

Morphological Productivity of Adjective Formation in German -- A Diachronic Corpus Study Using the CLARIN-D Infrastructure

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- The degree of applicability of a morphological process (e.g. compounding or the use of a derivational affix) in a given language
- Examples from English:
Xivity; e.g. *creative* -> *creativity*, *expressive* -> *expressivity*
Xiveness; e.g. *effective* -> *effectiveness*, *furtive* -> *furtiveness*
- A long-standing research topic in theoretical linguistics (Aronoff 1976, 1982; Dressler 2003) and quantitative linguistics (Baayen and Lieber 1991, Baayen 2008)

- **Synchronic perspective:** what is the degree of productivity of a morphological process at a particular time?
- **Diachronic perspective:** how does the degree of productivity of a morphological process change over time?

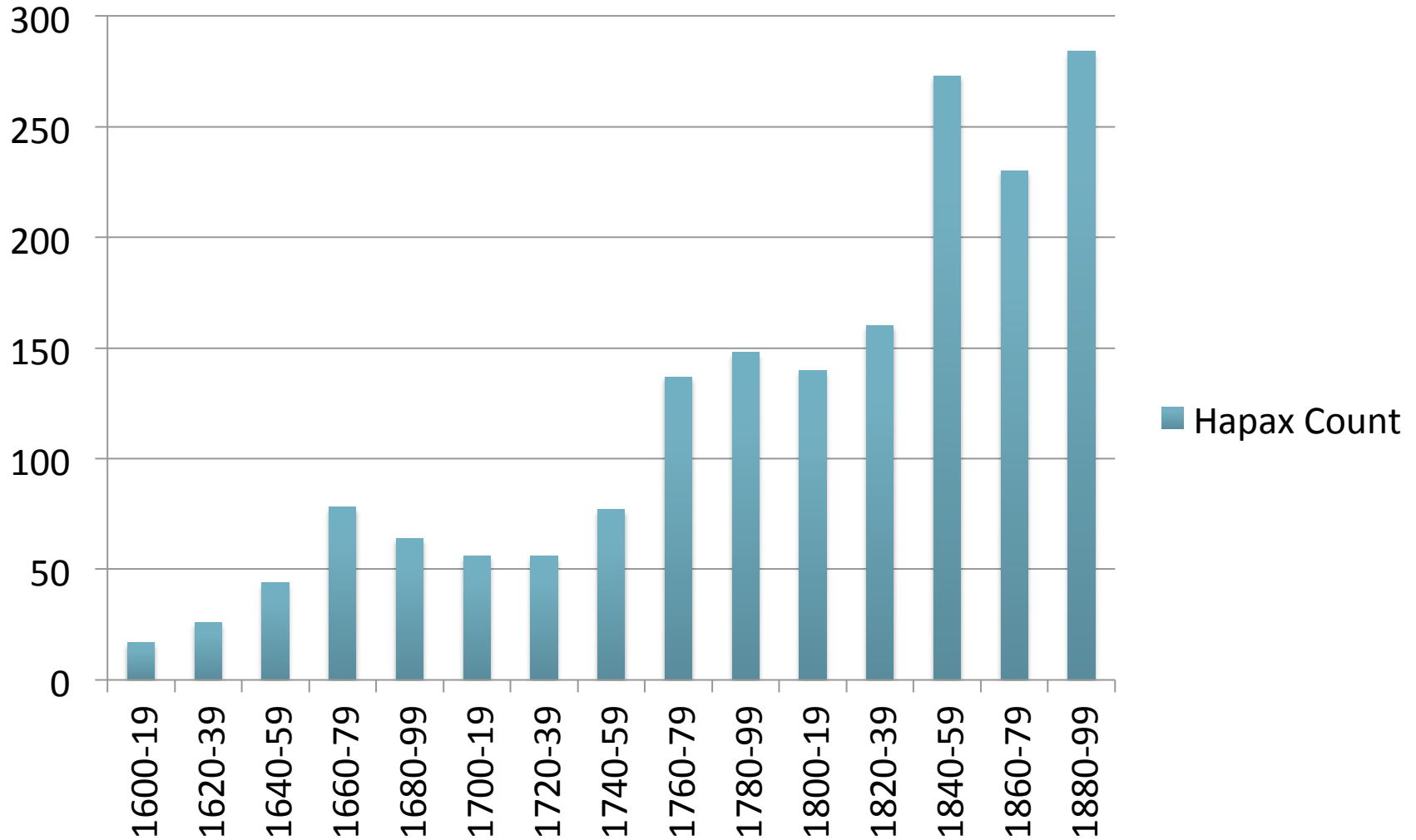
- How to best measure morphological productivity?
- What role does corpus evidence play, if any?

- German adjectives ending in *-bar*

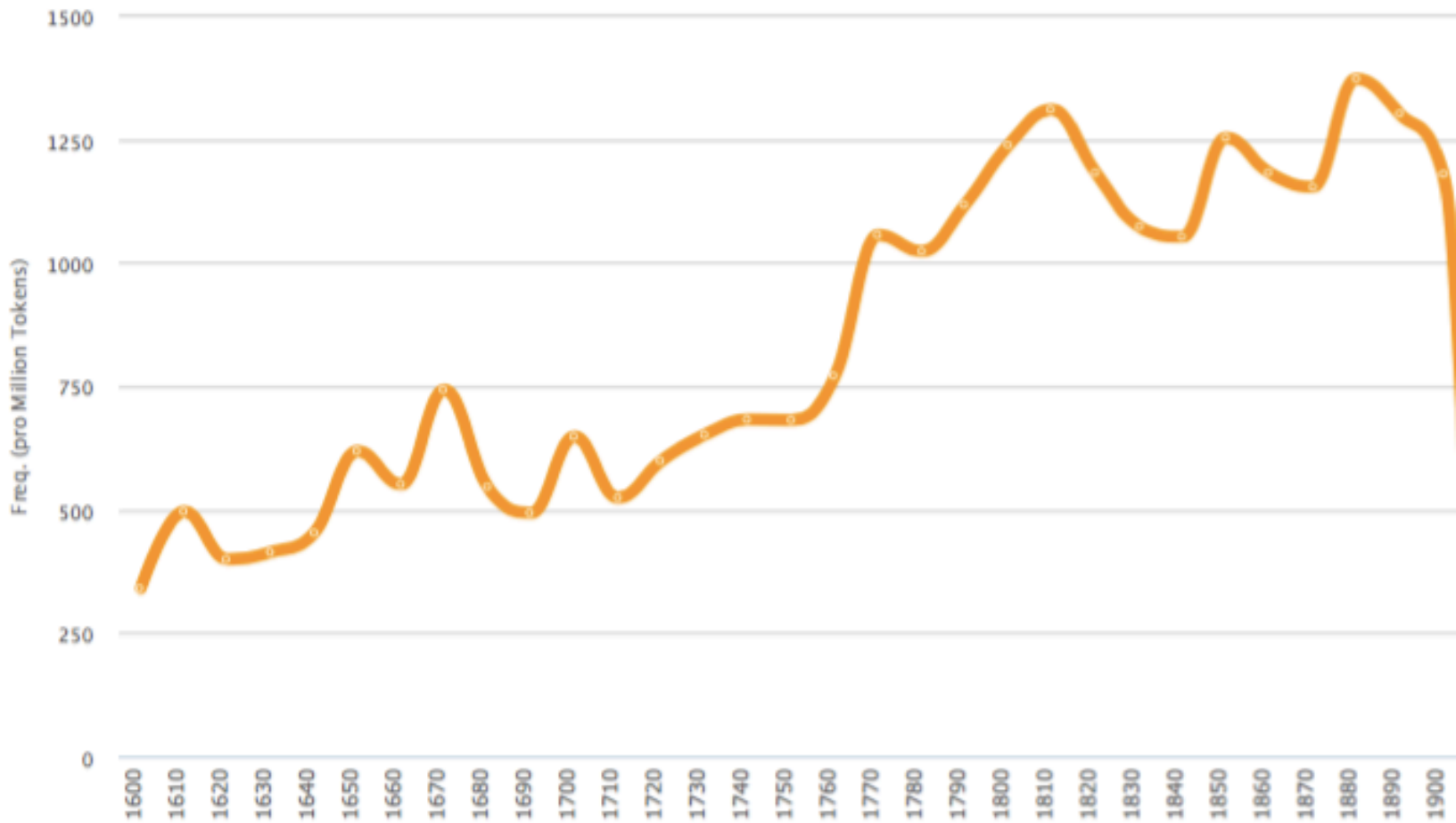
Examples: *trinken* → *trink-bar* (drink → drinkable)
lösen → *lös-bar* (solve → solvable)

- In contemporary German: highly productive suffix that converts transitive verbs into adjectives

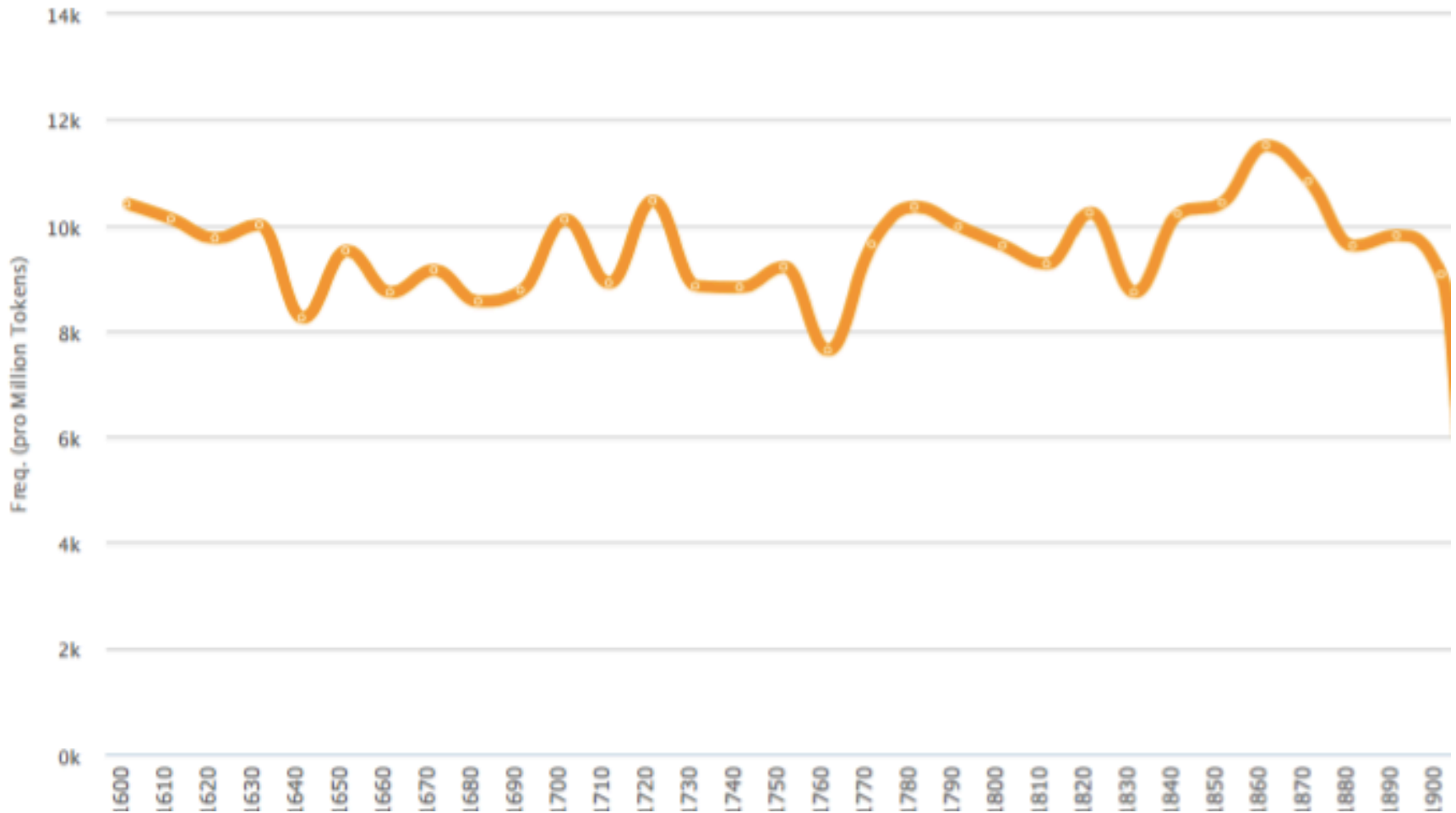
- Deutsches Textarchiv (DTA);
 - coverage: 1610 -1900;
 - size: 146.68 million words
 - hosted by the CLARIN-D Center at the BBAW:
<http://www.deutschestextarchiv.de/>
- Mannheimer Zeitungskorpus (MZK, “Handbuchkorpora“)
 - coverage: 1985 – 1988
 - size: 17 330 newspaper texts, appr. 11 million words
 - hosted by the CLARIN-D Center IDS Mannheim as part of the German Reference Corpus (DeReKo) :
<http://www1.ids-mannheim.de/kl/projekte/korpora.html>



Frequency Increase pro Mio. Tokens for –bar Adjectives



No Frequency Increase for *-lich* Adjectives



Source:	German Text Archive (DTA) 1600 - 1649	Source:	Mannheimer Zeitungskorpus (MZK), 1980s
Count	Lemma	Count	Lemma
816	<i>sonderbar</i> 'strange'	1698	<i>offenbar</i> 'obvious'
568	<i>fruchtbar</i> 'fertile'	1081	<i>unmittelbar</i> 'immediate'
532	<i>offenbar</i> 'obvious'	850	<i>sichtbar</i> 'visible'
394	<i>ehrbar</i> 'honorable'	811	<i>scheinbar</i> 'seemingly'
248	<i>sichtbar</i> 'visible'	595	<i>denkbar</i> 'thinkable'
235	<i>wunderbar</i> 'wonderful'	498	<i>vergleichbar</i> 'comparable'
214	<i>dankbar</i> 'thankful'	465	<i>erkennbar</i> 'recognizable'
185	<i>unsichtbar</i> 'invisible'	325	<i>spürbar</i> 'noticable'

Diachronic change: nominal hosts are gradually replaced by verbal hosts

- MHG *-bar* is derived from Middle HG *bære* and Old HG *-bâri*, both cognate with engl. *bear* (Flury 1964)
 - i.e., the original meaning of *dankbar* 'thankful' is 'someone bearing thanks'.
- Meaning of the *-bar* suffix gradually changes to a more abstract dispositional reading
- Nominal hosts are gradually replaced by verbal hosts with increase in productivity

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Diachronic change: nominal hosts are gradually replaced by verbal hosts

- It is highly productive to consult large diachronic corpora for studying morphological productivity.
- The German Text Archive DTA with the highly expressive search and concordancing tool DDC provides a world-class CLARIN(-D) resource for doing so.