Masculine, Feminine, Neuter, Vegetable
Grammatical Gender around the World

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What is Grammatical Gender?

fourchette
'fork'

la fourchette
'the fork'

feminine

couteau
'knife'

le couteau
'the knife'

masculine

French

What is Grammatical Gender?

Gender is the sorting of nouns into two or more classes, as reflected in the form of words associated with the noun.

La petite fourchette
the small fork
'the small fork'

Le petit couteau
the small knife
'the small knife'

Why is Gender Interesting?

Gender varies widely across languages.

Gender affects sound, form, & meaning.

How nouns are classified gives us clues about the nature of human cognition.

Outline

Question 1:

Can we predict the grammatical gender of a noun from its meaning? Yes!

Question 2:

What semantic properties of a noun can be used to predict its grammatical gender?

TBD!

Outline, continued

Question 3 (Big Picture):
Why is grammatical gender
related to meaning?

Question 4 (Big Picture):
What is the impact of these results for
human cognition?

Q1: Gender Predicted from Meaning?

Knife   **Fork**

Hypothesis: there seems to be no connection between the meaning of a noun and its grammatical gender.

Q1: Gender Predicted from Meaning?

Father   **Mother**

Revised hypothesis: the grammatical gender of a **<u>human</u>** noun can be predicted from its meaning.

Male → Masculine
Female → Feminine

Q1: Gender Predicted from Meaning?

But some languages have human nouns with fixed grammatical gender.

Spanish

persona 'person' (feminine)
individuo 'individual' (masculine)

French

sentinelle 'sentry' (feminine)
génie 'genius' (masculine)

In the face of conflicting information, what's a linguist to do?

Defining the Observations

Grammatical gender is assigned <u>arbitrarily</u> for some nouns (like 'knife' and *persona*).

→ arbitrary gender assignment

Grammatical gender is assigned <u>according to meaning</u> for other nouns (like 'mother').

→ semantic gender assignment

Defining the Observations

In Spanish and French, most human nouns undergo semantic gender assignment.

Nouns like *persona* are exceptions.

Is there any language where **all** nouns are assigned gender semantically?

Gender Assignment in Tamil is Semantic

All nouns denoting women are feminine.
peŋ 'woman'   *kaaɭi* 'Kali'

All nouns denoting men are masculine.
aaŋ 'man'   *civaɴ* 'Shiva'

All other nouns are neuter.
maram 'tree'   *viiʈu* 'house'

Tamil is a Dravidian language, spoken in India

Other languages like Tamil: Mangarayi (Australia), Alamblak (Papua New Guinea), Zayse (Ethiopia), Barasano (Colombia), etc.

Semantic & Arbitrary Gender Assignment across Languages

Is there any language where **all** nouns are assigned gender arbitrarily?

NO

Answer to Question 1

Every language with grammatical gender assigns gender semantically to at least some of its nouns.

→ Every language has a **semantic core** to its gender system (major empirical discovery!)

Q1: Can we predict the grammatical gender of a noun from its meaning?

→ Yes, for at least some nouns in every language

What About Question 2?

Q2: What semantic properties of a noun can be used to predict its grammatical gender?
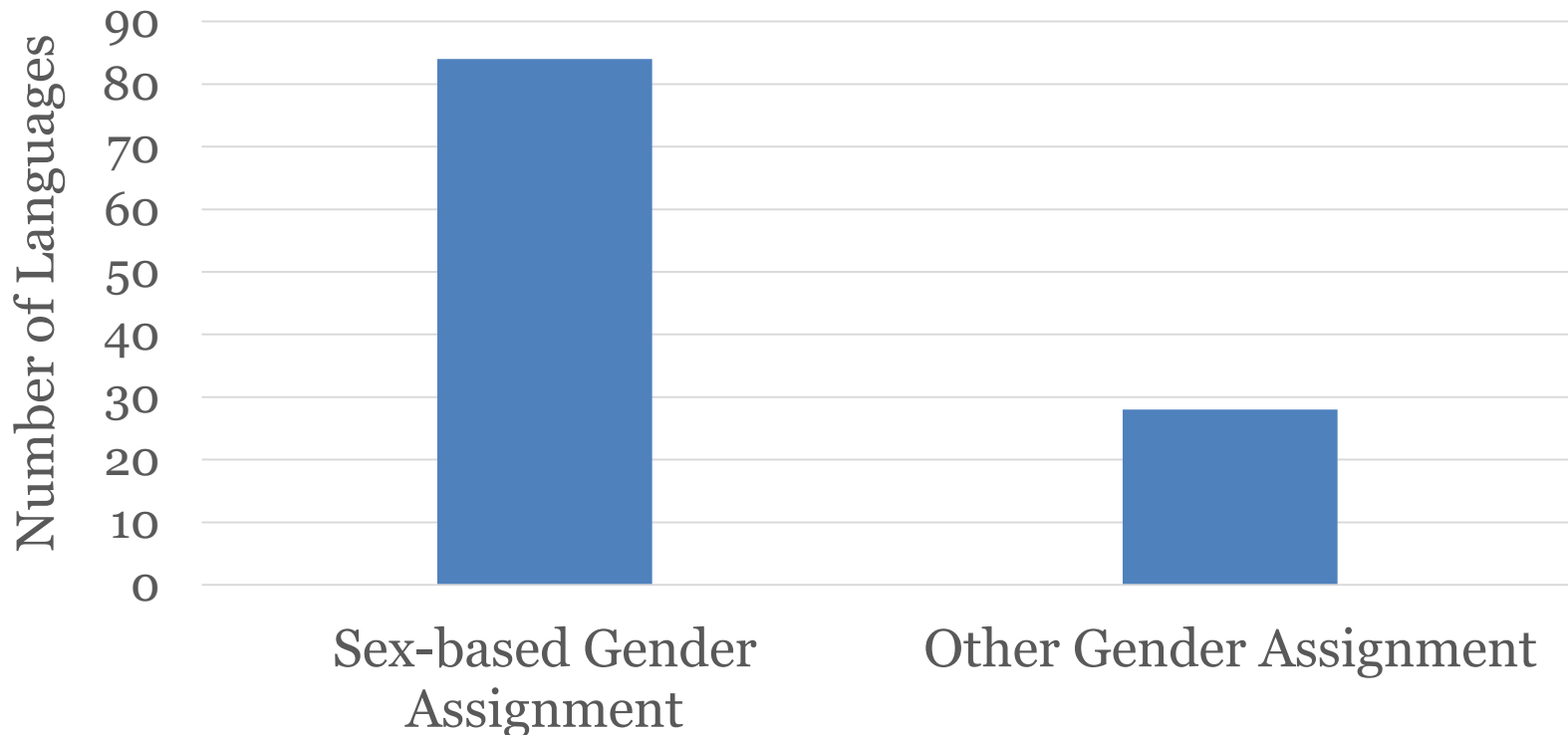
Answer so far: *biological sex (female/male)*

Languages vary in which nouns are sex-differentiable:
- Just humans (Tamil)
- Humans and certain animals (Spanish, French)
- Humans and all animals (Amharic)

It is very common to use biological sex for semantic gender assignment.

Types of Semantic Gender Assignment

What do the languages in the righthand bar use to assign gender?   Animacy!

Animacy Example: Lealao Chinantec

Lealao Chinantec has two genders:
    (1) *-i/-y* suffix on adjectives, verbs, etc.
    (2) no suffix on adjectives, verbs, etc.

Nouns denoting men and women both occur with *-i/-y*, so these nouns have the same gender.

Lealao Chinantec is an Otomanguean language, spoken in Oaxaca, Mexico

nakɨʔ-i mɨ	Mahu̠-i hmii mɨliuʔ
fallen the.woman	died father of.child
'The woman was made to fall.'	'The child's father died.'

Animacy Example: Lealao Chinantec

Nouns denoting animals occur with the *-i/-y* suffix.

dsɨ̱ dxú-y
dog good
'good dog'

mɨh dxú
clothing good
'good clothing'

But nouns denoting objects do not.

Animacy Example: Lealao Chinantec

<u>Overall:</u> Gender assignment in Lealao Chinantec is based on animacy, not biological sex.
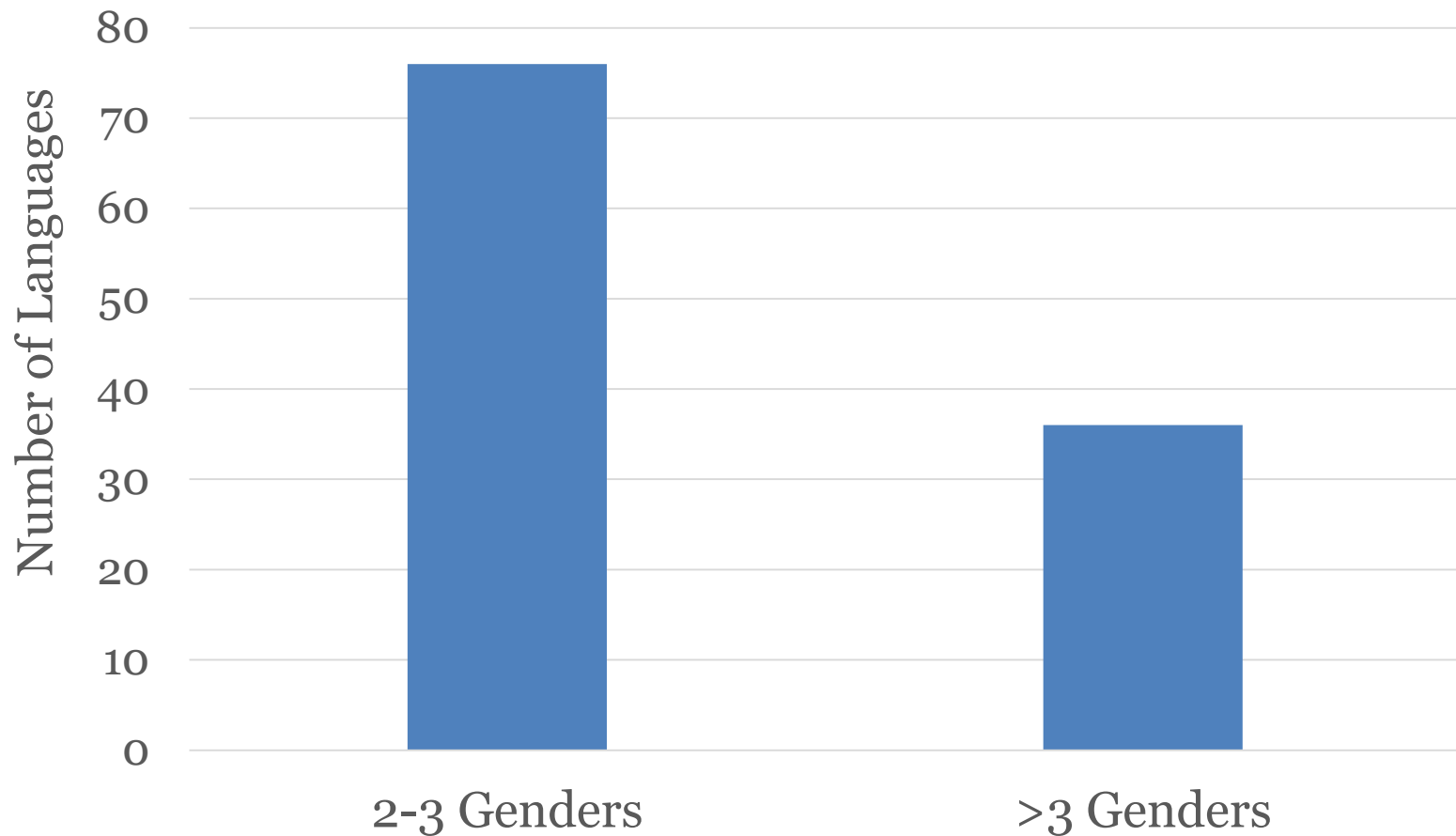
Animate ⟶ *-i/-y* suffix
Inanimate ⟶ no suffix

Better Answer to Question 2: What semantic properties are relevant to gender assignment?
Biological sex or animacy

But that's not all!

Some languages have more than 2 or 3 genders.

In addition to biological sex/animacy, some of these languages use other semantic properties for gender assignment.

Mayali Has Four Genders

Mayali is a Gunwinjguan language, spoken in Australia

Masculine

nakurrng
'son-in-law'

Feminine

daluk
'woman'

Neuter

kunwarre
'muddy ground'

Vegetable

mandubang
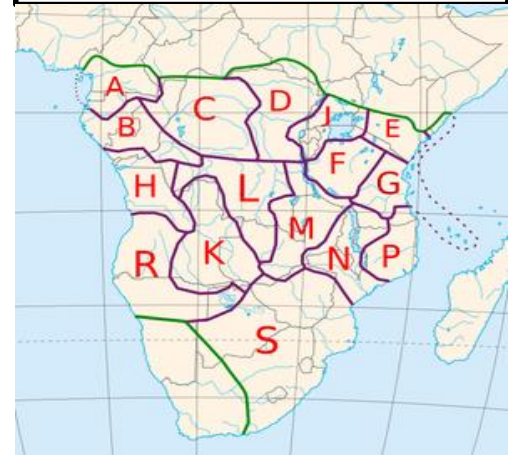'ironwood tree'

Gender in Bantu

Bantu languages typically have 7-10 genders

- marked by prefixes on the nouns
- referred to with numbers

Gender 1/2 is semantically assigned to human nouns.

mtu	'person'
mwenzi	'friend'
msichana	'girl'

Swahili (G42)

Bantu languages are spoken throughout sub-Saharan Africa.

Some of the other genders are also assigned semantically. What properties are relevant?

Gender in Bantu

Gender 3/4 is for <u>plants</u>.
*mi*ti 'trees,' *mi*zizi 'roots'

Gender 7/8 is for <u>tools</u>
*ki*joko 'spoon,' *ki*su 'knife'

Gender 9/10 is for <u>animals</u>.
mbwa 'dog,' *nyoka* 'snake'

Gender 6 is for <u>mass nouns.</u>
*ma*ziwa 'milk,' *ma*ji 'water'

Gender 14 is used for <u>abstract nouns</u>
*u*huru 'freedom,' *u*kweli 'truth'

Many exceptions!

Answers to Questions 1 and 2

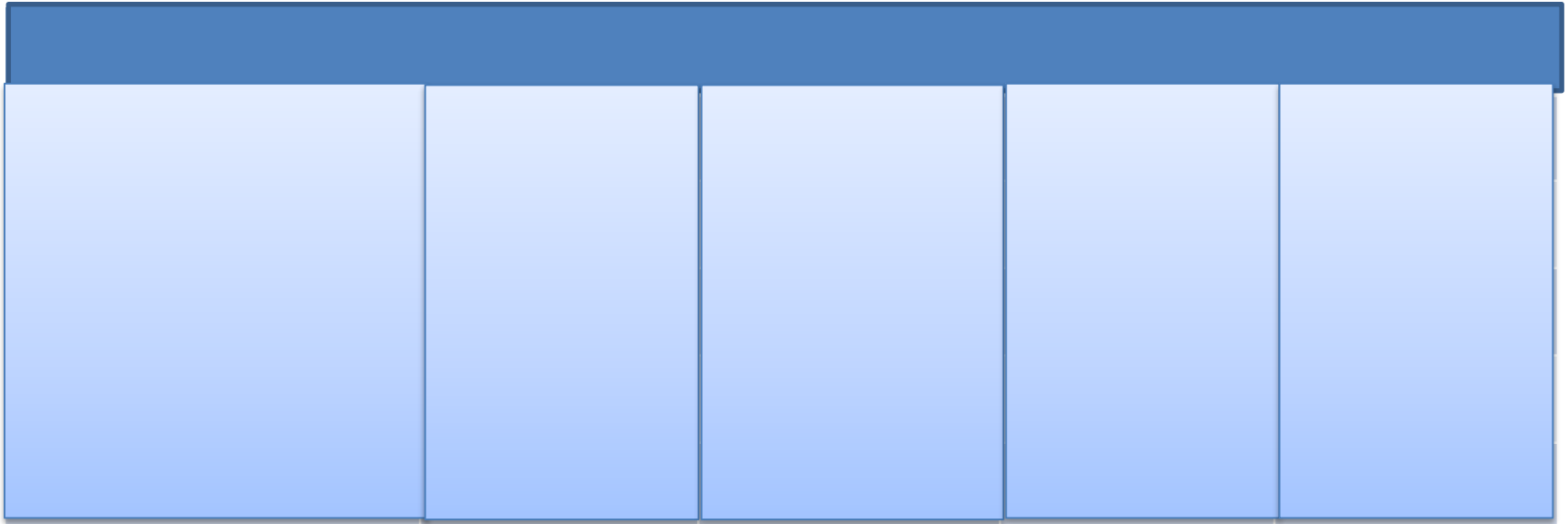Every language assigns grammatical gender to some of its nouns based on *animacy or biological sex.*

In addition, some languages assign gender semantically to nouns based on other semantic properties (*plants, tools, animals, mass nouns, etc.*).

Only the big picture questions remain:
- Q3: Why is gender always assigned semantically?
- Q4: What is the larger impact of this discovery?

Introduction to Inflection Class

<u>Inflection class</u>: another type of noun classification

Inflection Class, continued

Inflection class membership in Russian is not determined by any semantic property of the noun.

> *"Semantic features on a noun stem do not suffice to predict its inflection class, that is, none of the four inflection classes correlates unambiguously with a semantic property."*
> *(Alexiadou and Müller 2008)*

In fact, inflection class membership is never determined by meaning across languages.

Agreement

We saw earlier that the grammatical gender of a noun affects the form of words associated with the noun.

la *fourchette*
'the fork'

le *couteau*
'the knife'

The definite article agrees with the noun in grammatical gender.

Noun = Controller
Definite article = Target

Inflection class never behaves like this. There is no agreement in inflection class.

Agreement, continued

When a target & controller agree, they agree in a certain feature.

this dog

these dogs

The demonstrative (target) agrees with the noun (controller) in number (sg/pl)

The number feature on the controller is meaningful but the number feature on the target is not.

Independent Hypothesis: Agreement in a feature F requires at least some potential controllers to be meaningful for that feature.
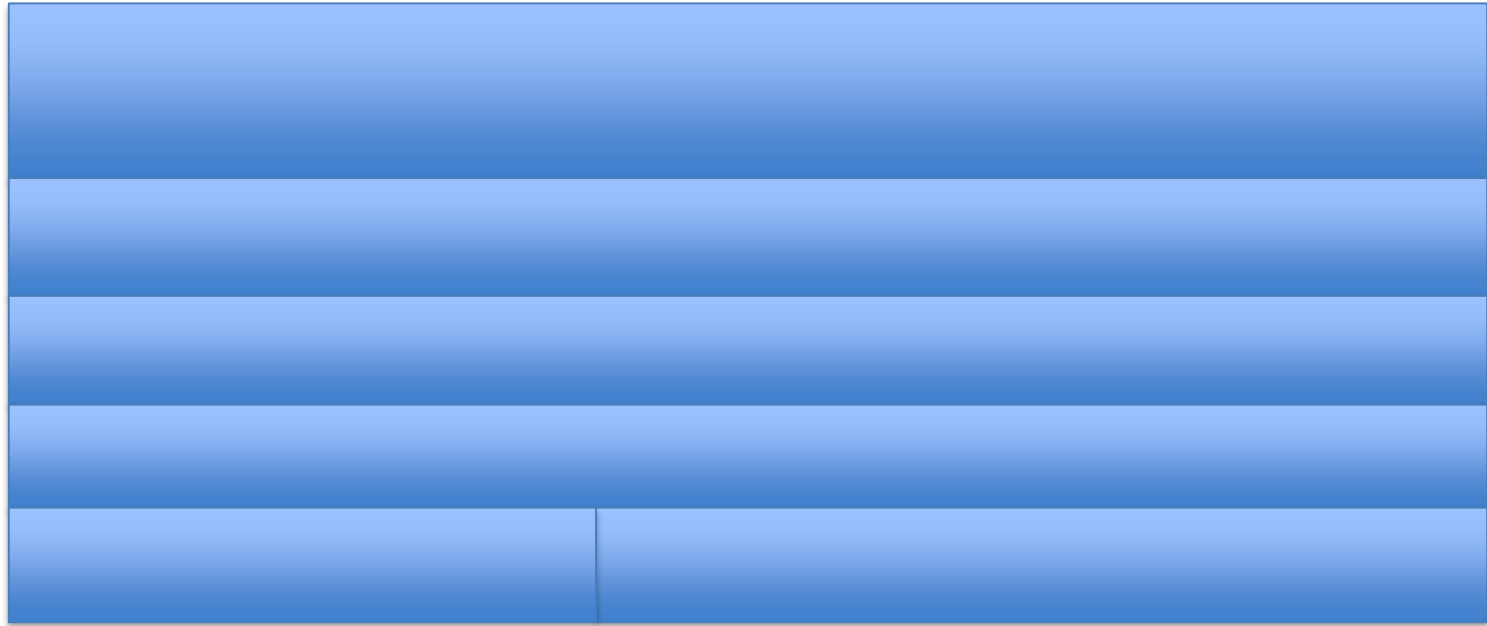
Why Gender Assigned Semantically?

Answer: gender involves agreement, and agreement in a feature (gender) requires that feature to be meaningful on some nouns

Two types of noun classification:

Gender	Inflection Class
• Involves agreement • Meaningful for at least some nouns	• No agreement • Not meaningful on any noun

Noun Classification in Language

xil	naj	xuwan	no7	lab'a	**Jacaltec**
saw	CL.MALE	John	CL.ANIMAL	snake	**(Mayan)**

'John saw the snake.'

Gender and Human Cognition

Assumption: Language is a cognitive capacity.

- It is learned during a critical period
- Speakers are largely unconscious of their ability to use it
- Yet speakers use it very well
- It can be impaired by injury to the brain

Thus: the semantic properties that are used to assign gender are important to human cognition.

Gender and Human Cognition: Key Questions

Why are **these** properties important and not others (color, flammability, etc.)?

Are these properties distinguished by infants and children? By non-human primates? By animals?

Does this result match with other research on semantic properties in human cognition?

Gender and Human Cognition

<u>Hypothesis:</u> conceptual knowledge is organized in the brain by the properties used to assign gender.

<u>Evidence</u>: brain injuries can selectively impair the ability to recognize entities with these properties
- impairment for animate entities
- impairment for animals
- impairment for plants

TBD: impairment just for humans? Just for male/female entities? Mass nouns? Abstract nouns?

Conclusions

Every language assigns grammatical gender to at least some of its nouns based on their semantic properties.

These properties include biological sex or animacy as a minimum, and can also include plants, tools, animals, mass nouns, etc.

Conclusions, continued

Answer to Question 3:
Gender is assigned semantically to at least some nouns because gender is defined by agreement.

Answer to Question 4:
The semantic properties used to assign grammatical gender may correspond to the categories of conceptual knowledge in the brain.

Thank you!

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