

#### On some linguistic wonders of NYC

#### Daniel Kaufman

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#### ELA background

Three case studies
Garifuna auxiliaries
Asking questions in Ikota
The peculiar case of Wakhi

Conclusion

### **ELA Background**

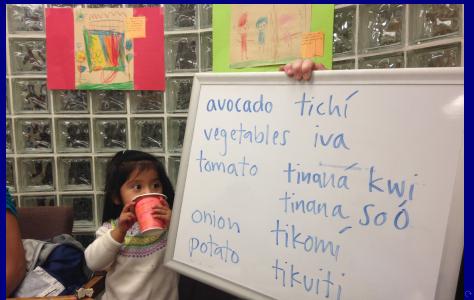


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#### The fieldstation



## Mother-tongue + English literacy



# Facilitating speaker-driven documentation



## Indigenous radio



### Pedagogical materials



#### Promotion through performance: Tontemboan



Mai cuman-ange, e wa'ilan Kasuruan, Apo' nimema' in tana'! Come eat, o mighty god, ancestor who has cultivated the earth!

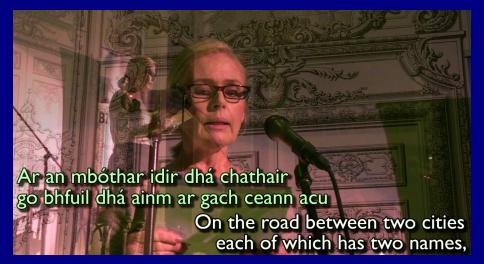
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# Promotion through performance: Mustang



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## Promotion through performance: Irish



Promotion through performance: Nahuatl



Uan tipakiltia ikan motlatzotzontli uan motlahuiltzin Nik tlakatia ipan moaltepemili.

You gladden them with your music and your light. Because they are reborn on your land.

## A sample of endangered languages of NYC

Language	Area	Family	# of speakers
Livonian	Latvia	Finno-Ugric	1
Mahongwe	Gabon	Bantu	1,000
Tsou	Taiwan	Austronesian	2,130
Mixtec	Mexico	Oto-Manguean	_
Amuzgo	Mexico	Oto-Manguean	23,000
Wakhi	Pakistan & Tajikistan	East Iranian, Indo-European	35,000
Shughni	Tajikistan	East Iranian, Indo-European	35,000
Me'phaa	Mexico	Oto-Manguean	37,500
Mamuju	Indonesia	South Sulawesi, Austronesian	60,000
Masalit	Darfur, Sudan	Nilo-Saharan	60,900
Totonac	Mexico	Tepehua-Totonacan	120,000
Beria	Darfur, Sudan	Nilo-Saharan	160,000
Garifuna	Central America	Arawakan	195,000
Neo-Assyrian	North Iraq	Semitic	219,000
Kabardian	S. Russia	NW Caucasian	500,000
Ossetian	S. Russia	East Iranian, Indo-European	550,000

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## Where do NYC's threatened languages come from?

- ▶ Mexico
- ▶ Nepal
- ▶ Guatemala
- ► Sudan
- ► Central Asia + Caucasus
- ▶ Indonesia
- ► (among many other places)



## Mapping NYC's languages

From Joshua Jelly-Schapiro & Rebecca Solnit. forthcoming. *Cultural Atlas of NYC*.

Cartographer: Molly Roy



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Basa Bali (Balinese) العربية (Arabic)
                                                                              LaGuardia Airport
                Bahasa Indonesia (Indonesian)
                Batak • Cara Jawa (Javanese) босански (Bosnian)
Матији 1777 771, Г. (Sundanese)
Топтетвоап Bahsa Acèh (Acehnese)

Сагасо Еаst Elmb
         Minangkabau ελληνικά (Standard Greek)
Basa Ugi (Bugis)
       Basa Ugi (Bugis) κρητική διάλεκτος (Cretan) કૃωθψ (Tamil)
Basa Mathura (Madurese) Athenian नेपाली (Nepali) Astoria ΒΙνα
Sasak • Basa Mangkasara' (Makassar)
• Dansk (Danish) • Thakali नम् क्यो (Gurung)
Norsk (Norwegian) Tagalog (Filipino) Chantyal लोमान्थाङ (Mustang) North Corona
     Português (Portuguese) Chavacano (Urdu) (Urdu) (Sindhi) Nomndaa (Amuzgo) Magyar (Hungarian) Ibaloi Iloko (Ilokano) (Waray-Waray ينلك Xik zik (Wakhi) Mam Nahuatl المنا
                                              lloko (llokano), xik zik (Wakhi) Mam Nahuatl Ixil Pangasinan Jackson Heights K'iche' Nuu Savi (Mixteco)
 Svenska (Swedish) Ibanag
                         Bisaya (Cebuano) Kapampangan 4 Corona Me'phaa (Tlapanec ranaw (Maranao) Kinaray-a Zapoteco Español (Spanish)
                                                                                                 Corona Me'phaa (Tlapaneco)
                  Mëranaw (Maranao)
<sup>49th</sup> Ave Türkçe (Turkish) 3
                                                                                               Kichwa
                                                                                                                 Cuicateco Trique
                                                  Woodside
                                                                                                      Quechua
                                                                           র্নিন্নের (Tibetan)
         român (Romanian) Sunnyside
                                                                                                            Totonaco
                                                                                                                             Mazateco
                                                                       ภาษาไทย (Thai) Tepehua • Tsotzil
                  Հայերէն (Armenian)
                                                                                    Elmhurst Kaqchik'el
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#### Three case studies

A few ways in which three understudied languages contribute to our general understanding of human language:

Garifuna, Ikota and Wakhi

#### ► The Central American region



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▶ The Antilles



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- ► A shipwreck introduced a free West African population to the indigenous people of the island.

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#### The Antilles



- ▶ The island of St. Vincent in the Lesser Antilles was home to both Arawak and Carib-speaking peoples.
- ► A shipwreck introduced a free West African population to the indigenous people of the island.
- ► The island became a contested area as French and English colonial powers extended their reach.



# Aríhatina gasígamu 'I saw an armadillo.'



October 11, 2015

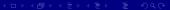
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- Aríhatina gasígamu 'I saw an armadillo.'
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Aríha-ti Daniel gasígamu see-3sg.msc Daniel armadillo 'Daniel saw an armadillo.'

Aríha l-umú-ti Daniel gasígamu see 3sg.msc-tran-3sg.msc Daniel armadillo 'Daniel saw the armadillo.'

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## Aríha-ti Daniel gasígamu

see-3sg.msc Daniel armadillo 'Daniel saw an armadillo.'

VERB AUX SUBJECT OBJECT

Aríha l-umú-ti Daniel gasigamu 3sg.msc-tran-3sg.msc Daniel armadillo 'Daniel saw the armadillo'

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# I will try to eat spinach



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# I will try [to eat→spinach]



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I [will
$$\rightarrow$$
[try $\rightarrow$ [to eat $\rightarrow$ spinach]]]



```
I [will→[try→[to eat→spinach]]] (English)
```



```
I [will\rightarrow[try\rightarrow[to eat\rightarrowspinach]]]
(English)
Aku [makan→bayam]
(Indonesian)
```



```
I [will→[try→[to eat→spinach]]]
(English)
Aku [makan→bayam]
(Indonesian)
Ani [oxel→tered]
(Hebrew)
```

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```
I [will \rightarrow [try \rightarrow [to eat \rightarrow spinach]]]
(English)
Aku [makan→bayam]
(Indonesian)
Ani [oxel→tered]
(Hebrew)
Imε [maja→mpochi]
(Ikota)
```

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I [will \rightarrow [try \rightarrow [to eat \rightarrow spinach]]]
(English)
Aku [coba→[makan→bayam]]
(Indonesian)
Ani [menase \rightarrow [lexol \rightarrow tered]]
(Hebrew)
Imε [manyeka→[ojaka→mpochi]]
(Ikota)
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```
I [will \rightarrow [try \rightarrow [to eat \rightarrow spinach]]]
(English)
Aku [akan→[coba→[makan→bayam]]]
(Indonesian)
Ani [hayiti \rightarrow [menase \rightarrow [lexol \rightarrow tered]]]
(Hebrew)
Im\varepsilon [me\tauaka\rightarrow [onyeka\rightarrow [ojaka\rightarrowmpochi]]]
(Ikota)
```

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► The linguist Joseph Greenberg noticed that the ordering of certain "heads" and their "complements" are often uniform within a language.



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- ► Heads select their complements and complements further specify what is denoted by the head.

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- ► The linguist Joseph Greenberg noticed that the ordering of certain "heads" and their "complements" are often uniform within a language.
- ► Heads select their complements and complements further specify what is denoted by the head.
- Categories thought to be in a head-complement relation:

VERB	$\rightarrow$ OBJECT PHRASE	eat →spinach
PREPOSITION	$\rightarrow$ noun phrase	to →New York
MATRIX VERB	$\rightarrow$ SUBORDINATE VERB	try →to eat
AUXILIARY	$\rightarrow$ VERB	will →eat

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VERB\rightarrow OBJECT PHRASEeat \rightarrowspinachPREPOSITION\rightarrow NOUN PHRASEto \rightarrowNew YorkMATRIX VERB\rightarrow SUBORDINATE VERBtry \rightarrowto eatAUXILIARY\rightarrow VERBwill \rightarroweat
```

Head-final orderings:

```
OBJECT PHRASE\leftarrow VERBspinach \leftarrow eatNOUN PHRASE\leftarrow POSTPOSITIONNew York \leftarrow toSUBORDINATE VERB\leftarrow MATRIX VERBto eat \leftarrow tryVERB\leftarrow AUXILIARYeat \leftarrow will
```

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► Some of these correlations are stronger than others. One of the strongest was:

Verb ↔ Aux : Object ↔ Verb

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$$Verb \leftrightarrow Aux : Object \leftrightarrow Verb$$

There was in fact no clear counter-example with an inflected auxiliary.

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- ▶ But this is exactly the pattern that Garifuna breaks:

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Some of these correlations are stronger than others.
 One of the strongest was:

$$Verb \leftrightarrow Aux : Object \leftrightarrow Verb$$

- There was in fact no clear counter-example with an inflected auxiliary.
- But this is exactly the pattern that Garifuna breaks:

```
[[Aríha ←l-umú-ti] →gasígamu]
see AUX armadillo
'He saw the armadillo.'
```

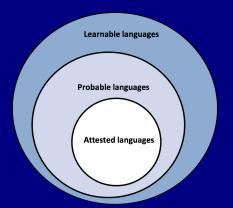
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► Linguists might have thought that Verb-Aux-Object was an impossible order were it not for Garifuna.



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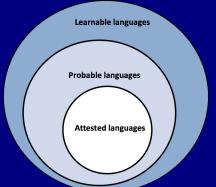
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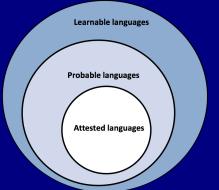
The fact that it is possible but unique underscores the distance between attested languages and learnable languages.



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► Linguists might have thought that Verb-Aux-Object was an impossible order were it not for Garifuna.

The fact that it is possible but unique underscores the distance between attested languages and learnable languages.



The strongest conclusion is that the word order correlations discovered by Greenberg are not a hard-wired part of the human language faculty but rather due to something else.

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# Ikota background

► A Bantu language of Gabon estimated to have roughly 30,000 speakers.



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- ► A Bantu language of Gabon estimated to have roughly 30,000 speakers.
- Understudied and marginalized within Gabon.



## Ikota background

- ► A Bantu language of Gabon estimated to have roughly 30,000 speakers.
- Understudied and marginalized within Gabon.
- ► Few speakers in the United States





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► No movement, as in Chinese:

你吃什么? Nǐ chī shénme? you eat what?

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► No movement, as in Chinese:

你吃什么? Nǐ chī shénme? you eat what? Movement of question word to the beginning of the sentence, as in English: John ate beans. What did John eat \_\_\_?

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No movement, as in Chinese:

> 你吃什么? Nǐ chī shénme? you eat what?

Movement of question word to the beginning of the sentence, as in English: John ate beans. What did John eat \_\_\_?

► Movement of question word next to the verb: (Aghem, Ossetian, Basque)

Maria Alan-acc see.pst 'Maria saw Alan'

Alan-acc who see.pst 'Who saw Alan?'



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► In the vast majority of the world's languages, question words either stay where you would expect them (as in Chinese, Japanese, Turkish) or they move to the beginning of the sentence (as in English, German, Spanish, Arabic).

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- That is why the following Ikota pattern is so surprising,

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Izanga amokwa kreyon Izanga took pencil 'Izanga took the pencil'

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- That is why the following Ikota pattern is so surprising,

## Izanga amokwa kreyon Izanga took pencil 'Izanga took the pencil'

took pencil who 'Who took the pencil?'

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► Note that the Ikota pattern is **not** the same pattern which we find in English exclamative questions:

You ate WHAT?



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You ate WHAT?

▶ which is actually the Chinese **no movement** pattern.

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► Note that the Ikota pattern is **not** the same pattern which we find in English exclamative questions:

You ate WHAT?

- which is actually the Chinese no movement pattern.
- ► This is clear when we look at subject questions:

WHO said that?

but not,

\*\_\_\_ said that WHO?

(ロ) (回) (三) (三) (回) (回)

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Izanga e-nyamwa-ka imε yana ο-εlongwε Izanga will.help me tomorrow in-house 'Izanga will help me in the house tomorrow.'

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Izanga e-nyamwa-ka imε yana ο-εlongwε Izanga will.help me tomorrow in-house 'Izanga will help me in the house tomorrow.'

enyamwaka ime yana o-elongwe iza?
will.help me tomorrow in-house who
'Who will help me in the house tomorrow?'

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# Asking questions in Ikota

Izanga anyeka inyamwaka ime

Izanga tried to.help 'Izanga tried to help me.'

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```
Izanga anyeka inyamwaka ime
Izanga tried to.help me
'Izanga tried to help me.'
```

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____ Anyeka inyamwaka imε iza?

tried to.help me who
'Who tried to help me?'
```

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## Things are not so simple

▶ When we look at object questions, something extra turns up in the beginning of the sentence. Compare:

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## Things are not so simple

- ➤ When we look at object questions, something extra turns up in the beginning of the sentence. Compare:
- Bela aja mpochi alakol. Bela eats spinach at.school 'Bela eats spinach at school'

ロト(御)(注)(注) 注 りへぐ

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# Things are not so simple

- ► When we look at object questions, something extra turns up in the beginning of the sentence. Compare:
- Bela aja mpochi alakol. Bela eats spinach at.school 'Bela eats spinach at school'
- ya Bεla aja alakol indε?

  Bela eats at.school what

  'What is it that Bela eats at school?'

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# Things are not so simple

- ► When we look at object questions, something extra turns up in the beginning of the sentence. Compare:
- Bela aja mpochi alakol. Bela eats spinach at.school 'Bela eats spinach at school'
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  Bela eats at.school what

  'What is it that Bela eats at school?'
- ► It turns out that what Ikota is doing is more similar to (a) than (b).
  - a. [The one who] helped me is who?
  - b. \_\_\_\_ helped me who?

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- ▶ This is an interesting finding because *The one who helped me is who?* is an odd but fully grammatical sentence in English.
- ► It's conceivable that this pattern could replace a simpler pattern over time.
- ► Ikota still disproves the surface generalization that question words never gravitate towards the end of the sentence.
- ► The problem now becomes: Why does only one language in the world require a pattern for questions such as: The one who helped me is who?

Kaufman (QC & ELA)

# Wakhi background



# Wakhi background



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## Wakhi background



photo credit: Nazir Abbas

► An Iranic language sometimes classified as "Pamiri", spoken by roughly 58,000 people.

## Case systems: Latin

Case is assigned by verbs and adpositions to their complements as well as assigned "by position" to things like subjects and possessors.

Brutus venit.
Brutus.nom comes
'Brutus comes'

**Égo** Brutum video. 1sg.nom Brutus.acc see.1sg 'I see Brutus.'

Et tu, Brute! and you, Brutus.voc 'Even you, Brutus!' de Brutō about Brutus.ABL/DAT 'about/to Brutus'

**Brutī.**Brutus.gen
'belonging to Brutus'

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- Case seems to have a functional basis: it tells us how to interpret roles of noun phrases.
- Predictably, languages with rich case systems tend to allow free word order because there is little chance for misinterpretation.

### English

The dog bit John

- \*John the dog bit.
- \*Bit the dog John.

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English	Russian	
The dog bit John	rabotu vypolnil <mark>Sereža</mark> .	
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- ▶ It comes as a surprise then that Chomsky argued that the design of grammar has little to do with its role in communication.
- More specifically, avoiding ambiguity was not considered a major factor in the grammar of human languages.

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► NOMINATIVE-ACCUSATIVE

ERGATIVE

- ► NOMINATIVE-ACCUSATIVE
- Mary arrived.

- **▶** ERGATIVE
- Mary arrived.

Kaufman (QC & ELA) Wonders

- NOMINATIVE-ACCUSATIVE
- Mary arrived.
- ► Mary saw Lisa

- **▶** ERGATIVE
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Kaufman (QC & ELA)

Wonders

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October 11, 2015

Kaufman (QC & ELA) Wonders

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- man-ABS arrived Aux 'The man has arrived.'

Kaufman (QC & ELA)

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  - gizona-k mutila-Ø ikusi du
- man-erg boy-abs saw aux 'The man saw the boy.'

Kaufman (QC & ELA)

	1sg (I)	2sg (you)
NOMINATIVE	wuz	tu
OBLIQUE	maz	to/taw

► Wakhi has a rare split system

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NOMINATIVE WUZ tu
OBLIQUE maz to/taw

- Wakhi has a rare split system
  - ► NOM-ACC in the present tense

1sg (I) 2sg (you)

NOMINATIVE WUZ tU

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wuz=ş gefs-am 1sg.nom=prog run-1sg '1 run.'

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Kaufman (QC & ELA)

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Case distinguishes sBJ vs. OBJ

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1sg (I) 2sg (you) nominative wuz tu

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Case distinguishes sBJ vs. oBJ

▶ obleoble in the past tense

Kaufman (QC & ELA)

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OBLIQUE maz to/taw

- Wakhi has a rare split system
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wuz=ş gefs-am 1sg.Nom=prog run-1sg '1 run.'

wuz=ş to win-am 1sg.NoM=PROG 2sg.obl see-1sg '1 see you.'

Case distinguishes sBJ vs. OBJ

► OBL-OBL in the past tense

WUZ=m gefst-ɛ

1SG.NOM=1SG run.PST-PST

'I ran.'

1SG (I) 2SG (you)

NOMINATIVE wuz tu

OBLIQUE maz to/taw

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Case distinguishes sBJ vs. OBJ

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maz to wind 1sg.obl 2sg.obl see.pst 'I saw you'

Kaufman (QC & ELA)

Wonders

1SG (I) 2SG (you)

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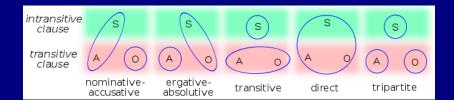
► OBL-OBL in the past tense
wuz=m gefst-ε
1sg.NOM=1sg run.pst-pst
'I ran.'

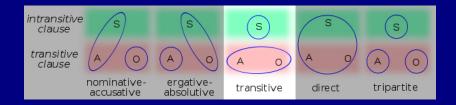
maz to wind
1sg.obl 2sg.obl see.pst
'I saw you'

► Case serves no function!

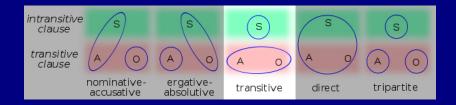
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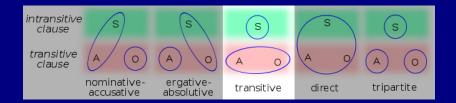




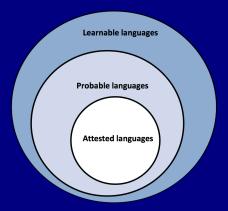
► Of all patterns that distinguish two cases, only the "double oblique" or "transitive" pattern is inherently non-informative.

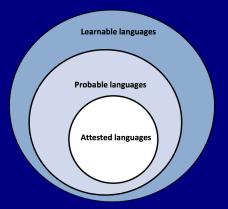


- Of all patterns that distinguish two cases, only the "double oblique" or "transitive" pattern is inherently non-informative.
- ► So anti-functional systems are rare but possible!

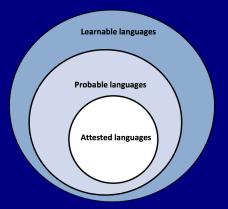


- ► Of all patterns that distinguish two cases, only the "double oblique" or "transitive" pattern is inherently non-informative.
- ► So anti-functional systems are rare but possible!
- An improbable but possible human language.



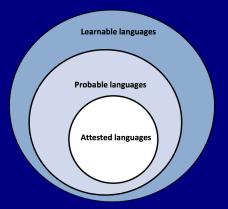


► Field linguists expand the innermost circles.



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- ► Typologists improve our understanding of the middle circle.

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- Field linguists expand the innermost circles.
- ► Typologists improve our understanding of the middle circle.
- ► Theoretical linguists try to account for the outside circle.

We've just looked at three extremely rare syntactic patterns encountered right here among the languages of New York City.



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  - With Garifuna and Ikota, we've seen patterns that are otherwise unattested.



- We've just looked at three extremely rare syntactic patterns encountered right here among the languages of New York City.
  - With Garifuna and Ikota, we've seen patterns that are otherwise unattested.
  - ► With Wakhi, we saw a pattern that makes a mess of many theories of case marking.

► Languages are a critical part of the collective heritage and identity of a people.



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  - ► For the speakers, losing a language means losing a rooted identity.

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  - For the speakers, losing a language means losing a rooted identity.
- ► Languages are also a feat of the human mind.
  - ► For linguists, there's still a long way to fully understand the limits of linguistic diversity.

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# Thanks for listening!

