# Variability of languages in time and space

## **Linguistic Typology - Morphology**

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# Serbian – Russian accents and tones

| Serbian | Russian |
|---|---|
| говòрити | говорить [govoriti] 'speak' |
| мухòловка | мухоловка [mucholovka] 'flytrap' |
| мêд | мёд [mjed] 'honey' |
| брôд | брод [brod] 'ford' |
| брȍда | брода [broda] 'ford', GSg |
| бра́да | борода [boroda] 'beard' |
| брâв | боров [borov] 'hog' |
| красòта | красота [krasota] 'beauty' |
| блȁто | болото [boloto] 'bog' |
| злâто | золото [zoloto] 'gold' |

| Serbian | Russian |
|---|---|
| беспòвратно | бесповоротно [bespovorotno] 'irreversibly' |
| мрȁз | мороз [moroz] 'frost' |
| крȍтки | кроткий [krotkij] 'gentle' |
| седòбради | седобородый [sedoborodyj] 'grey-bearded' |
| бȅзумни | безумный [bezumnyj] 'mad' |
| вȕчица | волчица [volčica] 'she-wolf' |
| бȕха | блоха [blocha] 'flea' |
| тȕсти | толстый [tolstyj] 'fat' |
| влáкно | волокно [volokno] 'fibre' |
| слȁби | слабый [slabyj] 'weak' |

1. **Translate from Russian into Serbian**:

город [gorod] 'town' _____

голова [golova] 'head' _____

колода [koloda] 'block' _____

безголовый [bezgolovyj] 'headless' _____

глотать [glotat'] 'swallow' _____

сестра [sestra] 'sister' _____

голорукий [golorukij] 'barehanded' _____

золоторогий [zolotorogij] 'gold-horned' _____

волк [volk] 'he-wolf' _____

грех [grech] 'sin' _____

вера [vera] 'belief' _____

2. **Translate from Serbian into Russian**:

врȁна   вȅдро   зȁмка   òбрезати

нȅбо   вȅдро   нȍски

# Syllable Structure

- **Syllable -** well-recognized unit in linguistic analysis which explains quite well the number of rhythmic units that will be perceived in a word or longer utterance. This number is usually equal to the number of vowels in the utterance

- Easy concept – if listeners differ in syllabifying particular words, it is generally the case that both possible syllabifications can be permitted

*pastry = past.ry* or *pas.try*

# Canonical syllable pattern

- Languages differ according to which syllable types are permitted, sequencing of segments within syllables
- **C** - consonant  **V** - vowel

# Simple syllable structure

## only CV

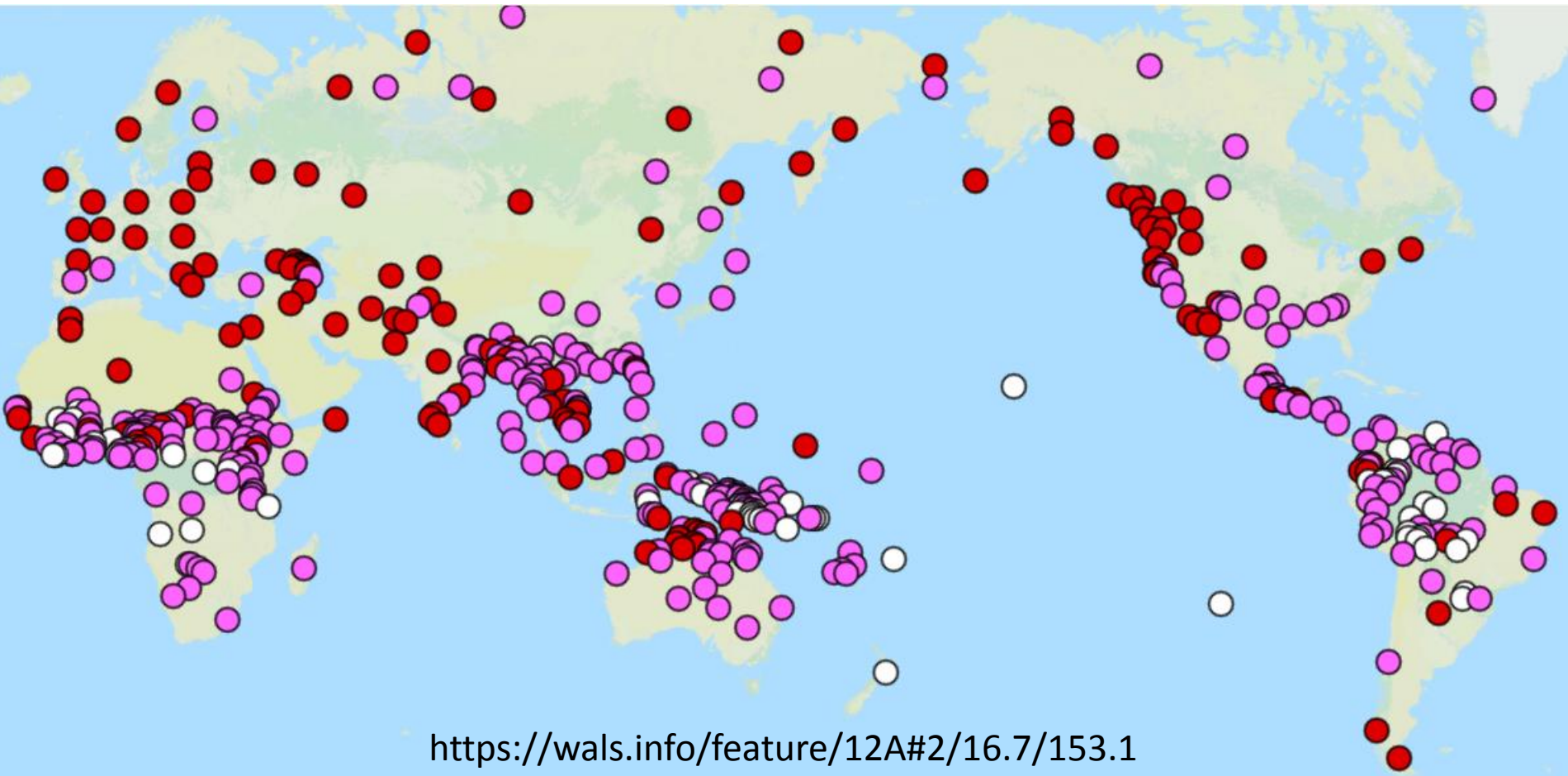## (C)V

it is permitted not to have an initial consonant

Mba    Congo

Fijian

Papua New Guinea

Yareba

# Distribution in WALS

| Value | | Representation |
|---|---|---|
| ○ | Simple syllable structure | 61 |
| ● | Moderately complex syllable structure | 274 |
| ● | Complex syllable structure | 151 |
| | Total: | 486 |



https://wals.info/feature/12A#2/16.7/153.1

# Moderately complex syllable structure

## (C)V, CVC, CCV

strict limits on what kinds of combinations are permitted: The second of two consonants is commonly limited to being one of a small set belonging to either "liquids" (*r, l*) or "glides" ([w] in en. *wet*)
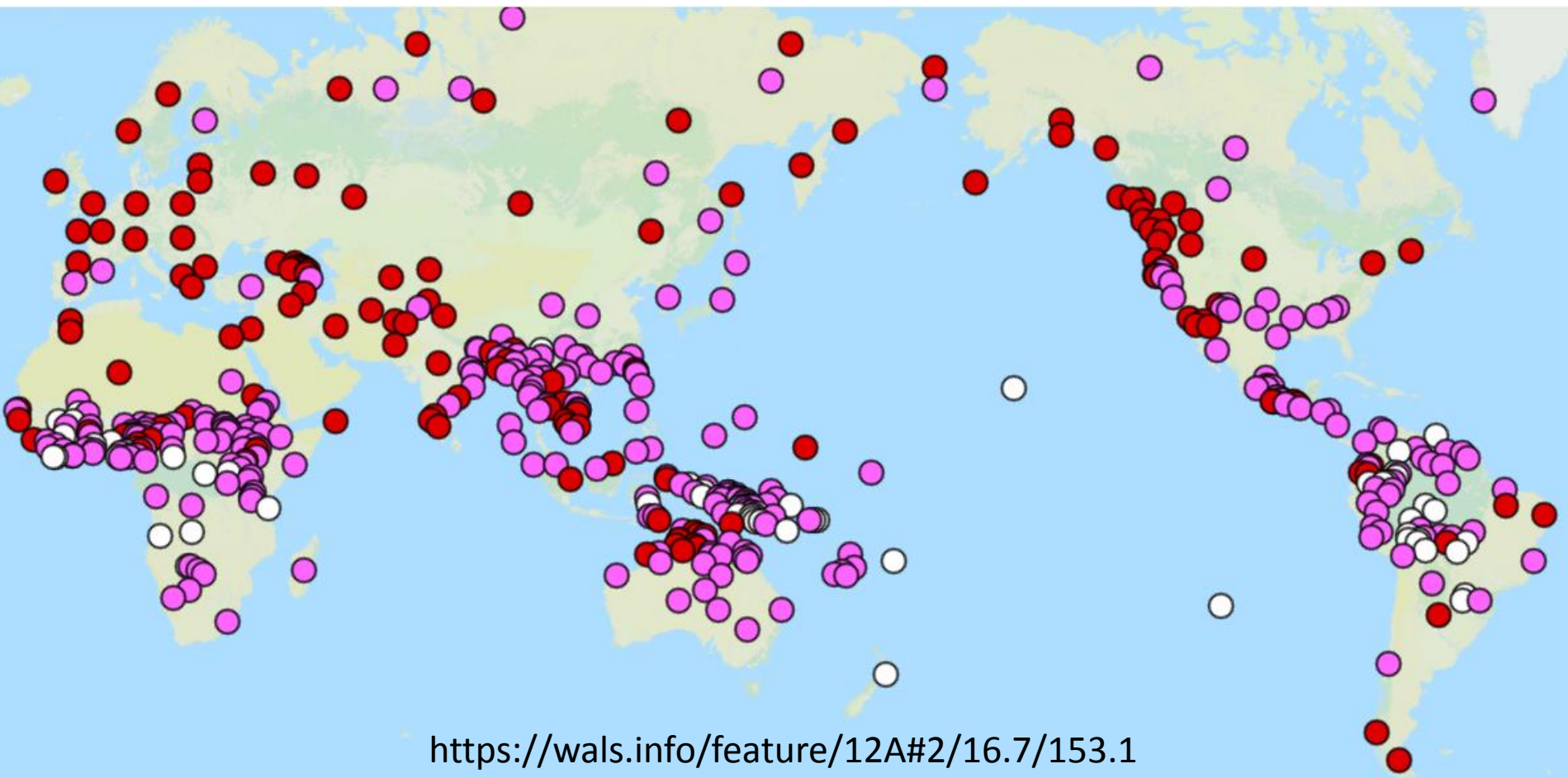
Darai          Nepal



the most elaborated syllable permitted is CCVC

/bwak/     '(his) father'

the only possible second consonant in a sequence of two is /w/

# Distribution in WALS

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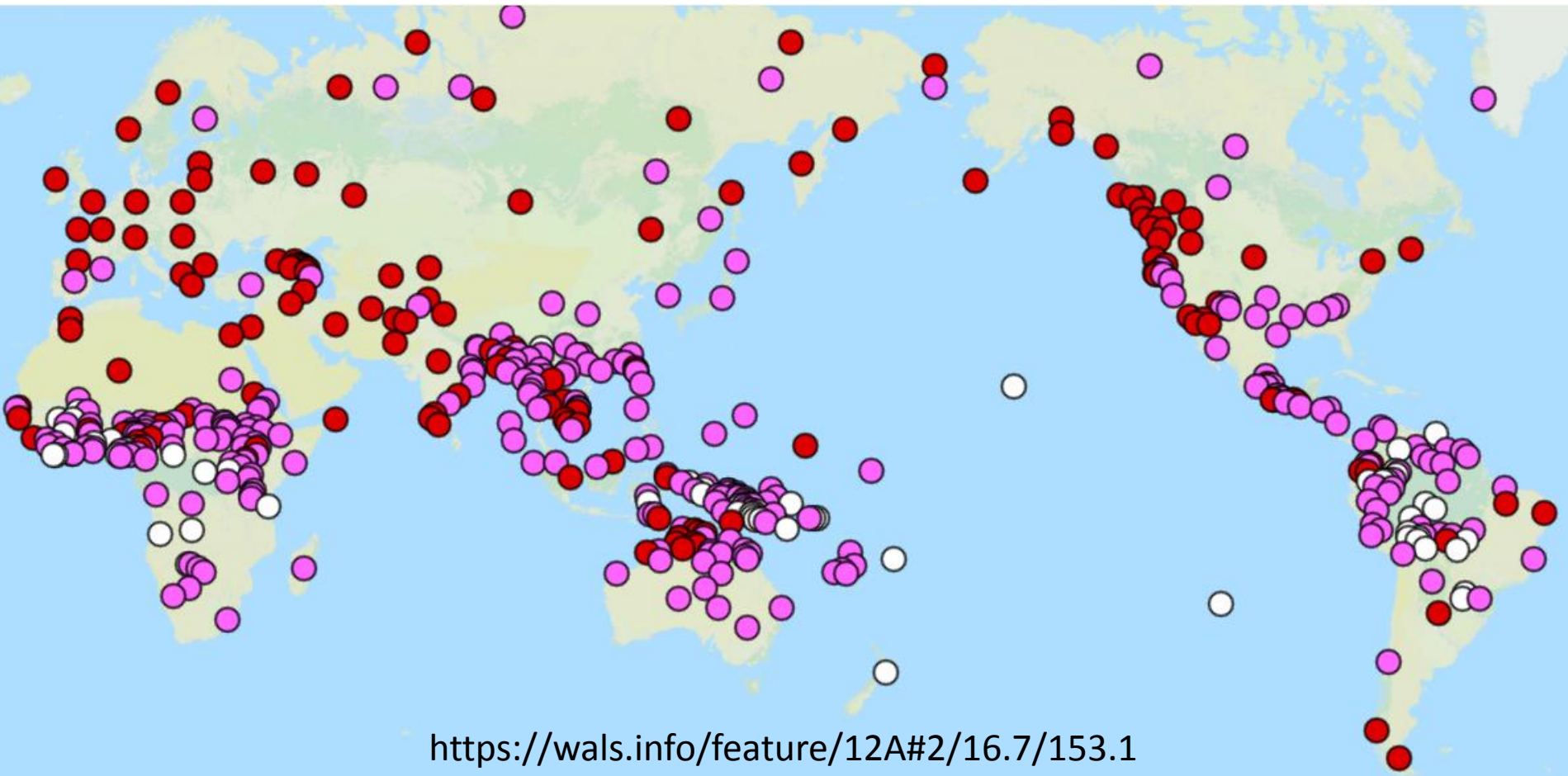

https://wals.info/feature/12A#2/16.7/153.1

# Complex syllable structure

- English -  (C)(C)(C)V(C)(C)(C)(C) –
  *strengths* /stɹɛŋkθs/
  *texts* /tɛksts/

# Distribution in WALS

| Value | | Representation |
|---|---|---|
| ○ | Simple syllable structure | 61 |
| ⬤ | Moderately complex syllable structure | 274 |
| ⬤ | Complex syllable structure | 151 |
| | Total: | 486 |



https://wals.info/feature/12A#2/16.7/153.1

# Correlations

- small consonant inventories <-> simple syllable structure

- large consonant inventories <-> complex syllable structures

# Given words in Japanese borrowed from English

redzonansu, oputimisuto, pen, endzin, medo in dz'apan, janki, noto-bukku, supu, n'ujoku-

tajmudzu, sekus'on, mota, dokuta, dzigudzagu, tikketto, indakus'on, s'okku, s'oppu,

burokku, baransu, uisuki, majru, ojru, surogan, rajburari, ibuningu, bandaridzumu, intab'u,

pasento, massadzi, ba, suta, atorakus'on, oba-koto, supido, dz'anaridzumu

1. **Find their English equivalents.**

2. **Translate to Japanese:**

| | | | |
|---|---|---|---|
| elevator | _____ | knob | _____ |
| seal | _____ | viktor | _____ |
| yard | _____ | clerk | _____ |
| bolt | _____ | lucky | _____ |
| cook | _____ | colour | _____ |
| trust | _____ | supper | _____ |
| crane | _____ | error | _____ |

*Note: dz – a single phoneme [dz], like c [ts] in Czech*

# Typology of grammar

- Classical typology sought a global characterization of the entire language according to a small number of typological characteristics. This holistic approach has proved to be too ambitious, and modern typologists practice partial typology, where specific phenomena or individual grammatical constructions are studied

- Over the past two decades, linguistic typology has been moving increasingly away from its original goal of classifying languages into ideal types that would be constrained by categorical universals.

- What has been emerging as a new paradigm instead starts from the distribution of structures in the world, asking "what's where why?"

# Typology of grammar

**Verbs**

- temporal categories

- aspect

- modality

- evidentiality

- causality

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- gender

# Turkish – Latin – English verbal grammar

| Turkish | | English |
|---|---|---|
| yazmışım | — | I've probably written |
| yazmışsın | — | You_sg have probably written |
| yazmış | — | He has probably written |
| yazmışsınız | — | You_pl have probably written |
| yazar | — | (he) writes |
| yazarlar | — | (they) write |

*Translate*:
*into Turkish*: scribo, They have probably written
into Latin: (he) writes,  yazarsınız
into English: scribitis,  yazmışlar

| Turkish | | Latin |
|---|---|---|
| çalışırım | — | laboro |
| çalışır | — | laborat |
| çalışırsın | — | laboras |
| çalışırlar | — | laborant |
| çalışırsınız | — | laboratis |
| yazarsın | — | scribis |

# Epistemic Possibility

| Value | Representation |
|---|---|
| 🔵 The language can express epistemic possibility with verbal constructions | 65 |
| 🔴 The language cannot express epistemic possibility with verbal constructions, but with affixes on verbs | 84 |
| 🟡 The language cannot express epistemic possibility with verbal constructions or with affixes on verbs, but with other kinds of markers | 91 |
| Total: | 240 |



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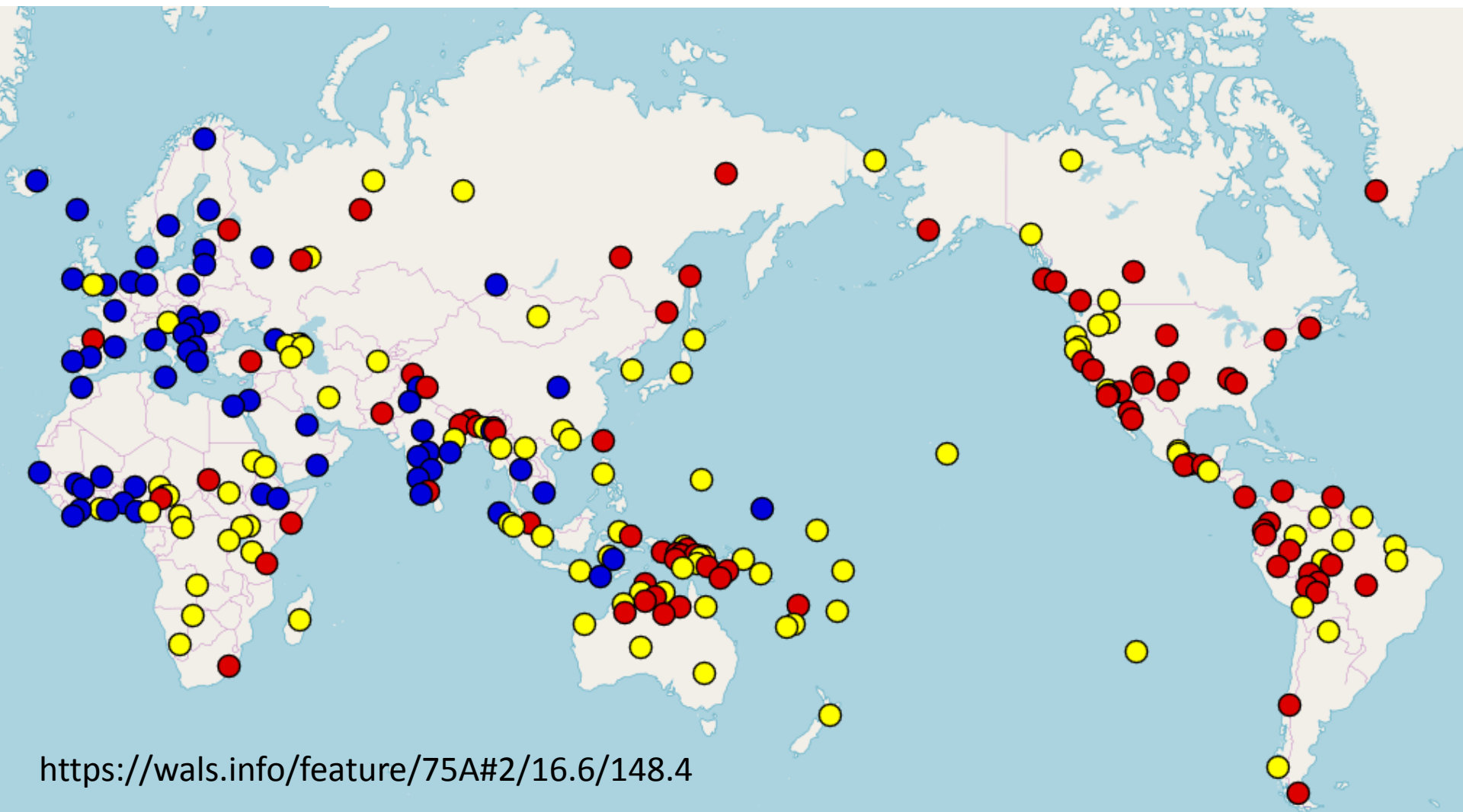
# Turkish – verbal grammar

| | | |
|---|---|---|
| yazmak | — | psát |
| yazılmak | — | psát se („Prahy" se piše s tvrdým *y*) |
| burmak | — | točit |
| burulmak | — | točit se (nít se točí kolem týče) |
| giymek | — | oblíkat |
| giyinmek | — | oblíkat se (kluk se oblíká) |
| sevişmek | — | milovat (Milují se) |
| görünmek | — | být vidět (Dům je vidět z dálky) |
| görüşmek | — | vidět se (Vidíme se často) |
| öpüşmek | — | líbat se |
| doğmak | — | rodit se |
| doğurmak | — | rodit |
| batmak | — | topit se |
| pişmek | — | vařit se |
| pişirmek | — | vařit |
| geçmek | — | přecházet |
| düşmek | — | padat |
| tutmak | — | držet |

Přeložte do čj:

tutunmak
tutulmak
düşürmek
geçirmek
öpmek
batırılmak
görülmek
görmek

# Evidentiality

- In Turkish: a distinction is made between witnessed past (the morpheme *-di* ) and unwitnessed (*-miş* )

(8) Turkish

a. *Ahmet*      *gel–di.*

    Ahmet       come–PST.DIR.EVD

    'Ahmet came.' (witnessed by the speaker)

b. *Ahmet*      *gel–miş*

    Ahmet       come–PST.INDIR.EVD

    'Ahmet came.' (unwitnessed by the speaker)

- evidential-type information through modal verbs

   in germanic languages - Dutch: *zouden*, Danish: *skulle*, German: *sollen*

- Maps in WALS https://wals.info/feature/78A#2/16.6/149.8

# Typology of grammar

**Nouns**

- agreement classes
- case
- ezāfe, head-marking
- number
- determination
- possessivity

# Nouns → Cases → Syntactic

- Subject (≈ ACTor in PDT)
- Object (≈ PATiens in PDT)
- indirect Object, oblique (≈ ADDRessee in PDT)
- other (≈ORIG, EFF in PDT, Instrument)

# Semantic Roles
## (Semantic cases, Thematic roles)

- Grammatical relations (subject, object, oblique…) are morphosyntactic, whereas semantic roles (agent, patient, instrument…) are conceptual notions.

- Semantic roles represent the dependency **type**

- Ch. Fillmore (1968, 1971)

# Nouns → Cases → Semantic

**Example:**

If, in some real or imagined situation, someone named *John* purposely hits someone named *Bill,* then *John* is the **AGENT** and *Bill* is the **PATIENT** of the hitting event. Therefore, the semantic role of *Bill* is the same (patient) in both of the following sentences:



*John*

- *John hit Bill.*
- *Bill was hit by John.*
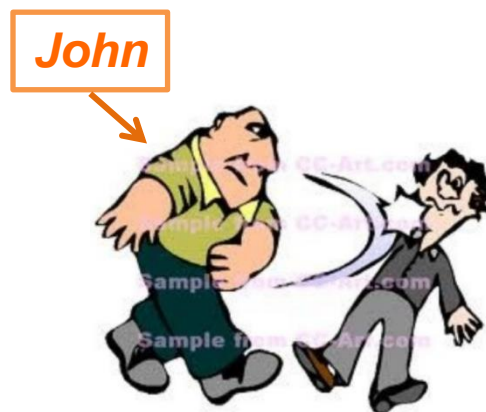
In both of the above sentences, *John* has the semantic role of agent.

# Semantic Roles

- Semantic roles do not correspond directly to grammatical relations.
- Notice what varying semantic roles a subject can play:

| Sentence | Grammatical relation | Semantic role |
|---|---|---|
| *Bob* opened the door with a key. | *Bob* = SUBJECT | *Bob* = AGENT |
| *The key* opened the door. | *The key* = SUBJECT | *The key* = INSTRUMENT |
| *The door* opened. | *The door* = SUBJECT | *The door* = PATIENT |

# Semantic Roles

**Agen**t: The 'doer' or instigator of the action denoted by the predicate.
**Patient**: The 'undergoer' of the action or event denoted by the predicate.
**Experiencer**: The living entity that experiences the action or event denoted by the predicate.
**Goal**: The location or entity in the direction of which something moves.
**Benefactive**: The entity that benefits from the action or event denoted by the predicate.

**Causer**: The referent which instigates an event rather than actually doing it.
**Source:** The location or entity from which something moves
**Instrument**: The medium by which the action or event denoted by the predicate is carried out.
**Locative**: The specification of the place where the action or event denoted by the predicate in situated.

…….

- **AGENS** (zprav. personální původce děje, důležitý rys kontroly děje) – _voják běží, stařec rozdělal oheň, sestra vypráví pohádku_ ale ne _vítr rozbil okno_
- **PATIENS** (objekt dějem zasažený) - _Kain zabil Abela_, ale také _Zeď spadla, kluk spí_
- **PROŽÍVATEL** nebo **EXPERIENCER** (účastník situace, který vnímá informaci) _Janičce se stýská, sestra Tě nepoznává, voják spatřil oheň_ atd.
- **STIMUL** (podnět nějaké reakce nebo vjemu) _Martina se bojí psů._
- **ADRESÁT** (účastník, kterém agens sděluje informaci) _Sestra mi vypráví pohádku._
- **RECIPIENT** (příjemce něčeho) _Babička dala Zuzce máslový dort._
- **BENEFICIENT** (účastník, v jehož /ne/prospěch se něco děje) _Pavel objednal Šárce pivo._
- **INSTRUMENT** (nástroj sloužící k provádění děje) _Šárka přitloukla hřebík kladivem._
- **LOKUS** (místo) _Náhle jsme se octli v háji._
- **DIREKCE** (směr) _Lenka přišla do redakce._

# Semantic Roles → Patient

- **Also known as:** *affected, undergoer*
- The entity undergoing a change of state or location, or which is possessed, acquired or exchanged, a person who experiences an event, the thing or person that is affected by an event

John hit *Bill.*

The dog ate *the meat.*

*Mary* became sad.

# Semantic Roles → **Patient**

- **The entity predicated with a state or location:**

*The door* is open.

*John* is at home.

- **The entity undergoing a change of state or location:**

He opened *the door.*

*The door* swung open.

He threw *the ball* across the yard.

*The ball* rolled off the table.

- **The entity which is possessed, acquired, or exchanged:**

John has *a new book.*

John bought *a new book.*

John gave Mary *a new book.*

# Semantic Roles → Recipient

**Recipients** are arguments that receive something (whether good or bad) in a situation.

*They gave the workers a raise.*

*I paid my landlord the rent.*

# Benefactive, Recipient, Addressee: Syntactic and Semantic Realization

- languages use cases to distinguish types
- but roles are combined
- Benefactive, Recipient, Addressee: mostly Dative, BUT
  - in Sanskrit Accusative is used for the Addressee
  - Dravidian languages: a special case for **Benefactive**, while Recipient + Addressee + Patient get Accusative

# Other examples of Semantic Roles → Causer

Referent which instigates an event rather than actually doing it.

*The rain destroyed the crops.*

# Semantic Roles → Comitative

relationship of "accompaniment": "in company with", "together with"

*John washed the car with Mary.*

**Estonian**   suffix "-ga"

| ja | Barber | rüüpa-b | koos | Balthasari-ga | sügava | sõõmu |
|----|--------|---------|------|---------------|--------|-------|
| and | Barber | drink-3.SG | together | Balthasar-COM | deep.GEN | mouthful.GEN |

*And Barber takes a sip together with Balthasar.*

**Hungarian**   suffix "-stul/-stül,"

| ruhá-stul | és | cipő-stül | feküd-t-em | az | ágy-ban |
|-----------|-----|-----------|------------|-----|---------|
| clothes-COM | and | shoe-COM | lie-PAST-INDEF.1.SG | the | bed-INE |

*I was lying in bed with my clothes and shoes on.*

**Chukchi**   circumfix

| а'ачек | ңытоскычат-гьэ | га-мэлгар-ма |
|--------|----------------|--------------|
| boy | ran.out-PERF | COM.PRED-gun-COM.PRED |

*The boy ran out with a gun*

# Semantic Roles → **Abessive**

the lack or absence of the marked noun

*John washed the car without Mary.*

- especially used in Uralic languages

**Finnish**

*raha* "money"
*rahatta* "without money"
*ilman rahaa* "without money"

**Hungarian**

*pénz* "money"
*pénztelen* "without money"
*haza* "home(land)"
*hazátlan* "(one) without a homeland"

# Locative Cases

| basic localization | case | some combinations in Hungarian |
|---|---|---|
| IN – inside | LOKATIVE=ESSIV E (where, LOC) | *Inessive* |
| | | *Elative* |
| APUD – near | | *Illative* |
| SUB – under | ABLATIVE=ELATIVE (from where, DIR1) | *Superessive* |
| SUPER – over | | *Delative* |
| POST – behind | | *Sublative* |
| AD – on surface | LATIVE=DIREKTIVE (to where, DIR3) | *Adessive* |
| CIRKUM – around | | *Ablative* |
| ULTRA – far from | | *Allative* |

*Given Alutor words and their English translations:*

| | |
|---|---|
| kujŋətenək | near to the glass |
| raralqək | on the roof |
| raraɣiŋəŋ | into the basement |
| aŋqakin | from the sea |
| aŋqan | the sea |
| keŋən | the bear |
| keŋəlqəkin | from the bear |
| raralqən | the roof |
| kujŋəŋ | into the glass |
| keŋək | inside the bear |
| aŋqatenək | on the beach |

Alutor



*Translate into Alutor:*

the basement, inside the house, the glass,  from the roof, to the bear