SFB 1252 PROMINENCE IN LANGUAGE

# The Right Frontier in the QUD Framework

Katja Jasinskaja & Runyi Yao

University of Cologne & Oxford University

*The 25th Szklarska Poręba Workshop on the Roots of Pragmasemantics*
February 21-24, 2025, Szklarska Poręba

Universität zu Köln

# Overview

SFB 1252 PROMINENCE IN LANGUAGE

1. The Right Frontier and the Stack

2. The Right Frontier in the QUD Framework: Fixing the details

3. The forward-looking potential of QUDs: Incomplete elaborations

4. The forward-looking potential of QUDs: Contrastive topics and delimitation

Universität zu Köln

# The Right Frontier and the Stack

# Subordination vs. coordination in discourse

SFB 1252 PROMINENCE IN LANGUAGE

## subordinating relations

(1) Bill left. Chris told me so. He ... *Evidence*

## coordinating relations

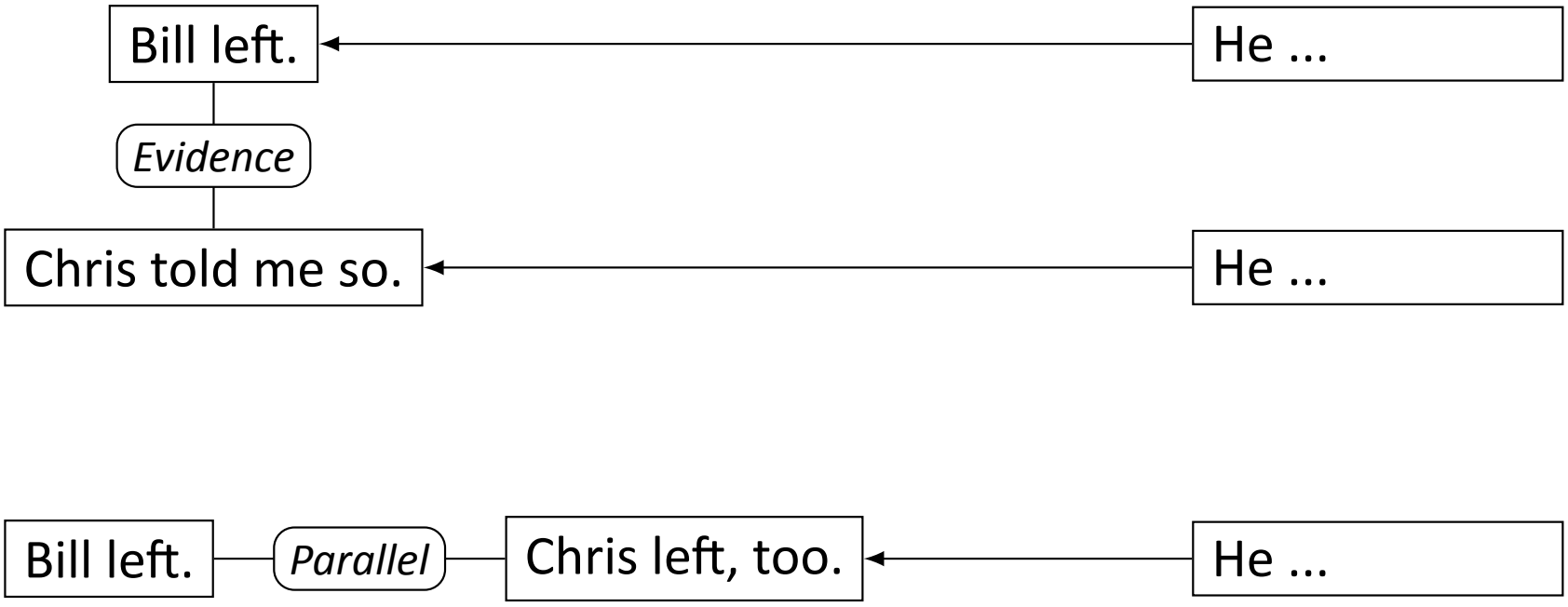
(2) Bill left. Then Chris arrived. He ... *Narration*

(3) Bill left. Chris left, too. He ... *Parallel*

Asher & Vieu (2005) *Subordinating and coordinating discourse relations*

Universität zu Köln

# The right frontier of a discourse graph




*The Right Frontier Constraint*, Polanyi 1988, Webber 1990, Asher & Vieu 2005, Holler & Irmen 2007

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**Did he really?** Chris told me so.

**What happened?** Bill left.

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

coordination

**What happened?**

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

coordination

**What did Bill do?** Bill left.

**What happened?**

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

coordination

**What happened?**

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# Stacking

SFB 1252 PROMINENCE IN LANGUAGE

subordination

**What happened?** Bill left.

coordination

**What did Chris do?** Chris left, too.

**What happened?**

Stack of focus spaces: Grosz & Sidner 1986
Stack of questions: Ginzburg 1995, Roberts 1996



Universität zu Köln

# The Right Frontier in the QUD Framework: Fixing the details

# The standard assumptions of the QUD Framework

SFB 1252 PROMINENCE IN LANGUAGE

- Every statement in discourse (partially) answers some currently most relevant question.
- The currently most relevant question is the topmost question on the stack.
- A question is popped off the stack only if it is completely answered (or acknowledged to be practically unanswerable).
- A question is pushed on top of the stack if it *helps* answering the currently topmost question on the stack

Ginzburg 1995, Roberts 1996



Universität zu Köln

# What counts as an answer?

SFB 1252 PROMINENCE IN LANGUAGE

**What happened?** Bill left.

Is this a complete answer?

- Bill left: no
- EXH(Bill left): yes
  Bill left and that is the only relevant thing that happened
- exhaustivisation of answers occurs by default

van Rooij & Schulz (2006) *Pragmatic meaning and non-monotonic reasoning: The case of exhaustive interpretation*



Universität zu Köln

# What counts as an answer?

SFB 1252 PROMINENCE IN LANGUAGE

**What happened?** Bill left. **Did he really?**

- Only if the answer is accepted, is the question answered.

Ginzburg (2012) *The interactive stance*



Universität zu Köln

# Subquestions



- A subquestion helps answering its superquestion
- $?\psi$ is a subquestion of $?\phi$ iff a complete answer to $?\psi$ contextually entails a partial answer to $?\phi$.

## Examples of subquestions:

- *What did Bill do?* is a subquestion of *What happened?*
- *Did Bill leave?* is a subquestion of *What did Bill do?*
- *What did Bill do?* is a subquestion of *Who did what?*

Groenendijk & Stokhof 1997, Roberts 1996

# *Explanation* question: example

SFB 1252 PROMINENCE IN LANGUAGE

(4) Max fell. John pushed him. He ... *Explanation*

**What happened?** Max fell.

- *Why did Max fall?* is not a subquestion of a (contextually restricted) *What happened?*



Universität zu Köln

# *Explanation* question: example

SFB 1252 PROMINENCE IN LANGUAGE

(4) Max fell. John pushed him. He ... *Explanation*

**Why?** John pushed him.

**What happened?** Max fell.

- *Why did Max fall?* is not a subquestion of a (contextually restricted) *What happened?*



Universität zu Köln

# *Explanation* question: example

SFB 1252 PROMINENCE IN LANGUAGE

(4) Max fell. John pushed him. He ... *Explanation*

**What happened?** Max fell.

- *Why did Max fall?* is not a subquestion of a (contextually restricted) *What happened?*



Universität zu Köln

# Subquestions are too restrictive

SFB 1252 PROMINENCE IN LANGUAGE

What kinds of questions can be pushed on top of the stack?

- subquestions
- supporting questions: the answer to a supporting question makes the answer to its superquestion more acceptable
- *Elaboration* questions
- *Explanation* questions
- ...

Jasinskaja & Zickenheiner (submitted) *Speech acts that support other speech acts*
Onea (2016) *Potential Questions*; Riester, Brunetti & De Kuthy (2018) *Annotation Guidelines for Questions under Discussion and Information Structure*



Universität zu Köln

# The forward-looking potential of QUDs: Incomplete elaborations

# Complete *Elaboration*

SFB 1252 PROMINENCE IN LANGUAGE

(5) I did two things on Friday.
I went for a walk,
and I had dinner at my favourite restaurant.
That took 3 hours. / Bill did too.

- The dinner took 3 hours.
- The two things I did on Friday took 3 hours.
- Bill had dinner at my/his favourite restaurant too.
- Bill did (the same) two things on Friday too.



Universität zu Köln

# Incomplete *Elaboration*

SFB 1252 PROMINENCE IN LANGUAGE

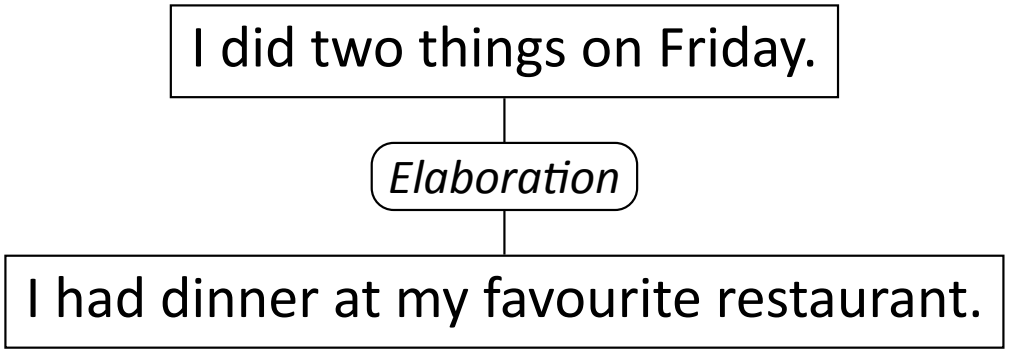
(6) I did two things on Friday.
I had dinner at my favourite restaurant.
That took 3 hours. / Bill did too.

- The dinner took 3 hours.
- # The two things I did on Friday took 3 hours.
- Bill had dinner at my/his favourite restaurant too.
- # Bill did two things on Friday too.

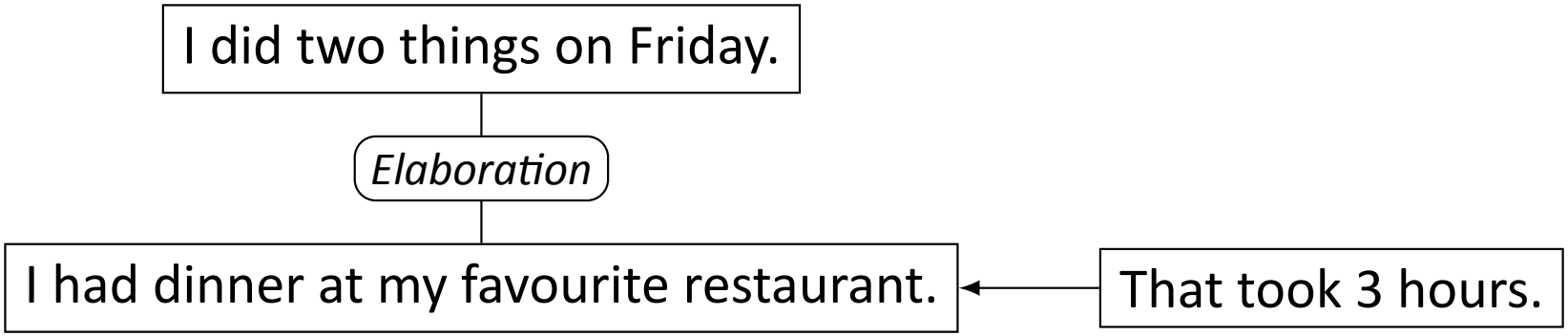


Universität zu Köln

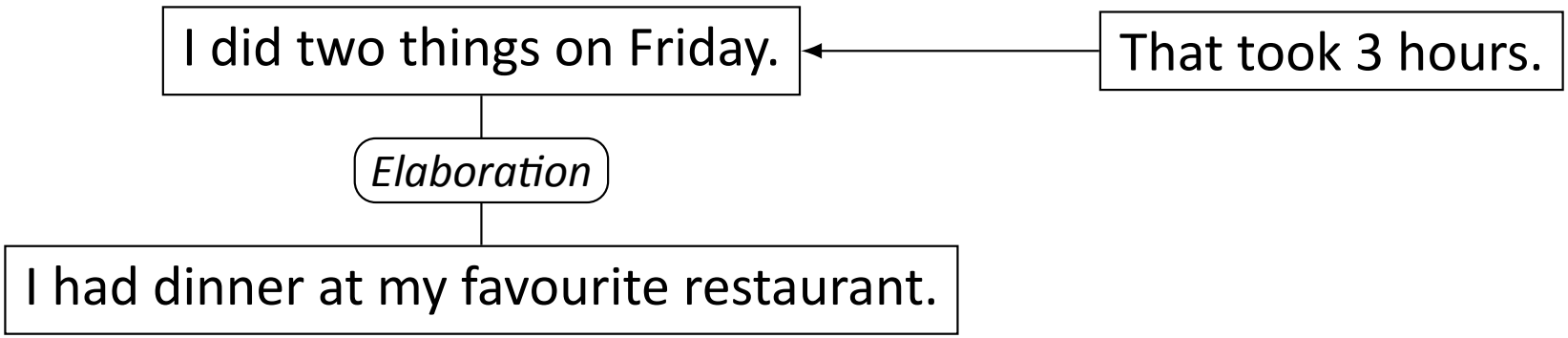
# Incomplete *Elaboration*: A discourse tree



# Incomplete *Elaboration*: A discourse tree



# Incomplete *Elaboration*: A discourse tree




Both readings should be possible.

# Incomplete *Elaboration*: Stacking and queueing

SFB 1252 PROMINENCE IN LANGUAGE

What did I do on Friday? I did two things.

- a stack: first in, last out
- a queue: first in, first out
- subordinate questions are stacked
- coordinate questions are queued



Universität zu Köln

# Incomplete *Elaboration*: Stacking and queueing

SFB 1252 PROMINENCE IN LANGUAGE

What was the first thing?
I had dinner.

What was the second thing?
...

What did I do on Friday? I did two things.

- a stack: first in, last out
- a queue: first in, first out
- subordinate questions are stacked
- coordinate questions are queued



Universität zu Köln

# Incomplete *Elaboration*: Stacking and queueing

SFB 1252 PROMINENCE IN LANGUAGE

What was the second thing?
…

What did I do on Friday? I did two things.

- a stack: first in, last out
- a queue: first in, first out
- subordinate questions are stacked
- coordinate questions are queued



Universität zu Köln

# The forward-looking potential of QUDs: Contrastive topics and delimitation

# Complete *Elaboration*

SFB 1252 PROMINENCE IN LANGUAGE

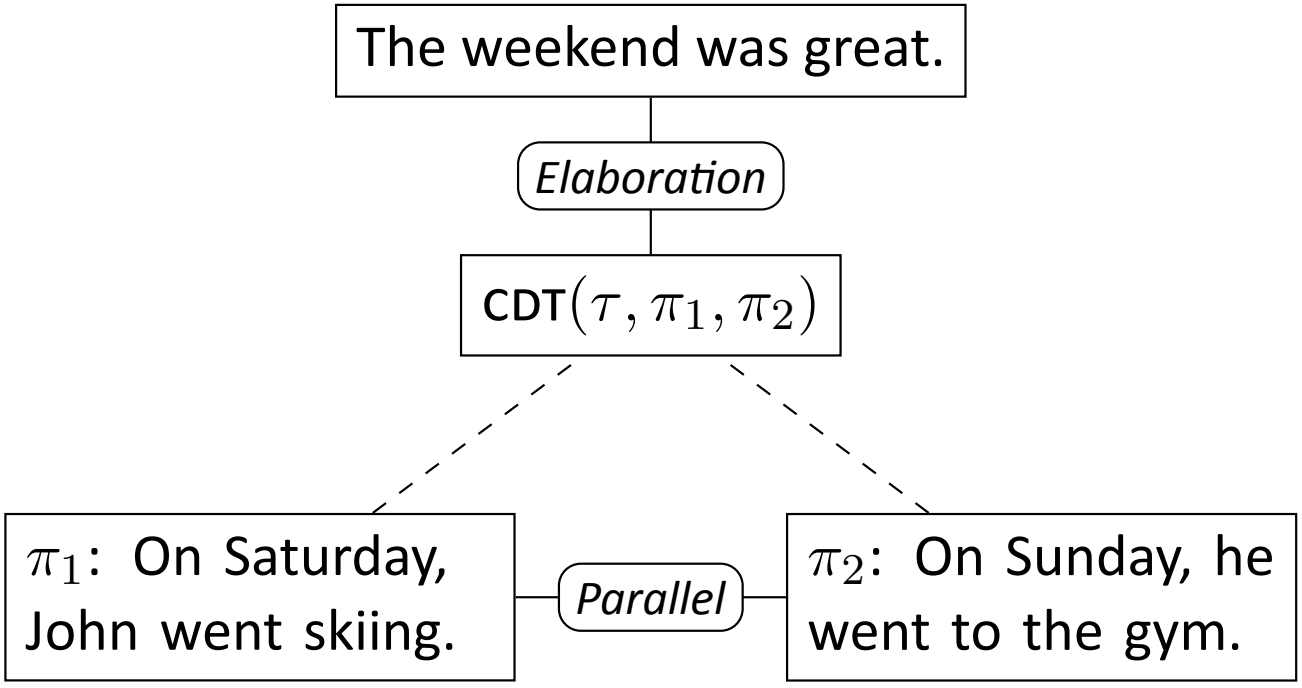
(7) The weekend was great.
On Saturday, John went skiing.
On Sunday, he went to the gym.
Mary did too.

Preferred reading: Mary went to the gym on Sunday.

(8) The weekend was great.
JOHN (L+H*LH%) went skiing on Saturday.
And he went to the gym on Sunday.
MARY (L+H*LH%) did too.

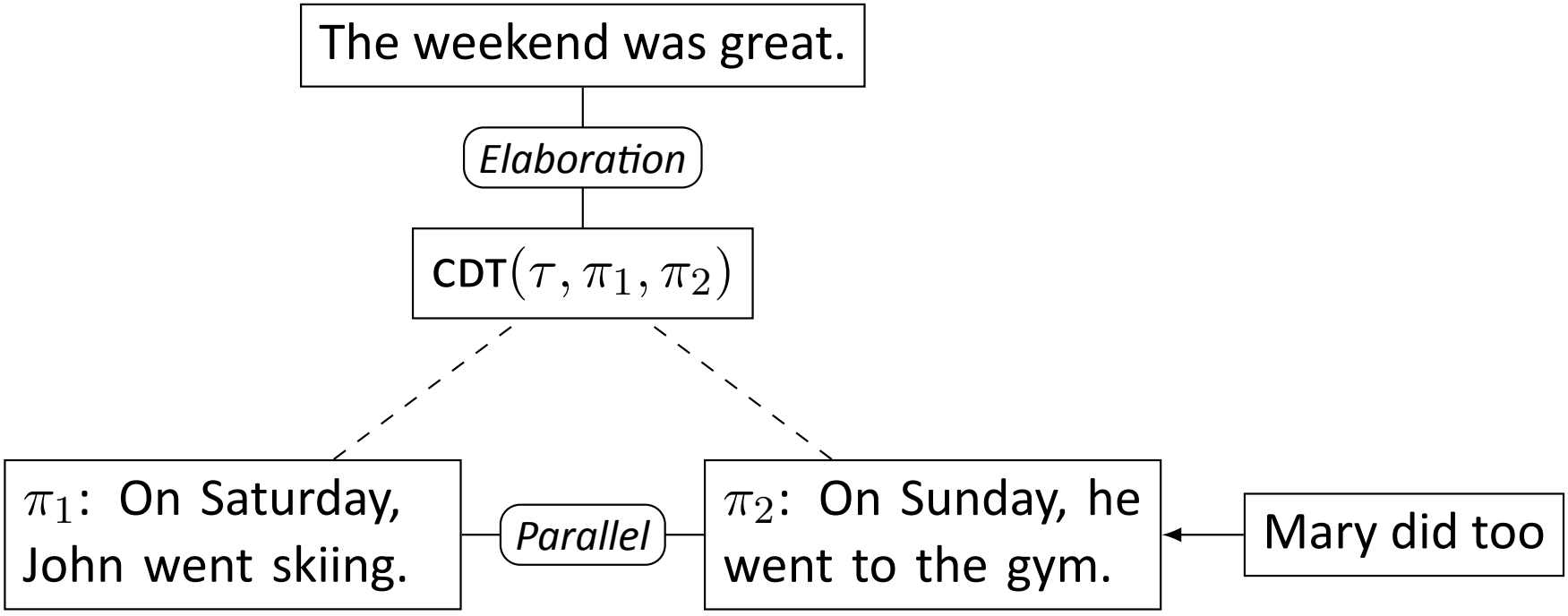
Preferred reading: Mary did both things.

# Contrastive topics in SDRT: by days



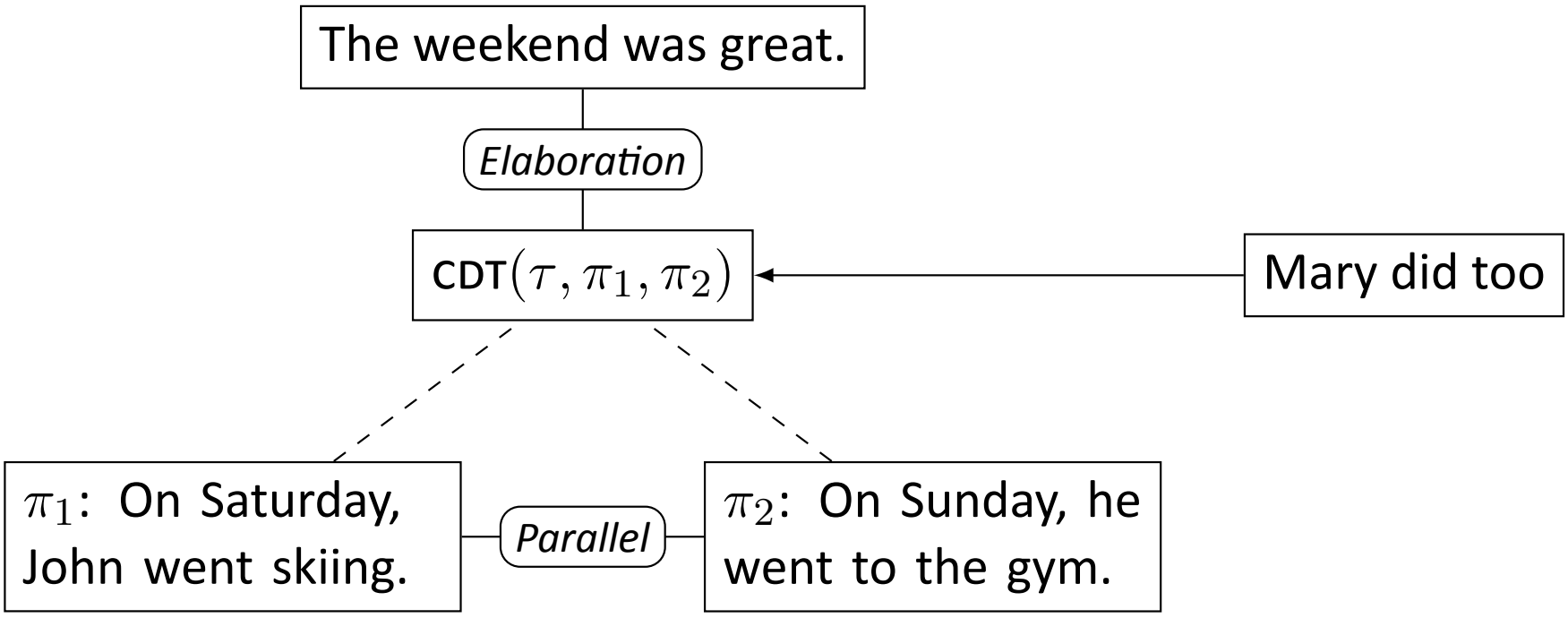

Txurruka (2003) *The natural language conjunction and*.
Asher (2004) *Discourse topic*.

# Contrastive topics in SDRT: by days



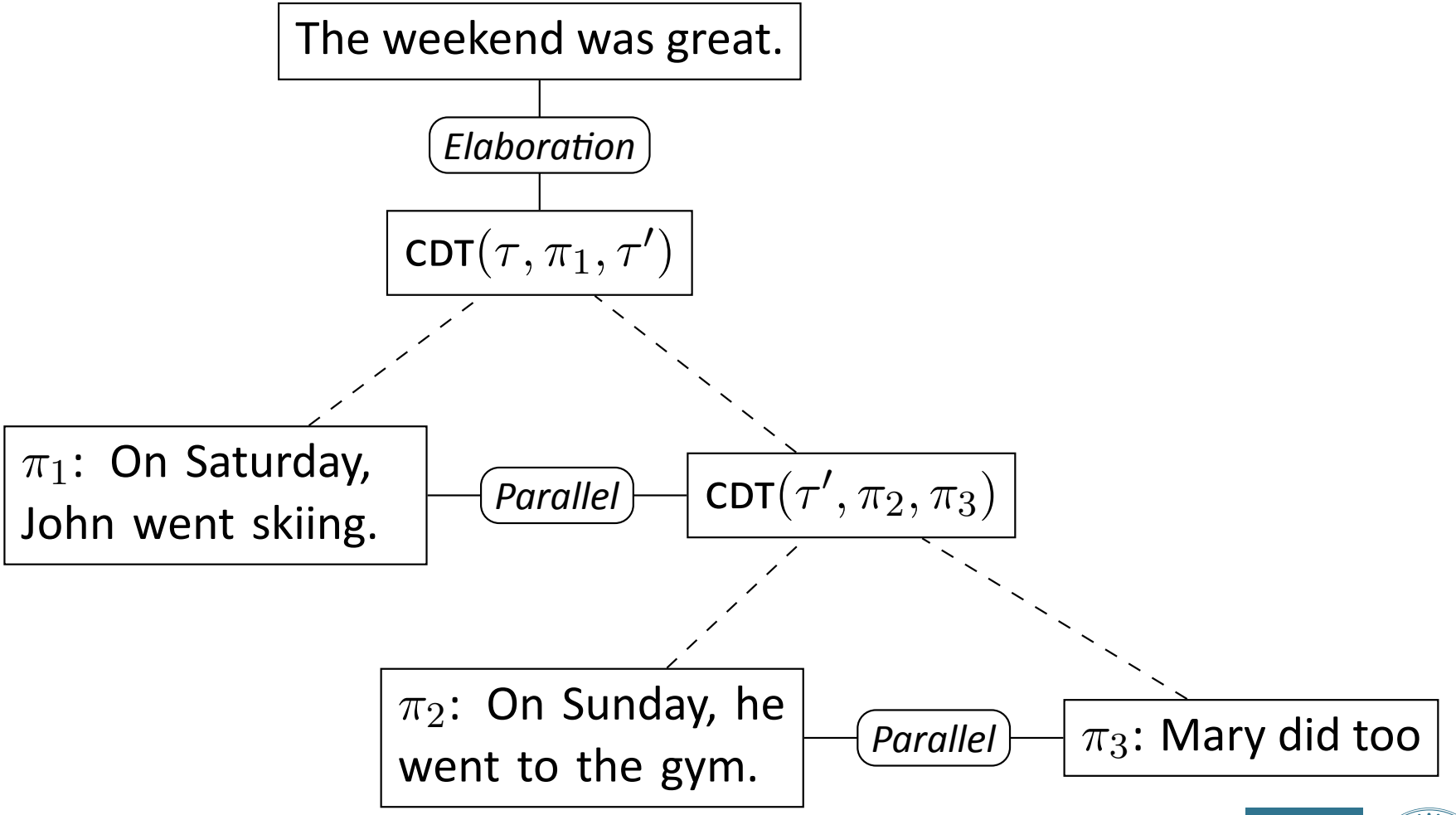

Txurruka (2003) *The natural language conjunction and*.
Asher (2004) *Discourse topic*.

# Contrastive topics in SDRT: by days

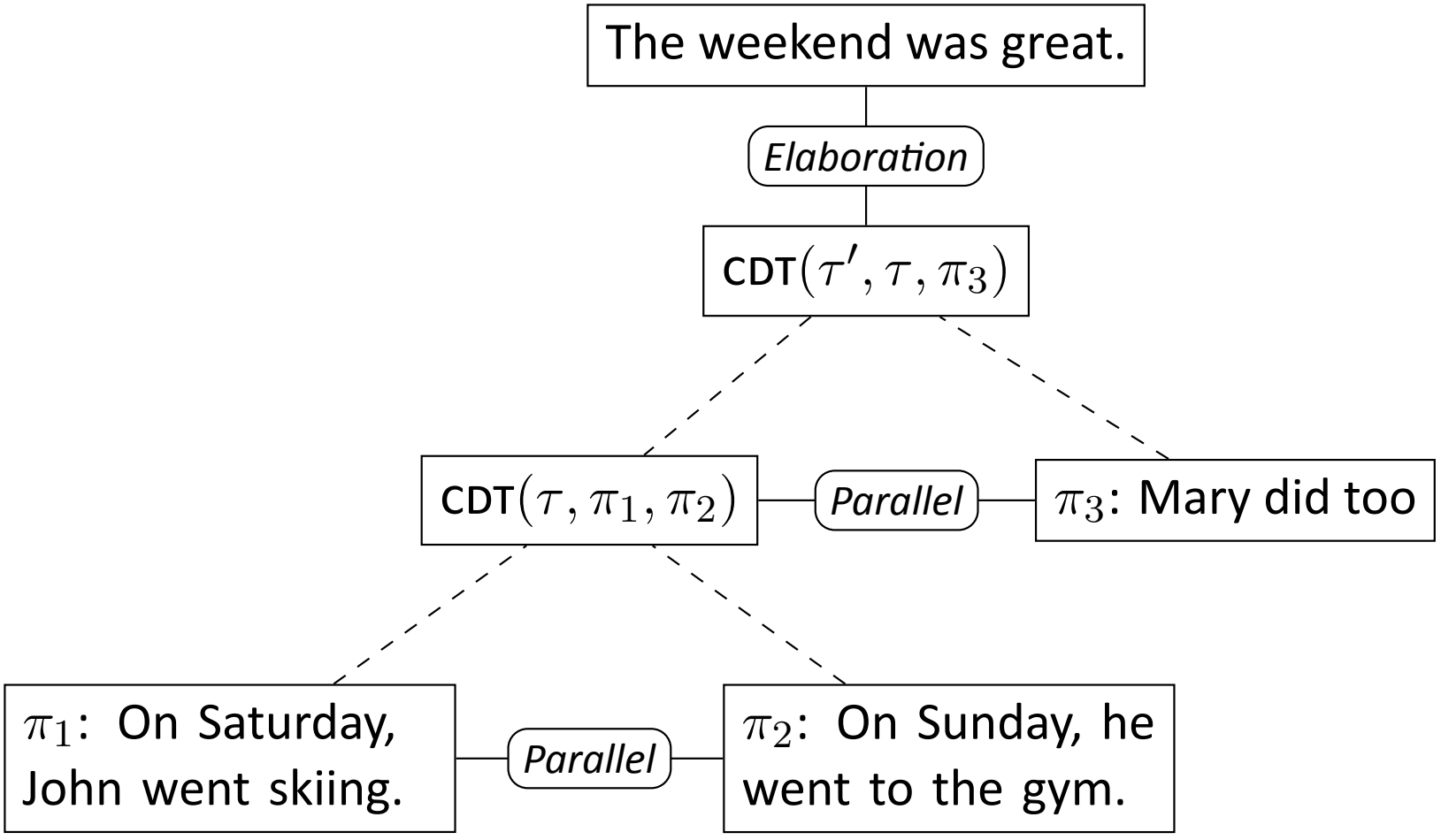



Txurruka (2003) *The natural language conjunction and*.
Asher (2004) *Discourse topic*.

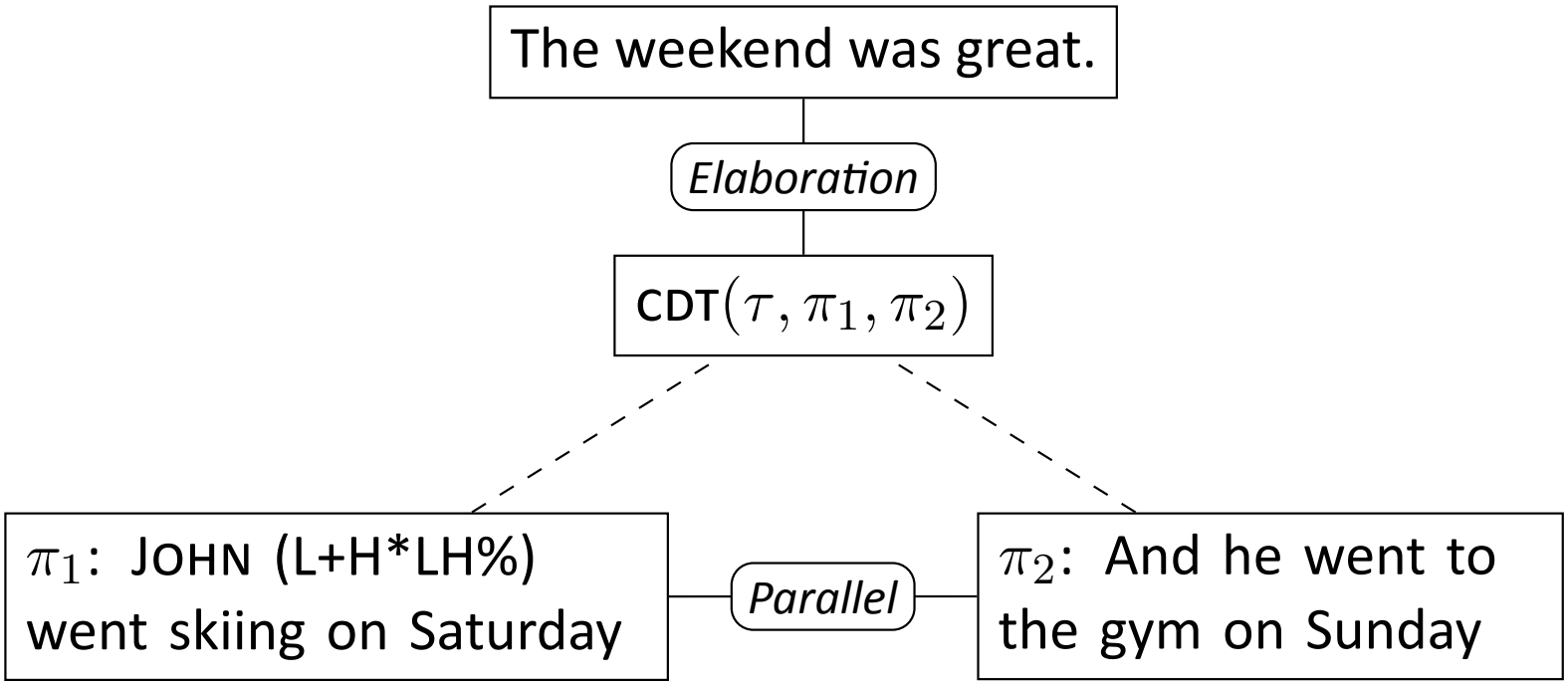
# Contrastive topics in SDRT: by days, low attachment



# Contrastive topics in SDRT: by days, high attachment

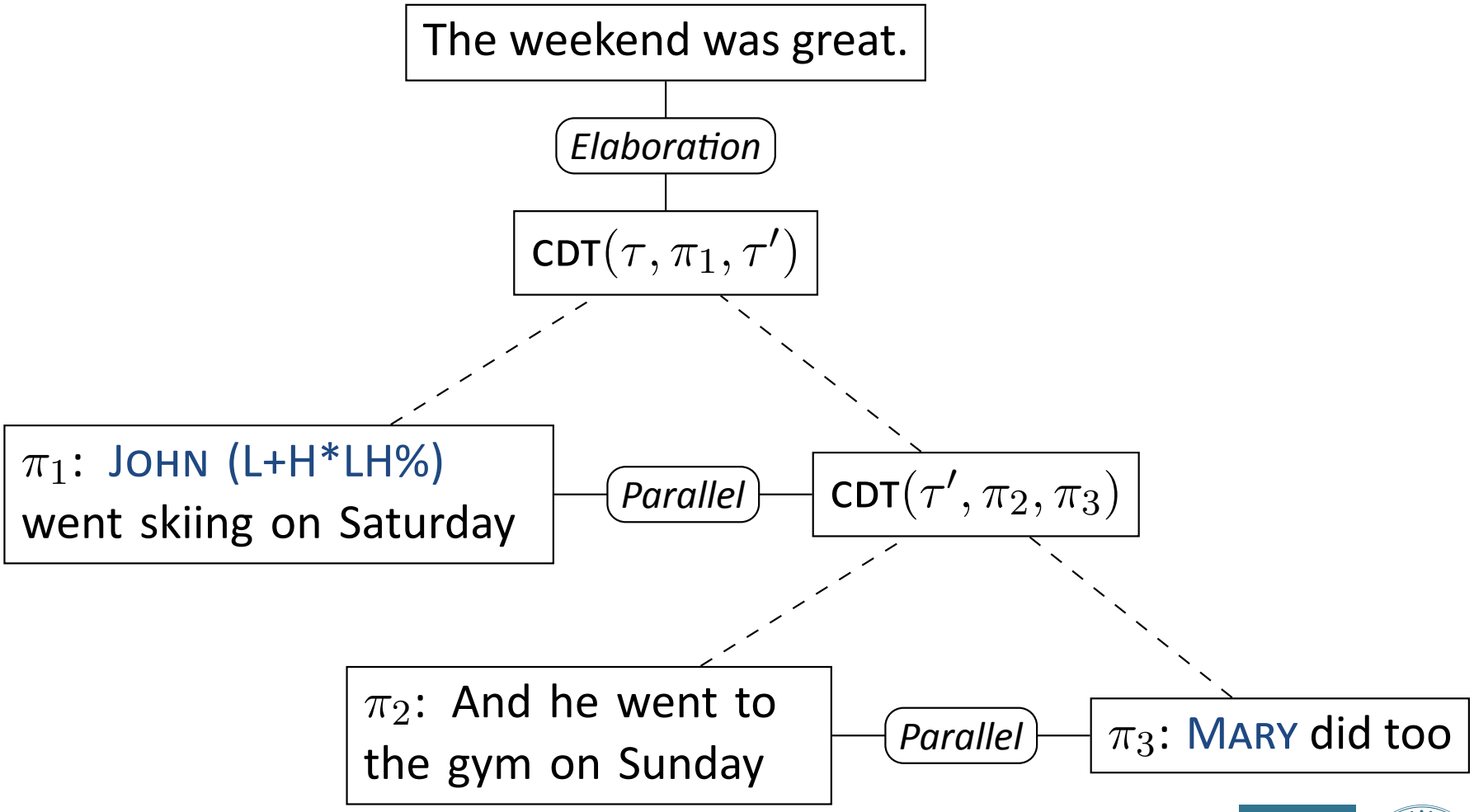


# Contrastive topics in SDRT: by people

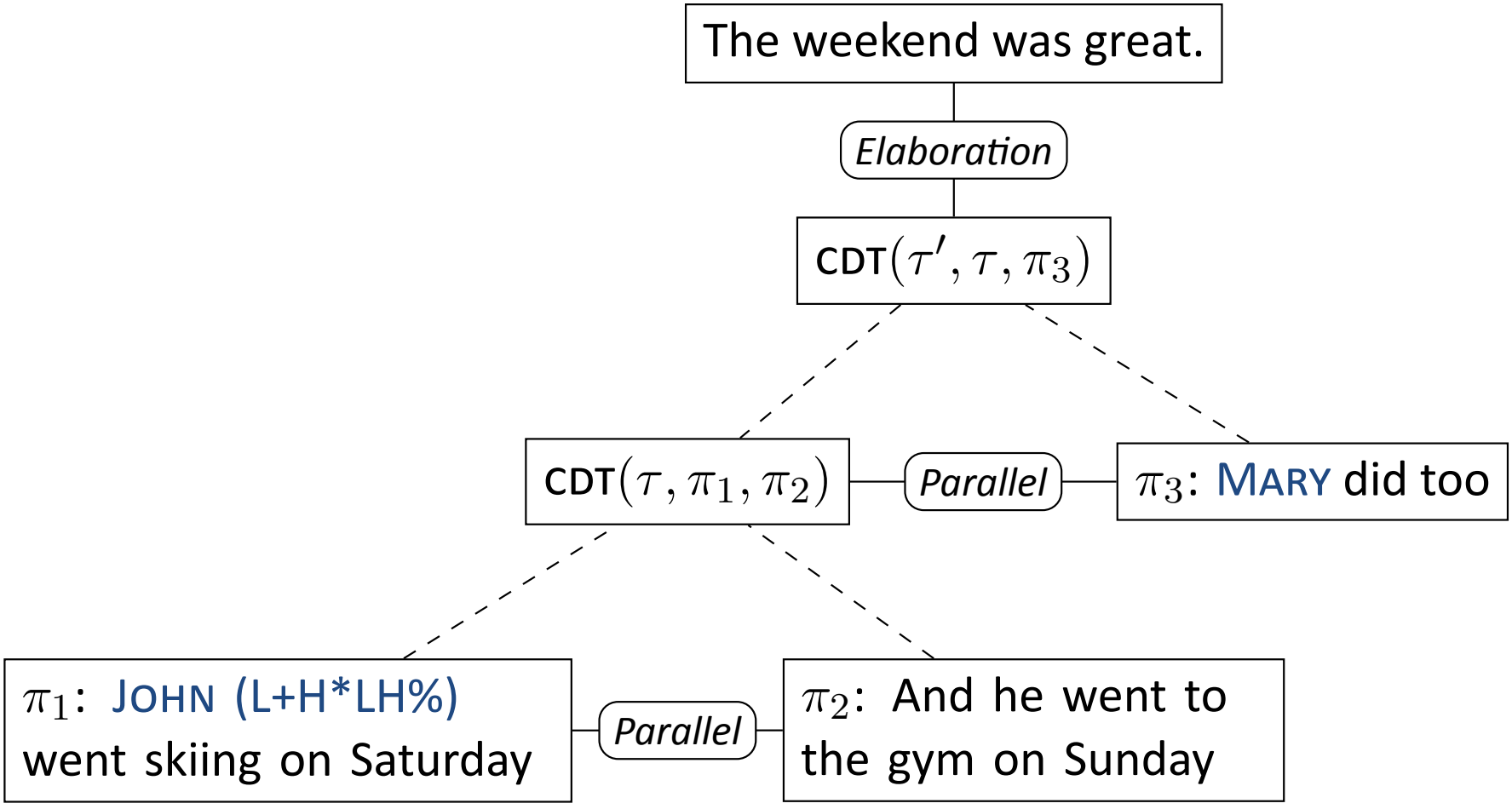



Txurruka (2003) *The natural language conjunction and*.
Asher (2004) *Discourse topic*.

# Contrastive topics in SDRT: by people, low attachment



# Contrastive topics in SDRT: by people, high attachment



# Contrastive topics in QUD: by days

SFB 1252 PROMINENCE IN LANGUAGE

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by days

SFB 1252 PROMINENCE IN LANGUAGE

**What happened on Saturday?**
On Saturday, John went skiing.

**What happened on Sunday?**
...

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by days

SFB 1252 PROMINENCE IN LANGUAGE

**What happened on Sunday?**
On Sunday, he went to the gym.

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by days

SFB 1252 PROMINENCE IN LANGUAGE

**What happened on Sunday?**
On Sunday, he went to the gym.
Mary did too.

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by people

SFB 1252 PROMINENCE IN LANGUAGE

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by people

SFB 1252 PROMINENCE IN LANGUAGE

**What did John do?**
JOHN (L+H*LH%) went skiing on Saturday.

**What did X≠John do?**
…

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by people

SFB 1252 PROMINENCE IN LANGUAGE

**What did John do?**
JOHN (L+H*LH%) went skiing on Saturday. And he went to the gym on Sunday.

**What did X≠John do?**
…

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Contrastive topics in QUD: by people

SFB 1252 PROMINENCE IN LANGUAGE

**What did Mary do?**
MARY (L+H*LH%) did too.

**How was the weekend?** The weekend was great.

Büring (2003) *On D-Trees, Beans, and B-Accents*;
Krifka (2008) *Basic notions of information structure*



Universität zu Köln

# Conclusions

- What trees can do, stacks can do too.
- Subrodination in relational approaches (SDRT) $\neq$ subordination in QUD-based approaches, but this can be fixed.
- Discourse relations only look backward.
- QUDs can project discourse structure in the forward direction.

# Thank you!