

# Unifying the comparative analysis of tonal systems

WS24

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# Why compare tonal systems

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**motivation** We are interested in the diversity and **complexity** of tonal systems

**problem** to find a sufficient and informative set of features for adequate characterisation of this diversity

**result** which would allow to state universal tendencies of the tonal systems — the explanandum for the typology of tonal systems

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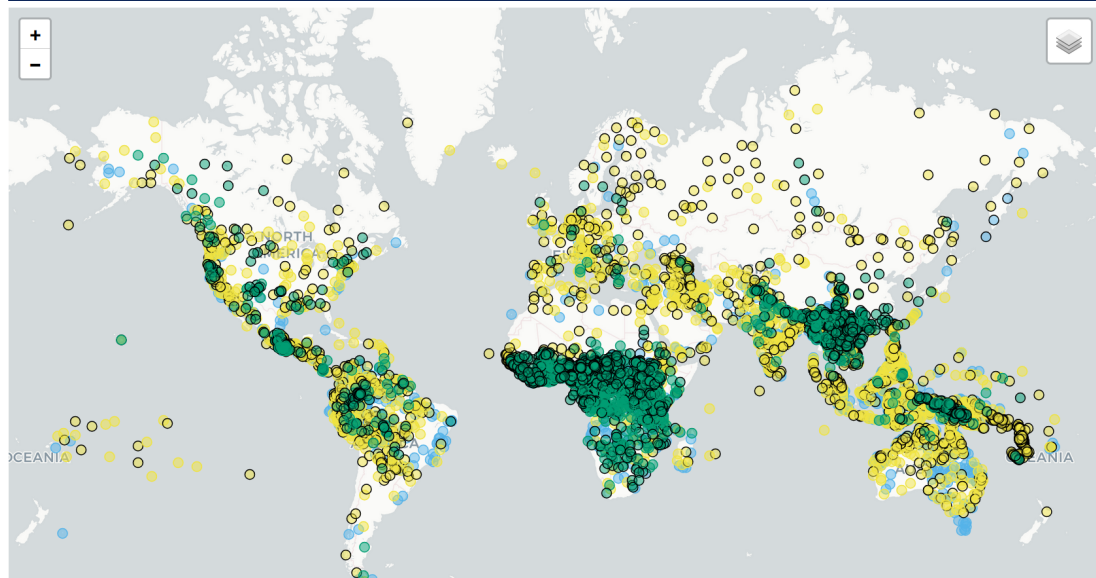
# Tone in WALS

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Three options:

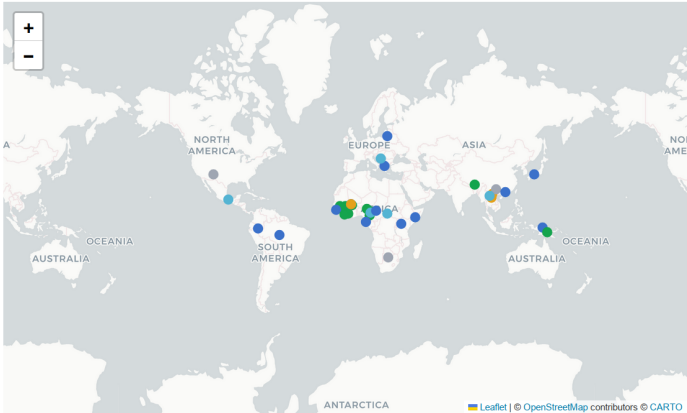
- No tone
- Simple tone system (a two-way basic contrast)
- Complex tone system (a more complex set of contrasts)

# ThoT project database



# ThoT project database

## Tonal system descriptions



### Description status

— sampled (3)

— promised (3)

— in progress (5)

— editing (13)

— ready (10)

| Language     | TDI(s) | TBU      | glottocode               | Description author | ThoT member in charge | Last modified | Status | view                 | Texts                 |
|--------------|--------|----------|--------------------------|--------------------|-----------------------|---------------|--------|----------------------|-----------------------|
| Jamsay Dogon | 0.96   | mora     | <a href="#">jams1239</a> | Dmitry Gerasimov   | dgerasimov            | 3 months ago  | ready  | <a href="#">View</a> | <a href="#">Texts</a> |
| Dom          | 0.69   | syllable | <a href="#">domm1246</a> | Dmitry Gerasimov   | dgerasimov            | 3 months ago  | ready  | <a href="#">View</a> | <a href="#">Texts</a> |

# ThoT project database

## Features of tonal systems

Analyze selected features

| Feature name   | Label     | Section            | Languages          | Values  |
|--|-----------|--------------------|--------------------|---|
| <input type="checkbox"/> TBU (Tone Bearing Unit)   | TBU       | 2. Prosodic units  | <a href="#">13</a> | mora / syllable                                 |
| <input type="checkbox"/> Language has a prosodic foot  | FOOT      | 2. Prosodic units  | <a href="#">13</a> | no / yes  |
| <input type="checkbox"/> Does prosodic foot play a role in establishing boundaries of tonal spans? | FTSPAN    | 2. Prosodic units  | <a href="#">10</a> | no / yes  |
| <input type="checkbox"/> Number of tonal levels  | NUMTL     | 3. Tonal inventory | <a href="#">12</a> | 2 / 3 / 4 / 5                                   |
| <input type="checkbox"/> Which tonal levels are present  | TL        | 3. Tonal inventory | <a href="#">12</a> | H L / H M L / H M L xL / xH H M L xL            |
| <input type="checkbox"/> Downdrift   | DOWNDRIFT | 3. Tonal inventory | <a href="#">10</a> | no / yes  |
| <input type="checkbox"/> Non-automatic downstep  | DOWNSTEP  | 3. Tonal inventory | <a href="#">10</a> | no / yes  |
| <input type="checkbox"/> Number of tonemes   | NUMTON    | 3. Tonal inventory | <a href="#">11</a> | 1 / 2 / 3 / 6                                   |
| <input type="checkbox"/> Minimal tonal span size (in TBUs)   | MINTSPAN  | 4. Tonotactics     | <a href="#">11</a> | 0.0 / 0.5 / 1.0                                 |
| <input type="checkbox"/> Maximal tonal span size (in TBUs)   | MAXTSPAN  | 4. Tonotactics     | <a href="#">11</a> | 2.0 / 3.0 / 4.0 / inf                           |
| <input type="checkbox"/> Tonal span prototypically coincides with what unit?                       | TD        | 4. Tonotactics     | <a href="#">11</a> | foot / mora / none / syllable / word            |
| <input type="checkbox"/> Which boundaries can appear   | TSPANBND  | 4. Tonotactics     | <a href="#">12</a> | mora syllable morpheme / mora syllable morpheme |



# ThoT project database

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`https://thot.huma-num.fr/db/`



# In search for comparative categories

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- c-categories (substance-based, not distribution-based) [Haspelmath 2010, 2018, 2020, 2024]

*I conclude that as long as we have not made good progress on identifying innate building blocks of universal grammar, comparative grammar research is best served by **system-independent comparative concepts**, and there is no impediment to broad cross-linguistic comparison.*

*[Haspelmath 2024: 1]*

# Example of a rich feature (WALS)

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Feature 57A: Position of Pronominal Possessive Affixes

Concepts involved:

- noun
- pronoun
- affix
- possessive
- relative order

# Example of a rich feature (ThoT)

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Feature TSPANBND: Which boundaries can appear inside a tonal span

Concepts involved:

- toneme
- tonal span
- morphological structure
- prosodic hierarchy

|                |             |           |
|----------------|-------------|-----------|
| Ù              | b'a`        | tòli.     |
| [L ù           | b'- a][L `] | [L tò.li] |
| 3PL            | IPFV.AFF-   | rotten    |
|                | 3SG         |           |
| They spoil it. |             |           |

## Framework-free or theory-bound?

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*Most phonologists would probably agree that there is little, if any, difference between doing phonological typology vs. phonological theory.*

*[Hyman 2006: 226]*

How much theory is there in our concepts:

- TBU ?
- floating tone ?

## Good concepts

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- **good** categories (with a track record of useful inferences) [Spike 2019]

*Good categories earn their status: “in induction nothing succeeds like success” (Quine, 1969). Establishing the respectability of cross-linguistic categories is an empirical matter.*

*[Spike 2019: 21]*

## In search for good concepts

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- **inspiration** from descriptions of other languages
- **clarity** (due to choice of transparent terminology)