

# LOGIC I



Language, Meaning, & Definition

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# Random Rewards - Answers

- How many premises are in an argument? **(1+)**
- How many conclusions are in an argument? **(1 and only 1)**
- What kind of statement is the following: If sugary drinks cause heart disease and diabetes, then they should be regulated by the government. **(Conditional)**
- Deductive arguments use facts from a general theory and must be falsifiable. **(True)**
- Inductive arguments use new observations, and their conclusions use probability. **(True)**

# What is something that you believe needs to change at Kyoto University?

1. Write a premise and conclusion stating that something needs to change.

## Example:

C: The salad bar needs to reopen the *shokudo* cafeteria.

P1: If students are expected to perform well in school, then they need a balanced diet that includes fresh vegetables.

# Language, Meaning, & Definition

## INFORMAL LOGIC



Streetwear



Casual



Business  
Casual



Smart  
Casual



Business /  
Informal



Black Tie / **Formal**  
Semi-Formal

## FORMAL LOGIC

# Language, Meaning, & Definition

## Functions of Language

Ask questions	Express feeling
Convey information	Make commands
Make descriptions	Greet someone
Express needs	Make music
Persuade action	Create art



# Varieties of Meaning

We will focus on 2 functions:

1. Cognitive - 思考: To convey information
2. Emotive - 感情: To express feelings

**COGNITIVE** - Communicates information, mental processes involved in gaining knowledge and understanding

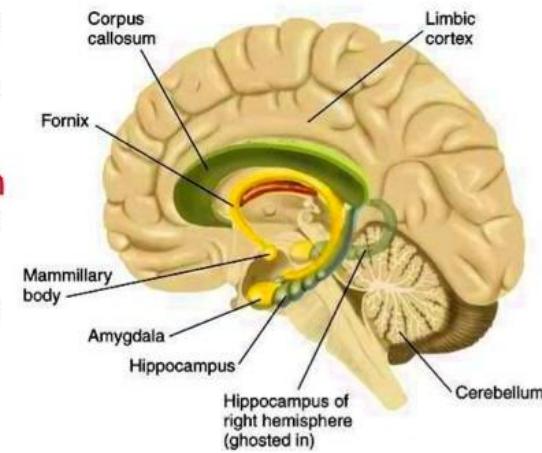
**EMOTIVE** - Creates feelings from events, moods, or relationships

## Cognition

Dorsal PFC  
Reasoning & deliberate, conscious reframing of schemata

## Emotion

Ventral PFC & OFC:  
Evaluate context-appropriate emotional values and select action



# Varieties of Meaning

English Nuance

**WORD**

**COGNITIVE**

**EMOTIVE**

Big

Corpulent

Imposing

Monumental

Gargantuan

# Varieties of Meaning

English Nuance

**WORD**

**COGNITIVE**

**EMOTIVE**

Dangerous

Vicious

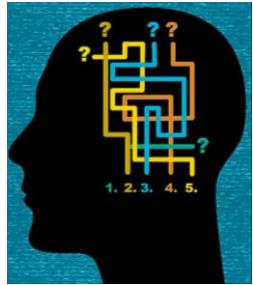
Precarious

Threatening

Murderous

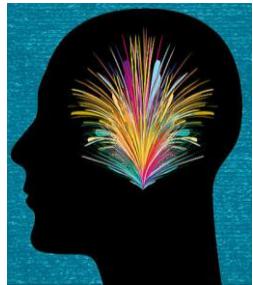
# Varieties of Meaning

## COGNITIVE



The death penalty, which is legal in thirty-one states, has been carried out most often in Virginia; however, since 1977 Texas holds the record for the greatest number of executions.

## EMOTIVE



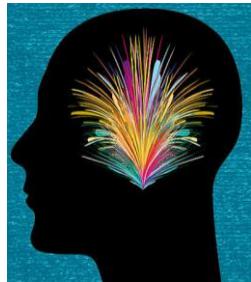
The death penalty is a cruel and inhuman form of punishment in which hapless prisoners are dragged from their cells and summarily slaughtered only to satiate the bloodlust of a vengeful public.

# Varieties of Meaning

The emotive statement is intended to persuade us that the death penalty is bad. It engages our emotions, but

- not as an argument & not by establishing the truth of a claim.
- Still has cognitive function
- Cognitive meaning makes a value claim

## EMOTIVE



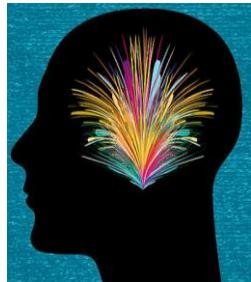
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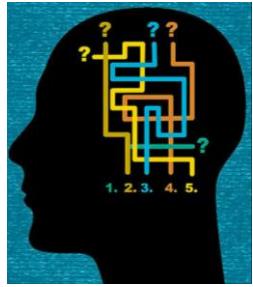
## EMOTIVE



The death penalty is a harsh and wrong form of punishment in which unknowing prisoners are taken from their cells and summarily killed only to satiate the desires of an unforgiving public.

# Varieties of Meaning

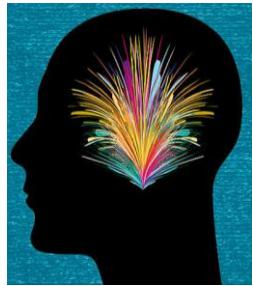
## COGNITIVE



## Value Claims - 値値の主張

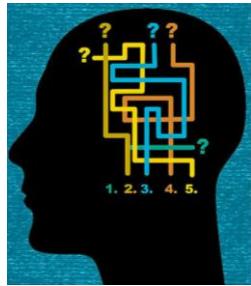
- A claim that something is good, bad, right, wrong, better, worse, more important, or less important than some other thing.
- Ex. the statement about the death penalty asserts the value claim that the death penalty is wrong or immoral.
- For logic, we must be able to disengage the value claims of emotively charged statements from the emotive meaning and treat these claims as separate statements.
- Value claims must be supported by evidence.

## EMOTIVE



# Varieties of Meaning

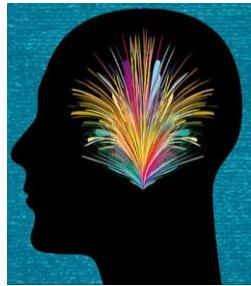
## COGNITIVE



When evaluating arguments:

1. Recognize the use of cognitive and emotive words
2. Be able to separate cognitive and emotive forms
3. Recognize and separate facts from emotion only terms
4. Identify value claims and evidence for the claims

## EMOTIVE



# What is something that you believe needs to change at Kyoto University?

1. Write a premise and conclusion stating that something needs to change.
2. Rewrite your premise using more emotive language

## Example:

C: The salad bar needs to reopen the *shokudo* cafeteria.

P1: If students are expected to eat food at elite levels in school, then the university is legally obliged to provide a balanced diet that includes fresh and nutritious vegetables.

# Varieties of Meaning

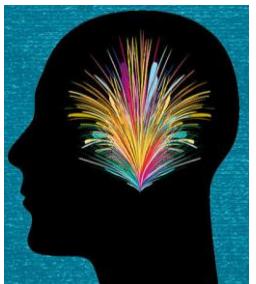
**Use of emotive language in an argument distracts the listener from:**

**Truth**

**Lack of evidence**

**Objectivity**

**EMOTIVE**



**“Of course I’m correct. This is bad, but I have no evidence.”**

# Language, Meaning, & Definition



ADVERTISING



P1: You love your daughter/father

P2: The car is a part of your life

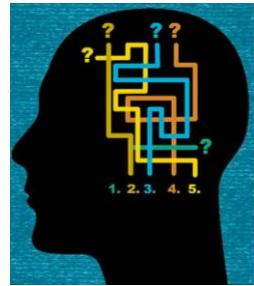
P3: Safety is important

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C: You should buy Toyota

# Varieties of Meaning

## COGNITIVE



**Vague Expressions 漠然とした表現** - allows for borderline cases in which it is impossible to tell if the expression applies or does not apply.

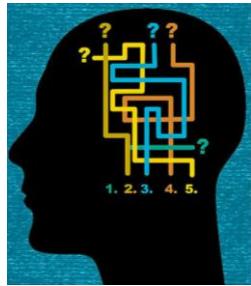
Imprecise or unclear meanings:

Ex. “love,” “happiness,” “peace,” “excessive,” “fresh,” “rich,” “poor,” “normal,” “conservative,” and “polluted” are vague.

What is the cutoff, how is it measured?

# Varieties of Meaning

## COGNITIVE



**Ambiguous Expression 曖昧な表現** - is one that can be interpreted as having more than one clearly distinct meaning in a given context.

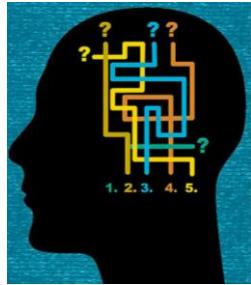
Words with multiple meanings

Ex. “light,” “proper,” “critical,” “stress,” “mad,” “inflate,” “chest,” “bank,” “sound,” and “race”

If you describe a beer as light, is it color, calories, taste, weight, or shine?

# Varieties of Meaning

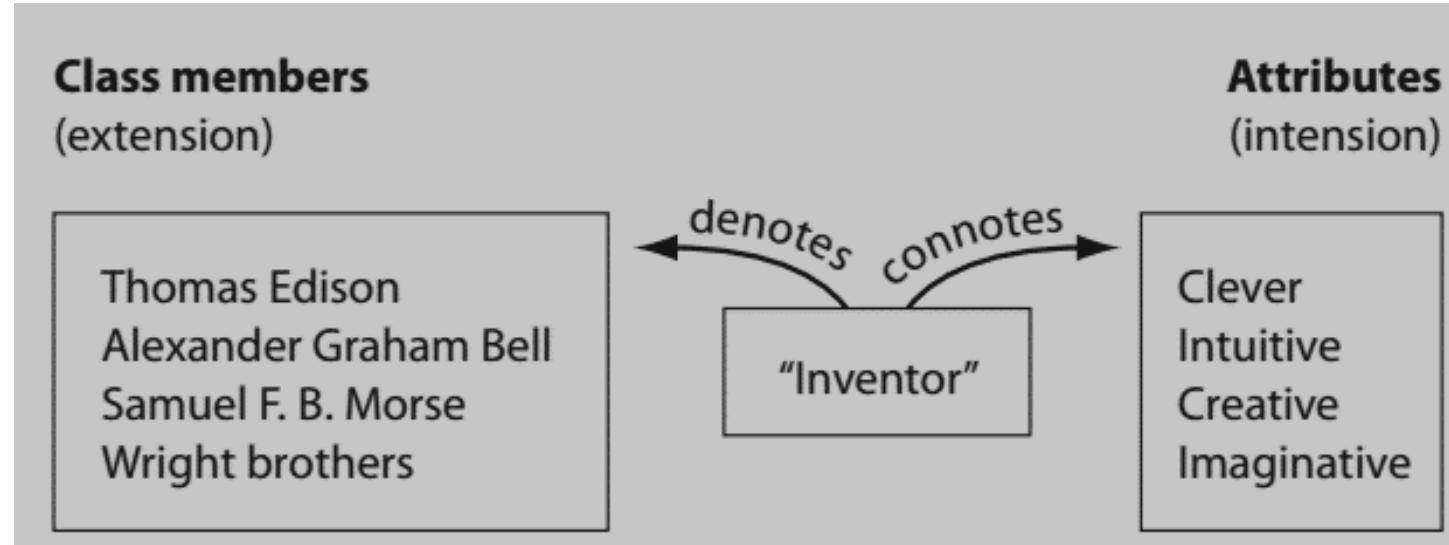
## COGNITIVE



### Intension and Extension

Intention = Connotation of attributes (内包)

Extension = Denotation of class (外延)



# Language, Meaning, & Definition



## ***The need to digitalize Japanese society as a whole***

“The digital agency should become a strong organization which can function as a powerful control tower, with highly talented people gathering from both the public and private sectors, to lead the digitalization of the society as a whole,” Suga said on Sept. 23 at a meeting of ministers involved in digital reform.

The government has created an office to prepare for the establishment of the agency, and unprecedented steps are being made, such as setting up an online platform to solicit opinions from the public. But the success of the agency depends solely on whether it can indeed serve the role of a “powerful control tower.” In order to achieve this goal, the agency should make its objective the digitalization of the Japanese society as a whole, and the agency should be positioned above other ministries and become a special zone for civil servants to secure human resources with cutting-edge skills and global perspectives.

# Language, Meaning, & Definition



## ***The need to digitalize Japanese society as a whole***

**P<sub>1</sub>:** The digital agency should become a strong organization which can function as a powerful control tower, with highly talented people gathering from both the public and private sectors, to lead the digitalization of the society as a whole.

**P<sub>2</sub>:** The government has created an office to prepare for the establishment of the agency,

**P<sub>3</sub>:** and unprecedented steps are being made, such as setting up an online platform to solicit opinions from the public.

**P<sub>4</sub>:** But the success of the agency depends solely on whether it can indeed serve the role of a “powerful control tower.”

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**C:** In order to achieve this goal, the agency should make its objective the digitalization of the Japanese society as a whole, and the agency should be positioned above other ministries and become a special zone for civil servants to secure human resources with cutting-edge skills and global perspectives.

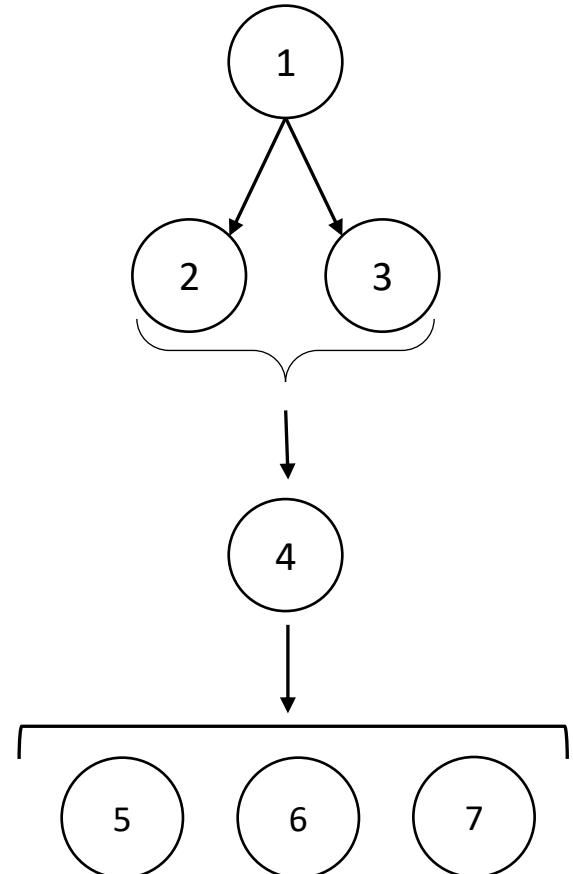
# Language, Meaning, & Definition



***The need to digitalize Japanese society as a whole***

- P<sub>1</sub>: A Japanese Digital Agency can function as a powerful control tower
- P<sub>2</sub>: The government created an office to prepare for a digital agency
- P<sub>3</sub>: We created an online platform to for public opinions.
- P<sub>4</sub>: Success of the agency depends on if it can be a powerful control tower.

**C:** We should make its objective the digitalization  
be positioned above other ministries and  
become a special zone for civil servants to secure human resources

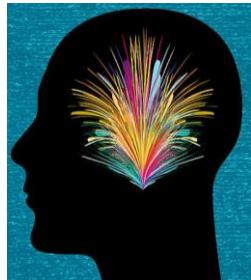


# Varieties of Meaning

## CHALLENGE

Change this argument to be more EMOTIONALLY neutral:

EMOTIVE



Liberalism has destroyed our welfare system and dreadfully corrupted our way of thinking. We hand out money with few questions asked. When welfare recipients are asked to contribute to our society in return, liberals scream that it's unconstitutional.

# What is something that you believe needs to change at Kyoto University?

1. Write a premise and conclusion stating that something needs to change.
2. Rewrite your premise using more emotive language
3. Add premises providing evidence for each value claim – decide which is important to keep

**Example:**

- C: The salad bar needs to reopen the *shokudo* cafeteria.
- P1: If students are expected to perform well in school, then they need a balanced diet that includes fresh vegetables.
- P2: The CDC reports that eating vegetables one or more times per day is associated with higher grades.

**Example:**

- C: The salad bar needs to reopen the *shokudo* cafeteria.
- P1: If our **exhausted** students are expected to perform **at elite levels** in school, then the **wealthy university is legally obliged to provide** a balanced diet that includes fresh **and mind nourishing** vegetables.