Class 10

Discussion Time!

What did we discuss
in our previous session?

Big picture

Relation **among/beyond** propositions

Logical relations

Propositional logic

Beyond logical relations

Pragmatics

[P My boyfriend is a vet] and [Q he is smart].

In reality: Bad inference

Prediction: Bad inference

Okay. [R He lives nearby].

This is what logic predicts!

P	Q	R
T	T	T
T	T	F
T	F	T
T	F	F
F	T	T
F	T	F
F	F	T
F	F	F

Examples

Relation **among/beyond** propositions

Logical relations

Propositional logic

Beyond logical relations

Pragmatics

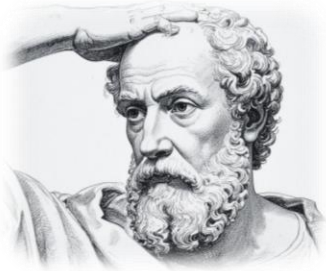
[P My boyfriend is a vet] and [Q he is smart].

In reality: Good inference

Prediction: Bad inference

Okay. [R She has a boyfriend].

Logic cannot explain this!



P	Q	R
T	T	T
T	T	F
T	F	T
T	F	F
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F	T	F
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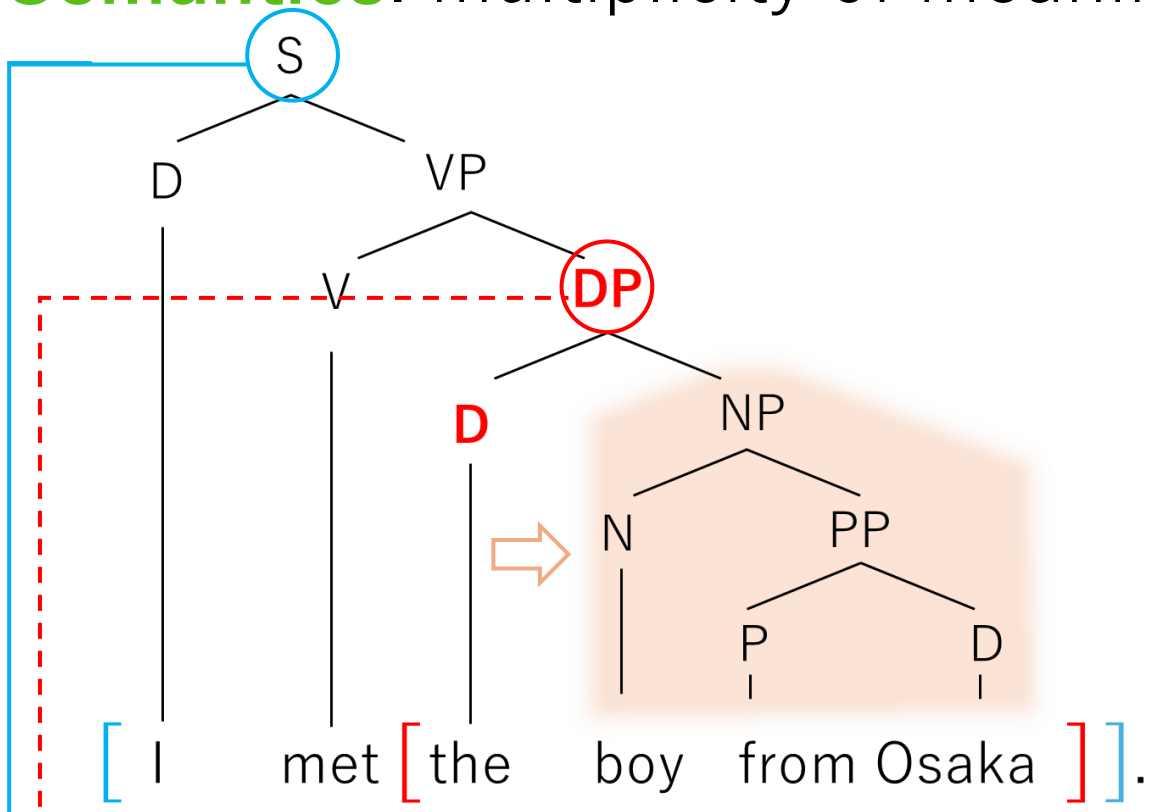
F	F	F

Semantics cares the information derived from a sentence.

Some sentence contains not only **an at-issue meaning** (main message; the target of Truth value judgment) but also **a presupposition** (background information).

Semantics: multiplicity of meaning



a. **Presupposition:**

There was a boy from Osaka.

b. **At-issue meaning:**

I met the boy from Osaka.

Pragmatics concerns how
a **presupposition** and
an **at-issue meaning**
interact with a **context**.

Pragmatics: Interaction with contexts

Step 1: Checking presuppositions

a. **Presupposition:**

There was a boy from Osaka.

Prior context/knowledge ⟷ (Comparison) **presupposition**

Step 2: Truth value judgment

b. **At-issue meaning:**

I met the boy from Osaka.

Prior context/knowledge ⟷ (Comparison) **at-issue meaning**

⇨ **True** or **False**

Table of contents:

1. Semantics vs. pragmatics
2. Semantics: Presupposition triggers
3. Semantics: Holes vs. Plugs
4. Pragmatics: Presupposition accommodation

"the" vs. "a(n)"

Examples:

(1) a. I met **a** boy from Osaka.
b. I didn't meet **a** boy from Osaka.

We can always immediately check the truth value.

→ One of the following sentences is always T.

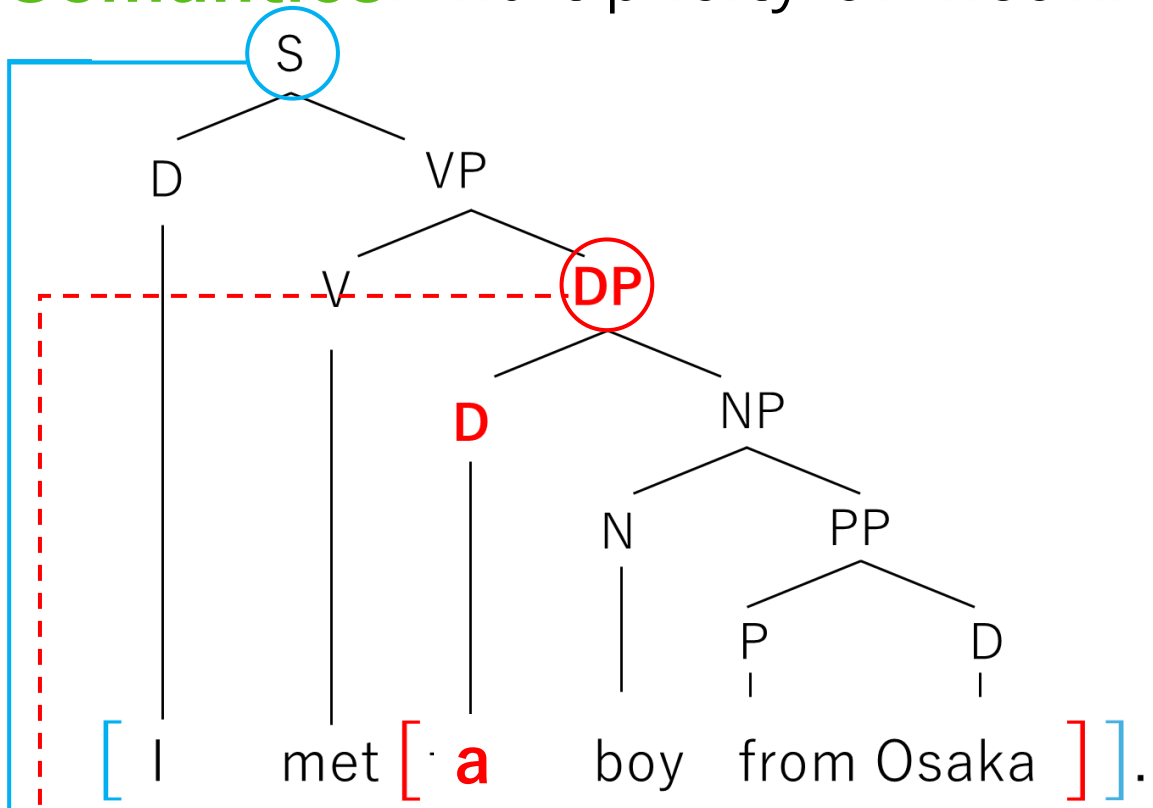
(2) a. I met **the** boy from Osaka.
b. I didn't meet **the** boy from Osaka.

We cannot check the truth value unless it is understood that there was a boy from Osaka.

→ If there was a boy from Osaka, ⇦ presupposition
then one of the following sentences is always T.

What if “a” is used instead of ”the”?

Semantics: multiplicity of meaning



a. **Presupposition:**

There was a boy from Osaka.

At-issue meaning:

I met **a** boy from Osaka.

What if “a” is used instead of ”the”?

Pragmatics: Interaction with contexts

Step 1: Checking presuppositions

No presupposition to be checked.

Step 2: Truth value judgment

At-issue meaning:

I met **a** boy from Osaka.

Prior context/knowledge ⟷ Comparison ⟷ **at-issue meaning**

⇨ **True** or **False**

Discussion Time!

Let's try to find other presupposition triggers!

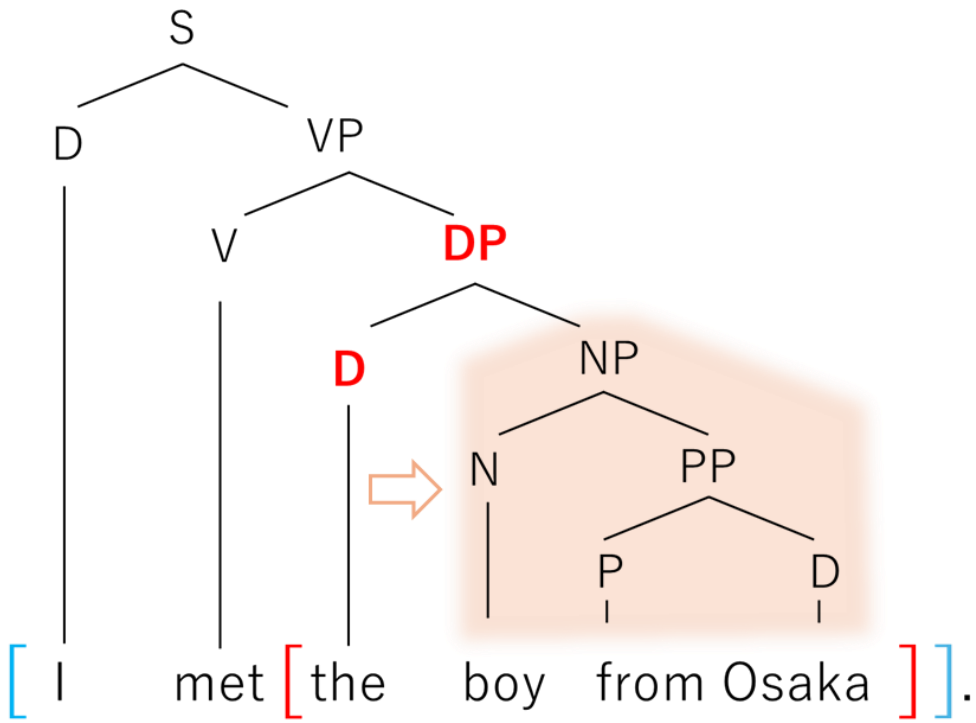
Presupposition triggers are expressions introducing a specific presupposition.

Example 1:

(1) **Definite NPs**:

I met [**the** boy from Osaka].

Presupposition:
"There was a boy from Osaka."



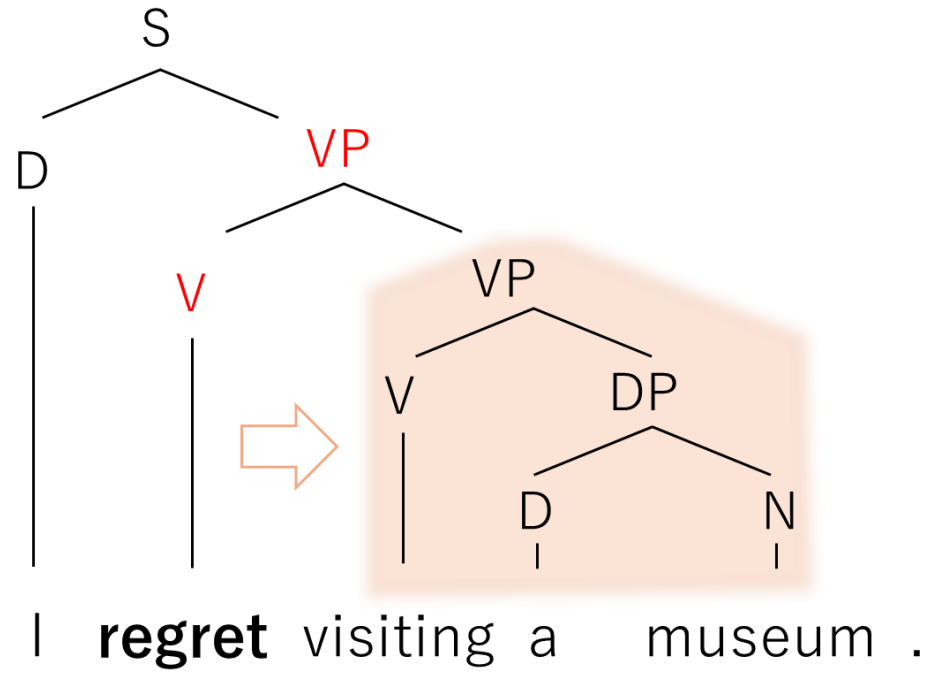
Presupposition triggers are expressions introducing a specific presupposition.

Example 2:

(2) **Factive verbs**:

I **regret** [visiting a museum].

Presupposition:
"I visited a museum."



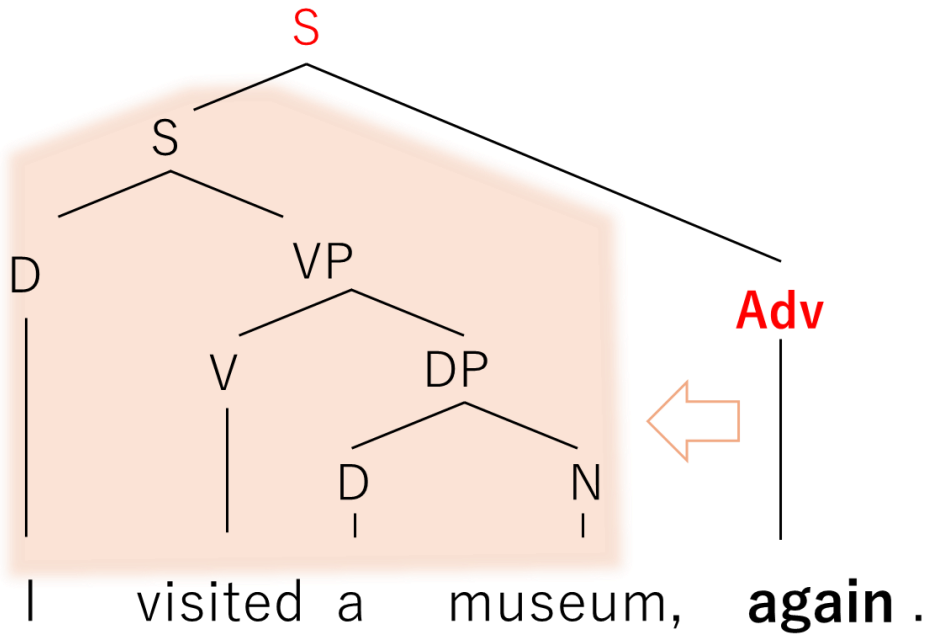
Presupposition triggers are expressions introducing a specific presupposition.

Example 3:

(3) **Additive particles**:

[I visited a museum], **again**.

Presupposition:
"I visited a museum."



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Semantic operators only affect the at-issue content of the meaning, but they are not able to affect a presupposition.

Example 1: Negation operator

Sentence: It is not the case that
I **regretted** buying a book .

(A) At-issue meaning:

It is affected by semantic operators:

→ NOT [P that I regretted buying a book] .

(B) Presupposition

It is not affected by semantic operators:

→ * NOT [that I bought a book] .

Semantic operators only affect the at-issue content of the meaning, but they are not able to affect a presupposition.

Example 2: Question operator

Sentence: Is it the case that
you **regretted** buying a book ?

(A) At-issue meaning:

It is affected by semantic operators:

→ ? [P You regretted buying a book] .

(B) Presupposition

It is not affected by semantic operators:

→* ? [You bought a book] .

Interim conclusion

At-issue meaning and presupposition are orthogonal to each other.

Discussion Time!

While the independence of pre-suppositions is a well-established observation, some expressions have been found to "**nullify**" a presupposition.

Can you give an example?

Issue:

Usually: Presupposition is triggered

I met [the king of France] .

→ There is a king in France.

Under certain conditions: It disappears

He knows [that I met [the king of France]].

Hole

→ There is a king in France.

Hole: a semantic operator that allows presuppositions to slip through it, even as that operator targets the at-issue content.

Plug: a semantic operator that blocks off the projection of presuppositions.

Issue:

Usually: Presupposition is triggered

I met [**the** king of France] .

→ There is a king in France.

Under certain conditions: It disappears

He **knows** [that I met [**the** king of France]].

Hole

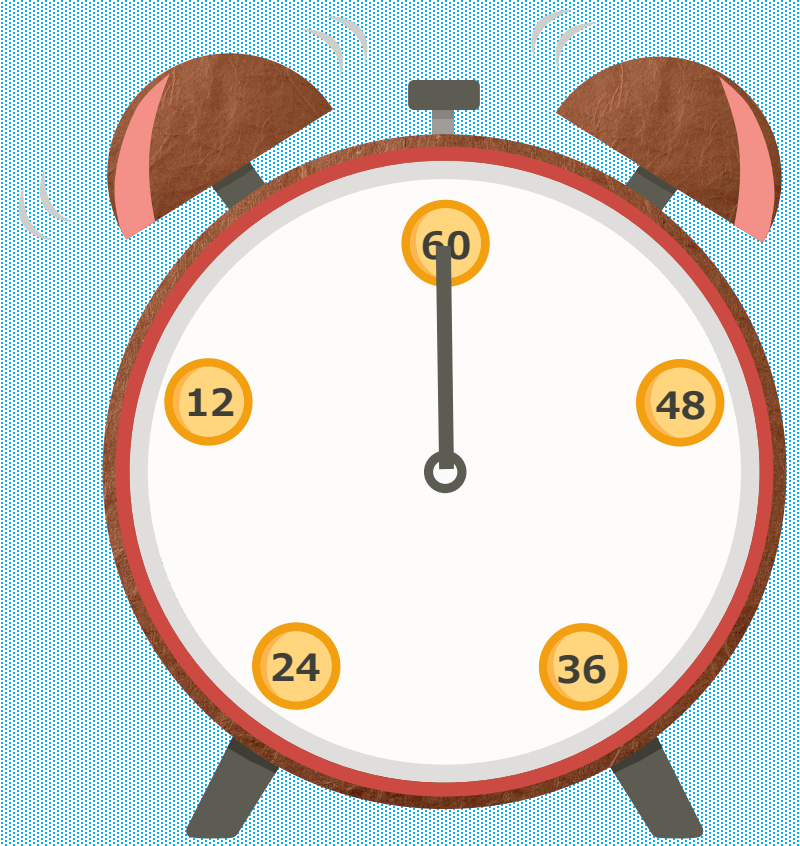
→ There is a king in France.

He **thinks** [that I met [**the** king of France]].

Plug

↛ There is a king in France.

Quiz



Which embedding predicate is a “plug”?

A. *be glad that*

B. *admit*

C. *suspect*

D. *mention*

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4. Pragmatics: Presupposition accommodation

When a speaker **presupposes** a thing that has not already been established in the common ground, s/he is implicitly asking the other discourse participants to **accommodate** that information by adding it to the common ground.

Example:

[P My boyfriend is a vet] and [Q he is smart].

In reality: Good inference
Prediction: Bad inference

Okay. [R She has a boyfriend].

Prediction

Prior context/knowledge ⟷ Comparison ⟷ **presupposition**

The sequence should be wrong, because the presupposition is not included in the prior knowledge of the addressee.

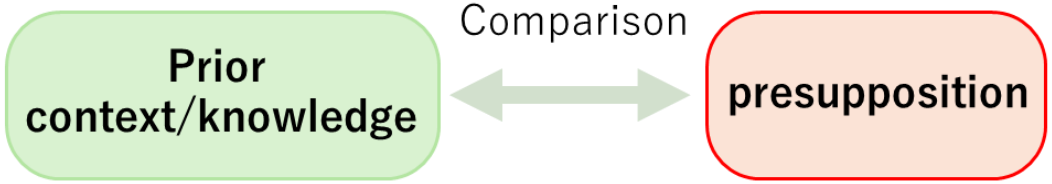
When a speaker **presupposes** a thing that has not already been established in the common ground, s/he is implicitly asking the other discourse participants to **accommodate** that information by adding it to the common ground.

Question:

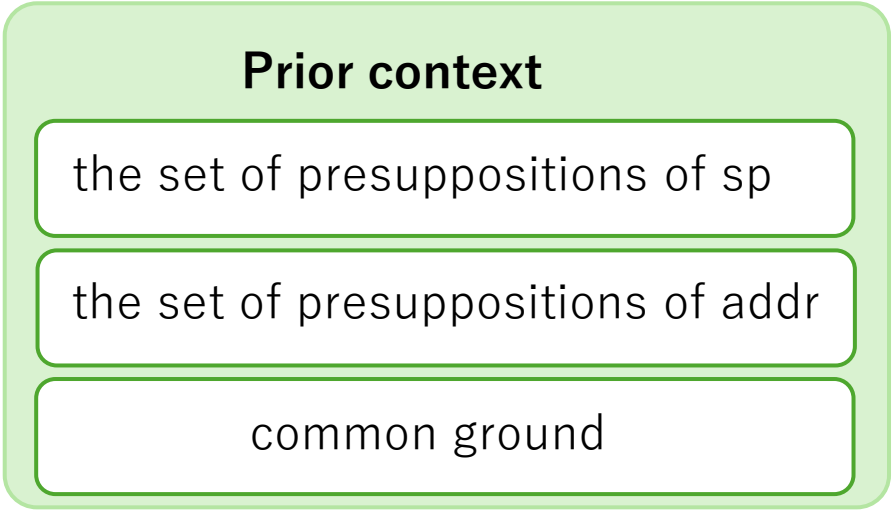
How do we update the discourse model, so we can better explain the data?

Theory: structured discourse context

(A) **Old model**: a context is unstructured



(B) **New model**: a context is structured



When a speaker **presupposes** a thing that has not already been established in the common ground, s/he is implicitly asking the other discourse participants to **accommodate** that information by adding it to the common ground.

Theory: structured discourse context

(B) **New model**: a context is structured

the set of presuppositions of sp

- "Alice has a boyfriend",
- "Alice's boyfriend is a vet",
- "The earth is round",
- "1 + 1 = 2"

Alice

the set of presuppositions of addr

- "Alice has a boyfriend",
- "The earth is round",
- "1 + 1 = 2",
- "It is raining outside"

Bob

common ground

= { "Alice has a boyfriend", "The earth is round", "1 + 1 = 2" }

+

Prior context

the set of presuppositions of sp

= { "Alice has a boyfriend", "Alice's boyfriend is a vet", "The earth is round", "1 + 1 = 2" }

the set of presuppositions of addr

= { "Alice has a boyfriend", "The earth is round", "1 + 1 = 2", "It is raining outside" }

common ground

= { "Alice has a boyfriend", "The earth is round", "1 + 1 = 2" }

+

My brother is a vet.

Step 1: Checking presuppositions

(A) Presupposition:
"Alice has a boyfriend"

Step 2: Updating common ground

(B) **At-issue meaning**:
"Alice's **boyfriend** is a vet"

Posterior context

the set of presuppositions of sp

= { "Alice has a boyfriend", "Alice's boyfriend is a vet", "The earth is round", "1 + 1 = 2" }

the set of presuppositions of addr

= { "Alice has a boyfriend", "The earth is round", "1 + 1 = 2", "It is raining outside" }

common ground

= { "Alice has a boyfriend", "The earth is round", "1 + 1 = 2" "Alice's brother is a vet" }

What if
Bob didn’t know
that Alice has a boyfriend.

Prior context

the set of presuppositions of sp

$$= \left\{ \begin{array}{l} \text{“Alice has a brother”}, \\ \text{“Alice’s brother is a vet”}, \\ \text{“The earth is round”}, \\ \text{“1 + 1 = 2”} \end{array} \right\}$$

the set of presuppositions of addr

$$= \left\{ \begin{array}{l} \text{“The earth is round”}, \\ \text{“1 + 1 = 2”}, \\ \text{“It is raining outside”} \end{array} \right\}$$

common ground

$$= \left\{ \begin{array}{l} \text{“The earth is round”}, \\ \text{“1 + 1 = 2”} \end{array} \right\}$$

+

My brother is a vet.

Step 1: Checking presuppositions

(A) Presupposition:
“Alice has a brother”

Step 2: Updating common ground

(B) **At-issue meaning**:
“Alice’s brother is a vet”

Emergency alert
(Surprised!)

Posterior context

the set of presuppositions of sp

$$= \left\{ \begin{array}{l} \text{“Alice has a brother”}, \\ \text{“Alice’s brother is a vet”}, \\ \text{“The earth is round”}, \\ \text{“1 + 1 = 2”} \end{array} \right\}$$

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common ground

$$= \left\{ \begin{array}{l} \text{“Alice has a brother”} \\ \text{“The earth is round”}, \\ \text{“1 + 1 = 2”} \\ \text{“Alice’s brother is a vet”} \end{array} \right\}$$

context

the set of presuppositions of sp

the set of presuppositions of addr

common ground

A **structured discourse context** is a model of the discourse context which has internal structure with multiple components, each of which stores information relevant for our communication.

Examples:

context

$c =< pr_s, \quad pr_a, \quad cg, \quad \ldots >$

$c =< pr_s, \quad pr_a, \quad cg, \quad tdl, \quad \ldots >$

Concerns in Pragmatics:

Many expressions in natural language have a discourse- oriented meaning.

What discourse structure is appropriate to capture the behavior of expressions?

Commonality or diversity among languages?

Speech act

Lec 3.2

Discussion Time!

Can the sentence be False?
Why?

(1) I named this ship the Queen Elizabeth.

(2) I name this ship the Queen Elizabeth.

(3) Who are you?

(3) Who are you?

FALSE!

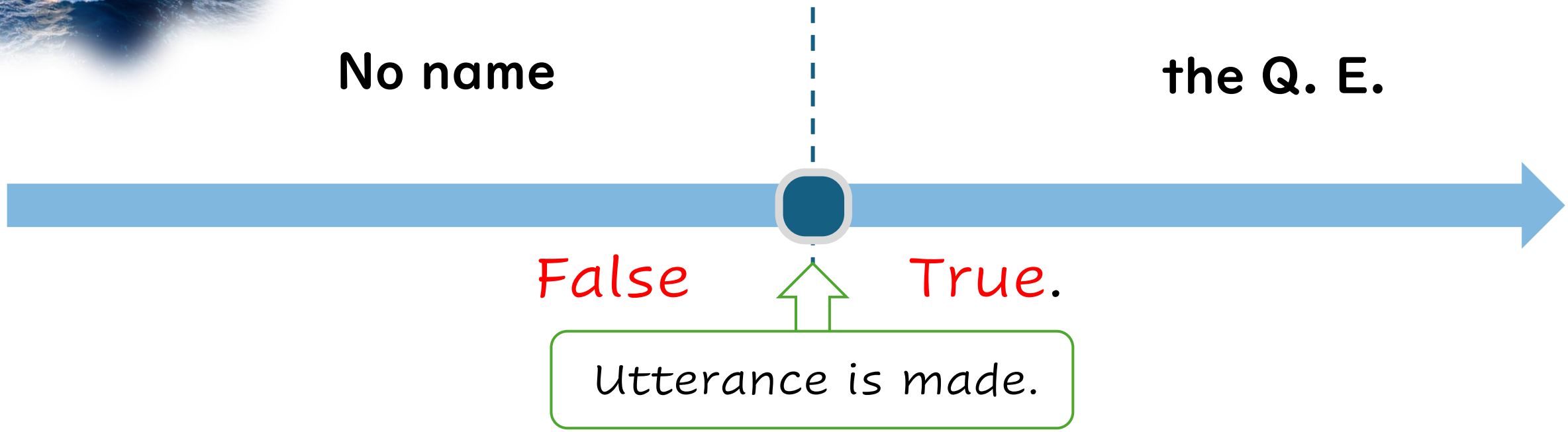
But let us think about the following sentence first.

(2) I hereby name this ship the Queen Elizabeth.

Can you find a scenario where it is judged **FALSE**?

I hereby name this ship the Queen Elizabeth

Using the sentence makes the sentence True.



“I name this ship Queen Elizabeth.”

Other examples

Using the sentence makes the sentence True.

a couple | **husband and wife**

False | True.

Utterance is made.

“I now pronounce you husband and wife.”

Relation between a sentence and the world

Traditional view (static view)
[e.g., propositional logic]

Sentence describes the world.

True/False

Relation between a sentence and the world

Alternative view (dynamic view)

Sentence

creates the world.
(updates)

Table of contents:

1. Speech act
2. Performative sentences
3. Constative sentence
4. Toolkit: possible worlds

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1. Speech act
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4. Toolkit: possible worlds

Just like a physical act, saying to communicate is an act!

At least three different levels are recognized.

Examples:

(A) **Locutionary act:**
Grammar-internal actions

Example:
The speaker {**articulated a velar stop/used the word** "*can*"} as a noun.

(B) **Illocutionary act:**
The intended discourse function of the utterance

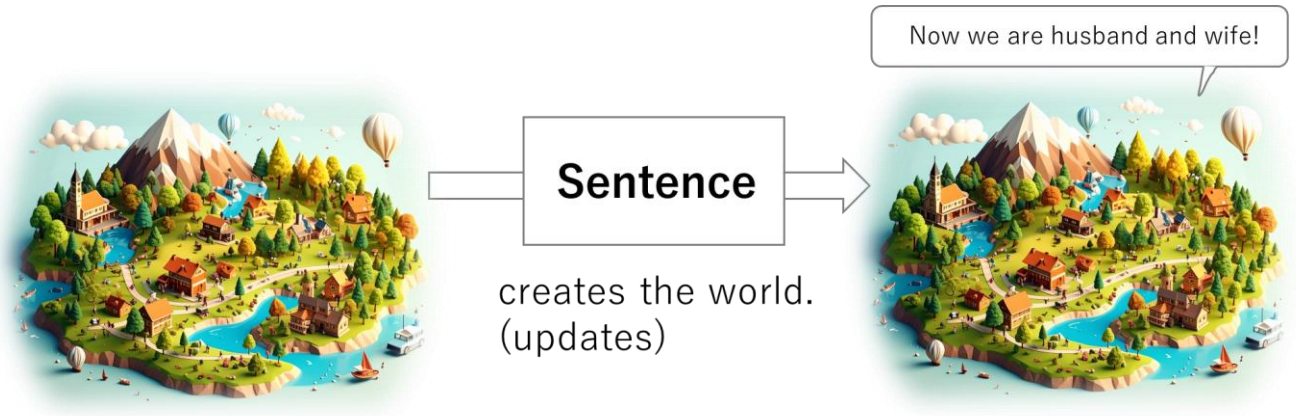
Example:
The speaker {**asserted a proposition/asking a question, requesting an action, promising to do something**} to the addressee.

(C) **Perlocutionary act:**
Actions which go beyond communication

Example:
As a result of the above actions, the speaker {**annoyed/blackmailed/tricked**} the addressee.

Relation between a sentence and the world

I pronounce you husband and wife!



This sentence explicitly states the **illocutionary act** being performed.

→ **performative sentence**:

Discussion Time!

Can you give other examples of performative sentences?

A **constative sentence**: the truth of the sentence depends on the scenario you are in.

A **performative sentence**: the very act of uttering the sentence makes the sentence true.

Examples:

(1) Constative

a. *I named this ship the Q.E.*
b. *He judges you guilty.*
c. *You promised to help me.*
d. *They guaranteed a full refund.*
e. *We apologized for the mistake.*

(2) Performative

a. *I name this ship the Q.E.*
b. *I judge you guilty.*
c. *I promise to help you.*
d. *I guarantee a full refund.*
e. *I apologize for the mistake.*

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Dynamic update by a constative sentence

the real world

Context

“I pronounce you H & W.”

Utterance

creates the world.
(updates)

the real world

Now we are husband and wife!

Context

Felicity conditions are the **pragmatic criteria** that determine whether a speech act works as intended.

When do we have a performative sentence?

1. Is it because of the verb? (lexicon?) Not enough
2. Due to the combination of the subject & the verb? Not enough
3. The subject, the verb and the tense? Not enough
4. The sentence structure + the situation? Not enough
5. The sentence structure + the situation + who you are?

Examples:

(1) Constatives:

a. *She* promised to visit tomorrow.

b. *I* promis*ed* to visit tomorrow.

c. *I* pronounce you husband and wife.
(in this classroom, no)

d. *I* sentence you to 6 years at hard labor.
(at a court, and 'I' am a lawyer, no)

(2) Performatives:

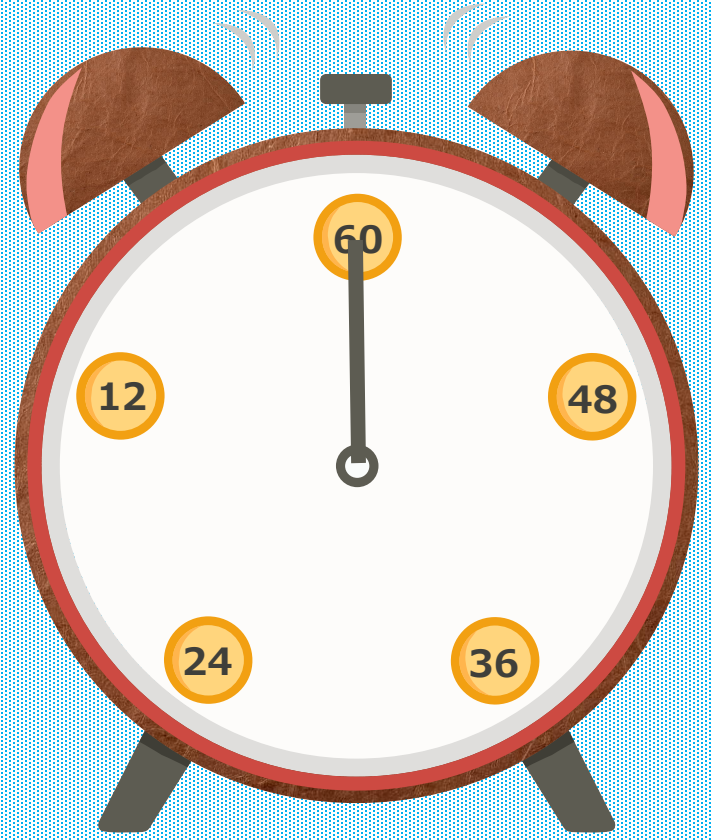
a. ***I*** **promise** to visit tomorrow.

b. *I* pronounce you husband and wife.
(in a wedding ceremony, yes)

c. *I* sentence you to 6 years at hard labor.
(at a court, and 'I' am a judge, yes)

It seems that we need multiple conditions for a performative sentence.

Quiz



Under what conditions does the following sentence cease to function as a performative sentence?

"I bequeath my collection to the museum."

A. *When* "I" *do not possess a collection*

B. *When* "I" am not in a legal context

C. *When* "I" already did it

D. *All of the above conditions*

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Is constative sentence really incapable of changing the world?

Recent studies propose the view that even a constative sentence is, in fact, used to change the **context.**

Dynamic update by a constative sentence

“The sun's not out.”

Utterance

creates the world.
(updates)

Dynamic update by a constative sentence

shared information

“The sun's not out.”

Utterance

creates the context.
(updates)

shared information

Context

Context

Dynamic update by a constative sentence

shared information

“The sun's not out.”

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creates the context.
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Context

Context

Dynamic update by a constative sentence

shared information

“The sun's not out.”

Utterance

creates the context.
(updates)

shared information

Context

Context

Dynamic update by a constative sentence

shared information

“It is thundering.”

shared information

Utterance

Context

creates the context.
(updates)

Context

Dynamic update by a constative sentence

shared information

“It is thundering.”

Utterance

creates the context.
(updates)

shared information

Context

Context

Dynamic update by a constative sentence

shared information

“It is thundering.”

Utterance

creates the context.
(updates)

shared information

Context

Context

Dynamic update by a constative sentence

shared information

There are two men outside the house.

Utterance

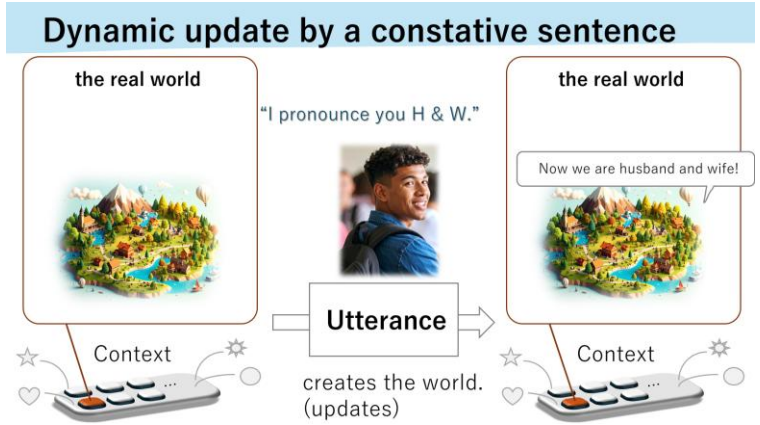
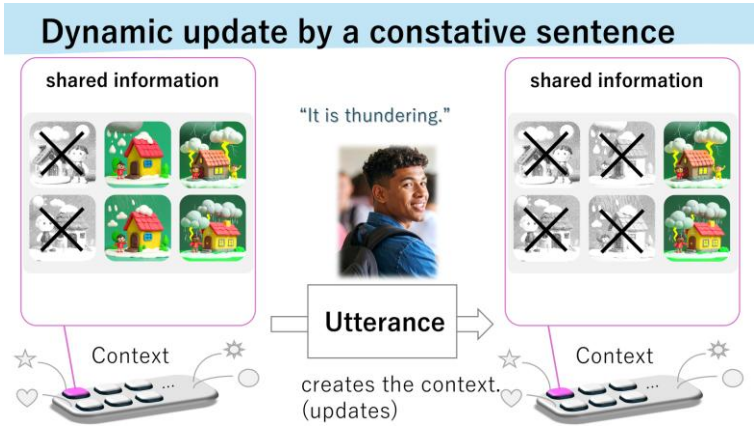
Context

creates the context. (updates)

shared information

Context

Interim Summary

	Performative sentence	Constative sentence
		
Truth condition	It makes no sense to consider the truth condition.	True or False
Dynamic update	Yes!	Yes!
Semantics of the sentence	The semantics describes the change in question.	The semantics is used to update the context.

Examples:

(1) Constative

I named this ship the Q.E.

(2) Performative

I name this ship the Q.E.

A **constative sentence**: the truth of the sentence depends on the scenario you are in.

A **performative sentence**: the very act of uttering the sentence makes the sentence true.

Answer Because of our cognition ability.

Because the **prototype effect** is internalized within our cognitive processes