambda x \,.\, x \text{ is distal from S} \rangle$

$[\![\text{this}]\!]^g = \langle e, \lambda x \,.\, x \text{ is proximal from S} \rangle$

$[\![\text{I}]\!]^g = \langle e, \lambda x \,.\, S = x \rangle$

$[\![\text{here}]\!]^g = \langle e, \lambda x \,.\, x \text{ is a place containing S} \rangle$

$[\![\textit{dom.}]\!]^g = \langle et, \lambda f \,.\, f = f \rangle$

(PTA*) Proposition-Type Abstraction

Let α be a branching node with daughters β and $\gamma_{i\ldots n}$, such that:

(a) β dominates only λp, and

(b) γ contains unbound variables $v^i \ldots v^n$.

Then:

$$[\![\alpha]\!] = \lambda p_{\langle s,t\rangle} . (\exists x^i_{\tau([\![v^i]\!]^g)} : \varphi([\![v^i]\!]^g) x^i) \ldots (\exists x^n_{\tau([\![v^n]\!]^g)} : \varphi([\![v^n]\!]^g) x^n) : p = [\![\gamma]\!]^{g[x^i/i \ldots x^n/n]}$$

(**DEFINITION**: For any v's semantic value, ⟨x, F⟩, **τ**(⟨x, F⟩) = x and **φ**(⟨x, F⟩) = F)

EXAMPLES

$$[\![\text{He smokes}]\!]$$
$$= \lambda p_{\langle s,t\rangle} \,.\, (\exists x_{\mathrm{e}} : x \text{ is male})\; p = [\lambda w_{\mathrm{s}} \,.\, x \text{ smokes at } w]$$

$$[\![\text{You smoke}]\!]$$
$$= \lambda p_{\langle s,t\rangle} \,.\, (\exists x_{\mathrm{e}} : x \text{ is S's addressee})$$
$$p = [\lambda w_{\mathrm{s}} \,.\, x \text{ smokes at } w]$$

$$[\![\text{The dog barks}]\!]$$
$$= \lambda p_{\langle s,t\rangle} \,.\, (\exists \varphi_{\mathrm{e}t})\; p = [\lambda w_{\mathrm{s}} \,.\, \textit{The } \varphi \textit{ dog} \text{ barks at } w]$$

SOME NICE FEATURES

- Contexts be gone!
- Minimal role for assignment functions.
- Thin, compositionally derived semantic values.

NEEDS MORE THOUGHT

- How does λp interact with scope-takers?
- What about non-deictic, unbound anaphoric uses?
- What about non-factual vocabulary?
- etc....

3 WHY NOT SEMANTIC CONTENT?

THE COLLAPSE ARGUMENT

1. The notion of semantic content collapses into the notion of speaker meaning for a large class of so-called "context-sensitive" expressions.
2. What, then, are the semantic values of those expressions? Two options:
   (a) Speaker Meanings
   (b) Standing Linguistic Meanings
3. If we pick option (a), we're no longer doing semantics.
4. So we should pick option (b).

THE COLLAPSE ARGUMENT

1. **The notion of semantic content collapses into the notion of speaker meaning for a large class of expressions.**
2. What, then, are the semantic values of those expressions? Two options:
   (a) Speaker Meanings
   (b) Expression Meanings
3. If we pick option (a), we're no longer doing semantics.
4. So we should pick option (b).

THIS, THAT

SIMPLIFYING ASSUMPTION

Simple demonstratives are unstructured devices of direct reference.

QUESTION ONE

In virtue of what does ‘that’ semantically refer on an occasion?

QUESTION TWO

In virtue of what does a speaker refer with ‘that’ on an occasion?

QUESTION TWO

In virtue of what does a speaker refer with ‘that’ on an occasion?

THE BEST ANSWER

A speaker refers with a demonstrative in virtue of facts about their meaning intentions on that occasion.

“To refer to something is to use a singular term with the intention (part of one’s communicative intention) of indicating to one’s audience the object of the attitude one is expressing.”

—Kent Bach, *Thought and Reference* (1989)
cf. Grice (ms), Stine (1978), Schiffer (1981), Neale (forthcoming)

A speaker S refers to x only if S produces an utterance intending:

(1) to produce an occurrent x-dependent thought φ in a certain addressee A;

(2) that A recognize S's intention (1); and

(3) that A's recognition of (1) be part of the reason for coming to have the thought φ.

cf. Schiffer (1981), Neale (forthcoming)

QUESTION ONE

In virtue of what does ‘that’ semantically refer on an occasion?

QUESTION TWO

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In virtue of what does ‘that’ semantically refer on an occasion?

SOME BAD ANSWERS

Demonstrations

(Kaplan 1989a; Quine 1968)

Salience

(Heim & Kratzer 1998; Mount 2008; Larson & Segal 1995; Wettstein 1984)

QUESTION ONE

In virtue of what does ‘that’ semantically refer on an occasion?

BETTER ANSWER

A demonstrative semantically refers in virtue of the speaker’s **referential intentions**.

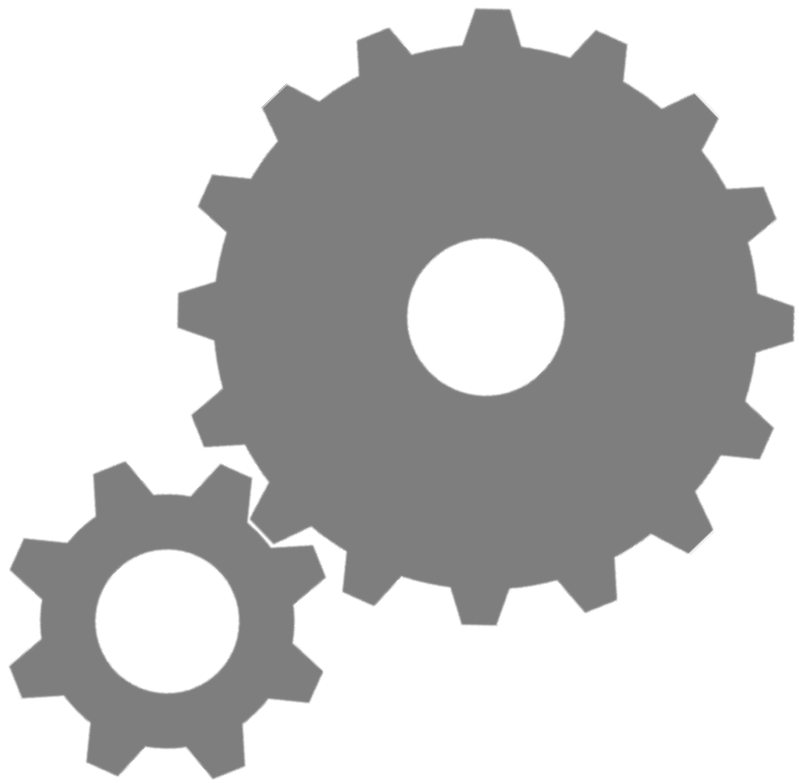
Bach (1987, 1992); Kaplan (1989b); King (2001, 2012); King and Stanley (2005); Kripke (1977); Michaelson (2013); Siegel (2002); Soames (2010).

4 SEMANTICS AND COGNITIVE ARCHITECTURE

AN ARCHITECTURAL ARGUMENT

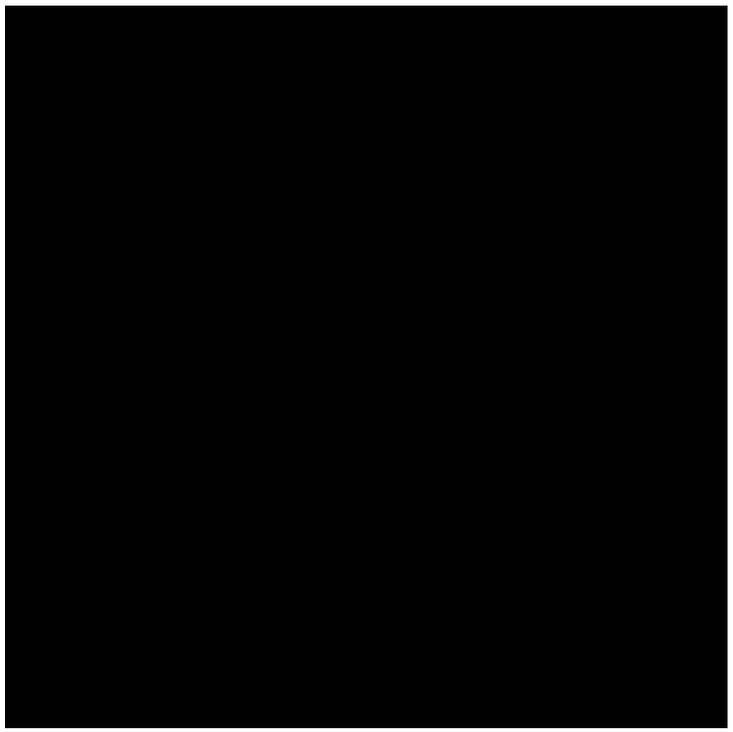
1. The part of utterance comprehension modeled by compositional semantics is modular (in Fodor's sense).
2. Reference-resolution is a central process.
3. Modular processes output to central processes (not the other way around).
4. So, reference resolution happens after compositional semantics, not before.

FODOR-MODULAR PROCESSES



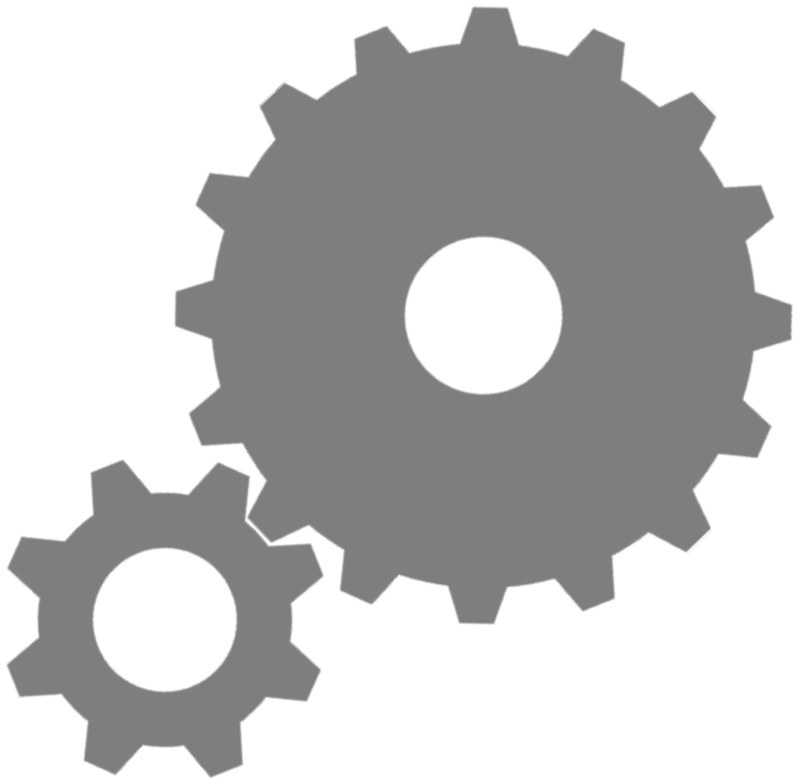
- encapsulated
- domain-specific
- fast, automatic
- algorithmic

CENTRAL PROCESSES



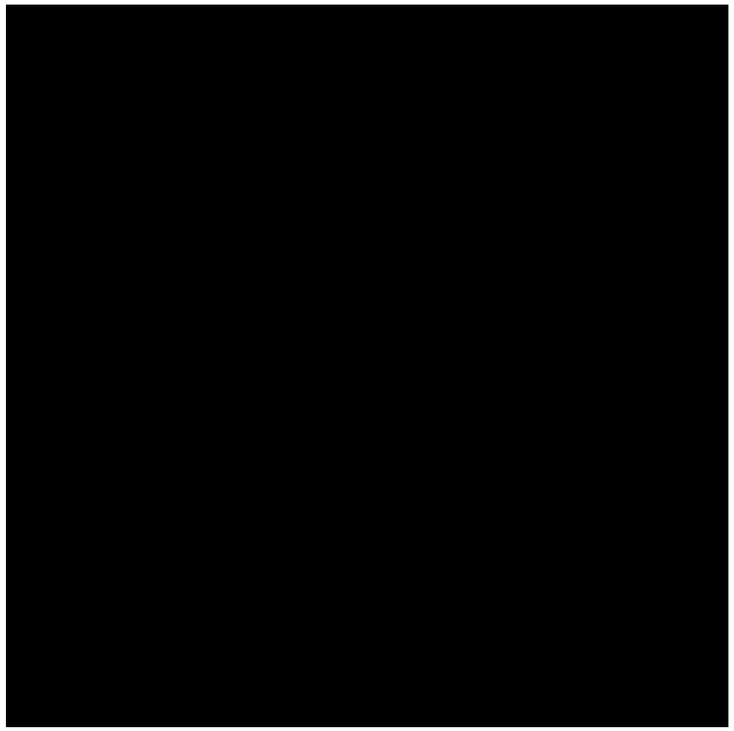
- isotropic
- general-purpose
- effortful
- abductive

SEMANTIC COMPOSITION



- encapsulated
- domain-specific
- automatic, effortless
- algorithmic

REFERENCE RESOLUTION



- isotropic
- general-purpose
- can be controlled, effortful
- abductive

FODOR'S FIRST LAW OF THE NONEXISTENCE OF COGNITIVE SCIENCE

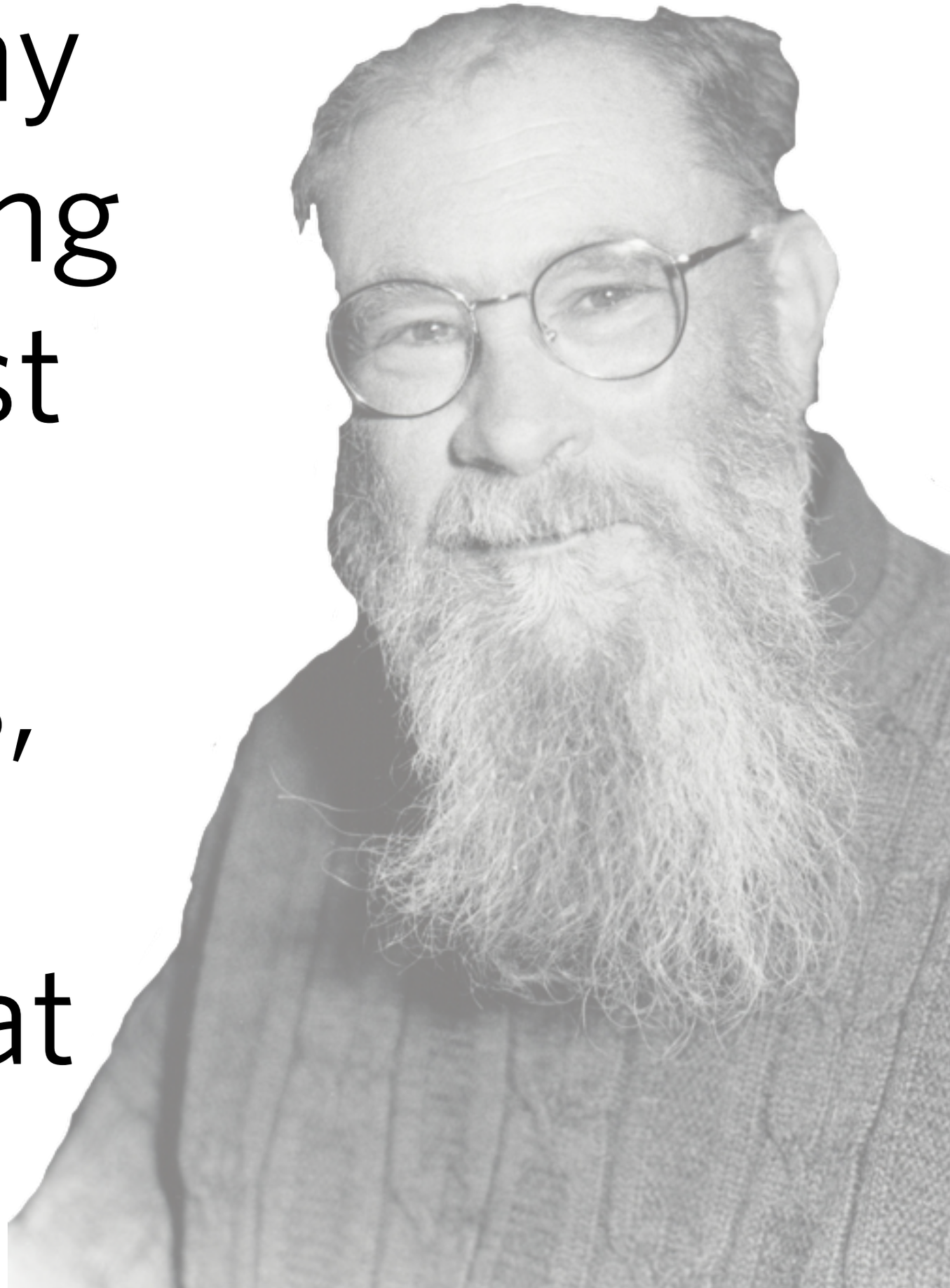
"...the more global (e.g., the more isotropic) a cognitive process is, the less anybody understands it."

—Fodor, *Modularity of Mind*, p.107

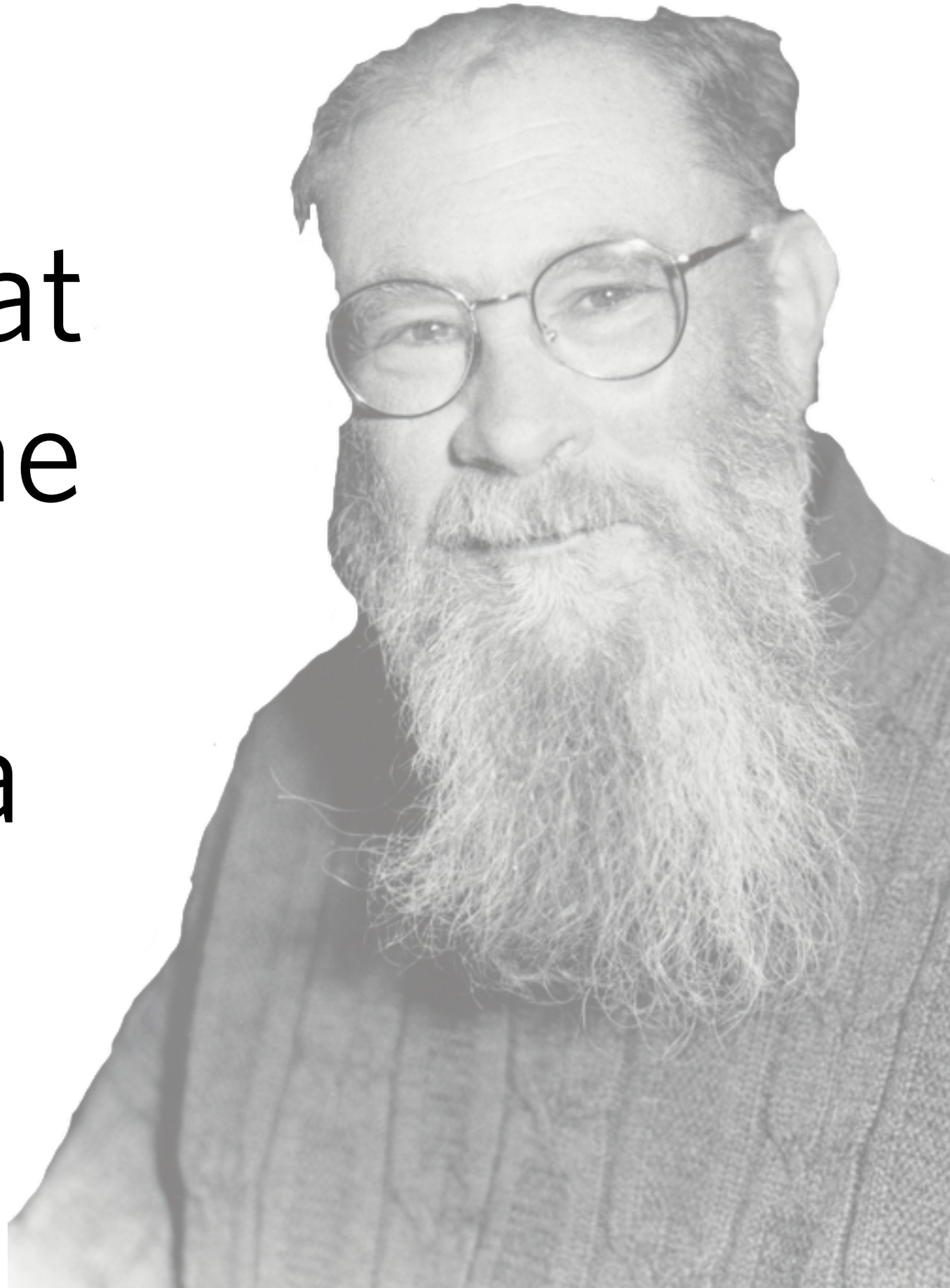
- ➡ Sounds like reference-resolution!
- ➡ Not like compositional semantics!

5 THE EXPLANATORY ROLE OF MEANING

“In order to say what a meaning is, we may first ask what a meaning does, and then find something that does that.”



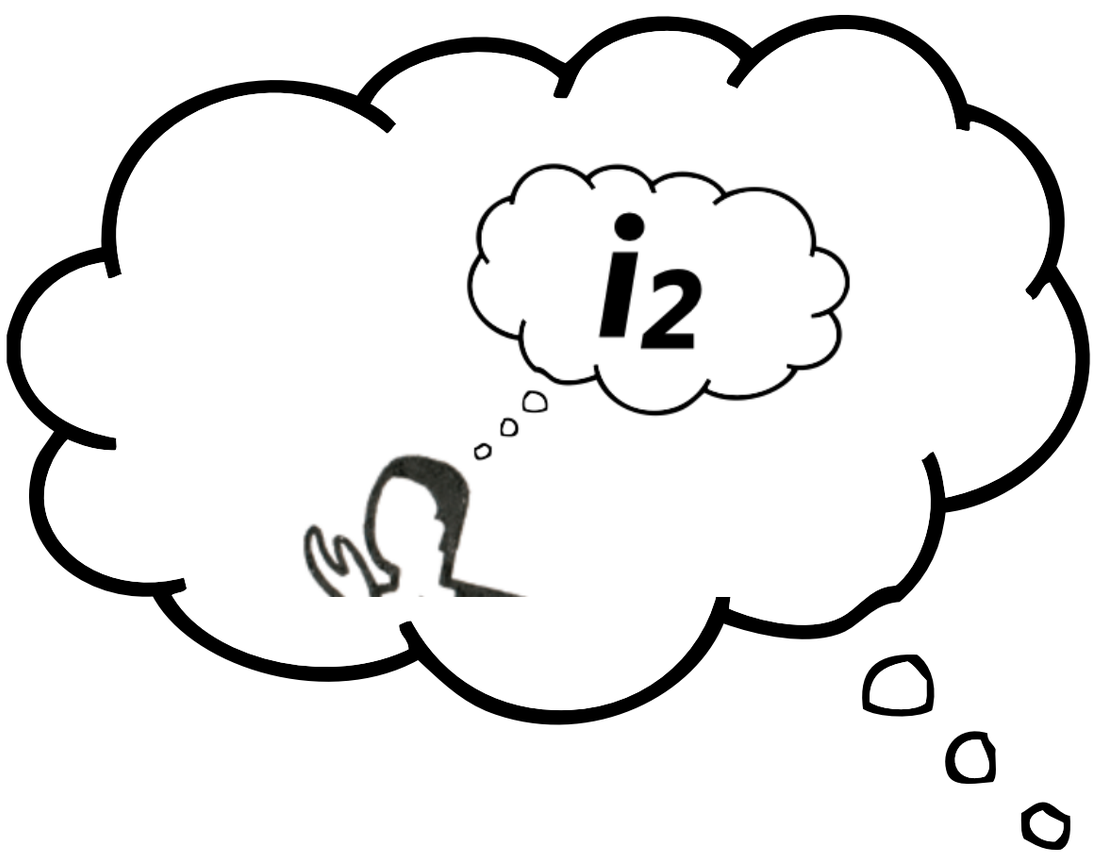
Meaning "is something that determines the conditions under which a sentence is true or false"



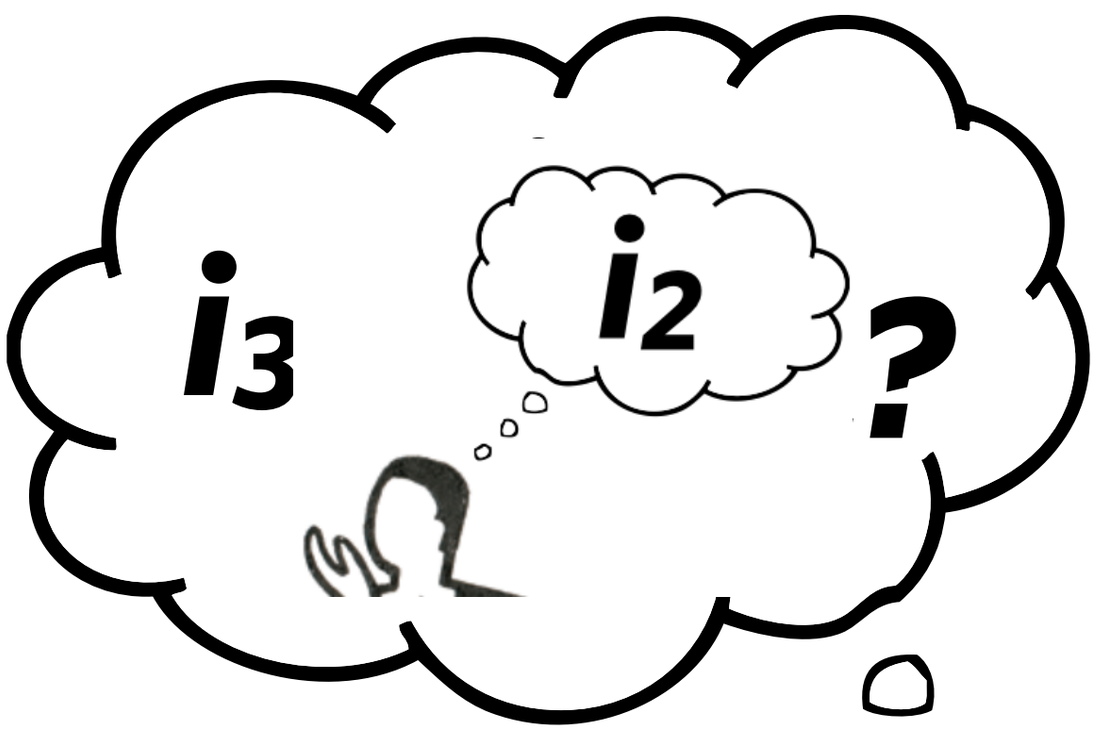
AN ALTERNATIVE IDEA

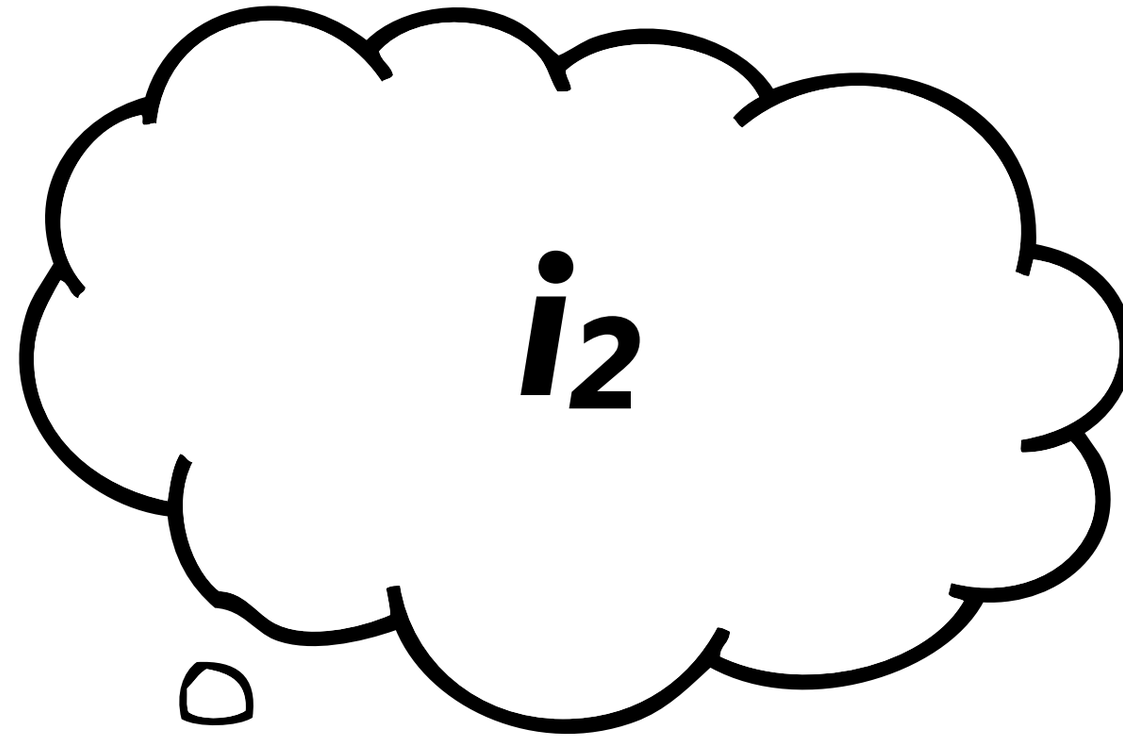
The meaning of a sentence provides evidence of what the speaker intends to do by uttering it.

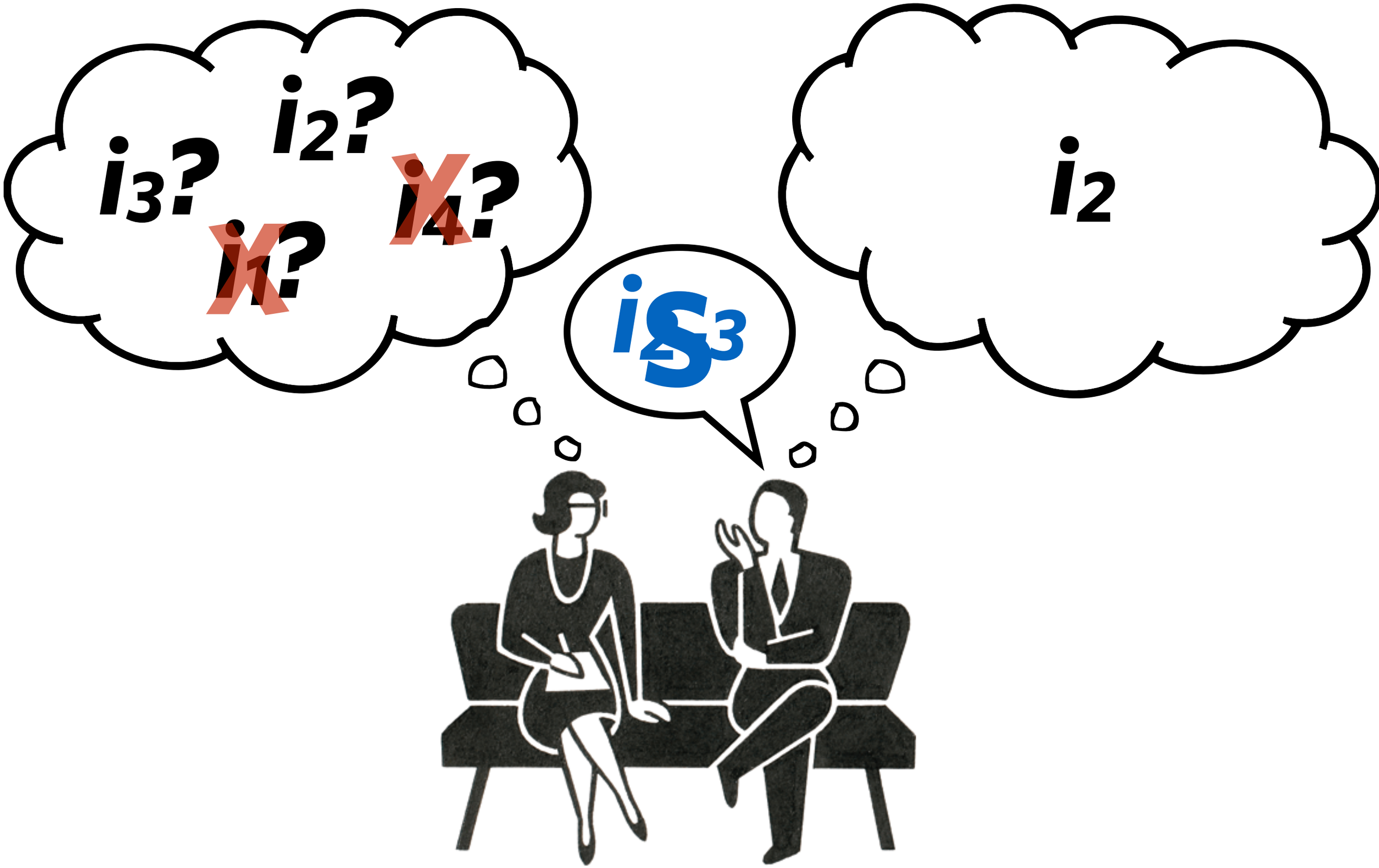
Sperber & Wilson (1986/94); Bach (1987); Carston (2002); Neale (2004); Schiffer (2003)


i_2


i_2

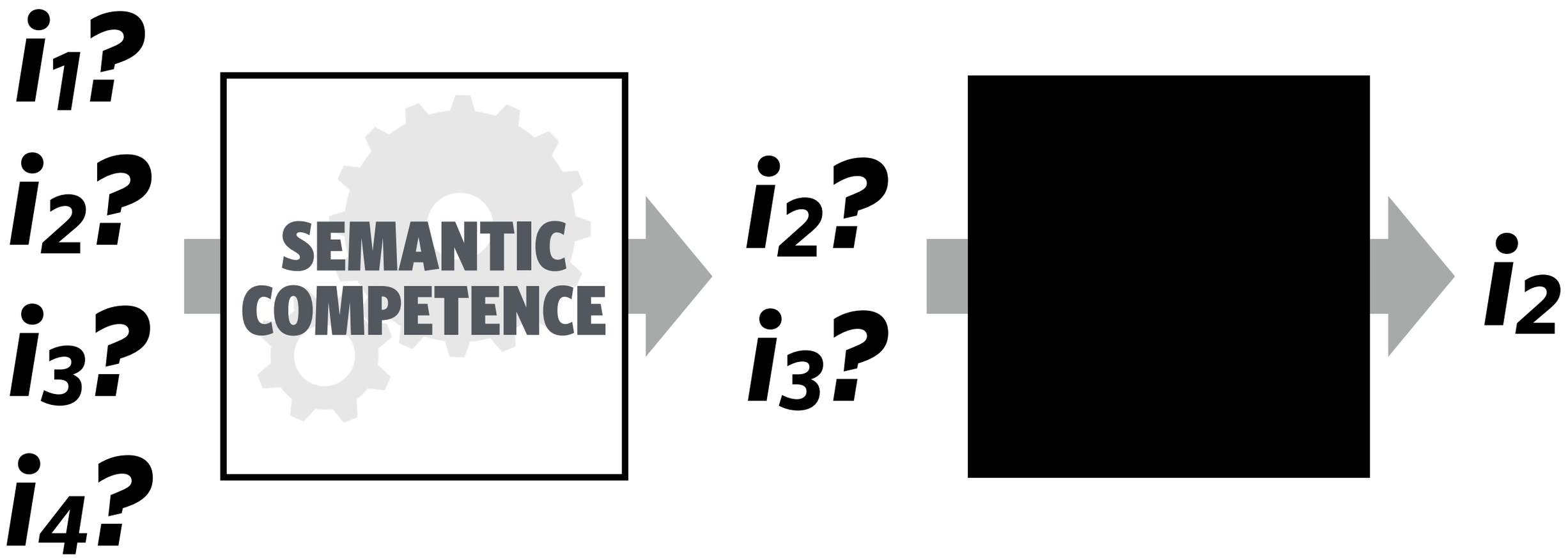

i_3
i_2
?


i_2


i_3?
i_2?
i_1?
i_4?
i_2
i_3


this month?
this minute?
yesterday?
Nov. 3rd?
now
intention to refer to this month


i_1?
i_2?
i_3?
i_4?
i_2


i_1?
i_2?
i_3?
i_4?
SEMANTIC COMPETENCE
i_2?
i_3?
i_2

WHAT DOES MEANING DO?

The meaning of an expression makes communicating with that expression efficient by:

- Reducing the black box's work load.
- Restricting what a speaker can communicatively intend in uttering the expression.

CONCLUSIONS

- We *can* do semantics without semantic content.
- We *should* do semantics without semantic content.

THANKS