Syntactic Change in Theories of Change

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How is linguistic change similar to biological evolution?
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How have different research paths in historical syntax and historical phonology shaped our theories of change?
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What are the properties of language change?
Outline

1. Language change and biological evolution
2. Language change within the discipline
3. Population and individual models
Language change and biological evolution
Language change within the discipline
Population and individual models

Similarities between evolutionary biology and linguistics

There are discrete heritable units:
DNA :: words, phonemes, grammar, etc
which are (more or less) independent
which undergo mutation
and selection
at different rates.

There are homologous features which descend from
common ancestors.

With understanding of the processes of change, we can
inference and reconstruct features of those ancestors.

Transmission is both vertical and horizontal, with the
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Change can be modeled in populations or individuals.

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Differences

Languages change much faster than genes.

Rates of change

Degrees of Lamarckian evolution (acquired traits are regularly inherited in language; controversial in biology)

Details of transmission and acquisition processes

Language acquisition from both care-givers and peers

Language acquisition is gradual

Individuals can speak more than one language

Language use changes across the lifespan

No easy way to define an effective population size.
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(These issues can be tested... ; cf. Hunley et al 2012, Bowern and Atkinson 2012, etc.)
Much controversy over these issues

Andersen (2006)

“There is no chance of explaining language change by the mechanisms of evolutionary theory.”

Issues include...

- Problems with the naïvity of application of biological concepts;
- Frustration at glib use of metaphors as theoretical tools;
- Problems with “needing” to find equivalents of all aspects of biological evolution in the linguistic model;
- Genuine non-trivial difficulties in finding explanations for change;
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Within language, how generalizable should our theories of change be?
Does syntactic change work the same way as sound change, for example?

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- Degree to which system is constrained by articulators
- Complexity
On the other hand... 

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Problems conceptualizing change?
- equivalence of correspondence sets
- continuity of grammars
Syntactic change ≠ Phonological change?

Grammatical discontinuity

- Lightfoot (1979:388) “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; he is not influenced by the form of his parents’ grammar(s)”
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- Phonological acquisition is similarly discontinuous, yet that has not stopped us studying change.
- Different learners come to very similar conclusions about the features of their languages.
- If this weren’t the case, we wouldn’t be able to use introspective data for synchronic syntax (that is, using individuals as representative for a language).
Agent/individual models vs population models

Syntactic change

- Focus on I-Language leads to natural focus on agent models (that is, what individuals do; cf. Hale (1998))
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- But most descriptive work on syntax, as well as work on diachronic syntax, implies population models.
- It’s easy to run into paradoxes—e.g. the paradox of “change” in an individual grammar—unless we are clear about the object of study.
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Building on Lass’ (1997) “modest ontological proposal” and others

- A language is a set of grammars spoken by a population of individuals (cf. Chomsky 1986:27–31; Kroch 1989, etc).
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- Within each population, there is variation, because not all grammars are identical (and can’t be, because as Lightfoot pointed out, grammars are created anew for each speaker, and speakers are not exposed to the same data).
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- Individuals extrapolate from their experience to make judgments about the properties of their language.
- Languages change when individuals converge on grammars with the new properties.
Explanations for mechanisms of change are then concentrated on

1. Variant selection (how speakers acquire variants from the pool that they are exposed to; why they preferentially acquire some variants but not others, etc, how variation is structured socially, etc)
2. How speakers create new generalizations about the properties of their languages.

Explanations under this view are not the things like reanalysis, extension, borrowing, etc; they are descriptions of patterns and follow from how speakers implement (1) and (2).
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- Provides a way to model the interplay of I-Language and E-Language phenomena
- Provides an array of testable hypotheses
- Constrains the mechanisms of change but not the outcomes.
Thanks

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- Contributors to the Routledge Handbook of Historical Linguistics, especially my co-editor, Beth Evans