Internal Computation/Mental Grammar

Nativism

The challenge for nativists

Constructivism

*I-language*More Fundamentals

Daniela Isac & Charles Reiss

Concordia University, Montreal



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Three fundamental arguments (Jackendoff 1994)

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- Internalism and Generativity: The argument for Mental Grammar: The nature of language tells us that our minds contain knowledge of an abstract system of rules that allows us to *generate*, that is, produce and understand, language. This type of system is called a *grammar*.
- Nativism: The argument for Innate Knowledge: Some aspects of our Mental Grammars are not learned, but are rather innate (we are born with them). This innate knowledge is sometimes called *Universal Grammar*.
- Constructivism: The argument for the Construction of Experience: Our experience of the world is (partially?) dependent upon what our minds bring to perception; we do not experience the physical world directly, as we will soon see

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Internalism and Nativism are distinct!

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Mental Grammar = UG + Experience

- UG refers to innate aspects of this knowledge. One could believe that we have mental grammars, without believing that any significant aspects of these grammars/knowledge states are innate.
- However, if one believes in UG, that is, innate components of (linguistic) knowledge, then one necessarily accepts the notion of mental grammars as knowledge states.

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• Experience refers to the exposure required to turn the initial (innate) state of the language faculty into a differentiated language faculty. In loose terms, experience turns UG into French, Cree, Swahili, Mohawk, Ainu.

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The two parts of the Argument for Mental Grammar

- Mental: This term highlights the view that we are studying knowledge states. It can be equated with Internalism
- Grammar: This knowledge consists of rules and principles, not just lists of utterances. This term reflects the generative, productive property of language.

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Fundamental argument 1: Internalism

The object of study of linguistics is what is in the mind (mental grammars), and not what is 'out in the world' (grammar books, conventions). This leads us to the surprising conclusion that as far as linguists are concerned English, French, Cree don't exist!

Dovious

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- (Phonetics—articulation and perception of speech sounds.)
- Phonology—the patterns and relationships among speech sounds, syllable structure, intonation, etc.
- Morphology—the structure of words: prefixes, suffixes, compounding.
- Syntax—sentence structure, word order, agreement (subject-verb, object-verb, noun-adjective).
- Semantics—interpretation and some kinds of meaning.

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Fundamental argument 1: Internalism

Papago reduplication

```
bana baabana coyote/coyotes
tini tiitini mouth/mouths
kuna kuukuna husband/husbands
```

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Constructivism

What's the rule?

| SG | PL | |
|--------|----------|--------|
| nofo | nonofo | 'sit' |
| moe | momoe | |
| alofa | alolofa | 'love' |
| savali | savavali | 'walk' |
| maliu | maliliu | |

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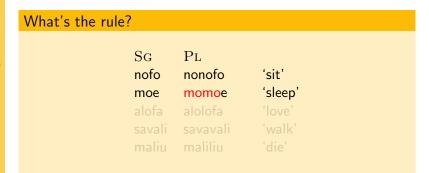
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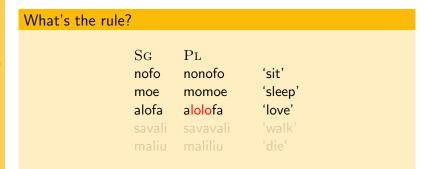
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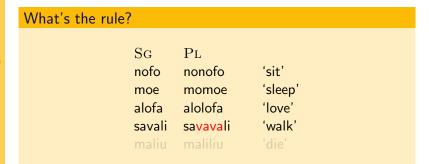
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What's the rule?

SGPLnofo nonofo 'sit' 'sleep' moe momoe alofa alolofa 'love' 'walk' savali savavali 'die' maliu maliliu

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maliu

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Fundamental argument 1: Internalism

Hungarian suffixes on verbs:

| Verb | I V an X | I V the X | I V you |
|-------|----------|-----------|----------|
| send | küldök | küldöm | küldelek |
| watch | lesek | lesem | |
| await | várok | várom | várlak |

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| watch | lesek | lesem | leslek |
| await | vár <mark>ok</mark> | vár <mark>om</mark> | vár <mark>lak</mark> |

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Fundamental argument 2: Nativism

Some aspects of out mental grammar are innate. The innate aspects of our grammar may require interaction with the environment to appear and develop, but they are somehow encoded in the genes. There is *some* initial state that the child is in before learning takes place.

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Fundamental argument 2: Nativism

This innate knowledge is sometimes called *Universal Grammar*

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Internalism and Nativism are distinct!

Mental Grammar = UG + Experience

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| Case in Dyirbal | | |
|---------------------|-----------------------------|--------------------|
| English | Dyirbal | gloss |
| she saw him | numa yabungu buran | 'mother saw father |
| she returned | yabu banagan ^y u | 'mother returned' |
| he saw her | yabu numangu buran | 'father saw mother |

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Languages may express concepts in different ways (pronoun versus verb marker, separate word *vs.* prefix), but there does not seem to be any concept that can not be expressed given the means available.

Morphology vs. syntax

| Mohawk | English |
|--------------|-------------------|
| tashará:tat | Lift it up here! |
| ia'shará:tat | Lift it up there! |

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Fundamental argument 3: Constructivism

we construct word boundaries, syntactic representations, ranges of meaning, etc.

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Morphological ambiguity

un-tie-able

- [[un-tie]-able]: 'able to be untied" The knot is untiable. I untied it in just five minutes.
- [un-[tie-able]]: 'not able to be tied"
 The knot is definitely untiable. I've been trying to tie it for 20 years.

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- She fed her dog biscuits.
- She fed [her dog] [biscuits].
 - She fed biscuits to her dog
- She fed [her] [dog biscuits].
 - She fed biscuits for a dog to her

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- She fed [her] [dog biscuits].
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| English | French |
|---------|--------|
| sheep | mouton |
| mutton | mouton |

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Kinds and generics

- *Dogs* are everywhere/widespread.
- Dutchmen are good sailors.

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The psychological reality of phonemes. E. Sapir 1949

2 homophonous forms in Sarcee, an Athabaskan language of Alberta

- dínì this one
- dínì it makes a sound

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The psychological reality of phonemes. E. Sapir 1949

Informants report that the two words do not sound alike. When asked why, the informants indicated that the ni of 'it makes a sound ended in a t. However, when they tested over and over to themselves, the informants had to admit that they could neither hear a t, nor feel their tongue articulating one.

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The psychological reality of phonemes. E. Sapir 1949

- dini + i \rightarrow dini this one
- $dini + i \rightarrow diniti$ it makes a sound

There's a phonological rule that deletes *t* word finally. The *t* surfaces otherwise.

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The psychological reality of phonemes. E. Sapir 1949

"The naive speaker and hearer actualize and are sensitive to sounds, but what they feel themselves to be pronouncing and hearing are phonemes, i.e. abstract, constructed symbolic sounds"

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Nicki, Jane

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Constructivism

| Mohawk | English | | Tok Pisin |
|----------------|----------|------------|----------------------|
| iakenihiá:tons | we write | 1, Du, exc | mitupela raitim |
| iakwahiá:tons | | 1, PL, EXC | mipela raitim |
| tenihiá:tons | | 1, DU, INC | yumi(-tupela) raitim |
| tewahiá:tons | | 1, PL, INC | yumipela raitim |
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