

LOST ENGLISH

GENERATING WORDS THAT WEREN'T QUITE

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A WORD THAT WASN'T

frith, n.

/friθ/

The act of asking; questioning.

Middle English frehth, Old English fregthu.

*From Proto-Germanic **f**lexθu, PIE *preḱ (ask) and suffix -tu (abstract noun). cf. Latin precor, Scot frain.*

A word that could have been in English
(derived from PIE, like most other English words)
but for whatever reason, was dropped before it
made it all the way to modern English...

But we can recover it via
the regular rules of sound change



TWO MORE

yimidge, *adj.*

/jaɪ.miʒ/

Wintery.

Middle English ymidge, Old English ymiȝa.

*From Proto-Germanic ȝimiȝa, PIE *gʰyem (winter) and suffix -iko (adj.). cf. Latin heims, Sanskrit híma*

swifther, *n.*

/swif.θə/

An aid to sleep; treatment for insomnia.

Middle English swefther, Old English swefthra.

*From Proto-Germanic swefθra, PIE *swep (sleep) and suffix -tro (instr. n.). cf. Latin somnus, Welsh hun*

These are fun but labor-intensive to run through all the sound changes by hand. Is there a better way???



PIEBOT

- ❖ PIEbot is a simple python package designed to take Proto-Indo-European roots and suffixes and generate modern English words, along with a guess at their spelling.
- ❖ Caveat: this is NOT a work of scholarship!
 - ❖ It can't be — these aren't real words after all
 - ❖ Not all sound changes are known, studied, or systematic. The program only models systematic sound changes

swiphther

/swifθɪə/

Middle English **swe:f**

From Proto-Germanic

Sleep + Instrumentiv

- ❖ Useful for:
 - Alternate history
 - Historical fiction
 - Good clean fun

SOURCES

- ❖ Proto-Indo-European roots and suffixes were downloaded from Wiktionary and the *American Heritage Dictionary of Indo-European Roots* (Watkins, 2011)
- ❖ Sound changes from PIE to modern English were drawn from *A Concise History of English* (Chamonikolasová, 2014)
- ❖ The Wiktionary data was downloaded and cleaned
- ❖ PIE suffixes and sound changes were entered and coded up by hand

PIEBOT INPUTS

- ❖ Proto-Indo-European roots and suffixes (with meanings, cognates, and pronunciations)
- ❖ English spelling generation model file (p2g)
- ❖ Phone mappings from IPA to XSAMPA (an ASCII representation of IPA)



PIEBOT OUTPUTS

- ❖ Modern English spelling and pronunciation
- ❖ Derivation through Proto-Germanic, Old English, and Middle English
- ❖ Approximate / suggested meaning
- ❖ Any known cognates in other languages



PIEBOT OPERATIONS

1. Proto-Indo-European roots and suffixes and spelling model are read into memory
2. If the user has requested a suffix, it is combined with the root before processing
3. Sound changes are applied step by step (usually with regular expressions, sometimes hard coded)
4. Spelling is generated
5. Output printed

```
$ python piebot.py -r "ask" -s "tu"
frith
/fɹiθ/
Middle English fxe:xθ, Old English fxe:xθu.
From Proto-Germanic fxe:xθu, from PIE root prek-, tu.
Ask + Abstract N.
```

```
# Late PIE
lpp = late_pie_changes(pie_pron)

# Grimm's Law
grimm_pron = grimm_changes(lpp)

# Verner's Law
verner_pron = sound_change(grimm_pron, {'s':'z','f':'v','x':'z',
                                         '.*'+VOWEL_PATTERN+'.*','.*','.*'})

# Proto Germanic Vowel Changes
pg_pron = proto_germanic_changes(verner_pron)

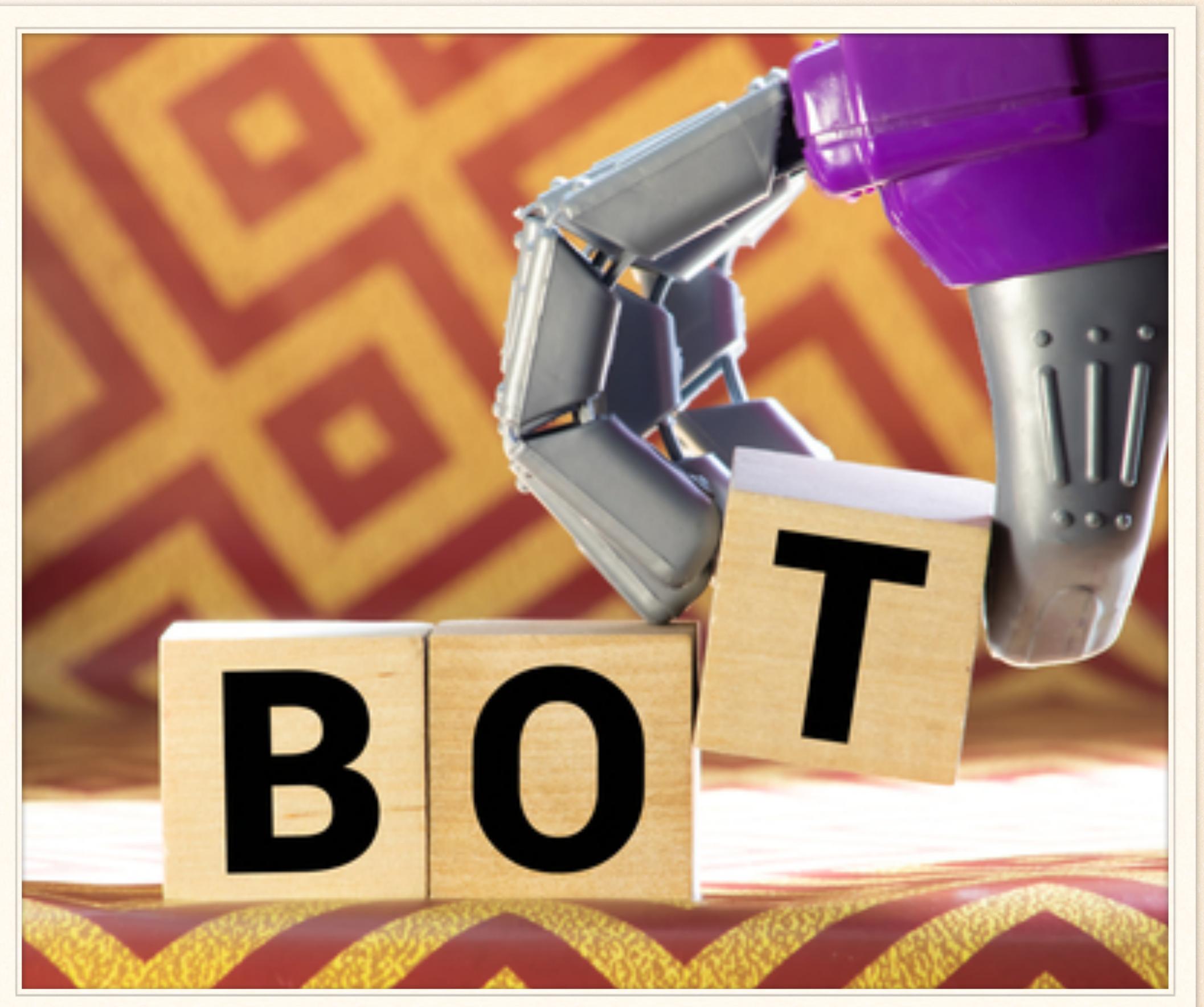
# Proto-Germanic to Old English
oe_pron = old_english_changes(pg_pron)

# Late Old English
loe_pron = late_old_english_changes(oe_pron)
final_e = False

# Middle English
```

SPELLING MODEL

- ❖ Modern English spelling is clearly perfect... but idiosyncratic
- ❖ Experimented with deriving the spelling from the Middle English pronunciation, but only worked so-so
- ❖ This model is a stripped down n-gram (i.e. probabilistic) but with some tweaks
- ❖ Users are recommended to exercise caution



TWO MORE FOR FUN

nidgewen, v.

/niʒ.wən/

To narrow down; to filter out.

Middle English nidgwen, Old English niʒwen.

*From Proto-Germanic niʒwen, PIE * neyk (winnow) and suffix -wen (abstract v.). cf. Latvian niekāt, Welsh nithio.*

iggle, v.

/i.gəl/

A juvenile hedgehog.

Middle English igol, Old English igila.

*From Proto-Germanic iɣizla, PIE * H₁eǵʰis (hedgehog) and suffix -lo (dim.). cf. Lith. ežys, Albanian eshk*



THANK YOU.

tille, *n.*

/til/

A small gift.

Middle English telle, Old English tela.

*From Proto-Germanic tela, PIE *deH₃ (give) and suffix -lo (dim.).*

cf. Latin dō, Sanskrit dādāti

GITHUB REPO:

<https://github.com/fireflylilly/piebot>

