

Realism and reconstruction

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Warm-up question

- Is linguistics a science?



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Warm-up question 2

- Is historical linguistics a science?

Historical sciences

- Mayr (2004: 32–33) on evolutionary biology:
 - ‘The methodology of historical narratives is clearly a methodology of historical science. Indeed evolutionary biology, as a science, in many respects is more similar to the Geisteswissenschaften than to the exact sciences. When drawing the borderline between the exact sciences and the Geisteswissenschaften, this line would go right through the middle of biology and attach functional biology to the exact sciences while classifying evolutionary biology with the Geisteswissenschaften.’



Historical narratives

- Mayr (2004: 32–33) on evolutionary biology:
 - ‘Evolutionary biology tries to find the answer to “why?” questions. ... With the experiment unavailable for research in historical biology, a remarkable new heuristic method has been introduced, that of historical narratives. Just as in much of theory formation, the scientist starts with a conjecture and thoroughly tests it for its validity, so in evolutionary biology the scientist constructs a historical narrative, which is then tested for its explanatory value.’

Historical linguistics as courtroom

- Lass (1997: 19):
 - accepted truth ‘arises through argument, evaluation, consideration of often conflicting testimony, discussion of the relative credibility of witnesses, precedent, even rhetoric. Witnesses may tell the truth; they may be mistaken or confused, or be liars; advocates may be sophists or demagogues.’

Historical linguistics as courtroom

- Lass (1997: 20):
 - ‘The historian, like a magistrate or jury, has to produce the best verdict he [sic] can. This is why historiography contains an irreducible conventionalist element, whether or not its ultimate pretensions are realist.’

So it's all just storytelling?

- Yes and no.
- The 'stories' we tell in historiography are subject to criteria of empirical responsibility and rationality – they're not there to entertain.
- (It's possible to go full postmodern and reject this too – but I won't be doing that)

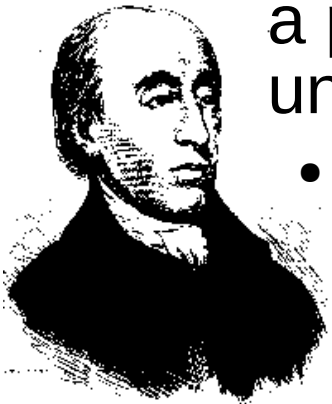
The Edinburgh connection



- One such criterion: **uniformitarianism** (or ‘actualism’; see Walkden 2019).

- ‘If a past phenomenon can be rendered as the result of a process now acting, do not invent an extinct or unknown cause as its explanation’ (Gould 1987: 120).

- Key figure in uniformitarian thinking: James Hutton (1726–1797), a geologist and Edinburgh lad



Why this class?

- ‘the longer it [a discipline] exists, the less succeeding generations or practitioners tend to know or remember (if they ever knew) or even care about how it came into being, or what supports its main tenets.’ (Lass 1997: 5)
- ‘even those admitted to the Arcana ('trained', as we say) may not always know in detail just why they believe such things, whether rationally, or through having been gently brainwashed by the tradition they grew up in.’ (1997: 6)

Roadmap

- Part 1: Reconstruction, formulism and realism
 - Basics of reconstruction
 - Case study: PIE stops and glottalic theory
 - Formulism vs. realism
- Part 2: What even is a (proto)language?
 - Real PIE vs. Reconstructed PIE
 - The Ship of Theseus
 - Towards a reconciliation

The conventional picture

- Languages are related to each other in family tree structures
- The Comparative Method* allows us both to establish relatedness and to reconstruct unattested nodes, prefixed with 'Proto-'
 - e.g. Proto-Indo-European, Proto-Germanic

Excursus: 'the' comparative method

- There is no unitary comparative method!
 - See Meillet (1954), Fox (1995: 57), Harrison (2003), and especially Baxter (2002)
 - What we now think of as the comparative method (use of regular correspondences to 'prove' relatedness) was invented by Meillet in the 20th century
 - Differences exist (e.g. how to treat morphological evidence)
- Hence the definite article is misleading

Stops in Proto-Indo-European

- Most widely accepted reconstruction:

I Voiced	II Voiced aspirated	III Voiceless
b	b ^h	p
d	d ^h	t
g	g ^h	k
g ^w	g ^{wh}	k ^w

Problems

Typologically odd system:

- a system with voiced aspirates but no voiceless aspirates has been claimed to be typologically impossible (Jakobson 1958: 23)
- reflexes of */b/ in the early IE languages are extremely rare – why?
- languages with aspirate phonemes also have /h/, which is not part of the reconstruction for PIE

I Voiced	II Voiced aspirated	III Voiceless
b	b ^h	p
d	d ^h	t
g	g ^h	k
g ^w	g ^{wh}	k ^w

Glottalic theory

- Gamkrelidze & Ivanov (1973): series I is glottalized; series II is not aspirated
 - Predicts rarity/absence of */p’/
 - PIE disallows roots with initial and final voiced stops (e.g. *deg and *ged), which is otherwise unexpected

I Voiceless glottalized	II Voiced aspirated	III Voiceless
p’	b	p
t’	d	t
k’	g	k
k ^w	g ^w	k ^w

New problems

- The theory requires voiceless glottalized stops to become voiced stops /b/ etc. in Latin and Greek, but this is phonetically implausible
- Glottalized stops are generally rare
- It would be odd that they have not survived in any Indo-European language
- Fails to account for borrowings into Finnish from Germanic and into Germanic from Celtic

I Voiceless glottalized	II Voiced aspirated	III Voiceless
p'	b	p
t'	d	t
k'	g	k
k ^w	g ^w	k ^w

Alternative solutions

- Accept the original system as typologically deviant? (Haider 1985)
- (Re)Introduce a series of voiceless aspirated stops? (Elbourne 1998)
- Crux of the problem: how to weigh up typological and diachronic considerations
 - Data can't answer this!

I Voiced	II Voiced aspirated	III Voiceless	IV Voiceless aspirated
b	b ^h	p	p ^h
d	d ^h	t	d ^h
g	g ^h	k	k ^h
g ^w	g ^{wh}	k ^w	k ^{wh}

Formulism vs. realism

- What is the nature of protolanguages?
- **Formulism**, Meillet (1964 [1937]: 42):
“reconstructions” are nothing but signs by which one can express correspondences in abbreviated form”
 - Also Zawadowski (1962)
- Thus PIE */p/ might as well be */♣/ or */🤪/
 - What’s important is that the Germanic reflex is /f/ (e.g. *fish*, *father*) and in Latin etc. it’s /p/ (*piscis*, *pater*)

The formulist credo

- The comparative method doesn't give us 'a reconstruction of Indo-European as it was spoken; *it is a defined system of correspondences between the languages that are historically attested*' (Meillet 1964: 47).
 - (Translations mine; emphasis original)
- What issues arise for this perspective?

Problems for formalism

- If IE */p/ and */t/ are simply abstract cover symbols like */♣/ and */😜/, we have no principled explanation for why their reflexes are [p, f] and [t, θ] respectively (Lass 1993: 169)
- Rules out the use of diachronic pathways for establishing plausible changes
 - e.g. the idea that /p'/ > /b/ is less likely than /b^h/ > /b/
 - This robs us of a useful source for establishing correspondences too

Rejecting formulism?

- This type of formulism seems like a non-starter: 'The reconstructing historian is making claims about substance whether he [sic] thinks he is or not' (Lass 1993: 169)
- Campbell & Harris (2002) dispute whether Meillet really held the formulist viewpoint often attributed to him

Meillet as positivist

- Meillet was a positivist/verificationist:
 - ‘Correspondences presuppose a common reality, but the only way of getting an idea of this reality is through hypotheses, and these hypotheses are not verifiable: thus only the correspondence is the object of science.’ (1964: 42)
- To say that positivism has fallen out of favour since the 1930s is an understatement
- Part of the ‘formulist’ position may really be an artefact of the philosophy of science adopted by Meillet

The realist position

- The formulist position is sometimes presented in detail; the realist position usually remains implicit
- Campbell & Harris (2002: 600): ‘The goal of reconstruction is a very “realist” one: for the reconstructed proto-language ... to approximate the original spoken proto-language ... as closely as possible.’
- **Realism** is, thus, the position that reconstructed protolanguages are hypotheses about real languages

The asterisk

- Proto-forms usually begin with an asterisk
 - Proto-Germanic *wulfaz 🐺 is the reconstructed proto-form corresponding to Old English *wulf*, Old Norse *úlfr*, Gothic *wulfs* etc.
- How necessary is this?

The subject matter of linguistics

- Two central intellectual tendencies in linguistics today:
 - Formal generative linguistics
 - Cognitive-functional linguistics
- Both are **mentalist**: that is, the object of study in linguistics is what's in the mind
 - (This is by no means a self-evident or universally shared position: Lass 1997: 10 thinks it's 'wrong-headed'; see also Weinreich, Labov & Herzog 1968)

Are 'attested' forms so real?

- Tendency is to treat forms attested in texts as 'real'. But:
 - From a mentalist perspective, it's *always* a leap from what's on the page to what's in the mind
 - Even without mentalism: letters are not sounds!
 - Most historical linguists have operated at at least one remove from the 'actual' 'attestations', via editions (see Walkden 2013a)



The asterisk revisited

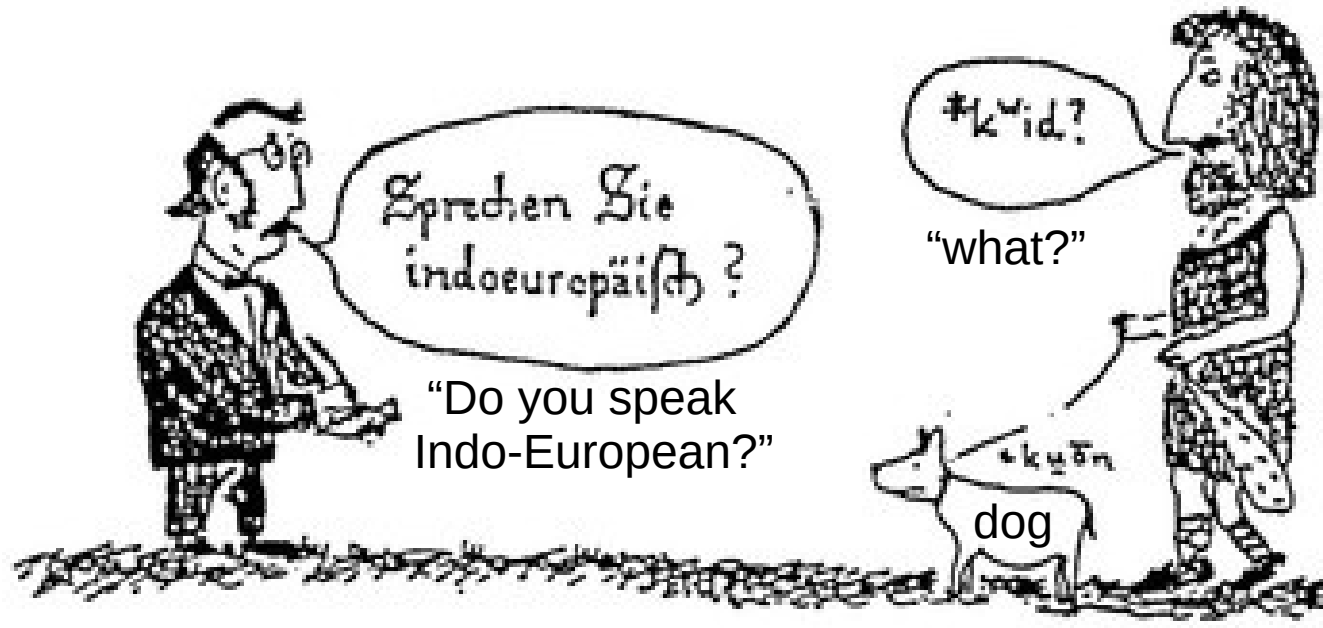
- Honeybone (2011):
 - ‘This is why I do not adopt the asterisk to mark “reconstructed” forms in PIE: all historical linguistics deals with reconstructed forms. Historical linguists aim to work out past I-languages, and it is clear that past I-languages, as objects of enquiry, cannot be observed. This is exactly the same for O[ld]E[nGLISH] (Middle Dutch, nineteenth-century Korean, etc.) as it is for PIE: none of them can be observed.’
- Holds, arguably, for *present* I-languages too (Honeybone 2022)

Interim summary

- We've seen that reconstruction can be tricky...
- ...defended against (?) the attempted attack of the formulists (?) in favour of realism...
- ...but seen, perhaps, that what is 'real' and what is a hypothesis is not as straightforward as sometimes assumed!

After the break:
more on reality vs. hypothesis

Intermission



Grimm meets a Primitive Indo-European.

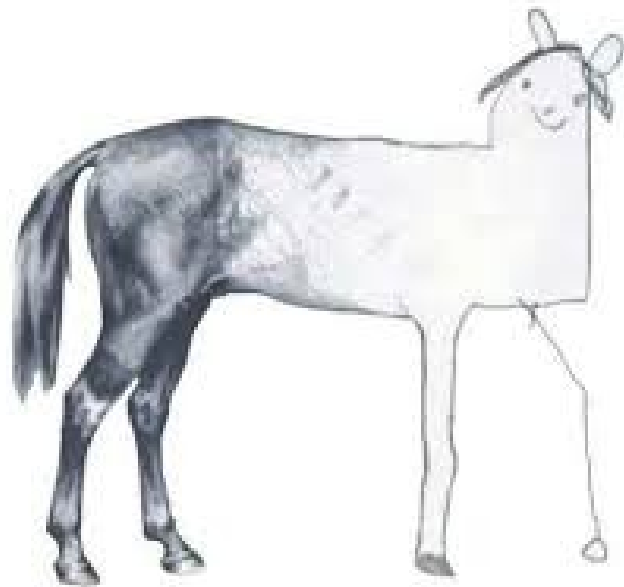
Real vs. Reconstructed PIE

- Orthogonal (I think) to the traditional formulism vs. realism debate is an important paper by Pulgram (1959), *Proto-Indo-European Reality and Reconstruction*.
- Pulgram distinguishes between
 - Real PIE
 - Reconstructed PIE

Pulgram (1959) on PIE

- **Reconstructed** PIE is the result of applying the comparative method* to daughter languages.
- Real PIE (Pulgram 1959: 424):
 - ‘Most linguists agree ... that the set of languages classifiable as Indo-European ... must be derived from a parent speech form that really existed – from a proto-language that was really spoken by some society, somewhere, at some time. And this real parent language, which we do not know, we call Proto-Indo-European too.’

Real PIE vs. reconstructed PIE



The distinction

- ‘No reputable linguist pretends that Proto-Indo-European reconstructions represent a reality’ (Pulgram 1959: 423).
 - This perhaps depends what we mean by ‘represent’.
 - Real PIE is intended by most ‘realists’ as a good hypothesis about reconstructed PIE.
 - But the Real vs. Reconstructed distinction is still a logically unavoidable one (the map is not the territory).



How close an approximation?

- The big problem: uniformity.
 - It's not disputed that the comparative method* yields uniformity (see e.g. Campbell 2013: §5.5).
 - 'Anything in linguistics that is timeless, nondialectal, and nonphonetic, by definition does not represent a real language' (Pulgram 1959: 422)

Other caveats

- Campbell (2013: 142–144):
 - ‘What textbooks call the “basic assumptions” of the comparative method might better be viewed as the consequences of how we reconstruct and of our views of sound change’
 - Regularity of sound change is crucial (this only has a partial analogue in other domains, such as syntax: Walkden 2013b, 2014)
 - We cannot reconstruct variants that are lost or merged away in all daughter languages

It gets worse: do languages exist?

- Comparative-historical linguistics is defined over 'languages'.
- In mentalist linguistics (and beyond), there is reason to reject the idea that languages in the usual sense are a useful object of study.
 - e.g. Chomsky (1986: 15), Lightfoot (various works), Makoni & Pennycook (2005), Walkden (2021)

Neogrammmarian mentalism

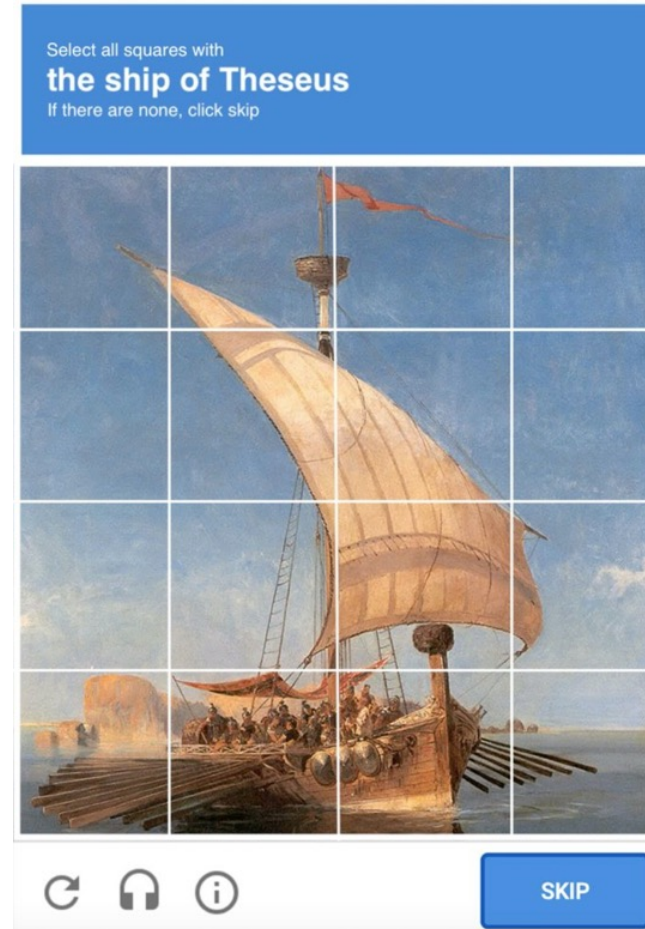
- Hermann Paul, late 19th century:



- ‘[a]ll mental processes take place in individual minds and nowhere else. ... Therefore, let us get rid of all these abstractions. “Away with all abstractions” has to be our motto if we want to determine the factors involved in any real event.’ (Translation taken from Auer & Murray 2015.)

Language and the Ship of Theseus

- If a ship has *all* of its components replaced, one by one, is it still the same ship?
- Is English still the same language as Old English?
- Or the same language as Proto-Indo-European?

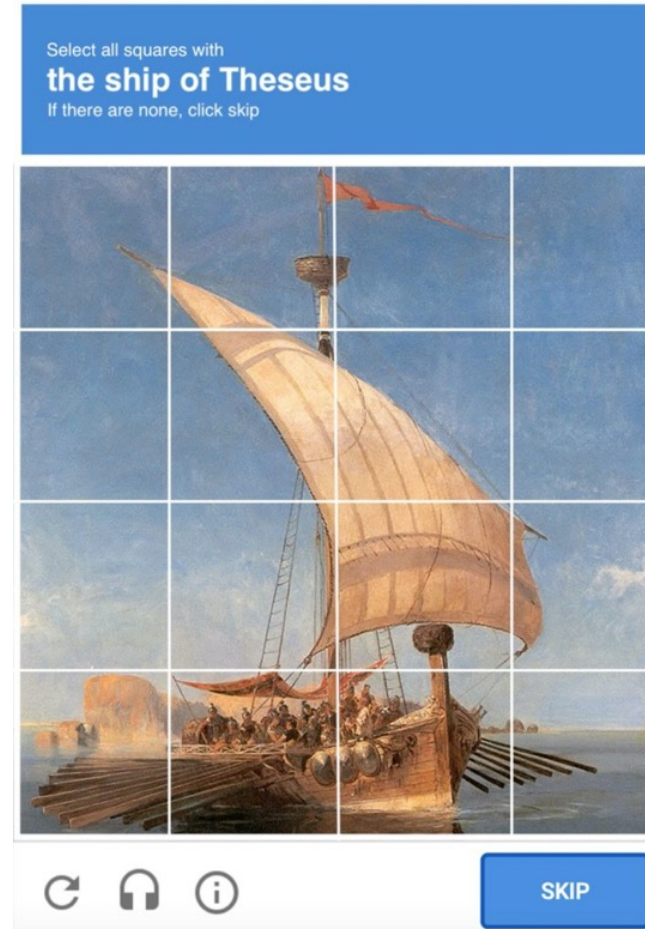


The discontinuity of language

- Lightfoot (1979: 388):
 - ‘Writers seem to regard grammars as historically transmittable, as objects floating smoothly through time and space ... this is essentially a mystical view; grammars are discontinuous – created afresh by each language learner, who is influenced only by the data to be mastered and the theory of grammar restricting available hypotheses’

Chomsky on the Ship of Theseus

- Chomsky (2009):
 - ‘the Ship of Theseus is simply a case where our concepts just don’t give an answer ... the objects that we talk about are really objects of thought which are constructed by mental operations’
- Arguably, the same is true of languages in the pretheoretical/historical sense.



What's the way forward?

- Taken seriously, these issues mean that *a lot* of historical linguistics – especially issues of relatedness and reconstruction – need to be retheorized.
- One response: reject mentalism, and stick with How It's Always Been Done (at least since Meillet).
 - But this entails refusing to take almost all of modern theoretical linguistics seriously (as well as brushing some serious paradoxes under the carpet).

Responses

- Lightfoot (2002): much of traditional historical linguistics is simply mysticism, and should be rejected (especially reconstruction).
 - I don't think this is right (Walkden 2013b, 2014)
- Hale (2007), Roberts (2021), Walkden (2021): attempt an integration.
 - But much, much work still remains to be done.

One positive step

- How can we rethink protolanguages to solve Pulgram's problem?
- Hale (2007: 228): a protolanguage (or, perhaps better, proto-grammar) is 'a set of grammars ... which agree in all recoverable features'.
- This allows us to accept diversity, rather than reifying our ignorance about non-recoverable features into a hypothesis of uniformity.

Another positive step

- Walkden (2021: 13): we should move from a ‘deformation’ model of language change to one that embraces population thinking.
 - ‘any effort to abstract from a characterisation of individual psychological profiles, in a way that allows an exploration of the consequences of these individual-level dispositions for population-level properties” (Lewens 2007)
- Evolutionary biology has already undergone this transition (very little role for ‘species’ in today’s biology)

Summary

- Reconstruction is tricky, but informative.
- Formulism is probably not a defensible position.
- Protolanguages are plausibly hypotheses about (unknown, unknowable) languages that actually existed.
 - How good these are as hypotheses is a matter of debate.
- Mentalism and historical linguistics stand in an uneasy relationship to one another.
 - But progress has been made, I think!

Real-world consequences



- Some of these issues are important to people!
Especially to:
 - Historical linguists
 - Racists
- Wengrow's post on X occasioned a lot of discussion (and mud-slinging)

Conclusion

- The philosophy of historical linguistics is interesting! Anyone can do it!
- It's worth engaging with this literature, if only because it helps to get at the root of many disagreements (different starting points).
- No good introductory work at present, but Lass (1997) and Hale (2007) are fun/annoying reads.

Thank you for your attention!

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