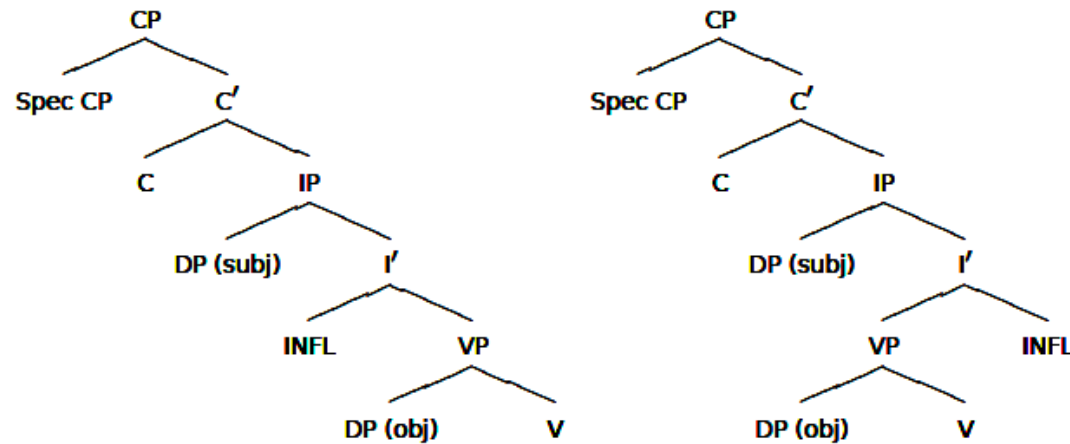


24.914

Language Variation and Change

Syntactic change II



Announcements

- Course evaluations now open

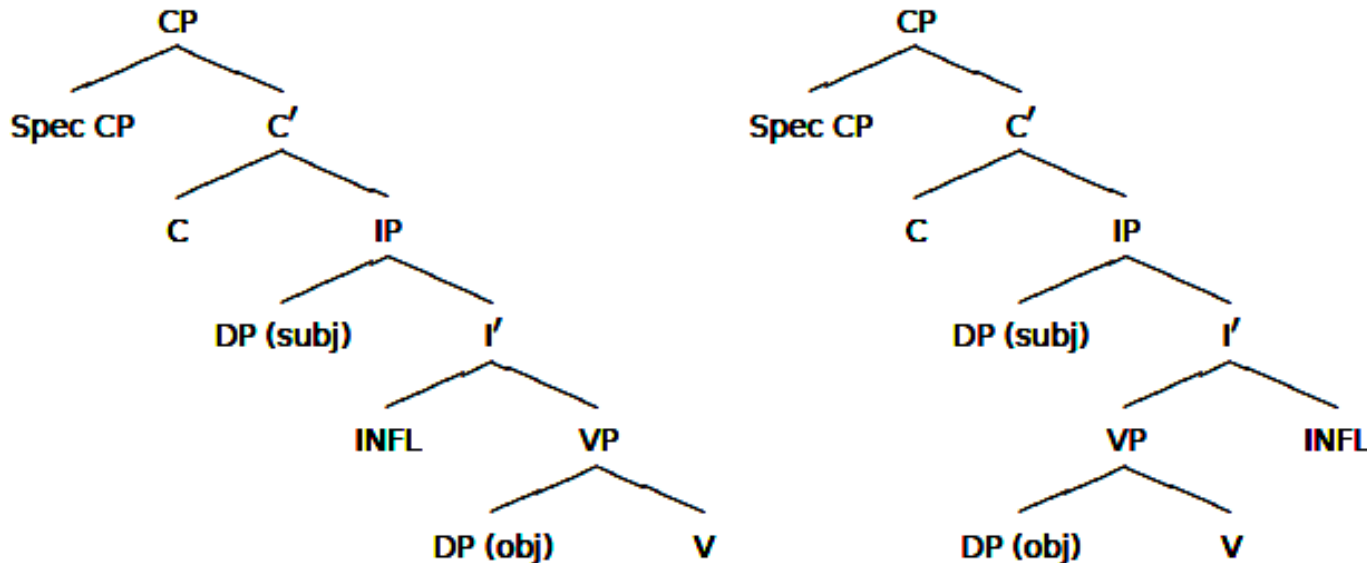
Syntactic change

- Case study: change from OV word order in Old English to VO order in Middle and Modern English
 - a. ...þæt ic **ðas boc** of Ledenum gereorde to Engliscre spræce **awende**.
...that I this book from Latin language to English tongue translate
"...that I translate this book from the Latin language to the English tongue."
(AHTh, I, pref, 6; van Kemenade 1987: 16)
 - b. ...þæt he **his stefne up ahof**.
...that he his voice up raised
"...that he raised up his voice."
(Bede 154.28)
 - c. ...forþon of Breotone **nædran** on scippe **lædde wæron**.
...because from Britain adders on ships brought were
"...because vipers were brought on ships from Britain."
(Bede 30.1-2; Pintzuk 1991: 117)

examples cited in Ian Roberts *Diachronic Syntax*, Oxford University Press, 2007

INFL-final to INFL-medial

- Pintzuk (1995) argues that a key part of the change from OV to VO is a gradual change in the order of INFL and its complement.
 - INFL starts and final position, but its position becomes variable, with increasing frequency of medial INFL

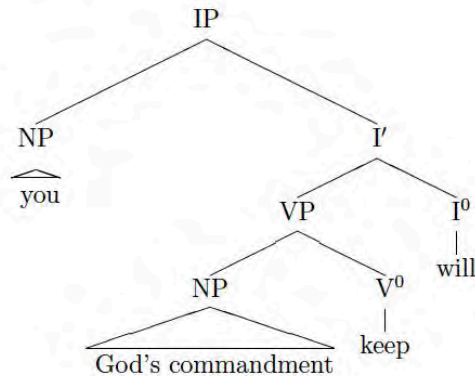


- There was also a change from OV head-final VP to VO head-initial VP (Kroch & Taylor 2000)
 - also with an extended period of variation

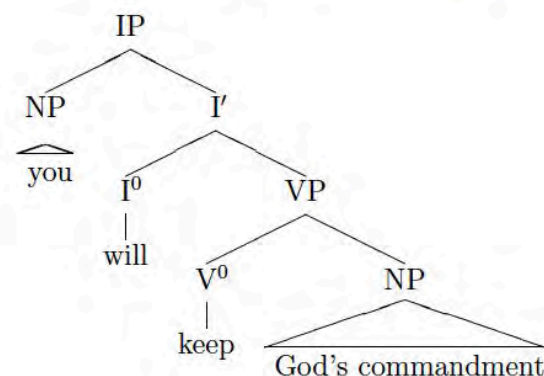
V-final to V-initial in VP

- Combined with optional medial vs. final I, this implies four possible orderings of Aux (in I), main V and Object (Kiparsky 1996, Clark 2004):

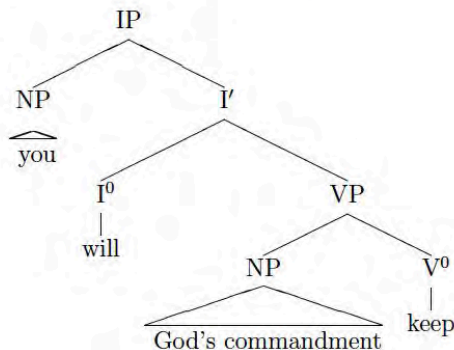
All-final (OV&VAux, *you God's commandment keep will*):



All-medial (VO&AuxV, *you will keep God's commandment*):



Brace (OV&AuxV, *you will God's commandment keep*):



- The fourth possibility is unattested: *V O I

- *You keep God's commandment will
- Violates 'Final over Final' Constraint (Biberauer, Holmberg & Roberts 2007 etc) 5

Mechanisms of syntactic change

- We have characterized the change in grammar:
 - Initial stage: INFL is always final
 - Innovation of medial INFL
 - gradual increase (over hundreds of years) in the frequency of medial INFL until it is the only option
 - Similar for V in VP
- How and why did this change occur?
- Ambiguity in the input?
 - V2 in main clauses is ambiguous
 - VO with heavy O is ambiguous in subordinate clauses
 - Medial INFL vs. final INFL+object extraposition
 - But there is also unambiguous input
- Ambiguity + learning bias?

Kiparsky (1996) on OV > VO in Old English

- The broader context in Germanic

- OV basic order retained

German *das Buch lesen*

Dutch *het boek lezen*

- Change to consistent VO

English *to read the book*

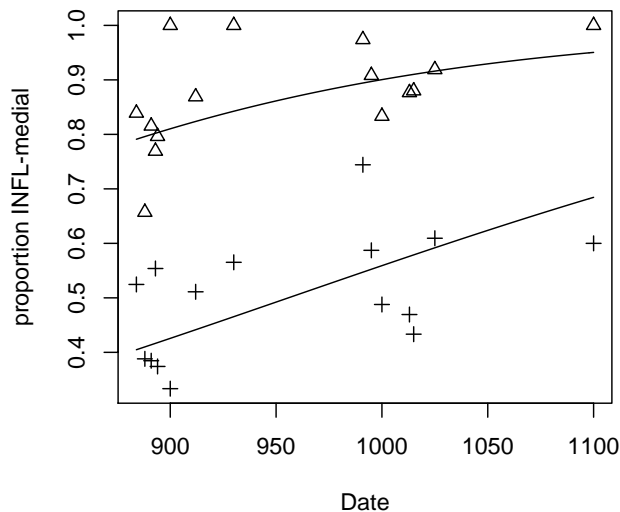
Swedish *att läsa boken* (Scandinavian)

Yiddish *leyenen dos bukh*

- Evaluate proposed explanations for the English OV > VO change against this broader set of languages

Language contact?

- $OV > VO$ under the influence of contact with VO languages?
- ‘Dutch and German have had more contact with other European language families (especially Romance) than the Scandinavian languages have.’
- English had extensive contact with French, but VO is attested prior to the Norman invasion (1066)



Loss of inflection?

- Loss of case marking and subject-verb agreement meant greater reliance on word order to disambiguate grammatical roles.
- Fixed VO order makes Object easier to identify.
- Not really a mechanism of change
- Inflection and VO word order are independent in Germanic

| | OV | VO |
|---------------|---------------------|-------------------------------|
| inflection | German, Old English | Yiddish, Early Middle English |
| no inflection | Dutch, Frisian | Swedish, Modern English |

- ‘The shift to VO began in Old English before the collapse of the case system and before the loss of subjectverb agreement.’
- But loss of case-marking does correlate with fixed order among nominal arguments: $S > O$, $IO > DO$
 - independent of order between V and O (Dutch vs. English)

Reanalysis?

- ‘The majority of linguists who have recently discussed the change to head-initial VP have attributed it to reanalysis of derived surface VO sequences as basic VO sequences.’
- Sources of derived VO sequences:
 - V2 in main clauses is ambiguous
 - VO with heavy O is ambiguous in subordinate clauses
 - Medial INFL vs. final INFL+object extraposition
- But there is also unambiguous input
- The incrementation problem: VO order is initially introduced as a minority option and steadily increases in frequency for more than 300 years.
 - why wasn’t minority VO order lost again through misacquisition?
- A learning bias might help to address these problems

Reanalysis?

- Furthermore, many of the processes that can create VO surface order exist in Germanic languages that did not undergo the OV > VO change (e.g. Middle High German, Middle Dutch)
 - V2 in main clauses
 - Rightward extraposition of objects
- Kiparsky argues the the crucial factor making OE V/O order ambiguous was the development of V2 in subordinate clauses.
 - Restricted in German, Dutch, Frisian
 - Obligatory in Icelandic, older mainland Scandinavian, modern Yiddish
 - Optional in Faroese, Old English, Old Yiddish
- ‘the shift from a head-final base to a head-initial base took place in exactly those languages which developed general verb-fronting in embedded clauses’

Reanalysis?

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Reanalysis?

- Verb-fronting in OE subordinate clauses
 - ‘assertions’ (cf. reported speech)

Ic secge þæt behefe ic eom ge cingce & ealdormannum (*ÆColl.* 150)
"I say that useful I am to the king and the chiefs."

Be ðam is awriten ðæt betera beo se geðyldlega wer ðonne se gielpna (*CP* 217.10)
"Therefore it is written that better is the patient man than the boastful (one)."

– other subordinate clauses

- underlying position of verb indicated by particles

þa wæs he sona mid godcundne onbryrdnyse innan monad, þæt he wearp þæt sword onweg (*Bede* 38.19)
then was he at once with divine inspiration inwardly warned, so that he threw the sword away

þæt wære swiðe gilplic dæd gif Crist scute ða adún
that would have been a very proud deed if Christ had plunged then down (*ÆCHom* 170.2)

(examples cited in Paul Kiparsky, "The shift to head-initial VP in Germanic," *Studies in Comparative Germanic Syntax II*. Dordrecht: Kluwer, 140 (1996))

Learning bias

- Kiparsky hypothesizes that the bias that favors interpreting the ambiguous evidence as underlying VO order is a preference for uniform headedness

Heads are initial in CP, PP, final in VP, IP

...þæt ic **ðas boc** of Ledenum gereorde to Engliscre spræce **awende**.

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"...that I translate this book from the Latin language to the English tongue."

(AHTh, I, pref, 6; van Kemenade 1987: 16)

(example cited in Ian Roberts, *Diachronic Syntax*, Oxford University Press, 2007)

- A typological tendency to uniform headedness has long been observed (e.g. Greenberg)
 - Although few languages are completely uniform
- If strong enough, a learning bias could favor acquiring head-initial structures in the face of some contrary evidence.
 - It could also keep pushing change in the same direction, if the input remains ambiguous/consistent with head-initial base structures.
- What form does the bias need to take to favor optional V-, I-initial base?
- Could a novelty preference be relevant here?

A learning model that can generalize V2

- Kiparsky gives a key role to V2 in subordinate clauses in making underlying positions of I and V ambiguous.
 - Assuming this was an innovation in the Old English branch, how did it arise?
- There is evidence that children acquiring Swiss German make errors over-generalizing V2 from main clauses to subordinate clauses.
- Gould (2015, MIT thesis) proposes a learning model that can account for these errors as a stage of acquisition.

V2 in Swiss German

- Swiss German, like most other German dialects: V2 main clauses, V-final subordinate clauses
 - ▶ De Rochus hät för sini Fründ die Guezli pachet.
the Rochus has for his friends these cookies bake-PPL
'Rochus baked these cookies for his friends'
 - ▶ Die Guezli hät de Rochus för sini Fründ pachet
these cookies has the Rochus for his friends bake-PPL
 - ▶ För sini Fründ hät de Rochus die Guezli pachet.
for his friends has the Rochus these cookies bake-PPL
 - ▶ De Prospero isch froh [wenn-er achli in Rue läse cha].
the Prospero is happy when-he a bit in quiet read-INF can.3SG
'Prospero is happy when he can read a bit in peace and quiet.'
- Acquisition errors: subordinate V2
 - ▶ #Prima [dass machsch du dat]. (E: 4;10)
great that do-2SG you that
'It's great that you do that.'

(Examples from Manuela Schönenberger, *Embedded V-TO-C in Child Grammar: The Acquisition of Verb Placement in Swiss German*, Springer, 2001)

Explaining the acquisition errors

- Gould's observation: most common clause type is matrix SV(O), which is ambiguous about phrase-headedness vs. movement.
- Parameters:
 - Head initial/final (for VP, TP, CP)
 - Movement: V to T, T to C
- Swiss German
 - Adult grammar: T-final, V-to-T, T-to-C
 - V movement in subordinate clause is blocked by filled C
 - Erroneous grammar: T-initial, V-to-T
- Idea: learners seek grammars that are consistent with the data, and initially place significant probability on “consistent” VO grammars because counterevidence is infrequent.

Explaining the acquisition errors

- Gould's observation: most common clause type is matrix SV(O), which is ambiguous about phrase-headedness vs. movement.
- Parameters:
 - Head initial/final (for VP, TP, CP)
 - Movement: V to T, T to C
- 32 possible combinations of parameter settings
 - All consistent with SV
 - Half consistent with SVO
- Idea: learners seek grammars that are consistent with the data, and initially place significant probability on “consistent” VO grammars because counterevidence is infrequent.

The learning model

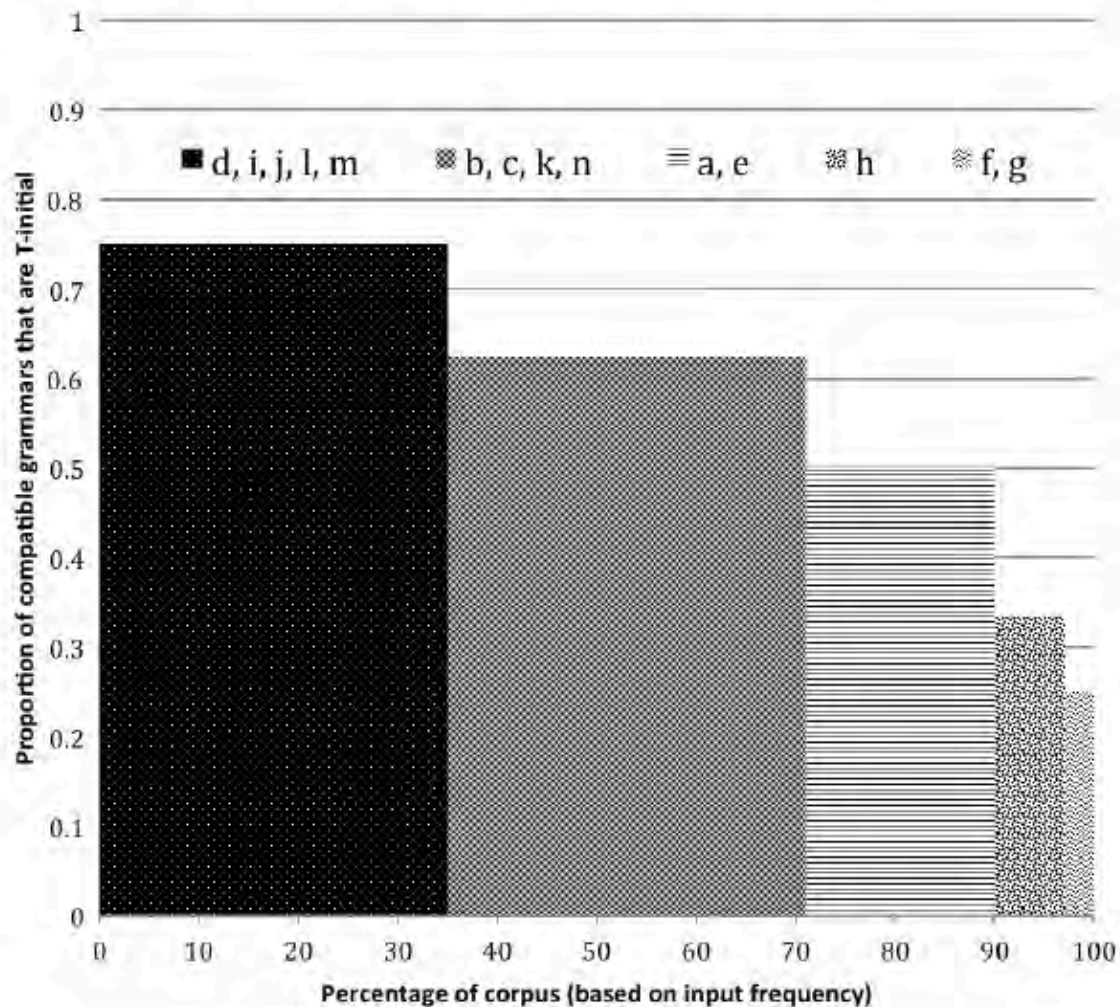
- Learning model attempts to maximize the probability of observed strings.
- Parameters are set independently of each other
 - No bias: each setting is equally probable a priori
 - Settings are probabilistic
 - Settings adjusted in response to data
 - Sample a grammar, if it is compatible with the sentence, increase the probabilities of those parameter settings (cf. Yang 2002)

Schematic corpus for Swiss German

| | | | |
|-----------|---------------------|------------|-----------|
| a. SV | e. SV[Comp. SV] | i. XVS | m. OVS |
| b. SVO | f. SV[Comp. SOV] | j. XVSO | n. OAuxSV |
| c. SAuxV | g. SV[Comp. SVAux] | k. XAuxSV | |
| d. SAuxOV | h. SV[Comp. SOVAux] | l. XAuxSOV | |

- frequency of presentation based on corpus frequencies
- Child is likely to favor T-initial grammars initially. E.g. SVO input
 - Consistent with T-initial and T-final grammars
 - But the majority of the consistent grammars are T-initial

Figure 3.1 Input type by frequency and strength of favoring T-initial

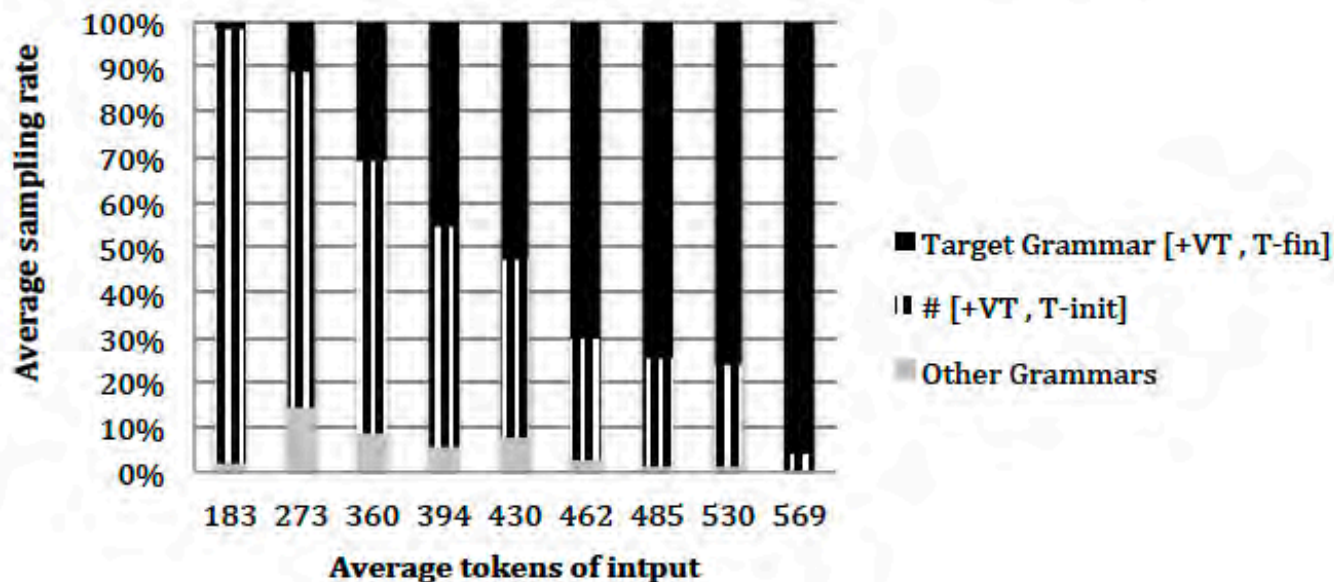


d. SAuxOV b. SVO a. SV h. SV[Comp. SOVAux] f. SV[Comp. SOV]
i. XVS c. SAuxV e. SV[Comp. SV] g. SV[Comp. SVAux]
j. XVSO k. XAuxSV
l. XAuxSOV n. OAuxSV
m. OVS

Predicted learning trajectory

Figure 3.2 *Developmental Course:* ²⁷

Sampling averages of grammars for TP-headedness and V-to-T movement



- Initially favors T-initial and V-to-T movements
- As evidence accumulates for T-final (less frequent strings incompatible with T-initial), target grammar is favored

Predictions for language change

- What does a simple mislearning model of change predict?
 - All children receive data that's ambiguous, to various degrees
 - How would reanalysis by individual children lead to change in the language as a whole?

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