Family trees of languages
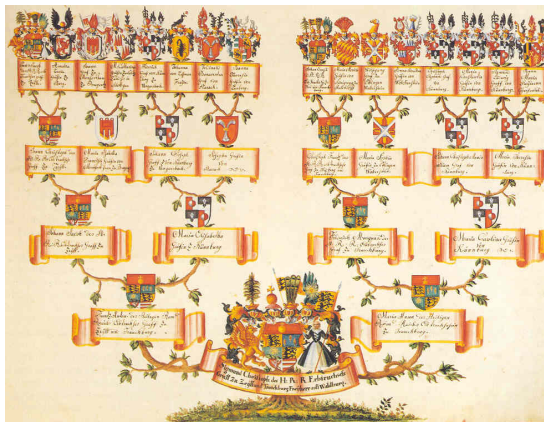
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We use a family tree to represent the relations of people in a family.

But what about languages?

Languages evolve in their own ways

"**Neogrammarian hypothesis**": word changes can only arise from

- Regular sound laws: $p > f$ (in *all* words as long as the sound is in the correct environment!)
- Borrowing: Arabic *ṣuffa* > French *sofa* > English *sofa* > Mandarin Chinese *shāfā*
- Analogy (self-regularization): do you know once people said *baken* instead of *baked*?

The tree model of language evolution
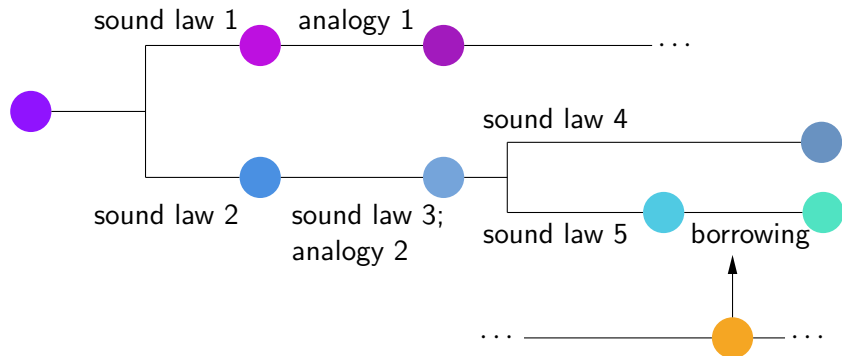
In short, it's like a family tree of microbes.

The comparative method

1. Finding regularly corresponding sounds in languages:

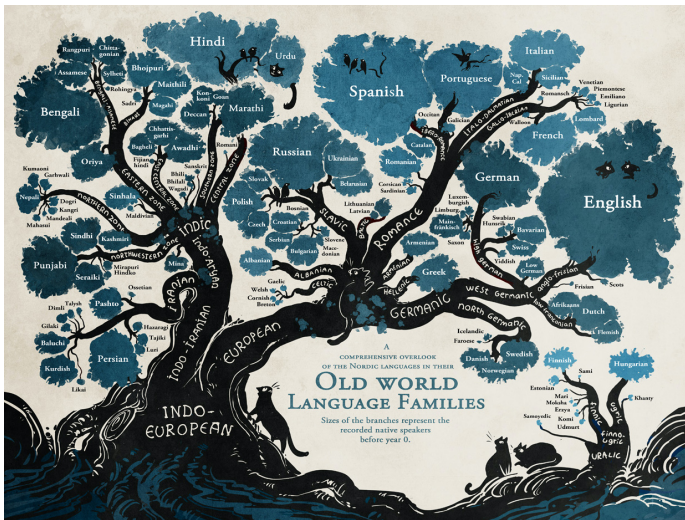 | **English** | ten | two | tow | tongue | tooth |
   |-------------|-----|-----|-----|--------|-------|
   | **Latin** | decem | duo | dūco | dingua | dent- |

   Borrowed words can be kicked out in this step.

2. Finding complementary distribution – it means a sound historically split into two with different surrounding sounds

3. Reconstruct proto-sound

4. Compare common mutations to draw a family tree

Some family trees

Indo-European

A very, very large family (figure from here)

Some family trees

Sino-Tibetan