

# Canonical Typology

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# Outline

1. Overview of Typology

2. Overview of Canonical Typology

3. Applications: Morphological Paradigms

4. Final Remarks on Canonical Typology

5. Use for Rosetta Stone

6. Questions & Discussion

Part I

# Introduction to Typology

# What is typology?

- \* Cross-linguistic patterns and universals
- \* Explain both the unity and diversity of language
- \* Universals – big topic from the 1960s onward:
  - \* *Joseph Greenberg* – an empirical method
  - \* *Noam Chomsky* – logico-deductive method
- \* *Joseph Greenberg (1963)* – ‘Some universals of grammar with particular reference to the order of meaningful elements’
- \* *Noam Chomsky (1957)* – *Syntactic Structures*

# Types of Universals

- \* Statistical
  - \* Most languages have nasal consonants
  - \* In the majority of cases, a language with SOV word order will have *postpositions*
- \* Implicational
  - \* *Trial number > dual number*
  - \*  $1^{\text{st}} > 2^{\text{nd}} > 3^{\text{rd}} > \text{proper name} > \text{human} > \text{animate} > \text{inanimate}$
- \* Absolute
  - \* All languages have consonants and vowels(?)
  - \* All languages have nouns and verbs(?)

# Problems in Typology

- \* **Too much data** – statistical methods and quantitative modeling are useless (or worse, misleading) without strong theory
- \* **Too little data** – thousands of languages remain undocumented
- \* **Gradience** – fuzzy categories
- \* **Absolute universals** – their existence and where to find them
- \* **Categories & Subcategories** – criteria for categorization
- \* **Correspondence** – crosslinguistic categories

# The Correspondence Problem

## Cross-Linguistic

- \* Are Spanish *articles* the same thing as English articles? (Ionin & Montrul 2010)
- \* *Lions are dangerous.*
- \* *The lions are dangerous.*
- \* *These lions are dangerous.*
- \* \**Leones son peligrosos.*
- \* *Los leones son peligrosos.*

## Language-Internal

- \* How many categories are represented here?
- \* *m-tu* ‘person’
- \* *m-tu m-refu* ‘tall person’
- \* *m-tu m-baya* ‘bad person’
- \* *m-refu* ‘tall person’
- \* *m-baya* ‘bad person’
- \* *m-tu hodari* ‘brave person’
- \* \**hodari* ‘brave person’

# It Gets Worse!

## Category-Internal

- \* Do each of these words correspond to the same category?
- \* The **tall** teacher...
- \* The teacher is **tall**.
- \* The **former** teacher...
- \* \*The teacher is **former**.
- \* I saw the **car** yesterday.
- \* \*I saw the **Mt. Rushmore** yesterday.
- \* I saw the **one-and-only Thomas**

Jefferson today.

## Word-Internal

- \* Do each of these instances correspond to the same word?
- \* I put the money in the **bank**.
- \* This is **bank** money.
- \* I **bank** with Wells Fargo.
- \* The baby is **sleeping**.
- \* The **sleeping** baby.
- \* The baby loves **sleeping**.



# Gradience

\* Are numbers in Russian nouns or adjectives? (Corbett 2004)

Properties of Adjectives	odin 1	dva 2	tri 3	pjat' 5	sto 100	tysjača 1,000	million 1,000,000
1. Agrees with noun in syntactic number	+	-	-	-	-	-	-
2. Agrees in case in the direct case	+	-	-	-	-	-	-
3. Agrees in gender	+	(+)	-	-	-	-	-
4. Agrees in animacy	+	+	+	-	-	-	-
5. Has no semantically independent plural	+	+	+	+	(-)	-	-
6. Fails to take agreeing determiners	+	+	+	+	+	-	-
7. Does not take noun in genitive plural throughout paradigm	+	+	+	+	+	±	-

Part II

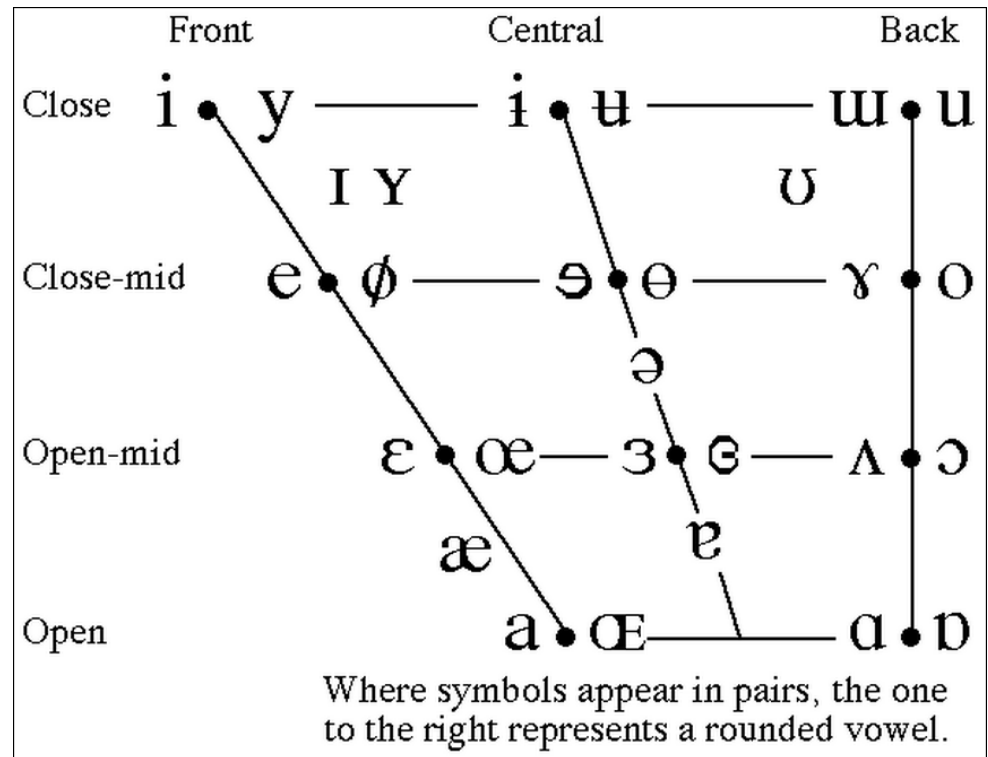
# Introduction to Canonical Typology

# What is canonical typology?

- \* Greville G. Corbett, Surrey Morphology Group
- \* A method for classifying and categorizing languages or specific structures within languages (i.e. a certain way of doing typology)
- \* Normal approach: necessary and sufficient properties define a category
  - \* Subcategorization based on non-essential properties
- \* Canonical approach: define the range of possible ways a certain phenomenon can be realized
  1. Define the most canonical instance
  2. Categorize different realizations based on how they deviate from the canonical

# Canonical Vowels

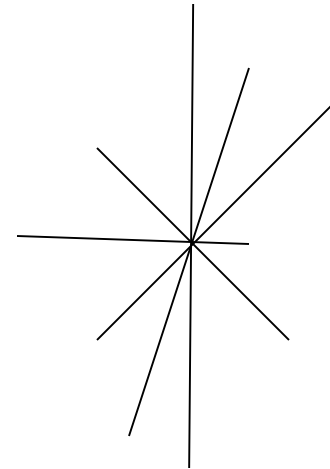
- A continuous *theoretical space* of possibilities
- Clearly-defined *logical endpoints* to that space
- Canonical point defined by more than one *criterion* (height, frontness)
- Criteria *converge* on the canonical point



# Defining the Canonical Point

Canonical phenomena are canonical in the same way  
Noncanonical phenomena are noncanonical in many different ways

1. Start with *recognizable* cases that we all agree on
2. Establish the criteria of more and less canonical
3. Establish general *principles* which guide the criteria
4. Use the intersection of the criteria to help define the canonical – the point they *converge* on

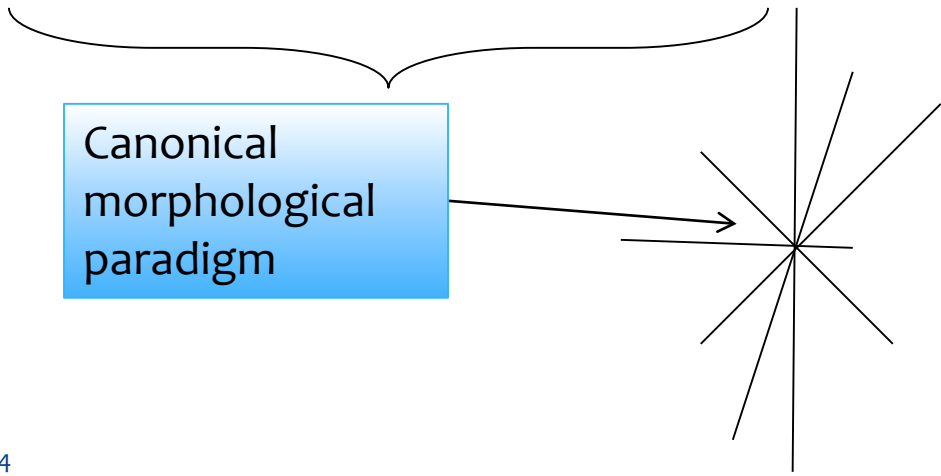


# Canonical Morphology

- \* Pretend that English had case marking on all its nouns
- \* Every slot in the *paradigm* has a unique form
- \* This is the canonical instance – completely regular and boring

	Singular	Plural
Nominative	DOG- <b>a</b>	DOG- <b>i</b>
Accusative	DOG- <b>e</b>	DOG- <b>u</b>
Dative	DOG- <b>o</b>	DOG- <b>y</b>

Canonical  
morphological  
paradigm



# Noncanonical Morphology

## Syncretism

	Singular	Plural
Nominative	DOG- <b>a</b>	DOG- <b>i</b>
Accusative	DOG- <b>e</b>	DOG- <b>u</b>
Dative	DOG- <b>o</b>	DOG- <b>u</b>

## Suppletion

	Singular	Plural
Nominative	GOOSE- <b>a</b>	GEESE- <b>i</b>
Accusative	GOOSE- <b>e</b>	GEESE- <b>u</b>
Dative	GOOSE- <b>o</b>	GEESE- <b>y</b>

One way of being noncanonical

Another way of being noncanonical

Part III

# Canonical Typology in Action: Morphological Paradigms



# Defining the Theoretical Space: Deviation Within a Paradigm

## Deviation in Structure

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	y-DOG

## Deviation in Stem

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DEG-y

## Deviation in Affix

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DOG-u

# Deviation Within a Paradigm: Structure (*Periphrasis*)

## Nankina

	Singular	Dual	Plural
1 <sup>st</sup>	<i>no</i>	<i>nit</i>	<i>nin</i>
2 <sup>nd</sup>	<i>go</i>	<i>git</i>	<i>gi</i>
3 <sup>rd</sup>	<i>nu</i>	<i>nu yatnu</i>	<i>nu κλνυ</i>

Spaulding & Spaulding (1994: 106)

# Deviation Within a Paradigm: Stem (*Suppletion*)

## Chitimacha

	cuw-/dut- 'to go'	Singular	Plural
Normal Verbs	First Person	<i>quc - ik</i>	<i>quc - naka</i>
	Non-First Person	<i>quc - i</i>	<i>quc - na</i>

	cuw-/dut- 'to go'	Singular	Plural
Suppletive Verbs	First Person	<i>cuy - ik</i>	<i>dut - naka</i>
	Non-First Person	<i>cuy - i</i>	<i>dut - na</i>

Swadesh (1939: 39)

# Deviation Within a Paradigm: Affix (*Syncretism*)

## Swahili

Object <i>Infixes</i>	Singular	Plural
1 <sup>st</sup>	-ni-	-tu-
2 <sup>nd</sup>	-ku-	-wa-
3 <sup>rd</sup>	-m(w)-	-wa-

Wilson (1970: 112)

*Na-wa-ambia*

‘I tell you (pl.)’

‘I tell them’

# Defining the Theoretical Space: Deviation Across Words (*Defective Paradigms*)

## Normal Word

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DOG-y

## Normal Word

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DOG-y

## Defective Word

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	

# Deviation Across Words: Defective Paradigms

## English *plurale tantum*

Normal Word

<i>dog</i>	<i>dogs</i>
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Normal Word

<i>cat</i>	<i>cats</i>
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Defective Word

$\emptyset$	<i>news, pants, scissors</i>
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# Defining the Theoretical Space: Deviation Across Words (*Deponency*)

## Normal Word

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DOG-y

## Normal Word

	Singular	Plural
NOM	DOG-a	DOG-i
ACC	DOG-e	DOG-u
DAT	DOG-o	DOG-y

## Deponent Word

	Singular	Plural
NOM	DOG-i	←
ACC	DOG-u	←
DAT	DOG-y	←

# Deviation Across Words: Deponency

## Regular Latin Verbs

'love'	Active	Passive
1s	amō	amor
2s	amās	amāris
3s	amat	amātur
1p	amāmus	amāmur
2p	amātis	amāmini
3p	amant	amantur

## Deponent Latin Verbs

'admire'	Active	Passive
1s	mīror	-
2s	mīrāris	-
3s	mīrātur	-
1p	mīrāmur	-
2p	mīrāmini	-
3p	mīrāntur	-



Part IV

# Evaluation

# Advantages of Canonical Typology

- \* Directs research in the right area
  - \* Define the theoretical space, then go look for data
  - \* Teach the canonical first, then the noncanonical
- \* Bottom-up formation of definitions

# Theoretical Problems

- \* What is meant by canonical?
  - \* NOT: usual, normal, frequent, expected, unmarked, prototypical
  - \* Simple? Regular? *Functionally* ideal? Cognitively easy? Based on Latin?
- \* Where do the criteria come from?
  - \* Are they based on intuition alone?
  - \* Can they be logically deduced?
  - \* Are they empirical, making the approach circular?

Part V

# Canonical Typology & Rosetta Stone

# ReHASH

## Meaning v. Function

**Canonical** – Meaning and function line up

**Noncanonical** – Meaning and function are different

	Reference	Modification	Predication
Object	<u>Noun</u> a house	<u>Possessive</u> my sister's car	<u>Predicate Nominal</u> book the suspect
Property	<u>Compound Noun</u> tennis shoes	<u>Adjective</u> green shoes	<u>Predicate Adjective</u> I am happy
Action	<u>Gerund</u> I like running	<u>Participles</u> the man running down the street	<u>Verbs</u> I am running

# Templatability

## Template for the Canonical

- \* Can't predict *features* (case, number marking) or *feature values* (sing/dual/pl vs. sing/pl)
- \* Can template for *possible* features
- \* Can design templates for the canonical instance
- \* General strategy: Overtemplate

## PLA for the Noncanonical

- \* Remove unneeded features or feature values
- \* Add PLA for tricky cases (*overdifferentiation*, *deponency*)
- \* General strategy: Remove unneeded sections of the template; add new content for noncanonical cases

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