

# ELC 231: Introduction to Language and Linguistics

What do you know when you know a language?

Dr. Meagan Louie

# Q: What is Language?

Q: What counts as a LANGUAGE?

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| 4 Greek alphabet, Pinyin,<br>Hiragana? |  |
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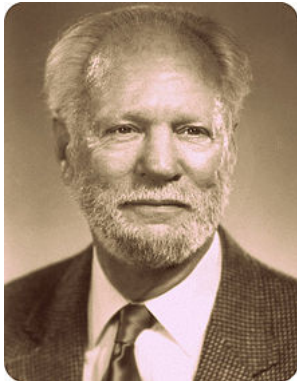
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## Question to Ponder: Hockett's Design Features of Language

**Q:** What properties does LANGUAGE have?  
i.e., what counts as a LANGUAGE (vs communication system)?



Charles F. Hockett (1916-2000)  
proposed several **criteria** that a  
communication system must have in  
order to count as a language

**What properties do you think a  
language needs?**

## Q: What is Language?

Q: Do these count as languages according to your criteria?

- |                              |                                   |
|------------------------------|-----------------------------------|
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| 2 ASL, LSQ, TSL?             | Emoticons/Emoji?                  |
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### Hockett's Design Features

- 1 Discreteness
- 2 Semanticity
- 3 Arbitrariness
- 4 Productivity
- 5 Prevarication
- 6 Duality of Patterning
- 7 Displacement
- 8 ...

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  - 6 Repeat steps 4 and 5
- **Q:** So what is language?

# The Core Subdomains of Linguistics

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- Language is a complex thing that consists of many different parts
- Linguistics likewise, can be broken down into different parts
  - Phonetics
  - Phonology
  - Morphology
  - Syntax
  - Semantics
  - Pragmatics

## Q: What is a Language?

### Q: What is a Language?

- **Hypothesis 1:** A language is a collection of sounds

- **English** = { p, t, k, tʃ, s, ʃ, θ, f, b, d, g, z, ð, v, i, u, ej, ... }
- **French** = { p, t, k, ʃ, s, f, b, d, g, z, ʒ, i, y, e, ... }
- **Thai** = { p, p<sup>h</sup>, b, t, t<sup>h</sup>, d, k, k<sup>h</sup>, i, ʉ, ə, e, ... }
- **Blackfoot** = {p, t, k, i, o, a.. }

# Core Subdomains: Phonetics

- **Phonetics** is the study of speech sounds
  - (i) How do you make these sounds?
  - (ii) What properties do these sounds have?
  - (iii) etc.

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  - **Thai** = {p, p<sup>h</sup>, b, t, t<sup>h</sup>, d, k, k<sup>h</sup>, c, c<sup>h</sup>, s, i, u, w, ə, e, ...}
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  - **Blackfoot** = {p, t, k, i, o, a.. }
- **Prediction 1:** If I learn the sounds of a language,  
I'll know the language!

# Hypothesis 1: A language is a collection of sounds

## H1: A language is a collection of sounds

- **(Dumb) Prediction:** If you learn the sounds of a language, you'll know the language!
- **Blackfoot:** {i, a, o, p, t, k, ʔ, m, n, s, w, j, t<sup>s</sup>, k<sup>s</sup>}

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...so can you speak Blackfoot now?

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...so can you speak Blackfoot now?

...Can you even pretend like you're speaking Blackfoot?

# Hypothesis 1: A language is a collection of sounds

- A language can't just be an unstructured set of sounds

(1)	a.	[p <sup>h</sup> it]	English
	b.	[p <sup>h</sup> luk]	English-ish
	c.	*[pti] *[pθɔ̃ʃk]	Not English

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- **Observation:** Sounds restricted in how they combine into syllables
- Sounds should be categorized, eg. into consonants and vowels
- This should be represented in our model of language
  - **English** = { {p, t, k, tʃ, ʃ, ð, θ, ...}, {i, u, eɪ, ...} }

# Phonology

**Phonology** is the study of how speech sounds pattern

- (i) What sounds are there?
- (ii) What sorts of categories do speech sounds fall into?
- (iii) How can these sounds combine?
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- **Hypothesis 1b:** A language is a **structured** collection of sounds
  - **Prediction 1b:** If I learn the sounds of the language, and rules about how they can combine, I can speak the language!

# Hypothesis 1b: A language is a structured collection of sounds

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## H1b: A language is a structured collection of sounds

- **Prediction 1b:** If I learn the sounds of the language, and rules about how they can combine, I can speak the language!
- But then what about this guy?



How to speak a fake Asian language  
01:48

Download

MP4 720p ✓

# Observation: Language is about more than sounds

Consider the following sequence:

STAGE 1: I think of something  
(Thought 1)



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**Question:** How do we get from  
Stage One to Stage 2?





# Q: What is Language?

- **Hypothesis 1b:**

A language is a **structured** collection of sounds 

- There's more to language than just **sounds**

# Q: What is Language?

- **Hypothesis 1b:**

A language is a **structured** collection of sounds 

- There's more to language than just **sounds**
- The sounds of a language combine to form **words**.

## Q: What is Language?

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  - **Thai** = {หมา, แมว, แอปเปิ้ล, วิ่ง, กิน, แดง, อ้วน, เป็น/อยู่, ... }

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- But a language can't just be an unstructured set of words:

# What's a Language?

- **Hypothesis 2:** A language is a collection of words

- (2) a. *\*nit-opii it-ohkit- omi ponokaomitaa*  
I-sit RR-on- that horse  
Target: I rode/sat on that horse
- b. *nit-it-ohkit-opii omi ponokaomitaa*  
I-RR-on-sit that horse  
“I rode/sat on that horse.”

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- If Blackfoot is a set of words, why can't I say something like (2b)?

# What's a Language?

- **Hypothesis 2:** A language is a collection of words

- (3) a. *\*Le chien a mangé la rouge pomme*  
the dog have.3sg eat.PTC the.f red apple  
Target: The dog ate the red apple.
- b. *Le chien a mangé la pomme rouge*

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Target: The dog ate the red apple.
- b. *Le chien a mangé la pomme rouge*

- If French is just a set of words, why can't I say something like (3a)?

# What's a Language?

- **Observation:** Only some English words can appear in the position marked in red (i.e., in the frame 'The \_\_\_\_ dog')

- (4)
- a. The red dog ran
  - b. The fat dog ran
  - c. \*The apple dog ran
  - d. \*The eat dog ran
  - e. \*The a dog ran
  - f. \*The with dog ran

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- If English was just a set of words, we wouldn't be able to account for why only some words can occur in this position

# What's a Language?

- (5) a. The red dog ran  
b. The fat dog ran  
c. \*The apple dog ran  
d. \*The eat dog ran  
e. \*The a dog ran

- (6) a. The red dog ran  
b. A red dog ran  
c. \*Eat red dog ran  
d. \*Cat red dog ran  
e. \*on red dog ran

- (7) a. The red dog ran  
b. The red dog ate  
c. \*The red dog cat  
d. \*The red dog a  
e. \*The red dog on

- (8) a. The red dog ran  
b. The red cat ran  
c. \*The red eat ran  
d. \*The red a ran  
e. \*The red on ran

# What's a Language?

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- We can account for this if language puts words into different categories

Nouns	Verbs	Adjectives	Determiners	Prepositions
cat, dog,...	eat, run,...	red, fat,...	the, a,...	under, on,...

# What's a Language?

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Nouns	Verbs	Adjectives	Determiners	Prepositions
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- **Question:** Is there any independent evidence for these categories?

# What's a Language?

- **Hypothesis 2b:** Language is a collection of words that fall into specific word-categories, eg., N, V, Adj, Det, P

# What's a Language?

- **Hypothesis 2b:** Language is a collection of words that fall into specific word-categories, eg., N, V, Adj, Det, P
- **Independent Evidence:** Only nouns can be pluralized

N	V	Adj	Det	P
cat, dog,...	eat, run,...	red, fat,...	the, a,...	under, on,...
cat-s, dog-s	*eat-s, *run-s	*red-s, *fat-s	*the-s, *a-s	*under-s,

# What's a Language?

- **Independent Evidence:** Only verbs can be past tense

N	V	Adj	Det
cat, dog,...	smile, walk,...	red, fat,...	the, a,...
*cat-ed, *dog-ed	smile-d, walk-ed	*red-ed, *fat-ed	*the-ed, *a-ed

- **Independent Evidence:** Only adjectives can be superlative

N	V	Adj	Det
cat, dog,...	smile, walk,...	red, fat,...	the, a,...
*cat-est, *dog-est	smile-st, walk-est	reddest, fattest	*the-est, *a-est

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# Syntax and Morphology

- **Observation:** The "collection of words" that make up (part of) a language is structured in terms of
  - (i) The external distribution of words  
(eg., where words of a certain category can occur within a phrase or sentence)
  - (ii) The internal structure of words  
(eg., what things ("morphemes") can be combined to form words)

# Syntax and Morphology

**Syntax** is the study of how words combine to form sentences

- (i) "word order"
- (ii) How to form phrases and sentences
- (iii) How to categorize types of phrases, types of sentences
- (iv) etc.

**Morphology** is the study of words

- (i) How to categorize words
- (ii) How to form words
- (iii) etc.

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PHONETICS

PHONOLOGY



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    - Rules re: how these sounds combine **PHONOLOGY**

- (ii) **A structured collection of words and "morphemes"** **LEXICON**

- Rules re: how morphemes combine into words **MORPHOLOGY**
    - Rules re: how words combine into phrases, sentences **SYNTAX**

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- Rules re: how morphemes combine into words **MORPHOLOGY**
    - Rules re: how words combine into phrases, sentences **SYNTAX**

- But you need more than these in order to know a language!

## Recall the Previous Observation

Consider the following sequence:



STAGE 1: I think of something  
(Thought 1)



STAGE 2: You know the content  
of Thought 1



## Recall the Previous Observation

Consider the following sequence:



STAGE 1: I think of something  
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STAGE 2: You know the content  
of Thought 1

- A word is not just a combination of sounds



## Observation: Words aren't just sounds.

(9) The butterfly is sitting on the cat's back.



## Observation: Words aren't just sounds.

(9) The butterfly is sitting on the cat's back.



True!



False!

# Truth-Conditional Meaning

When you know a language, you know

what the world has to look like  
in order for a sentence to be **true**

- i.e., you know its **truth-conditions**.

## Observation: Words aren't just sounds.

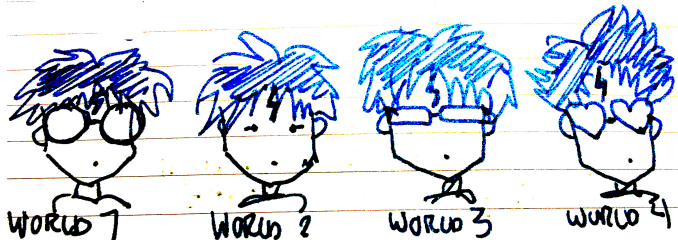
(10) Harry Potter is wearing glasses



(10) is true in World 1, 3, and 4!

## Observation: Words aren't just sounds.

(11) Harry Potter is wearing **round** glasses



(11) is only true in World 1

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# Truth-Conditional Meaning

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# Truth-Conditional Meaning

When you know a language, you know what the world has to look like in order for a sentence to be **true** - i.e., you know its **truth-conditions**.

- You have to know
  - (i) The meaning of words - eg., what they refer to, and
  - (ii) How the meanings of the words combine to form the meanings of phrases and sentences

# Semantics

**Semantics** is the study of meaning

(i) The meaning of words

LEXICAL SEMANTICS

(ii) How the meanings of words combine to form the meaning (i.e., truth-conditions) of sentences


COMPOSITIONAL SEMANTICS

(iii) etc.

# Q: What is Language?

- **Hypothesis 3b:** Language consists of:

---


<sup>1</sup>Where words and "morphemes" and *⟨sound, meaning⟩* pairs. 

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- (i) **A structured collection of sounds**

- Instructions about how to make them
    - Rules re: how these sounds combine

PHONETICS

PHONOLOGY

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PHONETICS


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LEXICON

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    - Rules re: how these sounds combine PHONOLOGY

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- Rules re: how morphemes combine into words MORPHOLOGY
    - Rules re: how words combine into phrases, sentences SYNTAX

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    - Rules re: how the meaning of words/"morphemes" combine into the meaning (i.e., **truth-conditions**) of sentences SEMANTICS

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## Are we done yet? Another Observation:

(12) **CONTEXT:** We're watching Raven dance right now.

a. Raven **is** dancing

True!

b. #Raven **was** dancing

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## Are we done yet? Another Observation:

(12) **CONTEXT:** We're watching Raven dance right now.

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True!

- When you know a language, you know more than just how to calculate the truth-conditions of sentences
- You also know when using sentence is acceptable (**felicitous**) regardless of whether or not it's true


# Pragmatics

**Pragmatics** is the study of language in context

- (i) The non truth-conditional meanings of words, phrases and sentences
- (ii) How these meanings interact with context
- (iii) how these meanings interact with truth-conditional meaning
- (iv) etc.

## Hypothesis 4: Language consists of:


---

<sup>2</sup>Where words and "morphemes" and  $\langle \text{sound}, \text{meaning} \rangle$  pairs. 

## Hypothesis 4: Language consists of:

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PHONETICS

PHONOLOGY

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- Rules re: how the meaning of words/"morphemes" combine into the meaning (i.e., truth-conditions) of sentences SEMANTICS
- Rules re: how to use words/sentences felicitously PRAGMATICS

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# Conclusion: A language consists of

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Phonetic Inventory

## Conclusion: A language consists of

- |                                       |                    |
|---------------------------------------|--------------------|
| (i) A structured collection of sounds | Phonetic Inventory |
| (ii) A repository of meaning          | Semantic Ontology  |

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  - sounds into complex sounds
  - sound and meanings into  $\langle \text{sound}, \text{meaning} \rangle$  pairs
  - morphemes into words
  - words into phrases and sentences
  - simple morpheme meanings into complex meanings
  - complex meanings with context

# Course Syllabus & Requirements

Grade Breakdown	V1	V2	V3
Instagram Homework (10 at 2%)	20%	-	-
Group Homework/Problem Sets (5 at 5%)	25%	25%	-
Midterm	20%	30%	40%
Final EXAM or PROJECT	25%	35%	50%
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# Weekly Instagram Homework

## Weekly Instagram Homework

$$10 \times 2\% = 20\%$$

Find and explain pieces of linguistic data, or illustrate linguistic concepts

- 1 IPA Production (5 sounds) eg., [t], [x], [ŋ], [ð], [θ]
- 2 Phonological Minimal Pair eg., /majl/ and /**s**majl/
- 3 Morphological Minimal Pair eg., /smal/ and /smal-**ə**/
- 4 ...
- 5 Design Features (Discreteness, Arbitrariness, Prevarication...)
- 6 ...

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## Group Homework/Problem Sets

Group Homework/Problem Set  $5 \times 5\% = 25\%$

Solve a linguistic puzzle/data set (i.e., do some linguistic analysis)

- 1 IPA and Orthography Problem Set
- 2 Phonology Problem Set
- 3 Morphology Problem Set
- 4 Morphosyntax Problem Set
- 5 Semantics & Pragmatics Problem Set

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# Final Project Option

## Final Project Option (in lieu of Exam) 25/35%

Present some **original linguistic research and analysis**

- 1 Research Proposal (W3)  
(Research Question, Data)
- 2 Progress Report (W6)  
(Research Question, Data, Hypothesis, Predictions)
- 3 First Draft (W11)  
(Research Question, Data, Hypothesis, Predictions, Analysis)
- 4 Final Poster/Presentation (W16)