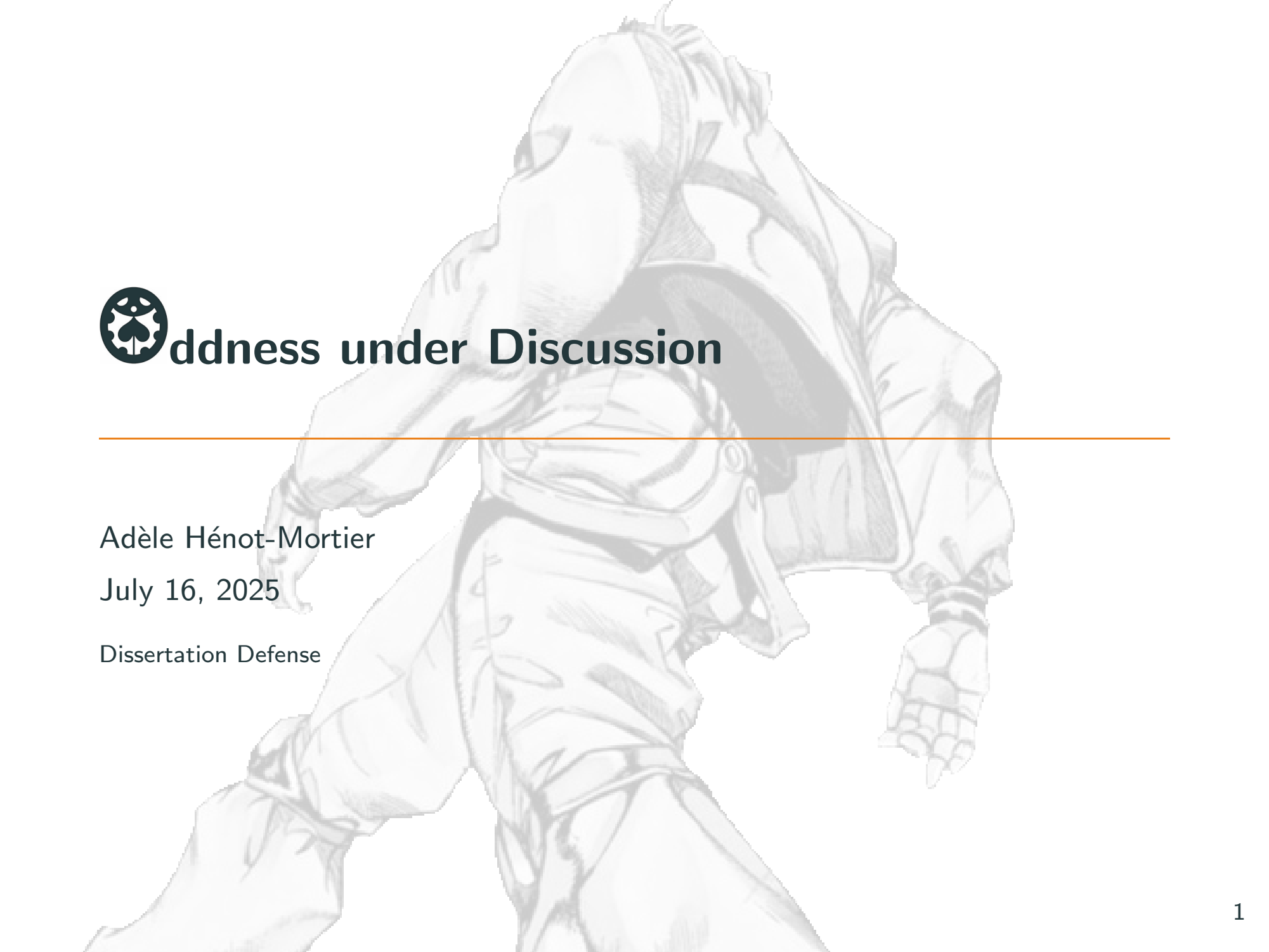

Oddness under Discussion

Adèle Hénot-Mortier

July 16, 2025

Dissertation Defense

What can make sentences bad?

- Sentences can be syntactically ill-formed.

(1) * Ed told Jo that he likes **herself**.

- Sentences can be contradictory, or tautological.

(2) a. # It's raining and it's **not** raining.
b. # It's raining or it's **not** raining.

- Sentences may out-of-the-blue contradict standard assumptions or expectations.

(3) ?? Jo will bring **her alligator** to the LSA.

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What is oddness?

- Sentences sometimes feel **odd** despite being informative, and perfectly "reasonable" is terms of what they implicitly assume.

Hurford Disjunction (**HD**):

(4) # Jo studied in **Paris** or in **France**. (Hurford, 1974)
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- A prominent approach to sentences like (4), is based on Redundancy.[1]
- Both of (4)'s disjuncts convey the information that *Jo studied in* **France**.
- In fact, the entire disjunction is contextually equivalent to (5), which is strictly simpler!

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Where Redundancy falls short

- Oddness can arise despite the non-existence of a simpler equally informative alternative:

(6) ?? Jo studied in **France** or **the Basque country**. (Singh, 2008)
Conveys: Jo studied in **France** or the **Spanish Basque country**.

- Sentences that are completely isomorphic contrast in terms of oddness (Mandelkern & Romoli, 2018; Kalomoiros, 2024).

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A new view of (implicit) questions

- The connecting thread of my dissertation is that many cases of oddness can be explained by considering that **a good sentence has to be a good answer to a good question** [2]
- I formalize this longstanding intuition by proposing a **compositional model of implicit questions**, which is:
  - directly sensitive to the **degree of specificity** conveyed by sentences;
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Conceptual advantages of implicit questions

- Assertive sentences are proposals to **update beliefs**, but also suggest ways to **hierarchically organize such beliefs**, i.e. encapsulate the dynamics of conversations.
- Implicit questions (defined in this way) constitute a natural **extension of Dynamic Semantics**[3] at a more pragmatic or "inquisitive" level.
- Unlike Inquisitive Semantics,[4], sentence meanings (propositional content) and the issues they raise (how the content comes about) are not conflated.

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- Making pragmatic constraints sensitive to both sentences and their implicit questions, captures cases like (4), (6) and (7), that together challenge standard REDUNDANCY-based approaches to oddness.
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A Bizarre Adventure into Oddness

1. Give some **background** on assertions and questions.
2. Define how **implicit questions** are compositionally evoked by assertions, and show why this is an independent desideratum.
3. Capture Hurford **Disjunctions** (4) by rephrasing Redundancy.
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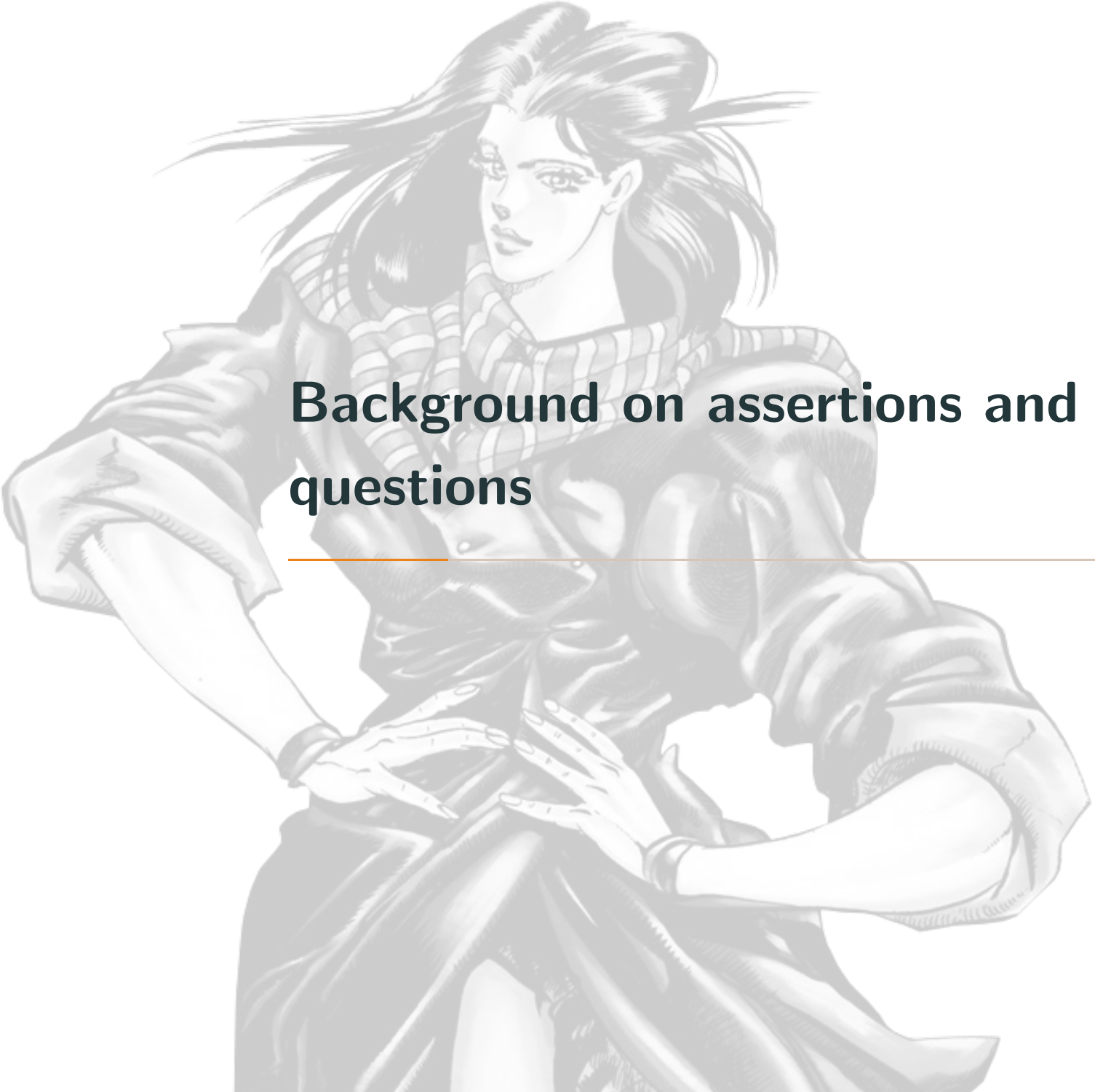

Background on assertions and questions

Assertions and questions

- Assertions typically denotes propositions (**sets of worlds**).
- The set of worlds compatible with the premises of a conversation is called **Context Set** (**CS**).[5]
- Assertions update the CS by **intersection**.[6]

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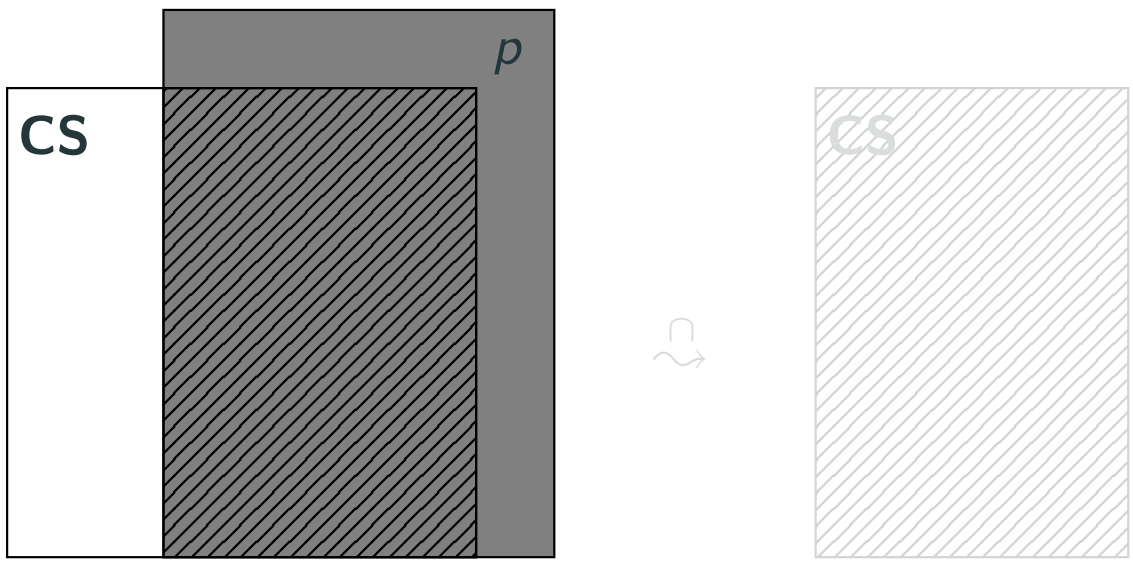

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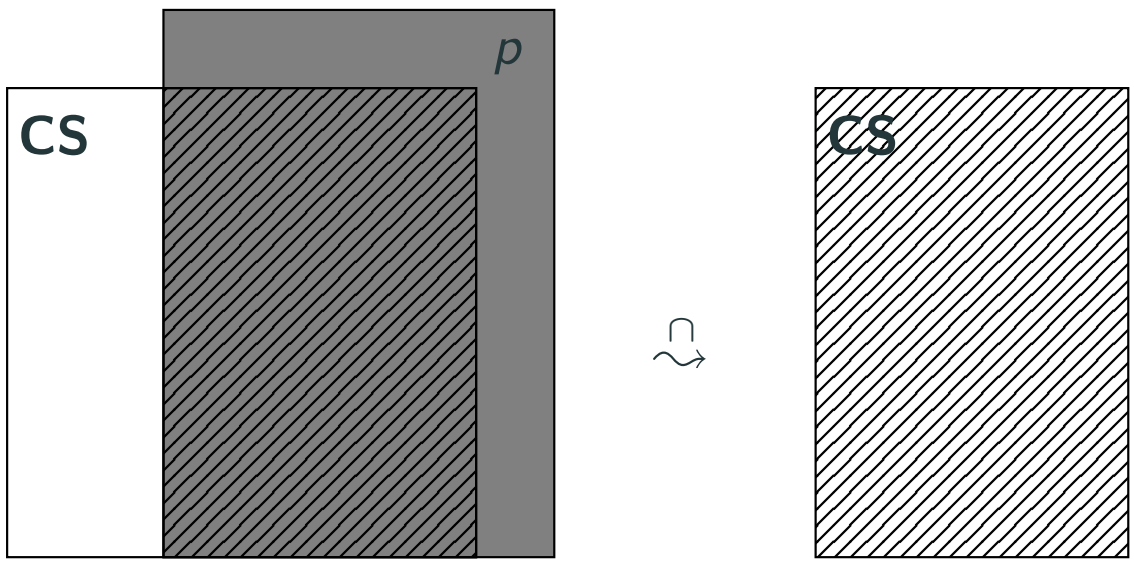

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Standard question semantics

- Questions have been traditionally understood as the **set of their possible answers, or "alternatives"**.[7]

(8) $[\![\text{Who did the readings?}]\!] = \{\text{Ed, AI, Ed and AI, ...}\}$

- Alternatives are not necessarily exclusive: if Ed and AI did the readings then Ed did the readings.
- Stronger alternatives, intuitively correspond to "better" answers.
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- Questions induce a **partition of the CS**: just group together the worlds of the CS that agree on all alternatives.[8]
- The resulting groups are called **cells**: they tell us which distinctions "matter".

- We will only consider exhaustive and mutually exclusive alternatives, s.t. question semantics and question pragmatics in fact coincide.

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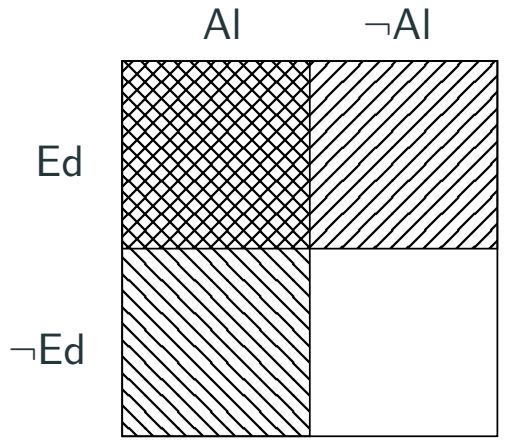

Step 1: Check how each world deals with the alternatives: ▨ defines *Al did the readings* and ▨ defines *Ed did the readings*.

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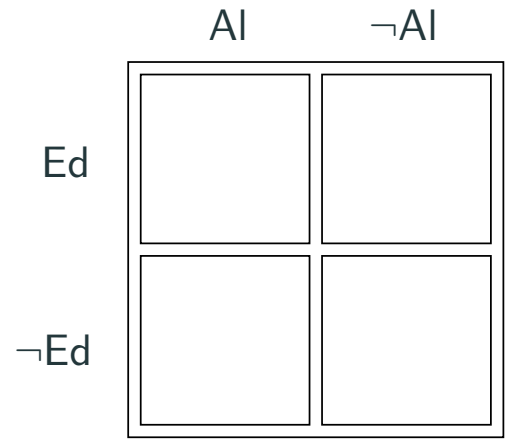

Step 2: Partition the CS by grouping worlds that pattern the same.

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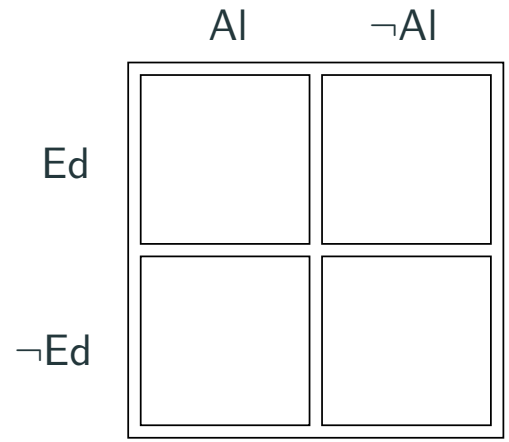
Answering questions

- Here the cells are *only Ed did the readings*, *only Al*, *Ed an Al*, and *neither*. Those are **maximal answers**.
- Union of cells, e.g. *Ed did the readings* (including *only Ed*, and *both*), are **non-maximal answers**.



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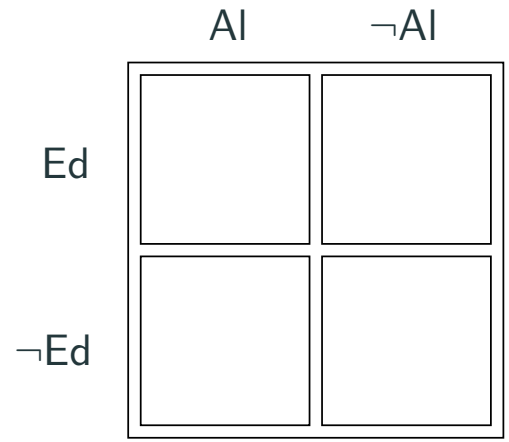

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Constraints on question-answer pairs: Congruence

- Question-answer pairs are subject to constraints.
- For instance, an answer better be "congruent" with the corresponding question. This explains the pattern in (10).

(9) Question-Answer Congruence (Rooth (1992)'s version).
For a pair $\langle Q, A \rangle$ to be well-formed, any alternative in $[\![Q]\!]$, must be obtainable from a substitution of A's focused material.

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Compositional Implicit Questions

Preview: Oddness as question-answer Incongruence

- Recall oddness seems to arise from **how** information is conveyed.
- I submit that this "how" is tied to which question is tentatively addressed by the sentence.
- **An odd sentence is a sentence that only gives rise to odd questions.**

- **The pragmatic module must then be sensitive to pairs formed by sentences and their implicit questions.**

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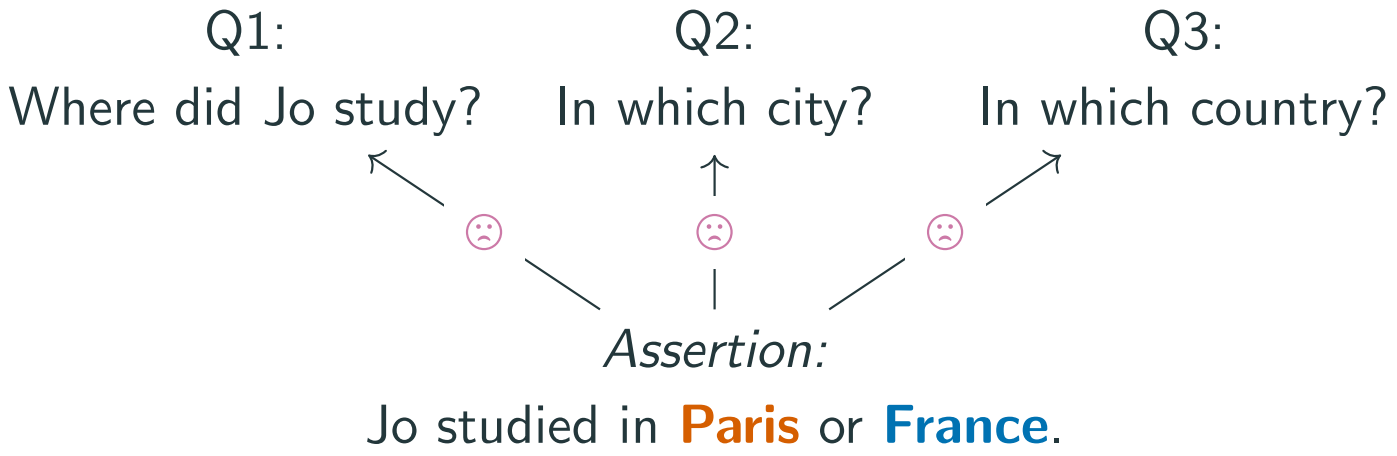

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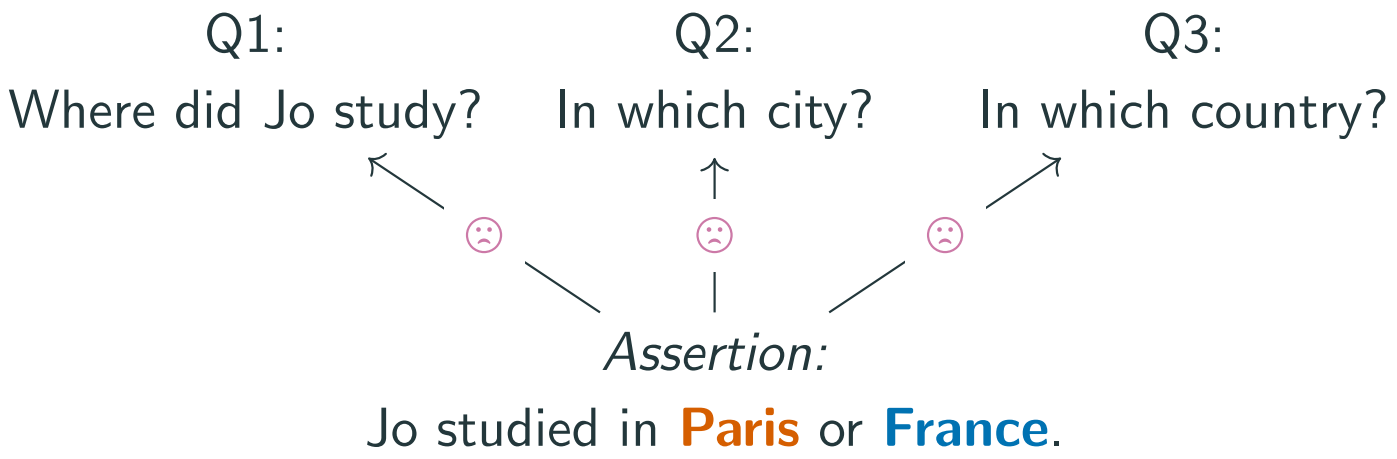

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A desideratum to guide our framework

- Overt question answer-pairs match in terms of **specificity**. This should be a desideratum for implicit questions, too.

(12) a. Where did Jo study? –{**Paris**, **France**}.

b. In which country did Jo study? –{#**Paris**, **France**}

c. In which city did Jo study? –{**Paris**, #**France**}

- Basic alternative semantics does not fully capture this: generating a question from a proposition by replacing its focused material with same-type alternatives does not guarantee that the outputs will have same specificity.[10]
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Additional motivations for a specificity constraint

- Does question-answer RELEVANCE help achieve the specificity desideratum? Not quite: both answer in (13) are unions of cells and as such RELEVANT, yet only (13b) seems to match the question's degree of specificity.

(13) In which country did Jo study?

a. # **Western Europe**

b. **France**, **the UK**, or **Germany**

- Intuitively, (13a) evokes a *which area* question while (13b) evokes a *which country* question, and **the former question is coarser-grained than the latter**.
- **We need a model of questions that encodes specificity relations between propositions – and questions themselves.**

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a. # **Western Europe**

b. **France**, **the UK**, or **Germany**

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Questions as nested partition

- Question are modeled as **nested** partitions. Nesting is based on specificity:[11] nested partitions are finer-grained than nesting partitions, meaning, **Paris** and **France** cannot be mixed up.

(a) By-city partition.

(b) By-country partition

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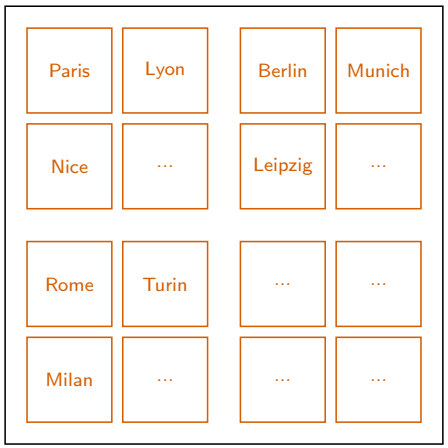

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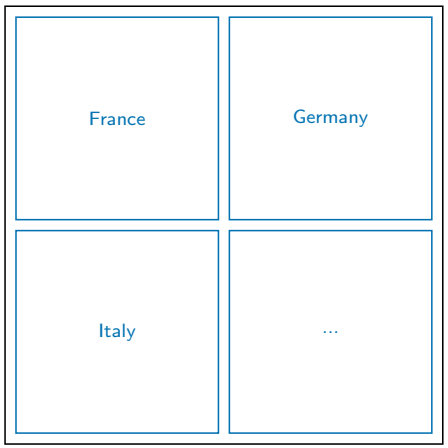

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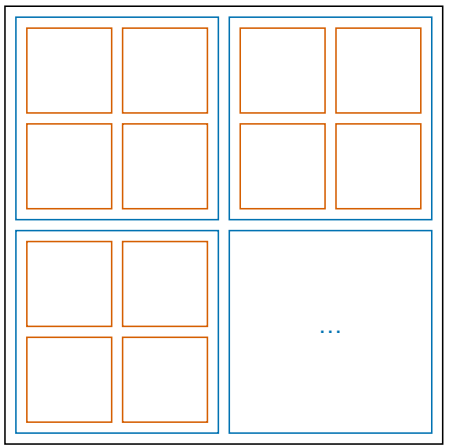

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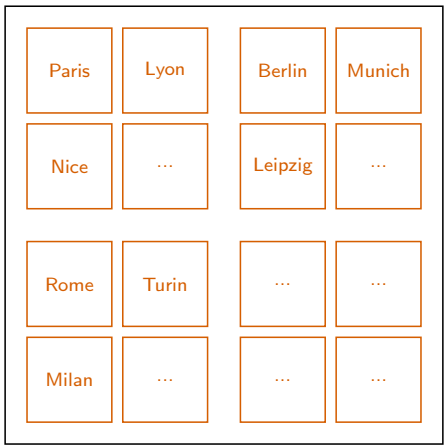

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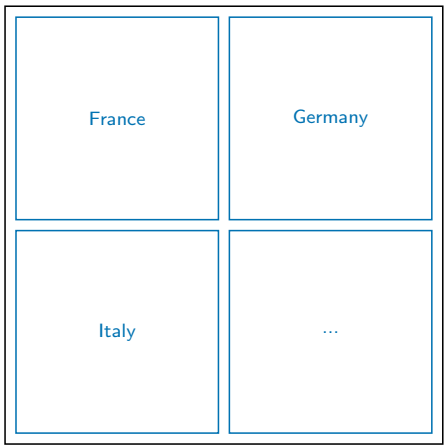

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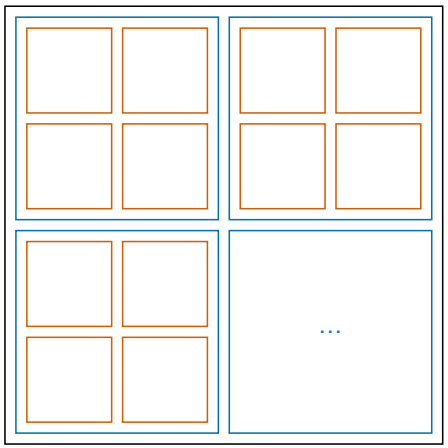

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Useful notational variant: questions as Trees

- Nested partitions will be represented as **trees**. The layers of a question-tree have same specificity.
- Simple sentences like *Jo studied in* **Paris** may then evoke nested "*wh*" trees like Fig. 2a, or polar trees like Fig. 2b.

(a) "*Wh*" tree **(b)** "Polar" tree

Fig. 2: Trees evoked by *Jo studied in* **Paris**.

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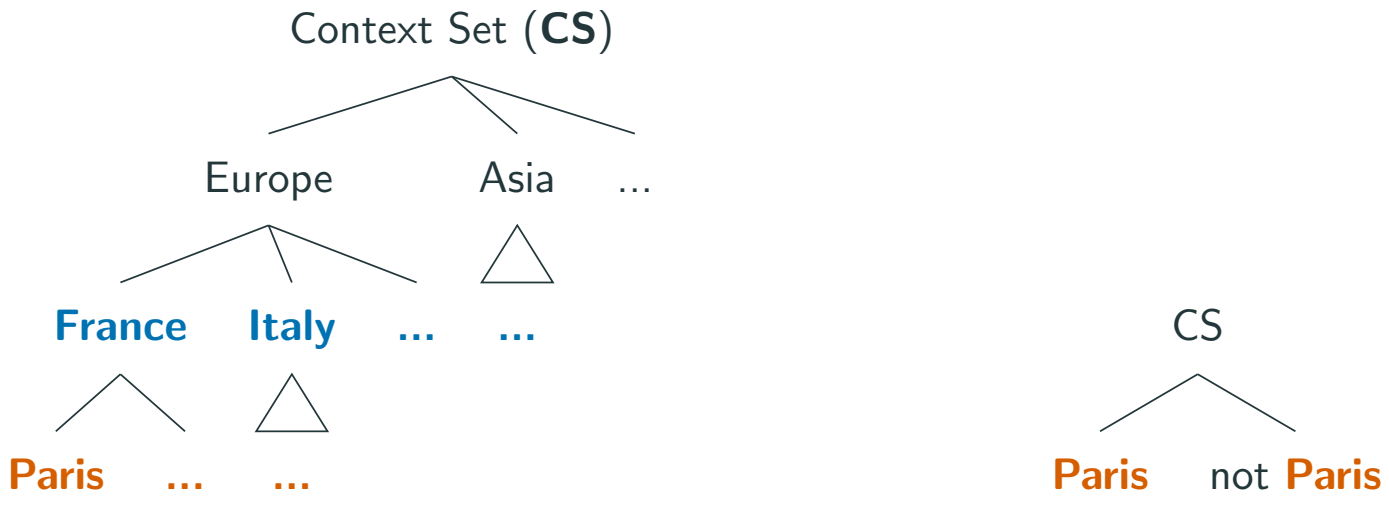

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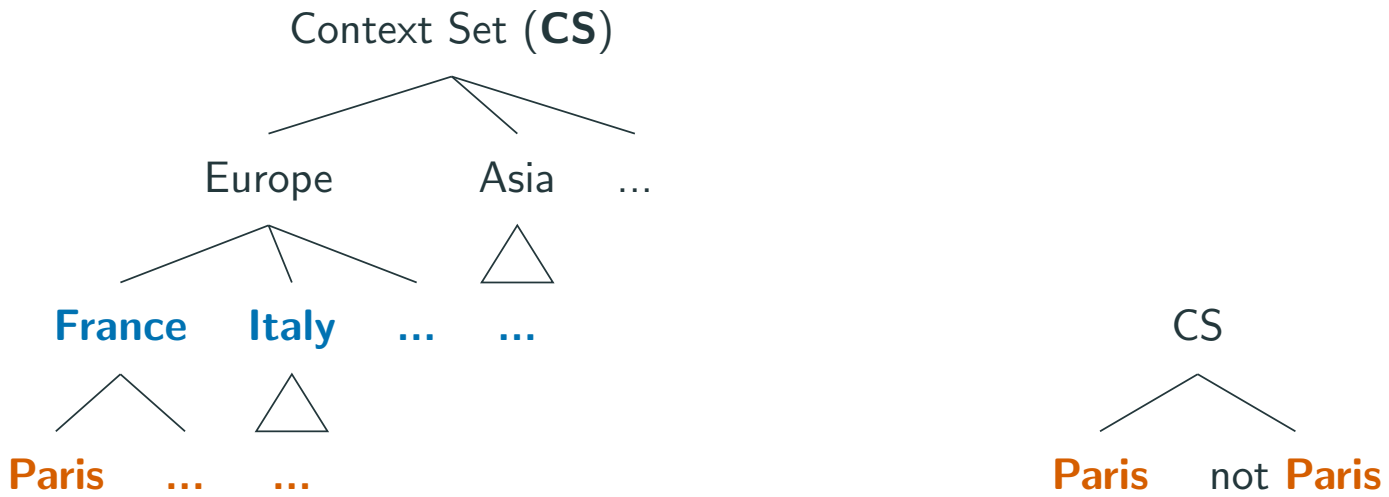

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Benefits of trees beyond specificity encoding

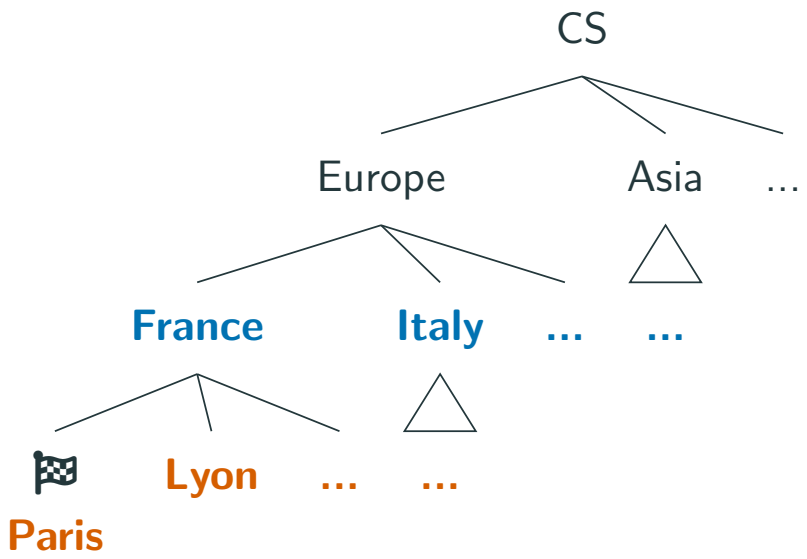
- Implicit questions[13], and question trees[14] have been around for a while. Ippolito (2019) even discussed how specificity differences in trees could capture oddness.
- But none of the previous approaches leveraged the expressivity of a tree model, to render the idea that **the questions evoked by a sentence, are compositionally derived from its LF**.
- This is needed if one wants to make precise predictions about logically similar, but structurally different sentences, like Hurford Conditionals.
- We now introduce a set of rules for $\neg$, $\vee$, and conditionals, that apply to trees and **recycle longstanding intuitions about these operators.**

[13] Carlson, 1985; von Stutterheim and Klein, 1989; Kuppevelt, 1995; van Kuppevelt, 1995; Ginzburg, 1996, 2012.

[14] Roberts, 1996; Büring, 2003; Onea, 2016; Ippolito, 2019; Riester, 2019; Zhang, 2022, i.a.

Flagging, and "negating" Questions Trees

- When a simple assertion evokes an implicit question tree, leaves entailing the assertion get flagged; **flags track "at-issue" meaning, and are compositionally derived**.
- Negating an assertion **flips the flags** on this assertion's trees. Flag-flipping is a layerwise **complement set** operation, which **does not affect the specificity of the underlying question-tree**.



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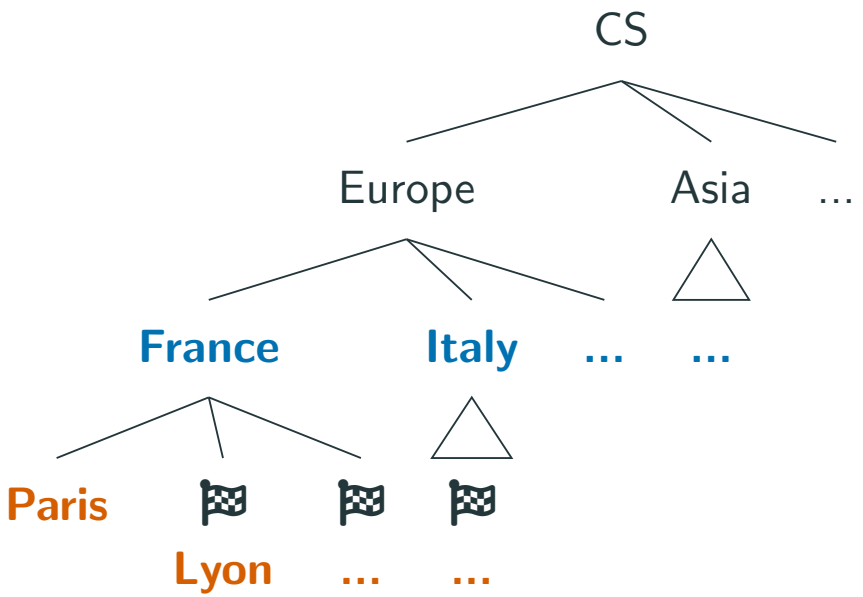

Fig. 4: A tree for *Jo did* **not** *study in* **Paris**.

Disjoining Questions Trees

- Disjunction **fuses** the trees evoked by the disjuncts, retaining only unions that are well-formed nested partitions.
- Set of flagged nodes are also merged.

Fig. 5: A tree for *Jo studied in* **Paris**.

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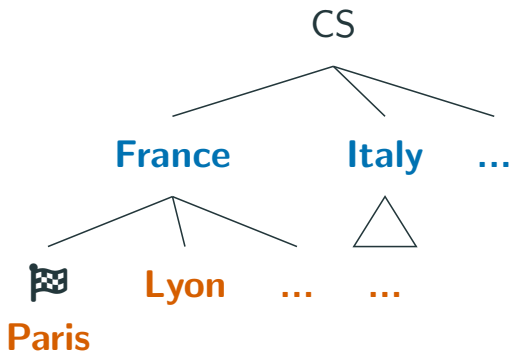

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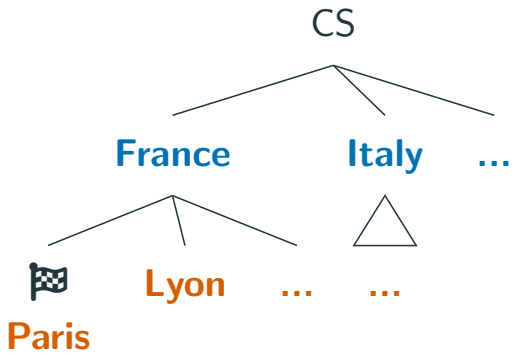

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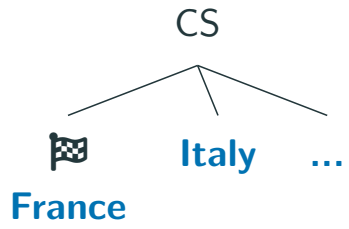

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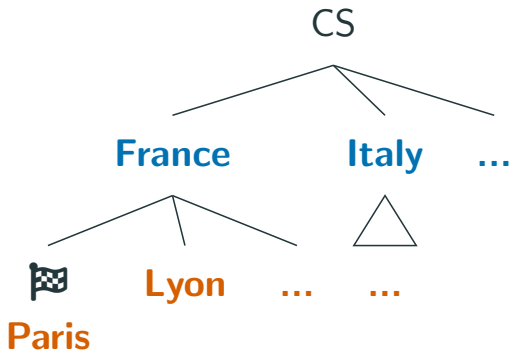

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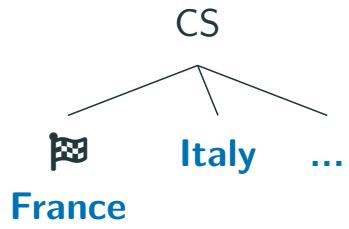

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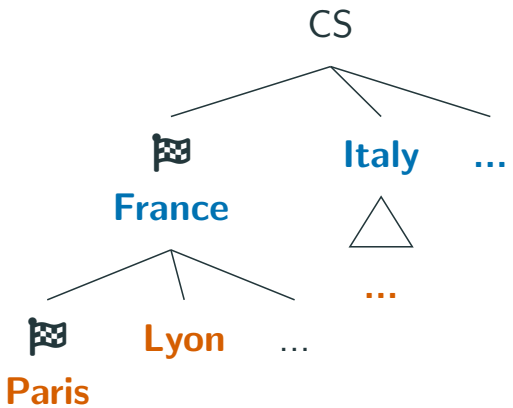

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- Therefore, we assume that conditional question-trees raise a question evoked by the consequent, only where the antecedent holds.
- Technically, conditionals **"plug" consequent trees, into the flagged leaves of the antecedent trees** – keeping only the consequent's flags.

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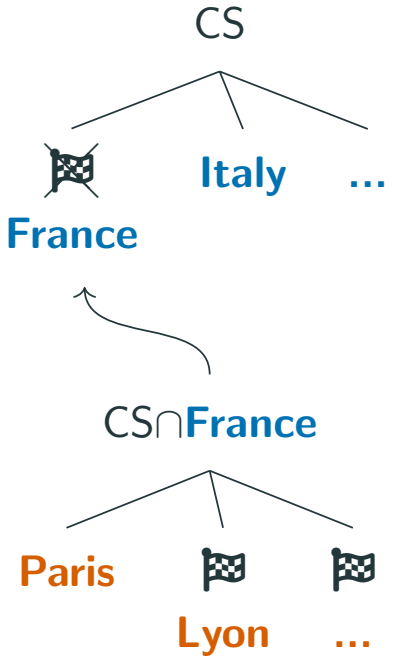

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- Trees are expressive enough to capture the intuition that some assertions (e.g. **Paris**, **London**) are more specific than others (e.g. **France**), in that they evoke more "ramified" trees. **Specificity is made directly available to the pragmatic module.**

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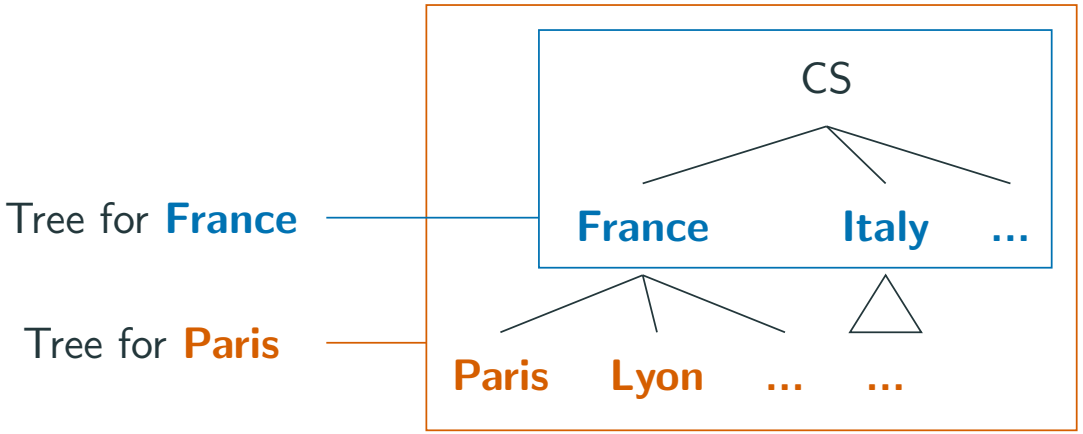

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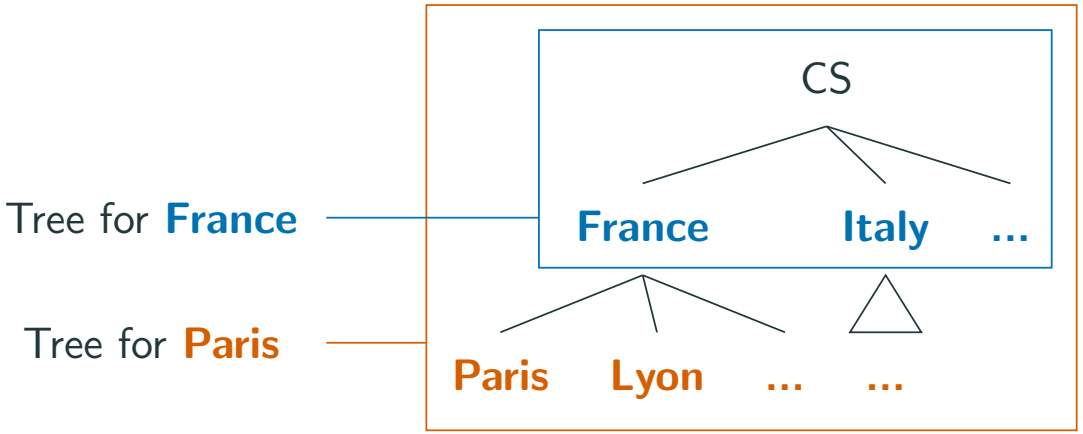

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- This will allow us to capture the challenging contrast in Hurford Conditionals (and the absence thereof in Disjunctions) in an intuitive way.

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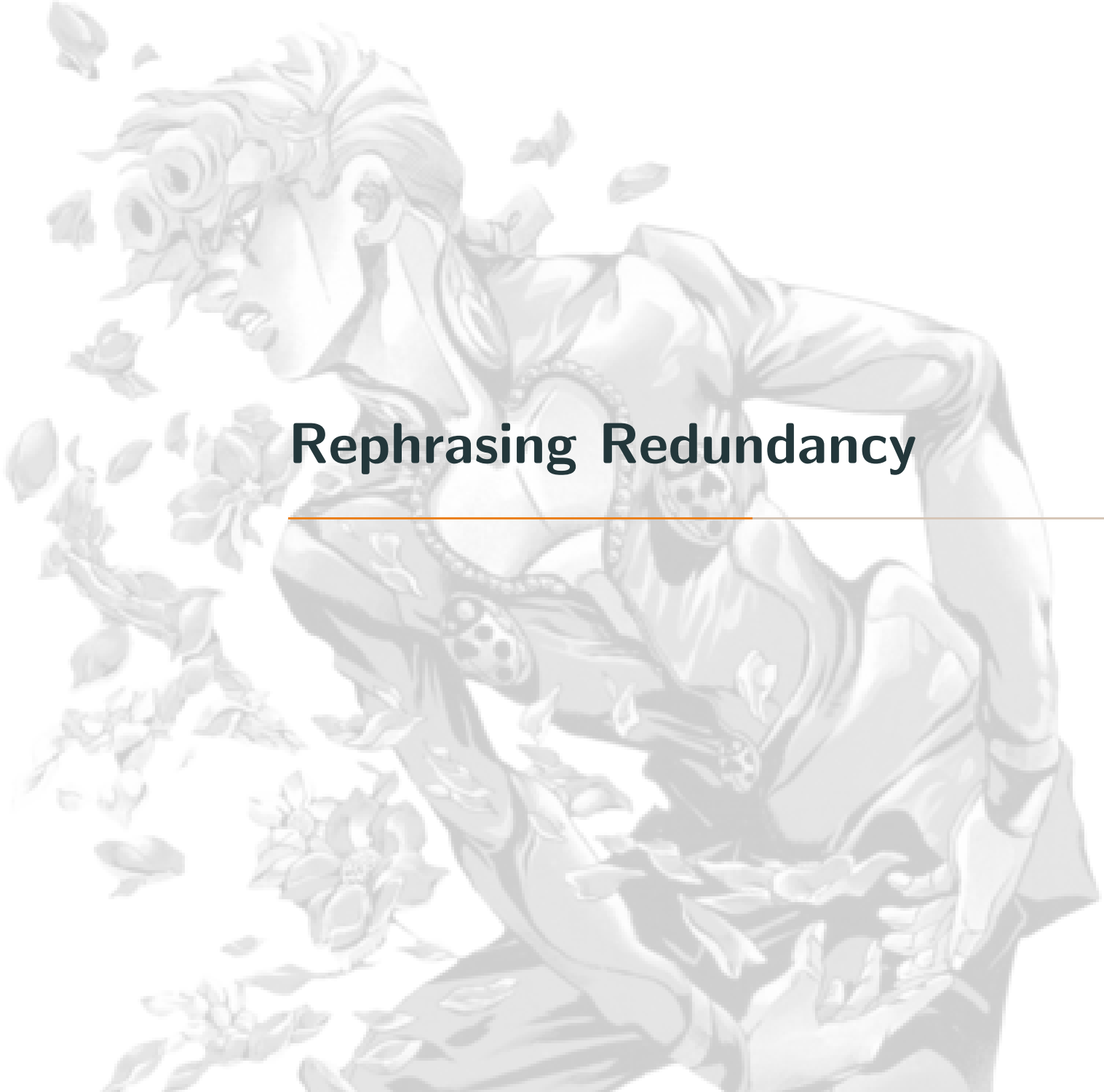

Rephrasing Redundancy

Back to Hurford Disjunctions

(4) Hurford Disjunction (**HD**):
Jo studied in **Paris** or in **France**.

- In our framework, HDs evoke well-formed unions of trees evoked by the disjuncts. We can show that there is only one possibility, the one we computed before, repeated below.

Fig. 9: A tree for *#Jo studied in* **Paris** *or* **France**.

- Descriptively, the issue seem to come from the fact the 🏁 are on the same path to the CS root – i.e. **inquiring about Paris, already settles France**.

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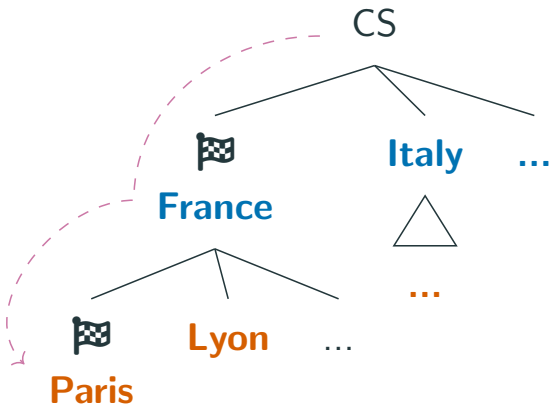

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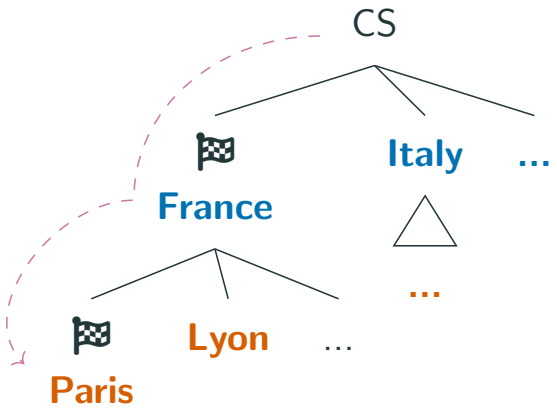

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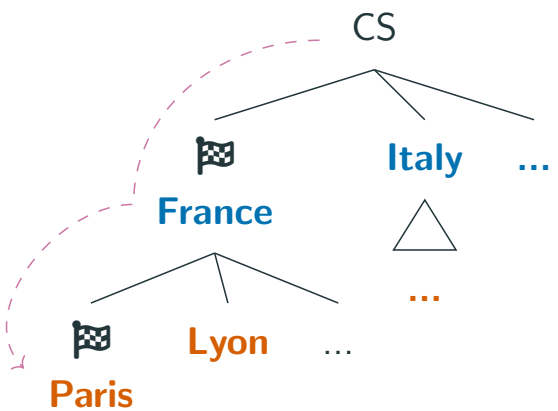

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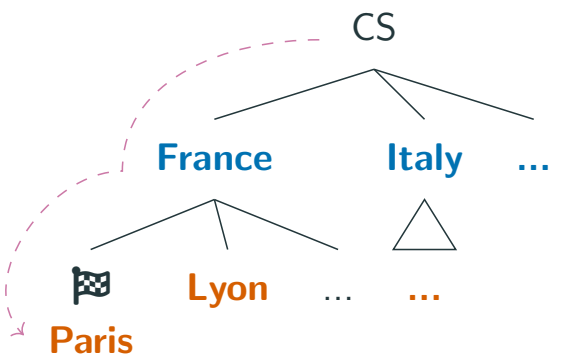

Fig. 11: A tree for *Jo studied in* **Paris**.

Additional remarks about Q-Non-Redundancy

- Unlike standard Redundancy approaches, Q-Non-Redundancy deems HDs odd due to their *stronger* disjunct.
- Because Q-Non-Redundancy is sensitive to the entire tree compositionally evoked by a sentence, it **captures long-distance interactions** e.g. between **France** and **Paris** in (14)

(14) Long-Distance Hurford Disjunction (Marty & Romoli, 2022):
Jo studied in **Paris** or **London**, or studied in **France**.

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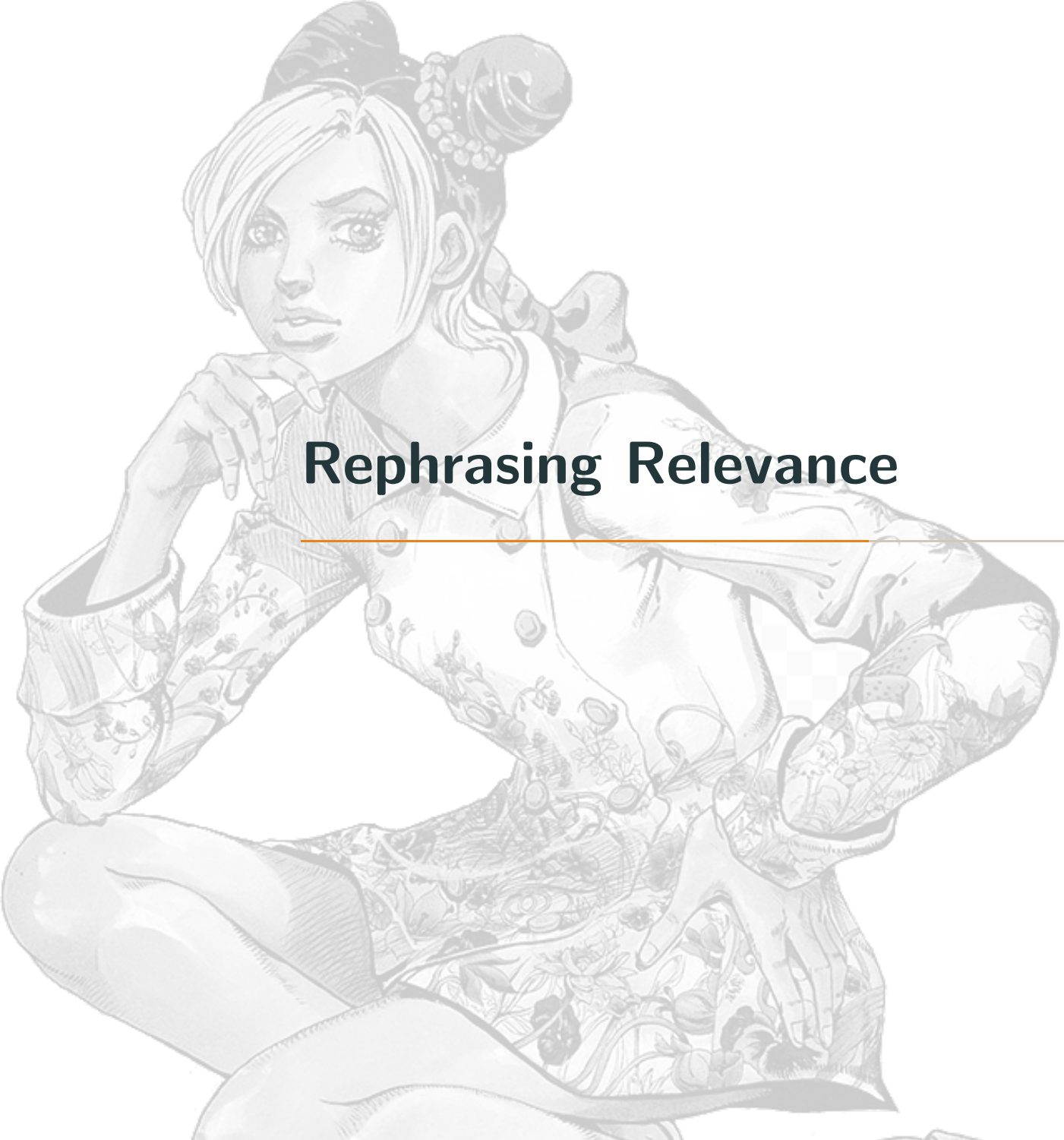

Rephrasing Relevance

The challenge of Hurford Conditionals

- HCs are isomorphic: both can be seen as $\mathbf{p} \rightarrow \neg \mathbf{p}^{+}$ or $\neg \mathbf{p}^{+} \rightarrow \mathbf{p}$, with $\mathbf{p}^{+} \vDash \mathbf{p}$ and $\mathbf{q}^{+} \vDash \mathbf{q}$, modulo double-$\neg$ introduction and a variable change (Mandelkern & Romoli, 2018).

(7) Hurford Conditionals (**HC**):

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$$\mathbf{p} \rightarrow \neg \mathbf{p}^{+} \equiv \neg \underbrace{(\neg \mathbf{p})}_{\mathbf{q}^{+}} \rightarrow \underbrace{\neg \mathbf{p}^{+}}_{\mathbf{q}}$$

b. # If Jo did **not** study in **Paris**, she studied in **France**.

$$\neg \mathbf{p}^{+} \rightarrow \mathbf{p} \equiv \underbrace{(\neg \mathbf{p}^{+})}_{\mathbf{q}} \rightarrow \neg \underbrace{(\neg \mathbf{p})}_{\mathbf{q}^{+}}$$

- Put differently, *not* **Paris** and **France** play **symmetric roles**.

the World		
not France	**France**	
not France	France and not Paris	Paris
not Paris		Paris

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Describing the contrast in HCs

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  - (ii) how antecedents and consequents are **ordered in terms of specificity**: **fine**-to-**coarse** progressions are #.
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An account based on specificity: core intuition

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b. # If Jo did **not** study in **Paris**, she studied in **France**.

- (7a) talks about cities, in the **France**-domain defined by the antecedent. This domain fully rules out some cities, and rules in others. Nice cut!

- (7b) talks about countries, in the *not* **Paris**-domain defined by the antecedent. This domain does not fully rule out any country – it only partially affects **France**. Bad cut!

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France				
Paris	Lyon	...	Rome	...

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not Paris		
France	Italy	...

not Paris	
France	not France

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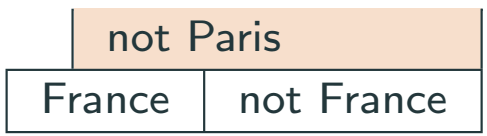

Incremental Q-Relevance

- Conditionals "plug" a tree evoked by the consequent into the flagged leaves of the antecedent's tree.
- This plugging operation **intersects** all nodes of the consequent's tree, with the leaf it gets plugged into.
- Intersection must be RELEVANT in the following sense:
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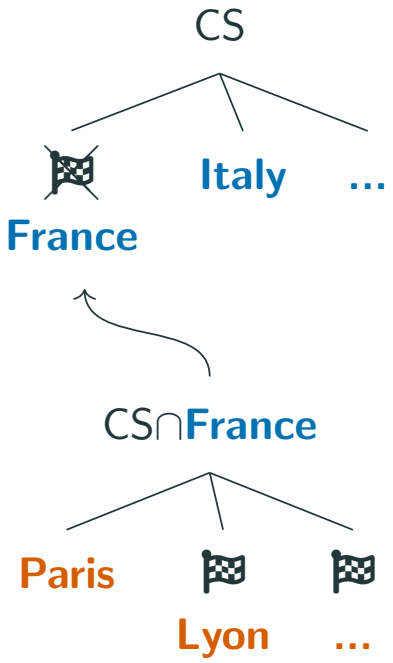

Fig. 13: A tree for *If Jo studied in* **France**, *she did* **not** *study in* **Paris**.

[1] Draws from D. Lewis (1988)'s and Križ and Spector (2020)'s RELEVANCE

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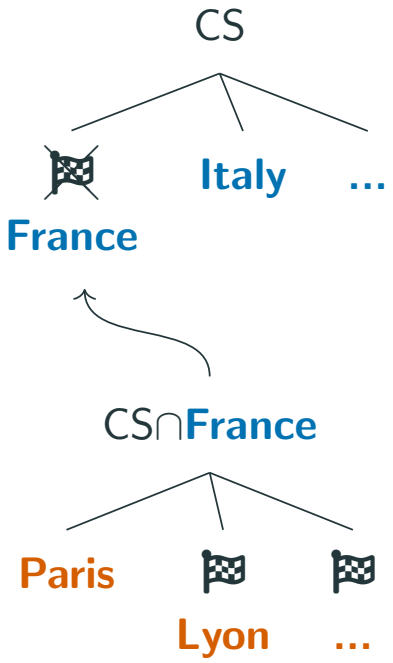

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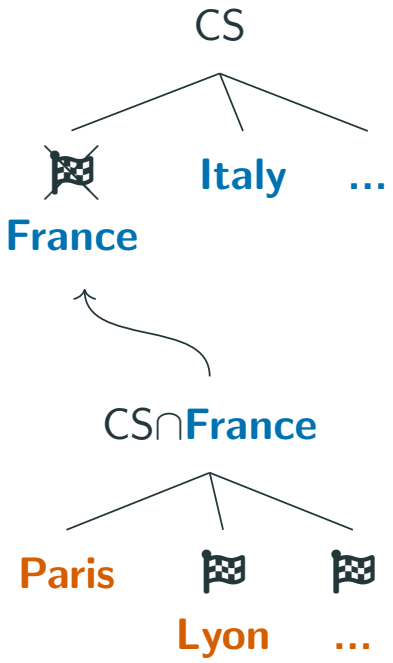

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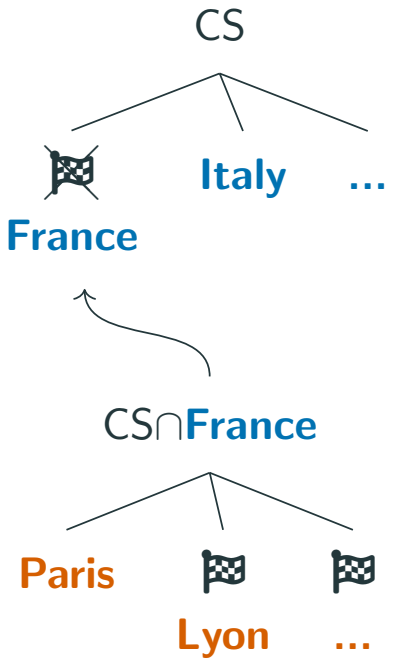

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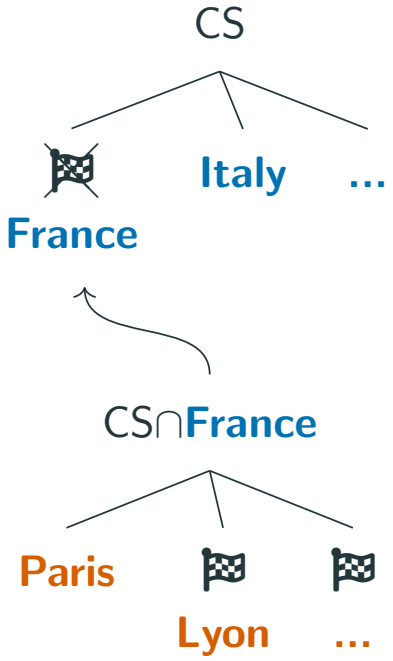

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Capturing felicitous HCs

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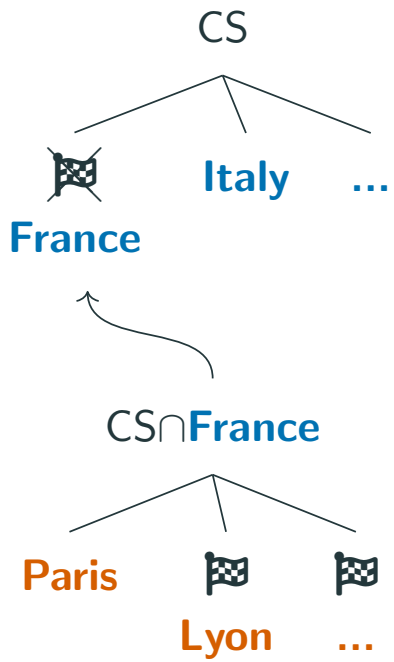

Fig. 14: A tree for *If Jo studied in* **France**, *she did* **not** *study in* **Paris**.

- A city-level tree gets plugged into a **France**-leaf.
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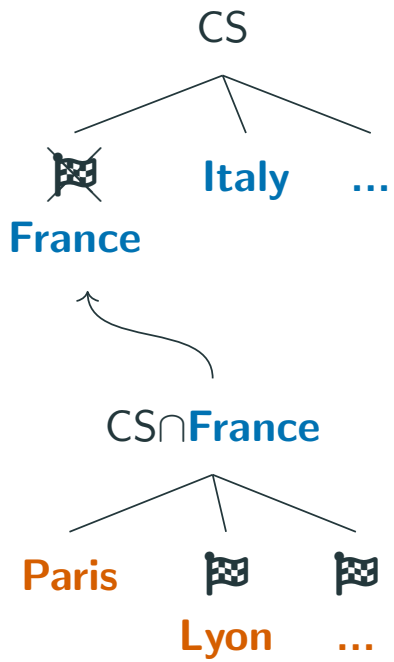

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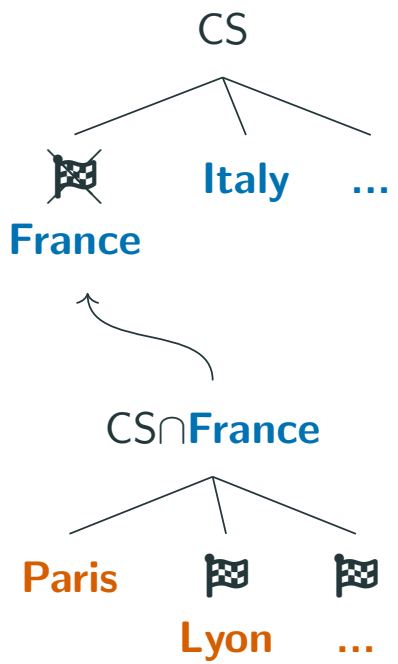

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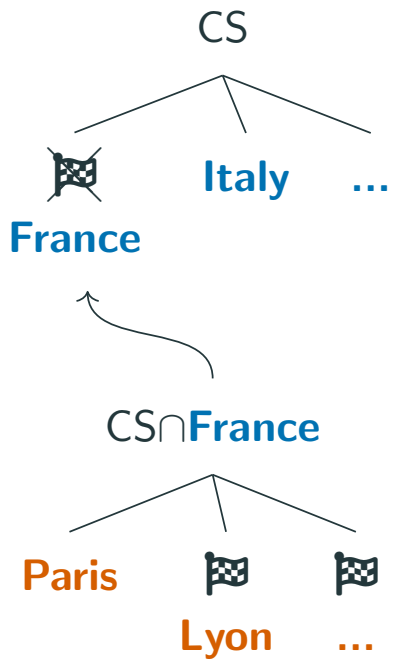

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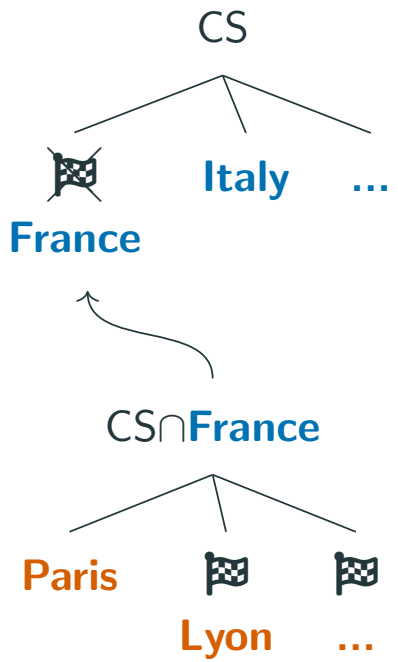

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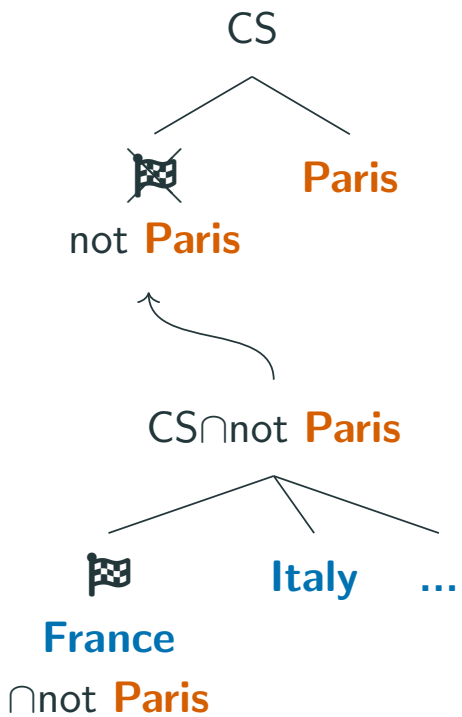

Fig. 15: A tree for *If Jo did* **not** *study in* **Paris**, *she studied in* **France**.

- A country-level tree gets plugged into a *not* **Paris**-leaf.
- The leaves that remains are all countries, but **France**is intersected with *not* **Paris**.
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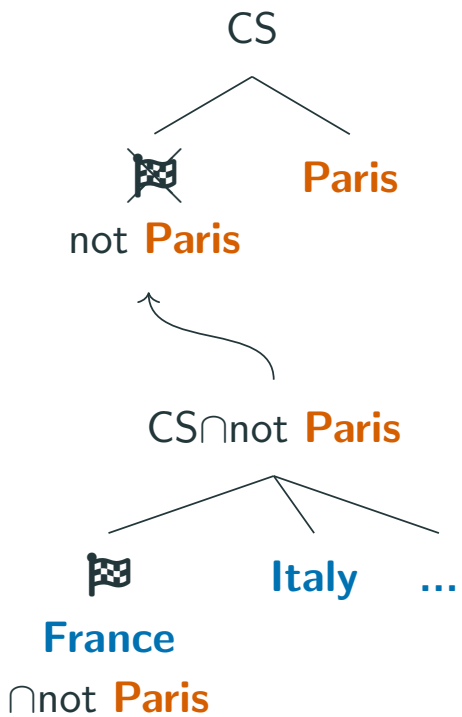

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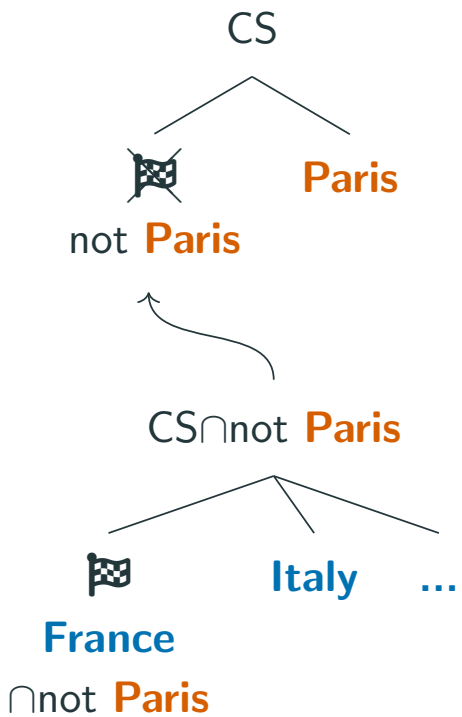

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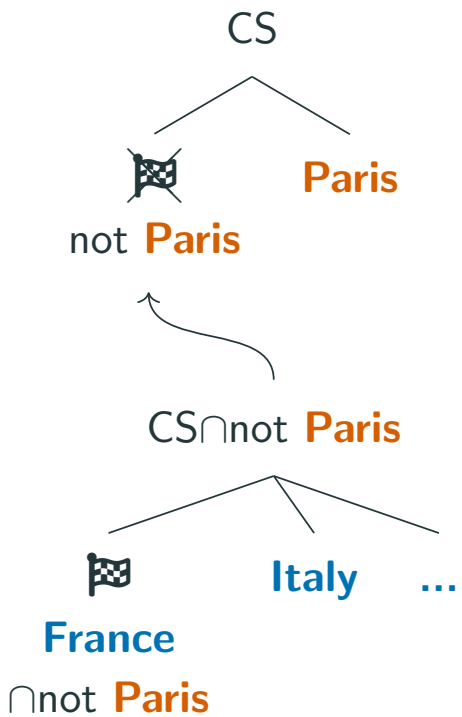

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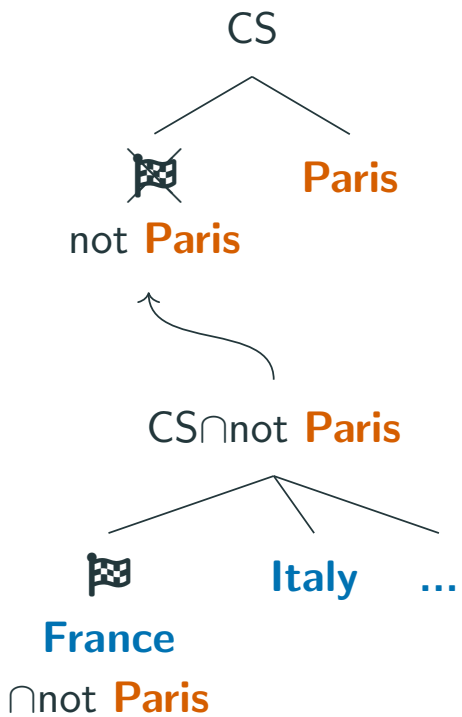

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Capturing odd HCs: case 2

(7b) If Jo did **not** study in **Paris**, she studied in **France**.

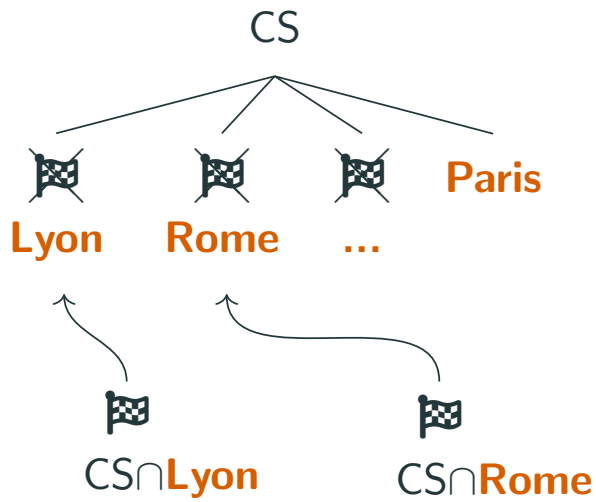

Fig. 16: A tree for *If Jo did* **not** *study in* **Paris**, *she studied in* **France**.

- A country-level tree gets plugged into a *not* **Paris**-leaf.
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- In sum (7b) is correctly predicted to be odd.[1]

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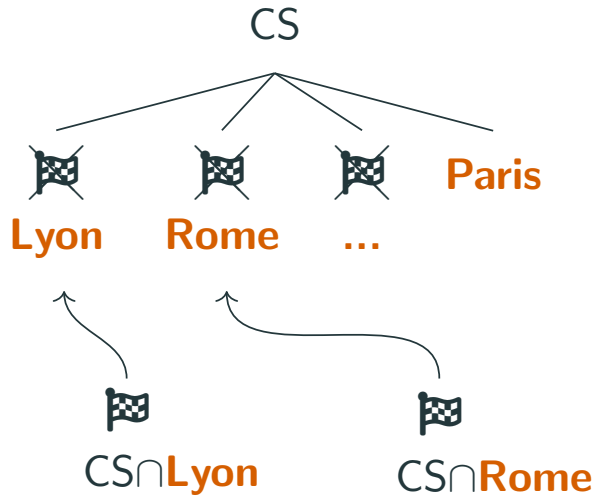

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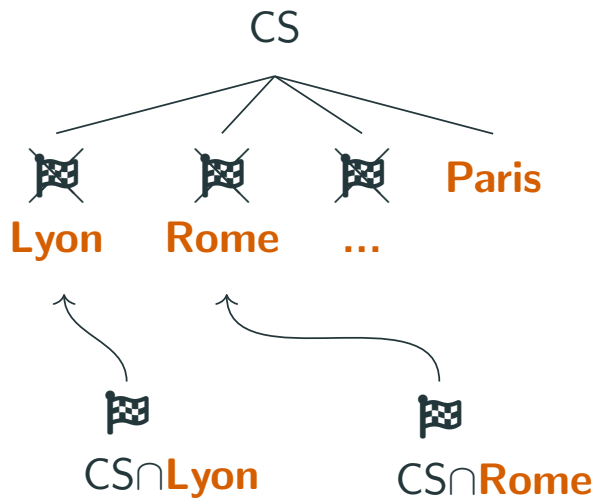

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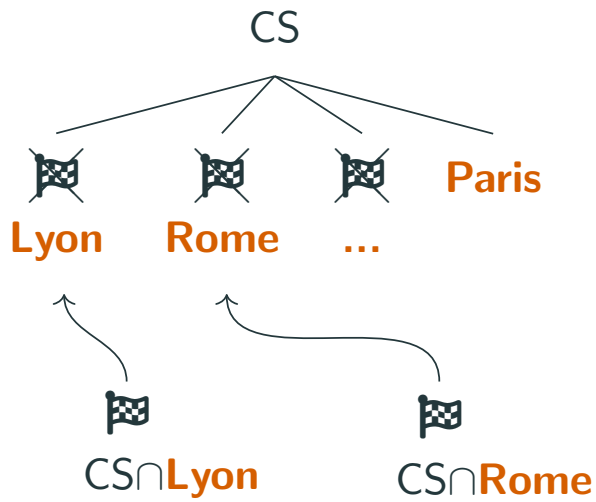

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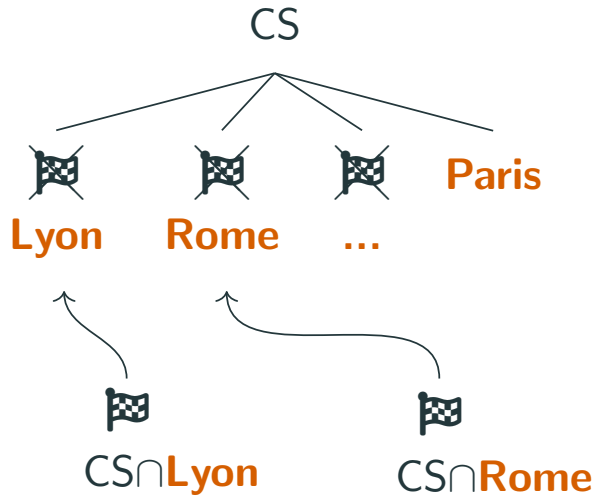

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Additional remarks about Incremental Q-Relevance

- Incremental Q-Relevance imposes that some, but not all distinctions introduced by the question being restricted, are retained; domain restrictions must be **faithful to the specificity** of the original question, but also **relevantly informative**.
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Further teasing apart specificity vs. overt negation

- Incremental Q-Relevance ends up capturing subtle asymmetries in "compatible" variants of HCs, whose oddness seems **more specificity-sensitive (in a weaker sense) than negation-sensitive**.

(15) a. # If Jo did **not** study in **the Basque country**, she studied in **France**.

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c. # If Jo studied in **the Basque country**, he did **not** study in **France**.

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Conclusion: Beyond the Bizarre?

Where we are

- My dissertation is an attempt to devise a precise, systematic model of implicit questions, and of their degree of specificity.
- This in and of itself appears to be needed to reflect deep intuitions about the dynamics of conversation.
- Existing concepts (questions-as-partitions, Redundancy, Relevance) were **minimally "lifted"**:
  - Partitions were made recursive in the form of question-trees;
  - Pragmatic constraints were rephrased to apply to sentences and/or their implicit trees.
- From this framework, I derived **oddness contrasts between sentences that approaches solely based on LFs and propositional meanings were not powerful enough to capture**.[17]
- Beyond the cases discussed here, the dissertation explores the interaction between implicit questions, embedded implicatures, and the overt exhaustifier *only*.

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And where we'd like to go

- I have ongoing work further exploring what a model of implicit questions has to say about:
  - **Repair operators** which seem to target implicit question-trees: *only*, *but*, *at least*.[18]
  - How implicit question may drive **overtness asymmetries** between competing operators.[19]
- But a lot remains to be explored/fleshed out:
  - Oddness in **conjunctions**;[20]
  - Presupposition **projection**, in relation to implicit questions;[21]
  - **Explicit** questions (their own implicit import; how they shape oddness[22]);
  - **Quantifications** (especially modals in the context of Free Choice phenomena[23]).

[16] Hénot-Mortier, 2025b, 2025c
[17] Hénot-Mortier, 2025a
[18] Haslinger, 2024
[19] Doron and Wehbe, 2024
[20] Haslinger, 2023
[21] Kaufmann, 2016, i.a.

Thank you!

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Appendix