

THE SEMANTICS–PRAGMATICS INTERFACE

HOW IT WORKS, WHY WE NEED IT, AND WHERE IT IS

Jacques Moeschler

Department of linguistics

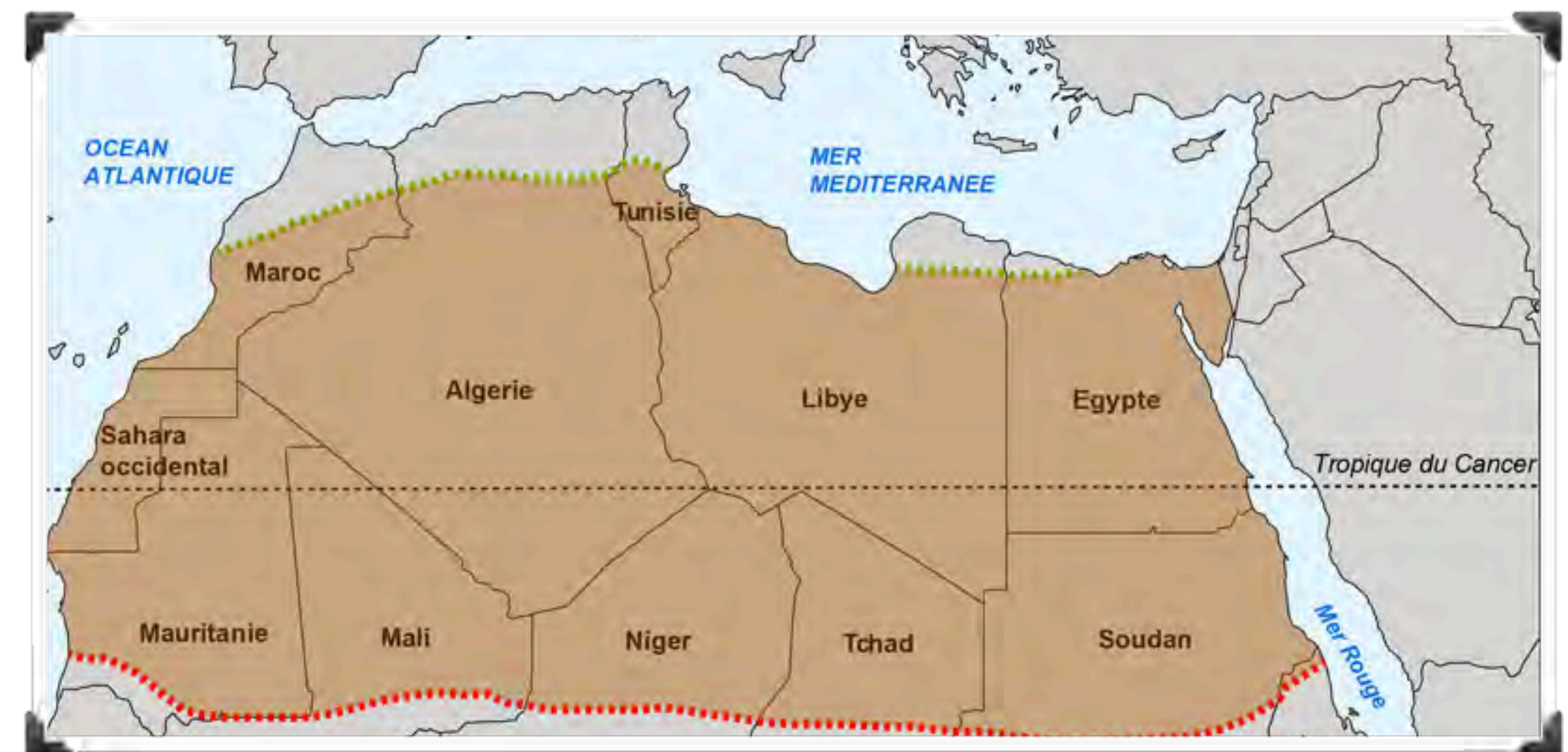
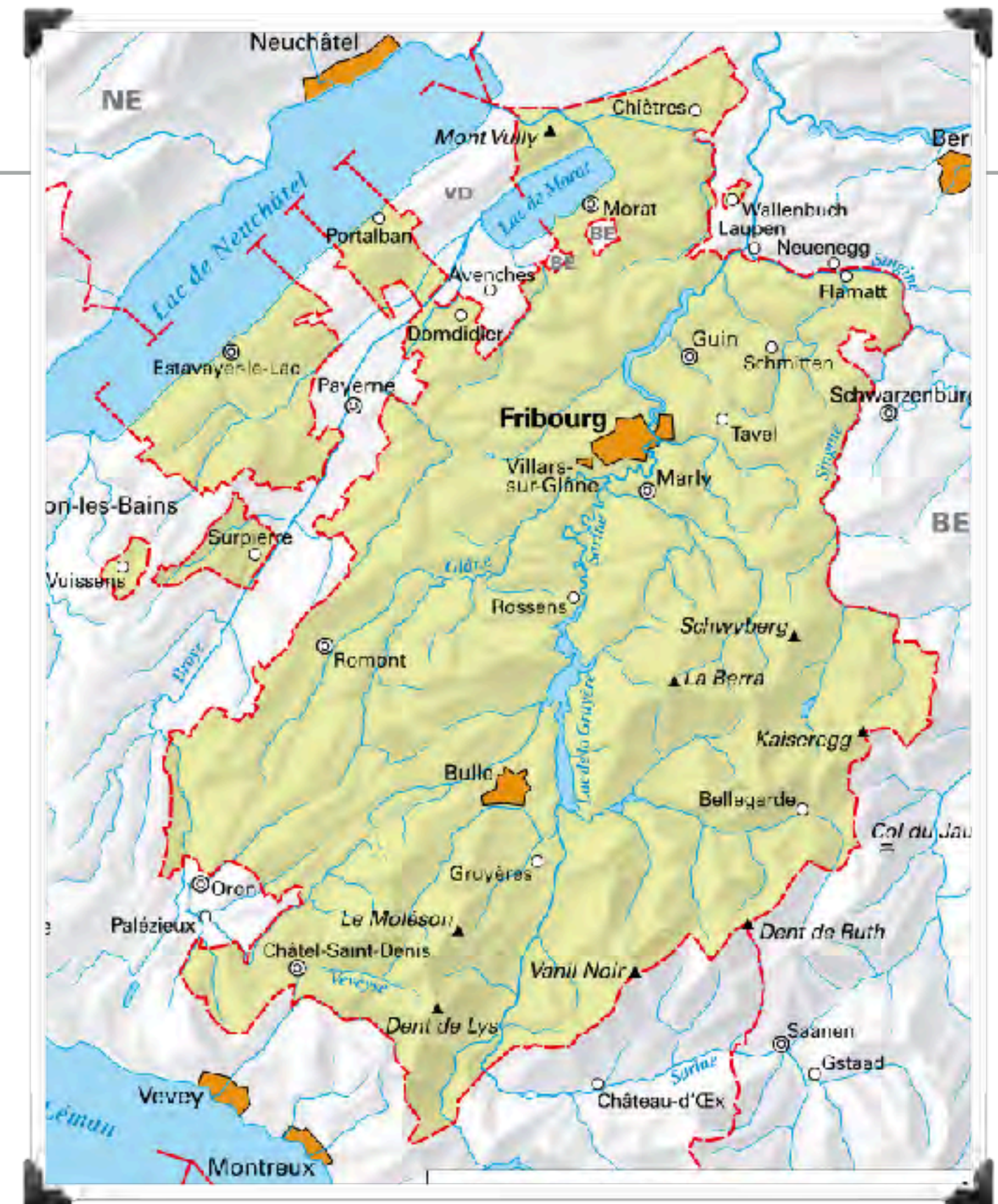
University of Geneva

jacques.moeschler@unige.ch

<https://sites.google.com/site/moeschlerjacques/>

THREE MAIN HYPOTHESIS

- ▶ **H1:** Meaning is layered, from conventional to contextual one.
- ▶ **H2:** SPI is due to the requirement of a fast and efficient information transfert.
- ▶ **H3:** The semantics-pragmatics border is porous, not straightforward.
 - ▶ The S-P border ressemblé the border of Swiss cantons such as FR and VD vs. sub-Saharan countries.



A ROADMAP

1. the semantics-pragmatics interface (SPI)
2. possible SPIs (how?)
3. the functions of SPI (why?)
4. the location of SPI (where?)

1. THE SEMANTICS-PRAGMATICS INTERFACE

THE SEMANTICS-PRAGMATICS INTERFACE

- ▶ The necessity of a Semantics-Pragmatics Interface (SPI) is due to the following empirical facts:
 - A. some pragmatic inferences (Generalised Conversational Implicatures, **GCI**s) are triggered by linguistic items;
 - B. pragmatic meaning seems to be more than non-truth-conditional, as **explicatures**;
 - C. pragmatic meaning can be determined by **truth-conditional meaning** (causal connectives, negation).

A. LINGUISTIC AND PRAGMATIC MEANINGS: GCI

- ▶ **Generalized conversational implicatures (GCIs)** raise the issue of the **encoding of pragmatic meaning**:

(a) Are conversational implicature part of the semantic meaning?

(b) Are they contextually triggered?

- ▶ The first option leads to the '**pragmatic meaning by default**' solution: a **GCI** is triggered by a **default inference**.

- ▶ The second option leads to the **contextual** solution: a **GCI** must be contextually licensed or contextually blocked.

1. *Some elephants have trunks.*

- ▶ ?? +> **not all elephants have trunks**

- ▶ +> **all elephants have trunks**

2. *Some of my students passed the pragmatic exam.*

- ▶ +> **not all of my students passed**

- ▶ ?? +> **all my students passed**

PREDICTIONS

- ▶ The **default approach** predicts that **GCI**s should not be costly, since they are **default inference**.
 - ▶ But it has been shown that they are (Noveck 2001, Noveck & Reboul 2010).
- ▶ The **contextual approach** predicts that **GCI**s are favored in some contexts and blocked in others.
 - ▶ Experimental approaches on **scalar implicatures** shows that **the contextual approach makes better predictions than the default one** (Noveck 2001, Reboul 2004, Noveck & Sperber 2007, Noveck & Reboul 2010, Breheny et al. 2006, etc.).

CONSEQUENCES

- ▶ The **avantage** of the **default approach** is that **GCI**s are attached to **lexical meaning**.
 - ▶ GCIs are **local**.
 - ▶ Its **disadvantage** lies in its **erroneous predictions**.
- ▶ The **disadvantage** of the **contextual approach** is that **pragmatic meaning is not calculable** without accessing contextual assumptions.
 - ▶ Its **advantage** is that it makes **correct predictions**.
- ▶ **SPI** is clearly defined in the default approach, whereas it is unclear in the contextual one:
 - ▶ Are GCIs **locally** or **globally** generated?
 - ▶ What is represented in lexical meaning?
- ▶ One option is the Relevance-theoretical difference between **linguistically encoded** and **communicated inferred concepts** (*ad hoc* concepts).
 - ▶ Even in this approach, what is **linguistically encoded**?
 - ▶ RT does not give a clear answer.

B. EXPLICATURES VS. GCIs

- ▶ **Explicatures** are **pragmatic meaning** which are **not conveyed implicitly**.
 - ▶ An **explicature** is an assumption which is **a development of the logical form encoded by the utterance** (Sperber & Wilson 1986).
 1. *Mary is happy: she finally met a **bachelor**.*
- ▶ **GCIs** are traditionally defined as **non-truth-conditional meanings**.
 - ▶ They do not contribute to the truth-value of the utterance: non-truth conditional meaning is **cancelable**.
 2. *Mary pushed John and he fell, **but not in this order**.*
- ▶ **Explicatures** are **pragmatic truth-conditional meanings**: they determine the truth-value of the utterance:
 3. *It's always the same at parties: either I get drunk **and** no-one will talk to me or no-one will talk to me **and** I get drunk.*

CONSEQUENCES

- ▶ The notion of ***explicature*** reduces the area of **GCI**s, and breaks the **clear-cut border between semantics and pragmatics**.
 - ▶ There are **pragmatic meanings which are developments of logical forms and are truth-conditional**.
- ▶ **Explicatures should not be cancelable**, whereas **GCI**s are.
 - ▶ In fact, **explicatures are cancelable**:
 1. *Abi and Fée climbed the Roche de Solutré [TOGETHER].*
 2. *Abi and Fée climbed the Roche de Solutré, **but not together**.*

C. PRAGMATIC MEANING DETERMINED BY TRUTH-CONDITIONAL MEANING

- ▶ Conversely, there are **pragmatic meanings which are dependent of truth-conditional meanings.**
- ▶ This is the case with **temporal and causal meanings of connectives** like *and* and *because*:
 - ▶ *P and Q*: in order to mean *P and then/because of this Q*, **both conjuncts must be true.**
 - ▶ *P because Q*: in order to infer that **Q CAUSE P**, both *P and Q must be true.*

PROVISORY CONCLUSION

- ▶ **SPI is more complex** than the traditional Gricean pragmatics predicts.
 - ▶ Cf. Gazdar's definition: pragmatics = meaning - truth-conditions
- ▶ The Gricean criteria defining the border between Semantics and Pragmatics are ruled out:
 - a. **truth-conditional** vs. **non-truth-conditional** aspect of meaning
 - b. **cancelation** criterion
 - c. **implicit** vs. **explicit** aspect of meaning.

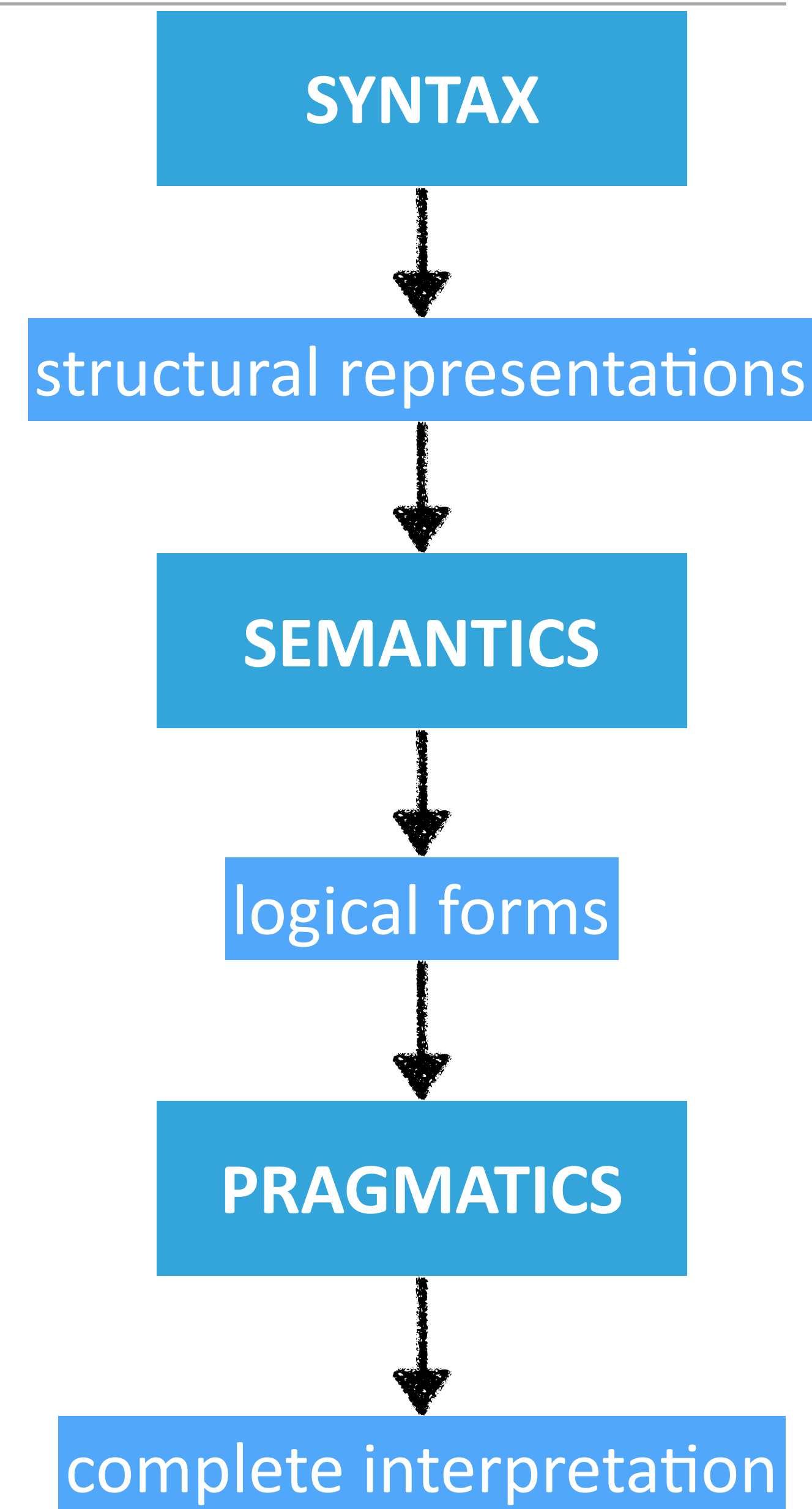
2. POSSIBLE SPIs (hows?)

POSSIBLE SPIs

- ▶ What are the possible SPIs?
- ▶ There are two classical answers:
 - a. **pragmatics** as the **output of the linguistic system**
 - b. **pragmatic intrusion**
- ▶ Both proposals are **unsatisfactory**:
 - a. the first solution implies **a step by step processing** (from syntax to pragmatics), and cannot account for pragmatic intrusion, neither for parallel processing;
 - b. the second solution cannot account for the **relation between explicatures and implicatures**, and leads to the **Gricean circle**.

A. THE LINEAR MODEL

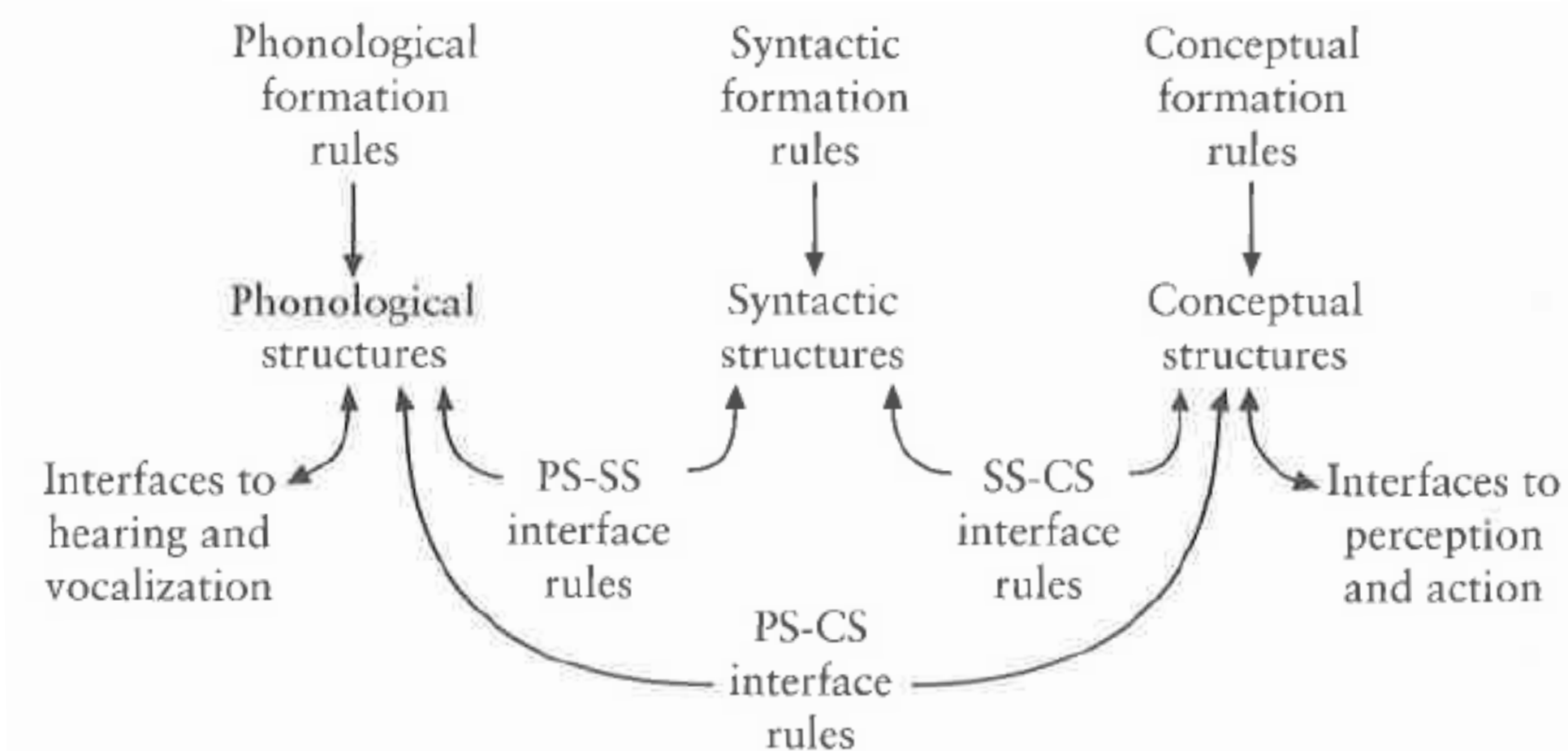
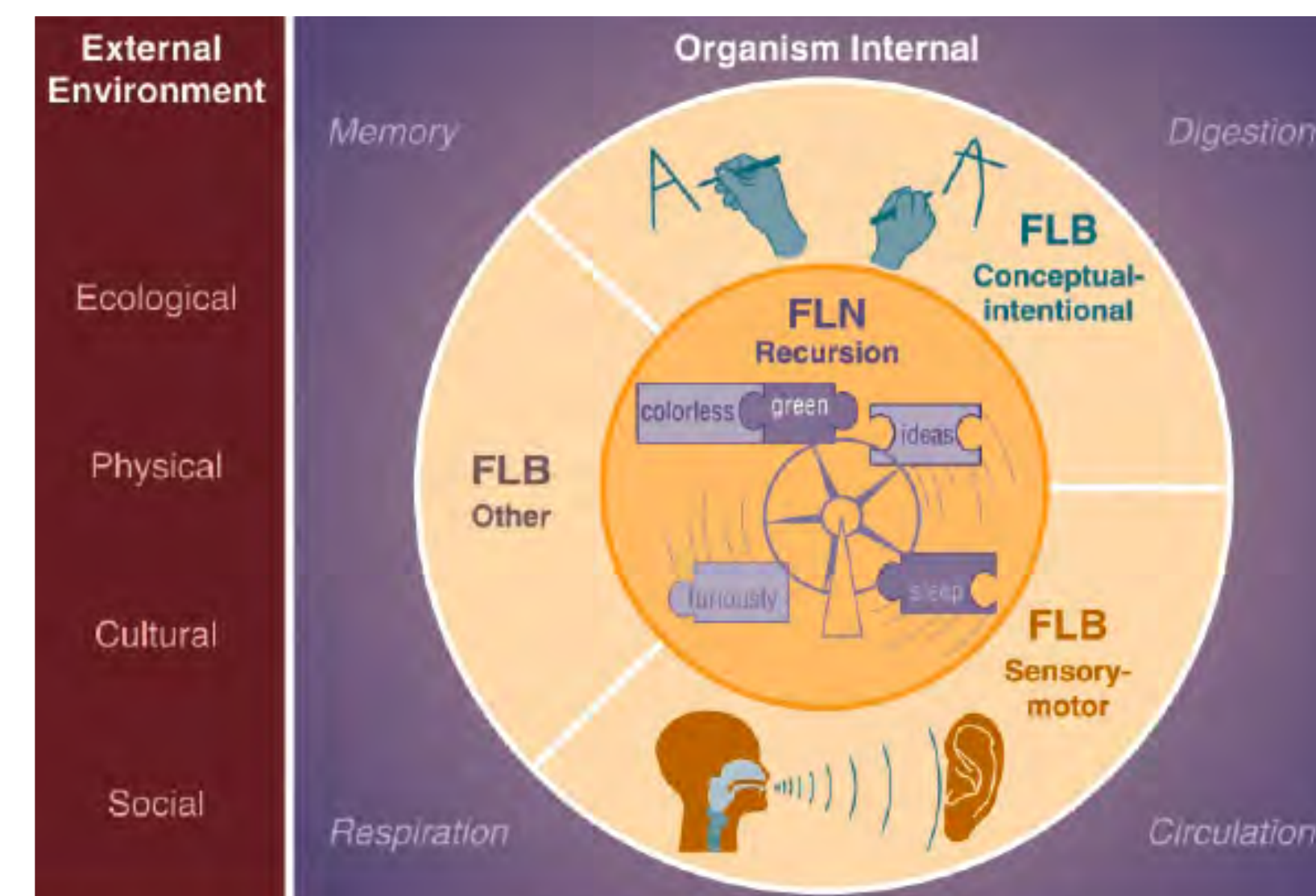
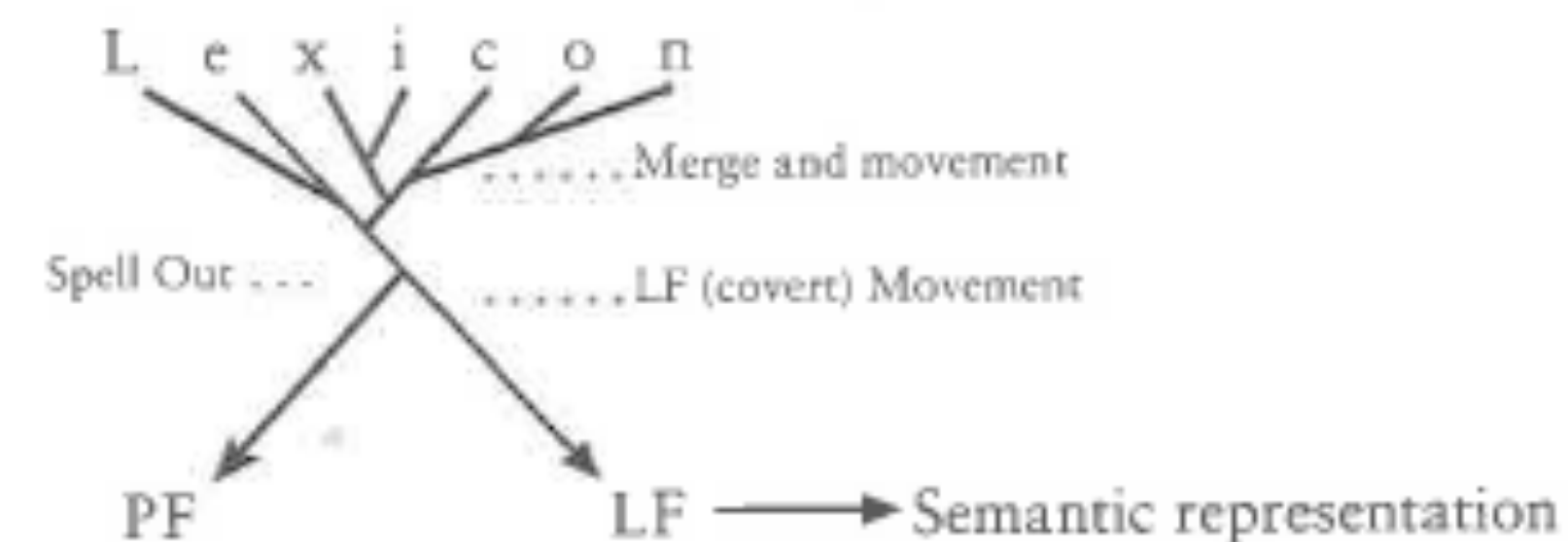
- ▶ The first solution is a kind of **linear model**:
 - ▶ **semantics** in the output of **syntax**
 - ▶ **pragmatics** is the output of **semantics**
- ▶ Two big issues:
 - ▶ **semantics** is an **interface of grammar**, not an **output**;
 - ▶ **pragmatics** does not belong to the **linguistic system**: it is not an input system (Fodor 1983), but belongs to the **central system of the mind** (Sperber & Wilson 1986).
 - ▶ **NB**: for RT (revised version), there is a **pragmatic module**, including a **comprehension** and an **argumentative** module.



SEMANTICS AS AN INTERFACE

- ▶ In a formalist framework, **logical forms** are the **interface** of the **computational system**, as **phonological forms** are.
 - ▶ In Hauser, Chomsky & Fitch (2002), they are defined as the **sensory-motor** and the **conceptual-intentional interfaces**.
 - ▶ The assumption is that **phonological formes (PF)** and **logical forms (LF)** are **interfaces of the grammar**, and belong to the *faculty of language in the broad sens (FLB)*, whereas **FLN** (*faculty of language in the narrow sense*) is restricted to **recursion**.
- ▶ This picture contrasts with the definition of language as **form-meaning pairs**, where no hierarchy between formal or semantic structures dominates (**constructions grammar**) and Jackendoff's approach - the **flat phonological, syntactic and conceptual structures** (2002), implying **5 types of interfaces**.

Minimalist Program (1993)



B. LINGUISTICS AND PRAGMATICS

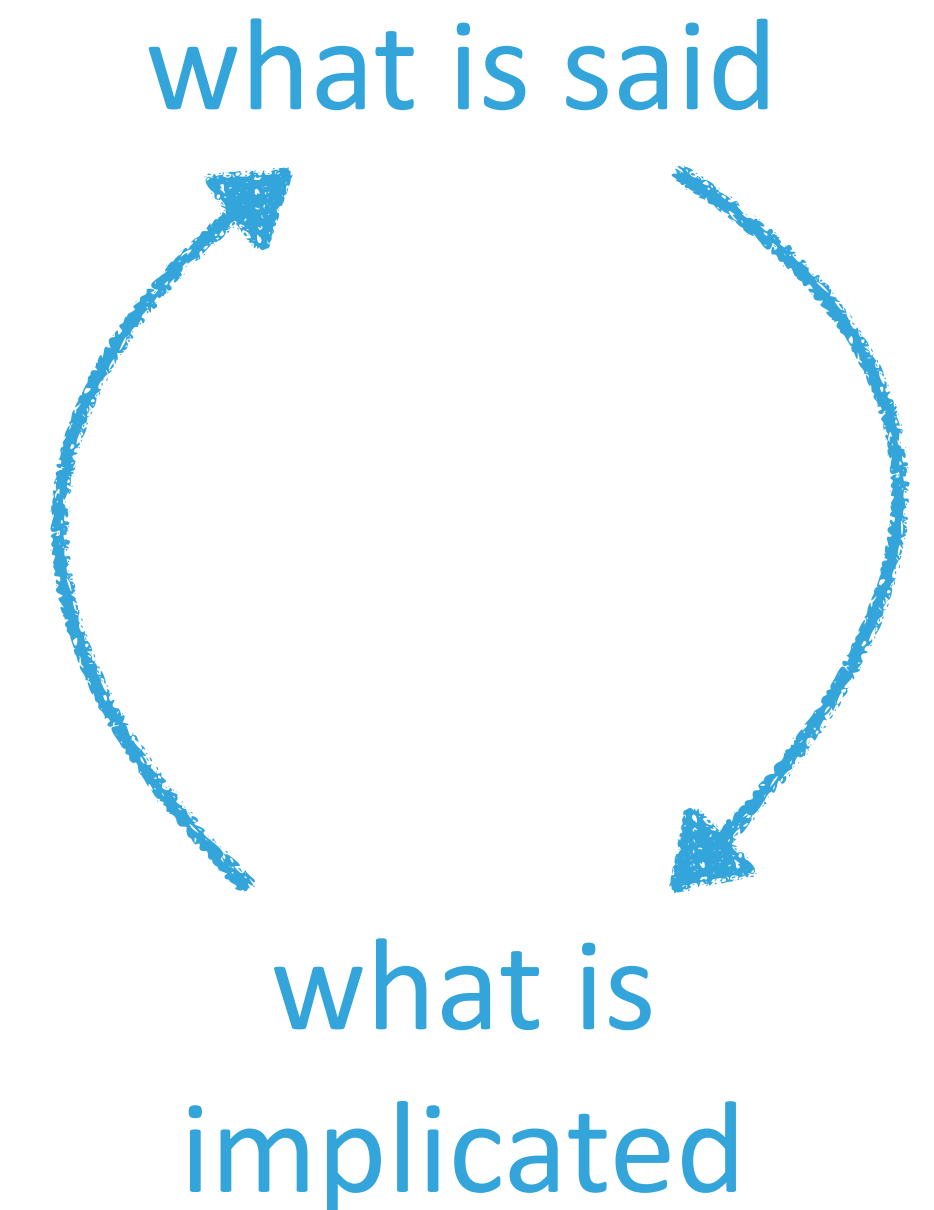
- ▶ One strong assumption of **pragmatic theory** is that **pragmatics is not a component of linguistics**:
 - ▶ **Pragmatics** is part of the **central system of the thought** (Sperber & Wilson 1986) - pragmatic is not a module and not devoted to specific tasks.
 - ▶ It means that **pragmatics** deals with **different types of inputs** (supposed to be translated into a same format) processed by the **inferential central system**.
 - ▶ **Linguistic information** is one among other types of information processed by the central system of the thought.
- ▶ What then is the relation between **linguistic** and **pragmatic meanings**?

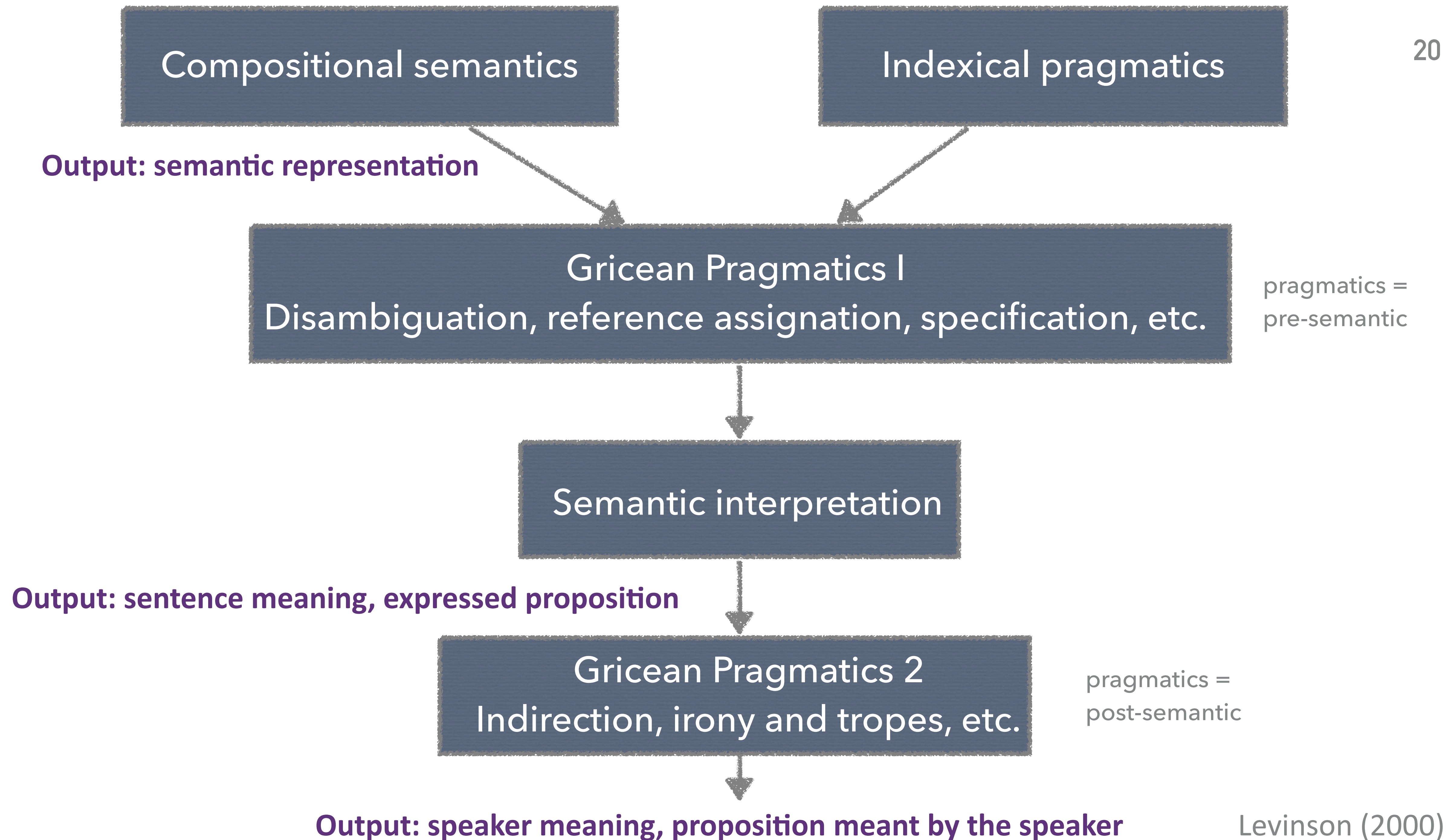
PRAGMATIC INTRUSION

- ▶ One main issue with **SPI** is **pragmatic intrusion**.
- ▶ The concept of *pragmatic intrusion* implies that **pragmatic interpretation interfere with semantic interpretation**.
- ▶ **Classical data** arguing for pragmatic intrusion (Levinson 2000):
 - a. **conditional perfection** (Geis & Zwicky 1971)
 - 1. *If you mow the lawn, I'll give you five dollars.*
 - b. **conjunction buttressing** (Atlas & Levinson 1981)
 - 2. *John turned the key and the engine started.*
 - c. **bridging** (Clark & Haviland 1977)
 - 3. *John unpacked the picnic. The beer was warm.*
 - d. **inference on a stereotype** (Atlas & Levinson 1981)
 - 4. *John said 'Hello' to the secretary and then he smiled.*
 - e. **negative strengthening** (Horn 1989)
 - 5. *I don't like Alice*
 - f. **mirror maxim** (Harnish 1976)
 - 6. *Harry and Sue bought a piano*

WHAT'S WRONG WITH PRAGMATIC INTRUSION?

- ▶ **Pragmatic intrusion**, in a neo-Gricean perspective, implies that **pragmatic inferences contribute to truth-conditions**.
 - ▶ For instance, in bridging, **reference resolution** as a pragmatic process determines the full proposition to be truth-conditionally evaluated.
- ▶ This yields the **Gricean circle**:
 - ▶ **Implicatures** (what is **implicated**) are computed on the base of the **proposition expressed** (what is **said**).
 - ▶ **Implicatures** determine the **proposition** expressed (**truth-conditional meaning**).





IMPLICATIONS

- ▶ **Pragmatic intrusion** shows that the **border** between semantics and pragmatics is **porous**.
- ▶ Some aspects of pragmatic meaning are **truth-conditional (explicatures)**, other are not (implicatures).
- ▶ Other relations need to be taken into account, as **entailment** and **presupposition**, in order to fix SPI (Moeschler 2013), as well as **conventional implicature**.

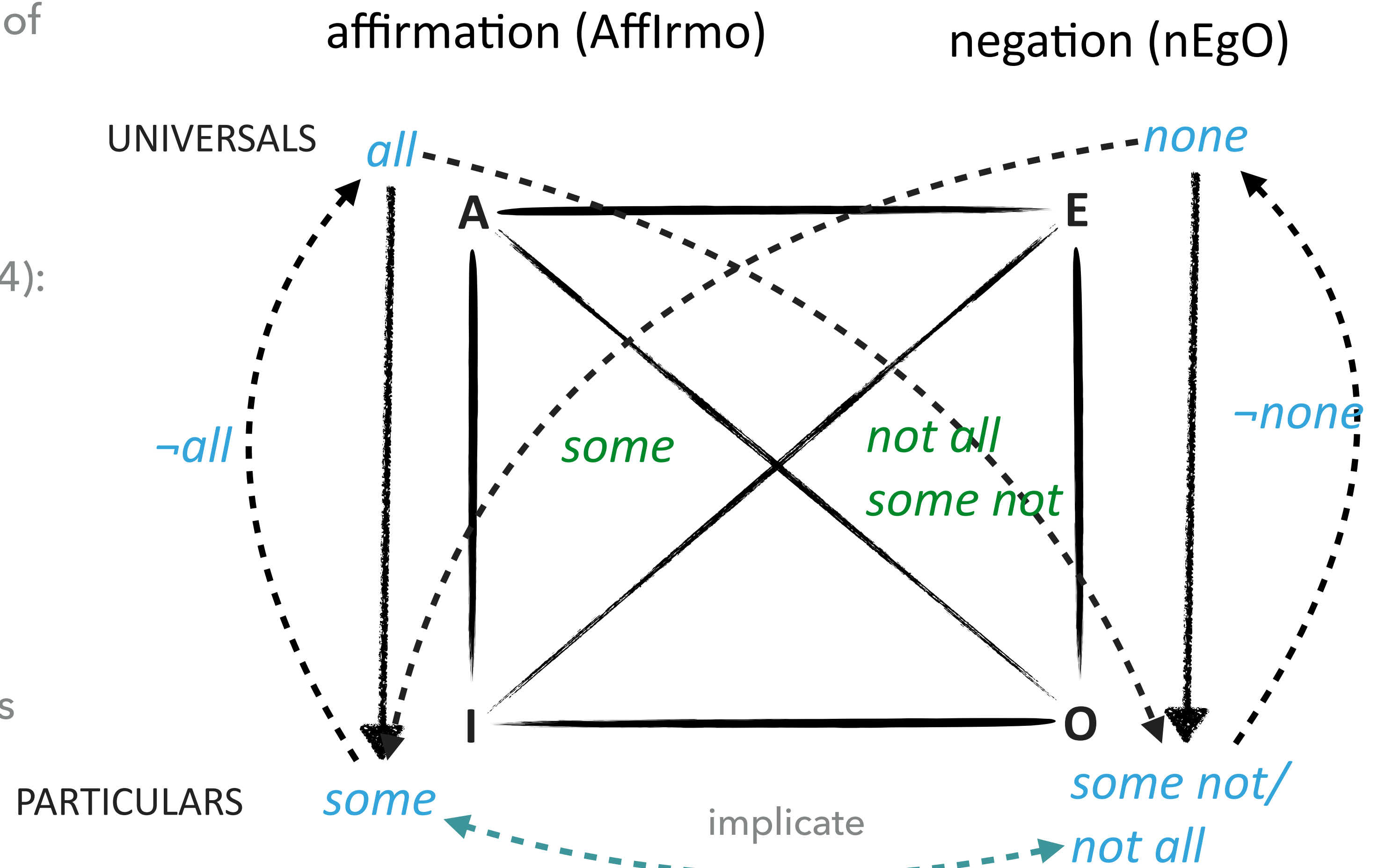
3. THE FUNCTIONS OF SPI (WHY?)

WHY DO WE NEED SPI?

- ▶ **SPI** has as a main function to **allow quick and efficient information transfer** from non-linguistic sources to linguistic ones, and vice-versa.
- ▶ **Contextual information** is generally required for **propositional enrichment** to trigger implicit and explicit inferred meaning.
- ▶ **Linguistically encoded meaning** is the starting point of an enrichment process to access reference, inferred conceptual representations, and implicatures.

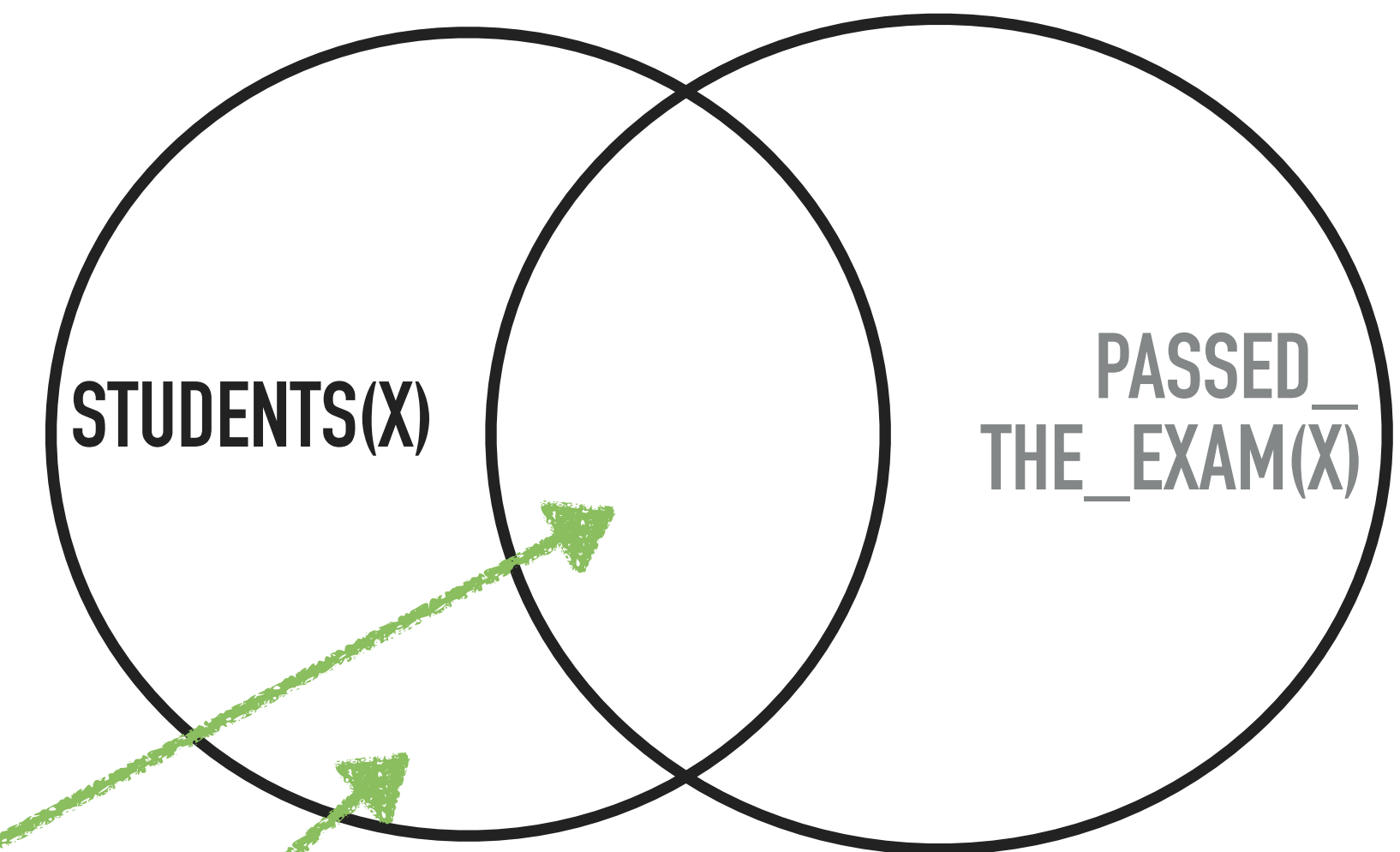
ONE EXAMPLE: SCALAR IMPLICATURES

- ▶ **Scalar implicatures (SIs)** are a classical case of **SPI**, allowing predictions about its function.
- ▶ **SIs** triggered by **quantifiers** are closely connected with their **logical meaning**, as represented by the logical square (Horn 2004):
 1. *all* → *some*
 2. *some* +> *not all, some not*
 3. *none* → *some not, not all*
 4. *some not, not all* +> *some*
- ▶ Subcontraries in the logical square implicates each other.



WHAT IS THE ISSUE?

- ▶ In what follows, I will assume the **strong connection between particulars**.
- ▶ I will insist on what is **linguistically encoded** (*semantics*) and what is **inferred** (*pragmatics*).
- ▶ The results will be that the **pragmatic meanings** of **some** and **some...not** will be interpreted as **explicatures**.
 1. *Some students passed the pragmatic exam.*
 2. *Some students did not pass the pragmatic exam.*



THE SEMANTIC AND PRAGMATIC MEANINGS OF PARTICULARS

- ▶ What can be the **semantics** and the **pragmatics** of *some* and *some...not*?
- ▶ Three assumptions:
 - a. there is a **strong connection between both particulars**: this relation is expressed by a **complement** operation;
 - b. their **semantics** is defined as what is **truth-conditionally incompatible** with each particular:
 - i. *some* is **semantically (=logically) incompatible** with *none*: they are **contradictories**
 - ii. *some...not* is **semantically (=logically) incompatible** with *all*: they are **contradictories**
 - c. their **pragmatics** is given by their **incompatibility** with their **upper-bound correlates**.

A BOOLEAN SEMANTICS AND PRAGMATICS FOR *some*

A. Semantics of *some X are Y*

- a. the **intersection** between X and Y (the sets denoted by X and Y) is not empty;
- b. *some X are Y* is **semantically incompatible** with *no X is Y*
 - ▶ $X \cap Y \neq \emptyset$ vs. $X \cap Y = \emptyset$

B. Pragmatics of *some X are Y*

- a. X is not included in Y , because there must be a sub-set of X which is not in Y
- b. *some X are Y* is **pragmatically incompatible** with *all X are Y*
 - a. $X \not\subseteq Y$ vs. $X \subseteq Y$

- ▶ As a result, *some X are Y* has as a pragmatic meaning its **explicature** *only some X are Y*

SEMANTICS AND PRAGMATICS OF *some...not*

A. Semantics of *some X are not Y*

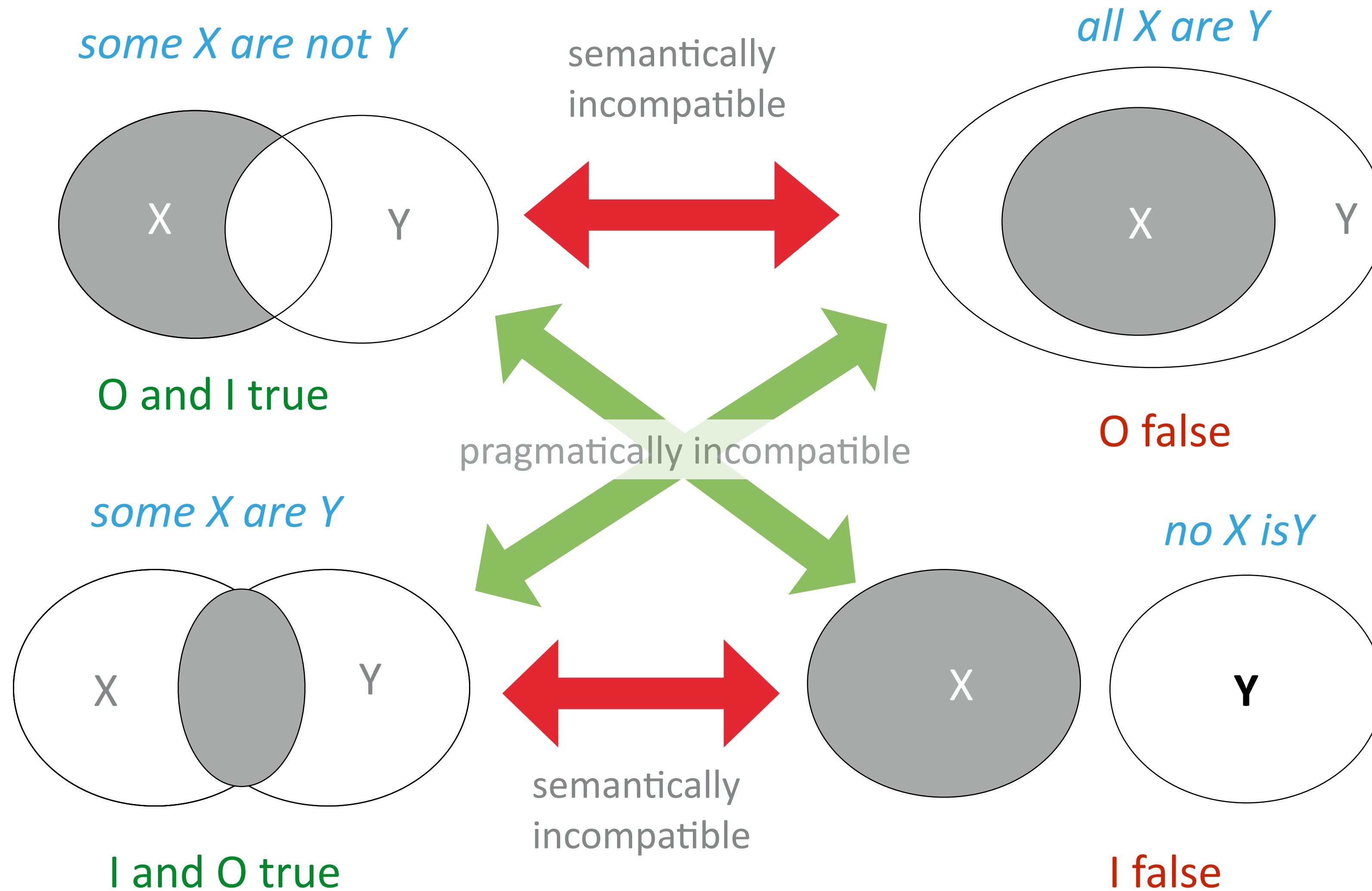
- a. the **complement** of the intersection between **X** and **Y** (the sets denoted by *X* and *Y*) is not empty
- b. *some X are not Y* is semantically incompatible with *all X are Y*
 - ▶ $c(X \cap Y) \neq \emptyset$ vs. $X \subseteq Y$

B. Pragmatics of *some X are not Y*

- a. the **intersection** between **X** and **Y** is not empty
- b. *some X are not Y* is pragmatically incompatible with *no X is Y*
 - ▶ $X \cap Y \neq \emptyset$ vs. $X \cap Y = \emptyset$

- ▶ As a result, *some X are not Y* has as pragmatic meaning its explicature **only some X are not-Y**

AN INFORMAL ANALYSIS



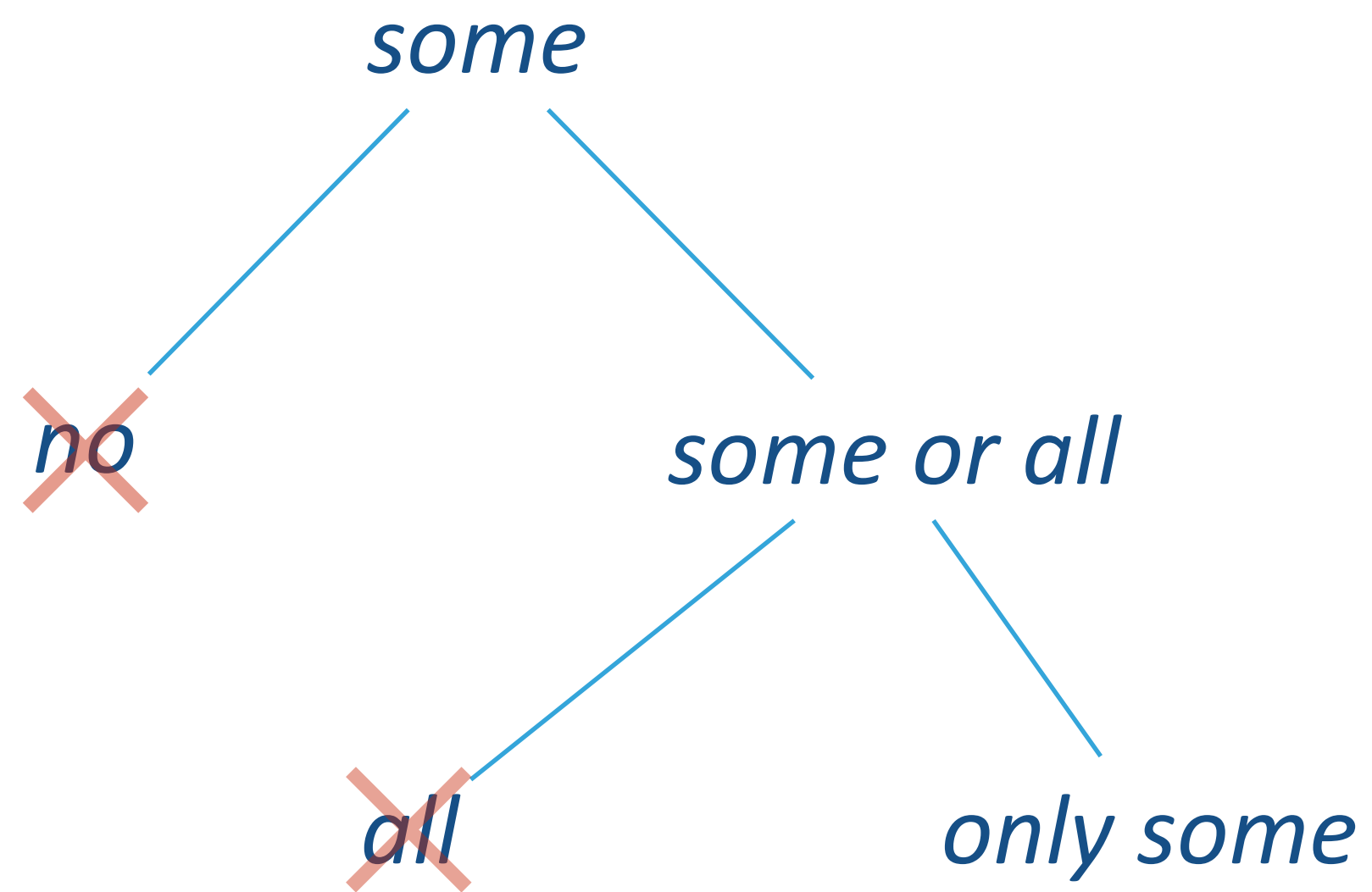
THE ROLE OF EXPLICATURE IN UTTERANCE COMPREHENSION

- ▶ The **interpretation of particulars** is directly dependent of their **truth-conditional meanings**.
- ▶ Their meanings are crucially **context-dependent**: the *not-all* and *not-none* interpretations can or cannot be triggered, depending on what the context is.
- ▶ The relation with their **semantics** is based on an **exclusion condition**.

THE EXCLUSION CONDITION

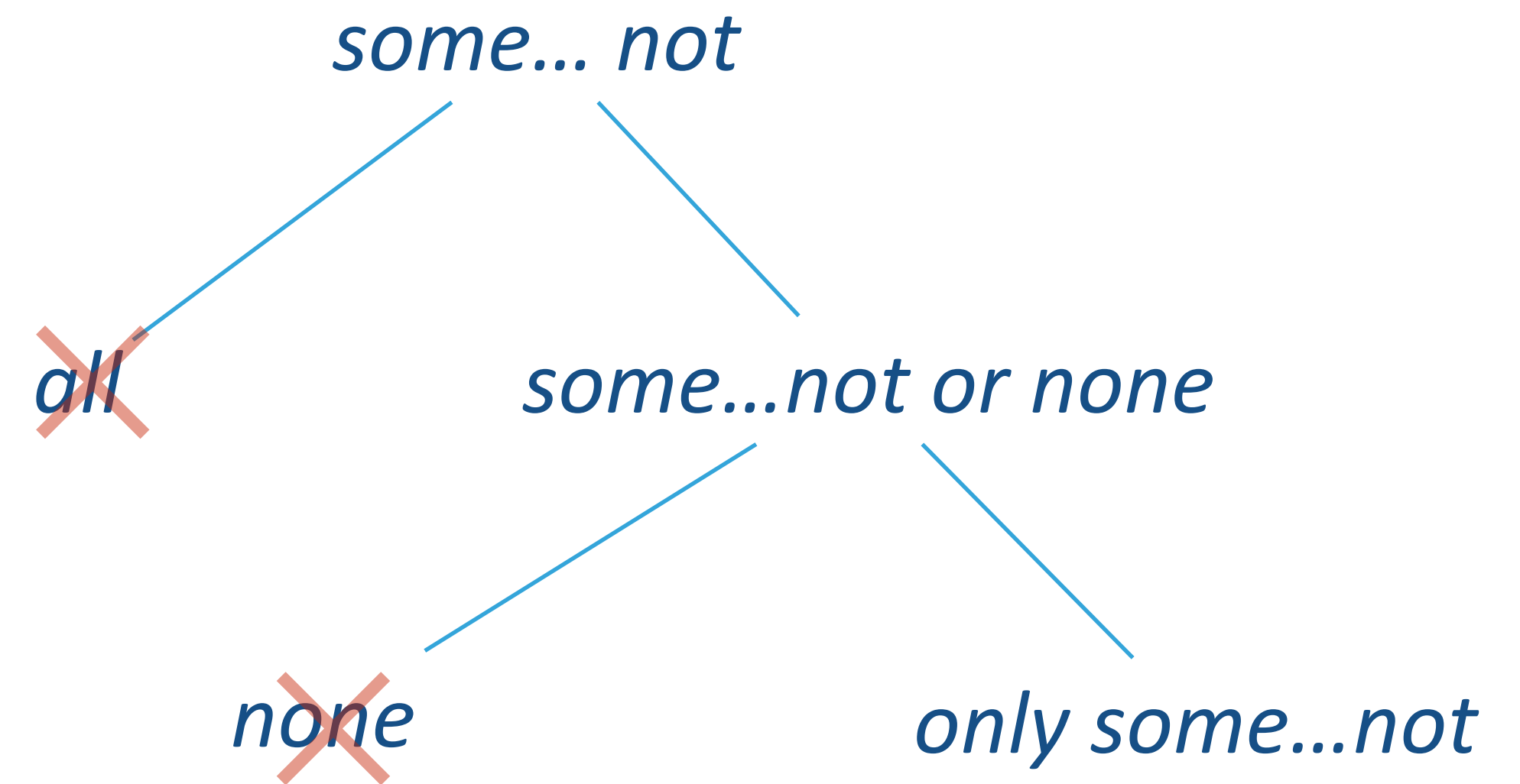
- ▶ The processing of the semantics and pragmatics for **some** and **some...not** is the following:
 - A. exclude the **incompatible semantic meaning**
 - B. exclude the **incompatible pragmatic meaning**
 - C. enrich the pragmatic meaning by **explicature**.
- ▶ This **procedure** yields a **specification reading by narrowing the semantics of the particulars**.

AN INFORMAL HEURISTIC



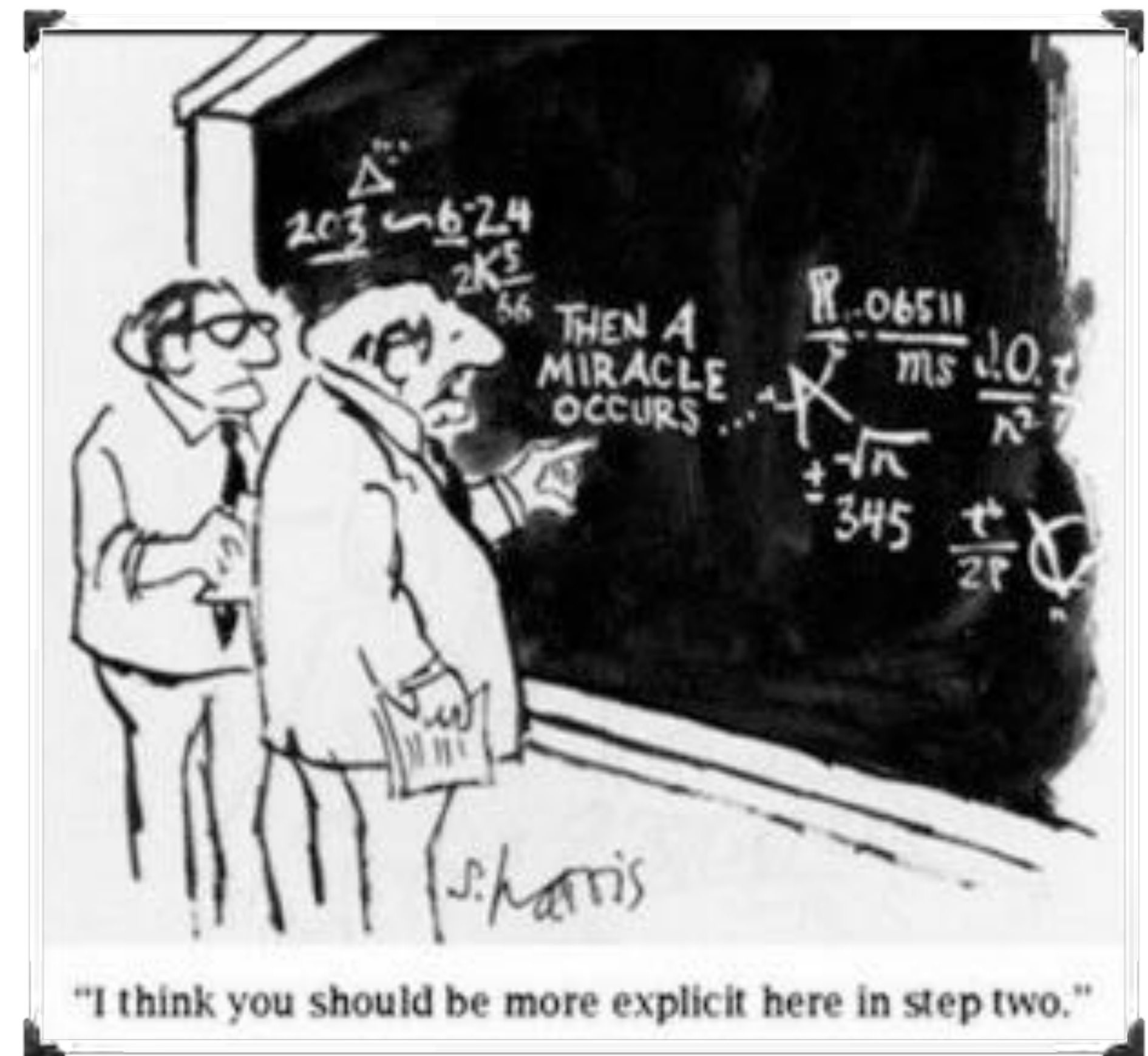
semantics

pragmatics



A GENERAL EXPLANATION

- ▶ Readings by specification of particulars (*only some, only some...not*) receive a **cognitive** and **communicative** explanation.
 - a. **Communicative explanation:** it would be a **violation of the first maxim of quantity** in saying *some* while meaning *all*.
 - ▶ From a Relevance-theoretical point of view, saying *some* while meaning *all* would allow the addressee to **unjustified inferences**, giving rise to **false conclusions**.
 - b. **Cognitive explanation:** the **partition readings** for *some* and *some not* allow an efficient and rapid processing, avoiding useless cognitive processes.
 - ▶ The prediction is that **negative particulars are not more costly cognitively than positive one**.



4. THE LOCATION OF SPI (WHERE?)

WHERE IS SPI?

- ▶ SPI is mainly a **linguistic issue: semantic meaning is the locus of pragmatic processes.**
- ▶ Sub-question: How can **conceptual and procedural meaning** be **located** in semantic meaning?
 - ▶ Cf. Grisot (2018) for a general proposal as regards tenses
- ▶ How is SPI compatible with a contextual approach?
 - ▶ The argument will be based on **temporal and causal connectives.**

THREE CONNECTIVES WITH DIFFERENT SEMANTIC AND PRAGMATIC MEANINGS

- ▶ How to explain the **differences** in semantic and pragmatic meanings between *parce que, donc, et*?
 1. *Jean est tombé parce que Marie l'a poussé.*
 2. *Marie a poussé Jean, donc il est tombé.*
 3. *Marie a poussé Jean, et il est tombé.*
- ▶ The hypothesis is that the **difference** is not in the **types of meaning encoded** by connectives, but in the **layers of meaning** they encode.
- ▶ All **connectives** encode at some level a **CAUSE** relation and license a **factive** vs. **non-factive** proposition.

CONNECTIVES AND THEIR INFERENTIAL MEANING

- ▶ In all cases, **temporal** and **causal inferences** are triggered, but with **different semantic and pragmatic paths**.
 - ▶ Some **contents** are the result of **entailments**, others are the result of **explicatures** or **implicatures**.
 - a. When a proposition is **entailed**, it must be **true**.
 - b. When a proposition is developed as an **explicature**, it allows assigning a **truth-value** to the utterance.
 - c. When a proposition is an **implicature**, it can be **cancelled**.
-
1. *Jean est tombé **parce que** Marie l'a poussé*
 - a. John fell AND Mary pushed him
 - b. Mary pushed John CAUSE John fell
 2. *Marie a poussé Jean, **donc** il est tombé.*
 - a. John fell
 - b. POSSIBLE (Mary pushed John CAUSE John fell)
 3. *Marie a poussé Jean, **et** il est tombé.*
 - a. John fell AND Mary pushed him
 - b. POSSIBLE (Mary pushed John CAUSE John fell)

A SUMMARY

- ▶ These connectives trigger different **speaker's commitment** about the **truth of the propositions expressed**:

a. ***P*** is entailed by all connectives *parce que, donc, et*.

b. ***Q*** is entailed by *parce que* and *et*.

c. The **CAUSE relation** is an **explicature** with *parce que*, and an **implicature** with iconic order under the scope of a modal operator (*et, donc*).

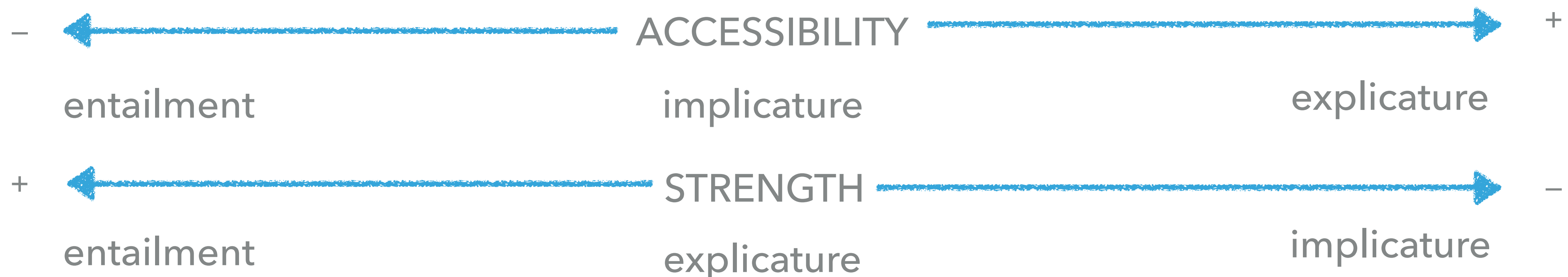
- ▶ Hence, **the same informative content is semantically and pragmatically distributed in different ways**.

P CONNECTIVE Q

	Entailment	Implicature	Explicature
<i>parce que</i>	<i>P</i>	<i>Q</i>	<i>Q CAUSE P</i>
<i>donc</i>	<i>P</i>	◇ (<i>P CAUSE Q</i>)	
<i>et</i>	<i>P</i>	<i>Q</i>	◇ (<i>P CAUSE Q</i>)

ACCESSIBILITY AND STRENGTH

- ▶ What is the **impact** of the **type of inference** on **utterance interpretation**?
- ▶ **Accessibility** and **strength** are two criteria allowing to differentiate between **entailment**, **explicature** and **implicature**:
 - ▶ how accessible is the inferred content?
 - ▶ how strong is it?
 - ▶ **accessibility** explicature > implicature > entailment
 - ▶ **strength** entailment > explicature > implicature



ACCESSIBILITY AND STRENGTH (2)

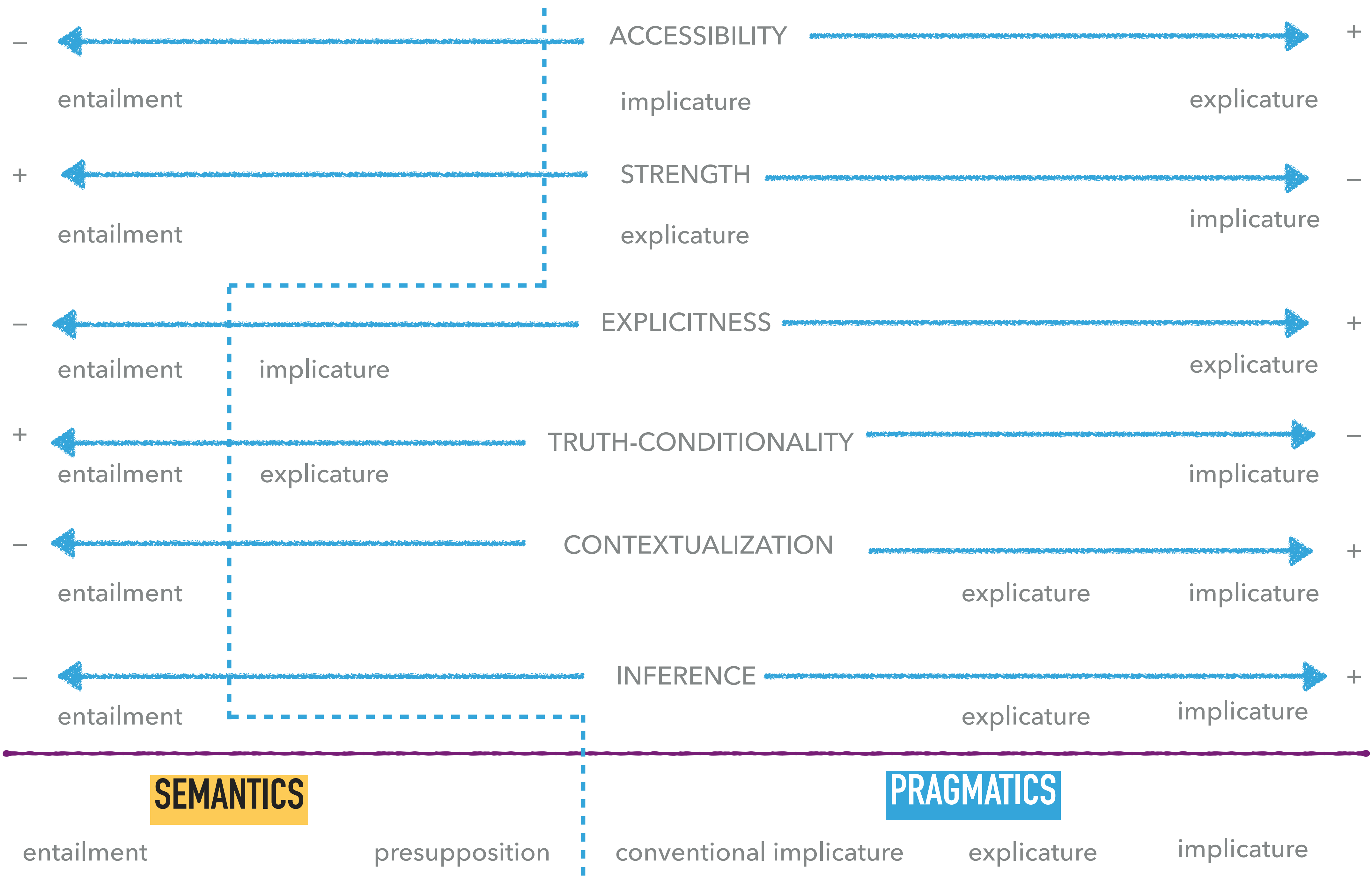
- ▶ **Semantic relations** (entailment) are **less accessible**, but **stronger**.
- ▶ **Pragmatic relations** (**explicature** and **implicature**) are **more accessible**, but **lighter** (they can be more easily denied).
 - ▶ **Explicatures** are **stronger** than **implicatures** because implicatures rule out a **logical constraint**:
 - ▶ an entailment cannot be true when *P* is true and *Q* is false.

P	Q	P entails Q
1	1	1
1	0	0
0	1	1
0	0	1

P	Q	P implicates Q
1	1	1
1	0	1
0	1	0
0	0	1

CONSEQUENCES

- ▶ Linguistic lexical items are the (main) locus of SPI.
- ▶ SPI can be made **visible** by the **continuum of semantic and pragmatic relations** as **entailment, (presupposition), explicatures** and **implicatures**.
- ▶ **Causal connectives** show how atomic and complex propositional meanings are distributed in the **semantics-pragmatics continuum**.
- ▶ **Quantifiers** as **some** and **some...not** show how basic semantic relations (**inclusion, intersection**) are **distributed** at the **semantic** and **pragmatic** level.



SEMANTICS

PRAGMATICS

entailment

presupposition

conventional implicature

explicature

implicature

THANKS FOR YOUR ATTENTION

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