

Statistical Independence in Syntactic Change

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The shift from Infl-final to Infl-medial word order in the history of Yiddish (Santorini 1993)

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Unambiguous I-final cases:

- (1) ven der vatr nurt doyts leyn **kan**
if the father only German read can
- (2) ven du mir meyn kop **ab** shneydst
if you me my head off cut

Unambiguous I-medial cases:

- (3) ven der vatr **kan** nurt doyts leyn
- (4) ven du mir shneydst meyn kop **ab**

Extraposition in Yiddish

- (5) ven der vatr **nurt doyts** leyn kan
- (6) ven der vatr leyn kan **nurt doyts**

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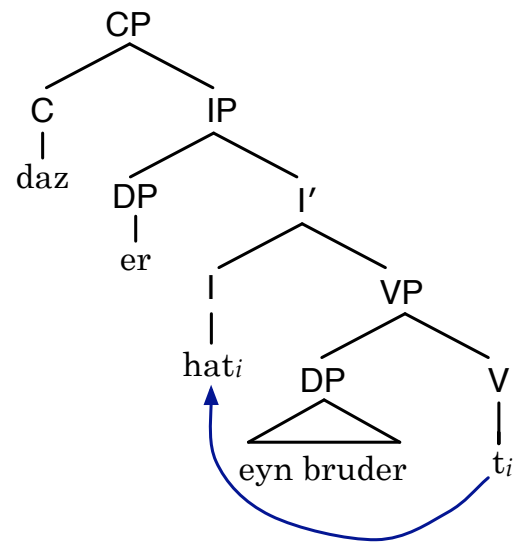
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Ambiguity between I-medial and I-final structure

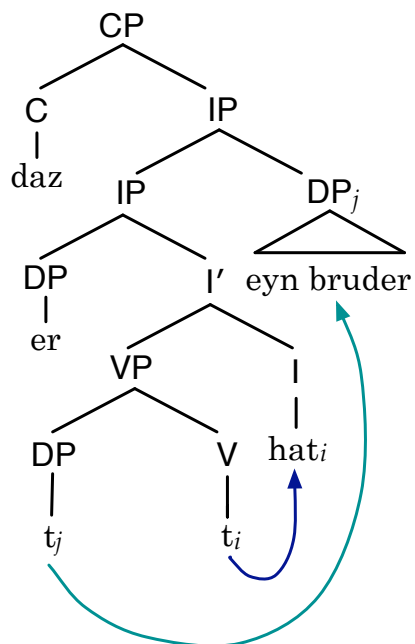
(7) daz er **hat** eyn brudr
that he had a brother

(8) da ishue **kam** in arts isral
when Joshua came into the land of Israel



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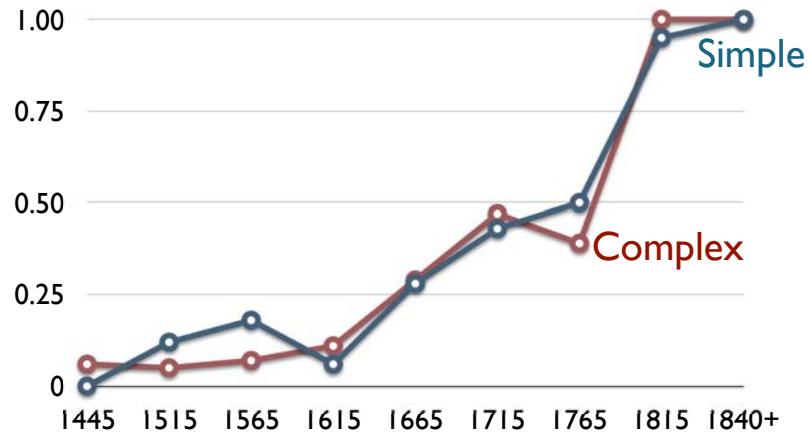
Frequency of Infl-medial versus Infl-final word order in the history of Yiddish, unambiguous cases

Date	Simple verb case			Complex verb case		
	INFL-medial	INFL-final	freq.	INFL-medial	INFL-final	freq.
1400-1489	0	27	.00	1	15	.06
1490-1539	5	37	.12	2	35	.05
1540-1589	13	59	.18	4	51	.07
1590-1639	5	81	.06	7	57	.11
1640-1689	13	33	.28	18	44	.29
1690-1739	15	20	.43	25	28	.47
1740-1789	1	1	.50	11	17	.39
1790-1839	54	3	.95	79	0	1.00
1840-1950	90	0	1.00	62	0	1.00

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Frequency of Infl-medial versus Infl-final word order



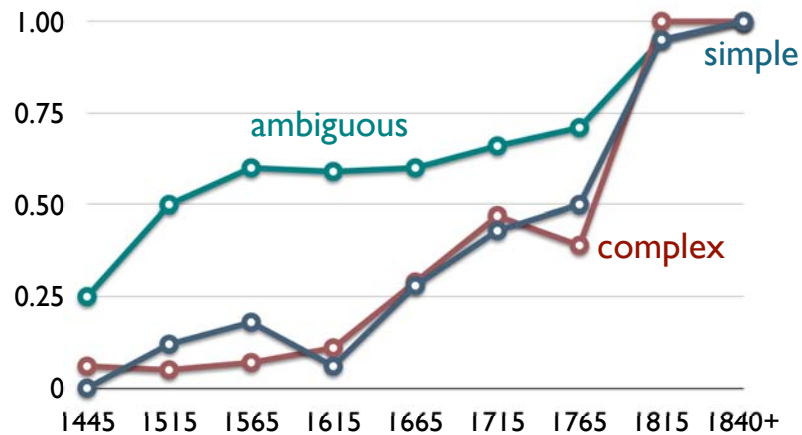
Frequency of Infl-medial versus Infl-final word order in the history of Yiddish, ambiguous case

Date	Ambiguous case		
	Possibly INFL-medial	INFL-final	frequency
1400-1489	3	9	.25
1490-1539	13	13	.50
1540-1589	58	39	.60
1590-1639	41	29	.59
1640-1689	32	21	.60
1690-1739	21	11	.66
1740-1789	5	2	.71
1790-1839	58	3	.95
1840-1950	69	0	1.00

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Rise of I-medial word order, II



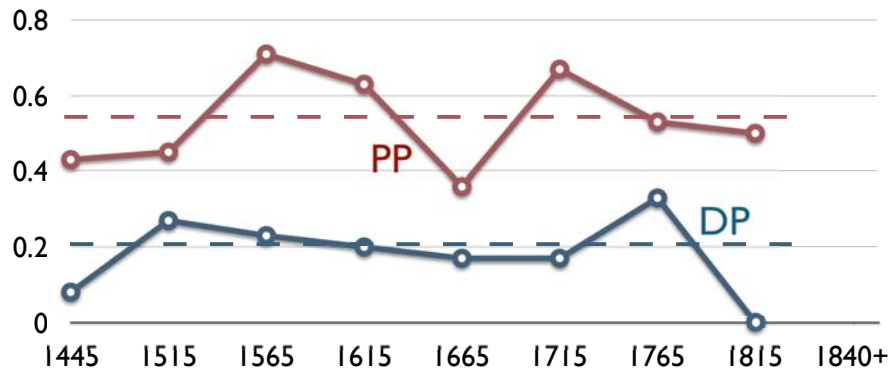
Frequency of DP and PP postposing in the history of Yiddish (Santorini 1993)

Date	DP postposing			PP postposing		
	Postposed	Not postposed	freq.	Postposed	Not postposed	freq.
1400-1489	1	12	.08	9	12	.43
1490-1539	7	19	.27	13	16	.45
1540-1589	7	24	.23	52	21	.71
1590-1639	10	40	.20	39	23	.63
1640-1689	4	19	.17	17	30	.36
1690-1739	1	5	.17	6	3	.67
1740-1789	1	2	.33	8	7	.53
1790-1839	0	1	.00	1	1	.50
1840-1950	no INFL-final data			no INFL-final data		

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Stability of DP and PP postposing



mean rate of PP postposing = .56
 mean rate of DP postposing = .20

Correcting for postposing in ambiguous cases

For each time period, let

A = # ambiguously I-medial cases

F = # I-final cases that would be ambiguous if medial

p = rate of postposing

Then the estimated true # of I-medial cases in A is

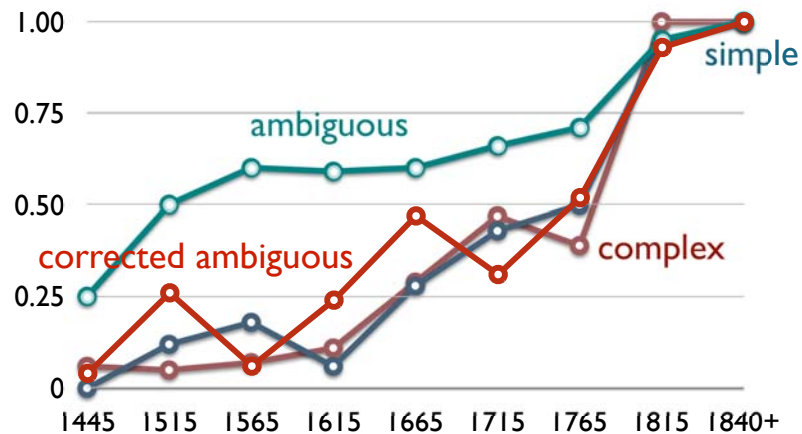
$$E = A - F \cdot p$$

This calculation is done separately for sentences with postverbal DPs and PPs, with the results then summed.

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Rise of I-medial word order, III



The decline of topicalization in Middle and Early Modern English (Speyer 2008)

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A clash avoidance requirement in Germanic sentence prosody (Ries 1907, Speyer 2008)

- (1) The Times, Mary reads.
- (2) #The Times, Mary reads.
- (3) Die Zeit liest Maria.
- (4) #Die Ziet liest Maria.

Translating object topicalization from German into English

- (1) G: **Mahlkes** Haupt bedeckte dieser Hut **besonders** peinlich.
E: On **Mahlkes** head, this hat made a **particularly** painful impression.
- (2) G: Zu **den sechs** kamen noch **drei weitere**.
E: **Three others** joined **these six**.
- (3) G: Den findet **keine Sau**.
E: **Nobody** will ever find it.

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Frequencies in translating object topicalization from German into English

	topicalization → topicalization	topicalization → SVO	topicalization → other	percent top. → top.
second accent on subject (N=25)	0	7	18	0
second accent elsewhere (N=83)	26	15	42	31
no second accent (N=48)	5	8	35	10

Distribution of contrastive topicalization by focus (second accent) placement in Middle English

focus position distribution of cases	focus on subject	focus on tensed verb	focus elsewhere
N (total= 207)	113	29	65
% inversion	89	14	71
% of cases	55	14	31

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Frequency of subject types in matrix clauses in a Modern English corpus

	pronoun	simple demonstrative	full noun phrase
SVO	140	20	142
topicalized	181	2	17

From:
Speyer, 2008
Prince and Ward, *personal communication*

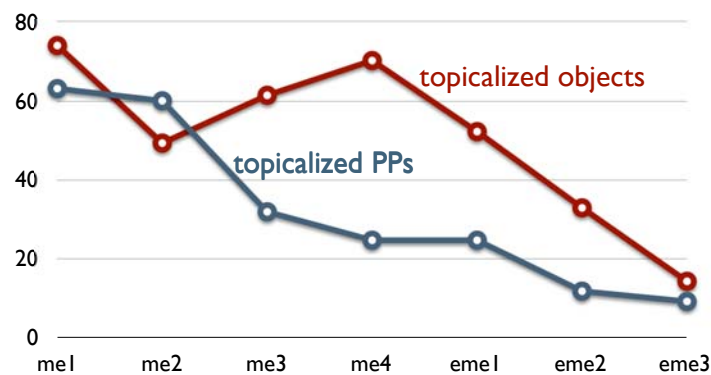
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Frequency of matrix clause topicalization and V2 in Middle and Early Modern English

time period / sentence type	me1	me2	me3	me4	eme1	eme2	eme3
# sent. with DO	2855	1300	4615	2271	3229	3584	2544
# topicalized	219	69	145	66	67	82	28
% topicalized	7.7	5.3	3.1	2.9	2.1	2.3	1.1
#V2	162	34	89	46	35	27	4
%V2	74	49.3	61.4	70.2	52.2	32.9	14.3

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Rate of V2 order in topicalized clauses



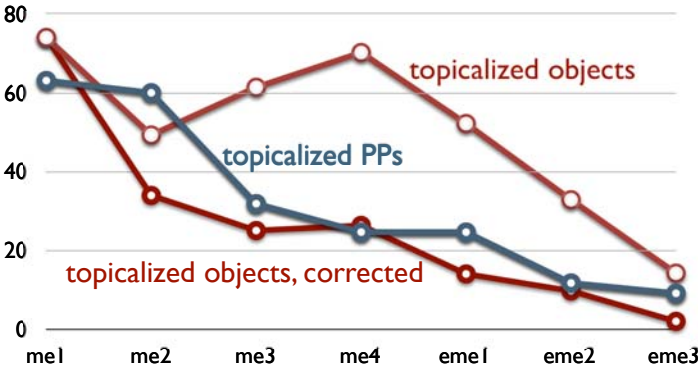
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Corrected frequency of matrix clause topicalization and V2 in Middle and Early Modern English

time period / sentence type	me1	me2	me3	me4	eme1	eme2	eme3
# sent. with DO	2855	1300	4615	2271	3229	3584	2544
# topicalized	219	69	145	66	67	82	28
would have been topicalized	219	100	354	174	248	275	195
actual rate of V2	74	49.3	61.4	70.2	52.2	32.9	14.3
corrected rate V2	74.0	34.0	25.1	26.4	14.1	9.8	2.1

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Rate of V2 order in topicalized clauses corrected for the clash avoidance effect



The end