

Proper name compounding – a productive word formation pattern?

Proper name Compounds

Proper name compound are nominal compounds with a proper name as modifier constituent.¹³

- (1) *Trump-Rede* („*Trump speech*“)
- (2) *Union-Fan* („*Union fan*“)
- (3) *Bunsenbrenner* („*Bunsen burner*“)

Proper names are a special linguistic category in many regards (eg. grammar, semantics) and as such distinct from common nouns.¹⁰ Although proper name compounds have a lot of similarities with compounds with a common noun as a modifier (*wedding speech*, *football fan*, *gas burner*), proper name compounding is not only an independent subtype within the N+N composition, but an independent type of nominal composition.¹³ The main distinctions can be found in the semantics, the function and the referentiality of the modifier.

Methods

- Corpus study based on DWDS core corpus of the 20th century
- Balanced corpus in terms of text types and time over the entire century
- resulting PN compound corpus: 46.933 Tokens, 11.305 Types, 6.991 Hapax legomena (14,9% of Tokens and 61,84% of Types)
- Calculation of TRR, V , P , P_{neo} , V_{neo}

How to measure morphological productivity?

Productivity is the potential of morphological processes to give rise to new words.^{1,4,5} The measurement of productivity will only ever be an approximation.

Baayen’s P^1

- Hapax legomena (n_1) and token based

$$P = \frac{n_1(t)}{N_{token}(t)}$$

P = the probability that a randomly selected token within the time span (t) is a hapax.

Berg’s $P_{neo}^{2,3}$

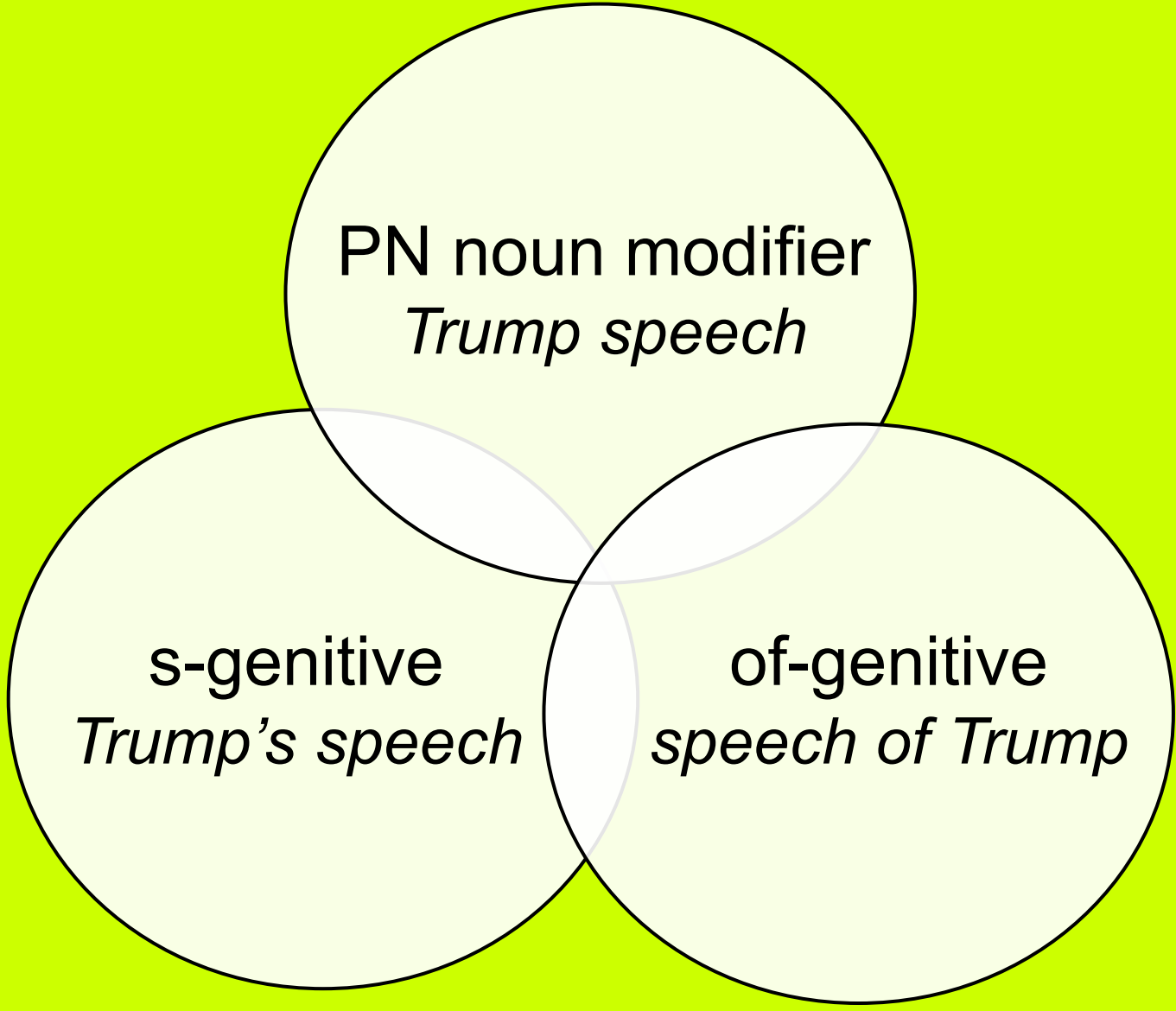
- new types (n_{new}) and type based

$$P_{neo} = \frac{n_{new}(t)}{N_{types}(t)}$$

P_{neo} = the probability that a randomly selected type within the time span (t) is a new type.

Discussion

- Interpreting Baayen’s P and Bergs P_{neo} is not easy and comparing them even harder.
- Problem 1: Baayen’s P is Hapax based; are hapax legomena good approximations for new words?
- Problem 2: Baayen’s P is token based, hence it is susceptible to frequency changes.



Compounding in German

Composition is a productive word formation process in German. Determinative compounds in particular are the most productive group of compounds.¹¹ There are only few studies that empirically investigate the productivity of compositional morphological word formation processes.^{9,12,14} Overall, the focus of studies on the productivity of morphological processes is on derivation.

Why should the productivity of PN compounds be investigated?

A widely held assumption is that proper noun compounds have increased in use over time and that there has been a particularly strong increase in the course of the 20th century. For German, the (alleged) increase has often been attributed to the competition with genitive constructions and an influence of English, as early as at the end of the 19th century¹⁵ but also throughout the 20th century^{6,7,8,16}. So far, there have been no empirical studies regarding the productivity of proper name compounding.

Results

	Types	Tokens	TTR
20. Jh.	11.305	46.933	0,2408
1900-1909	1.309	3.337	0,3923
1910-1919	1.384	4.167	0,3321
1920-1929	1.882	4.785	0,3933
1930-1939	2.041	5.973	0,3417
1940-1949	1.601	4.932	0,3246
1950-1959	1.389	4.433	0,3133
1960-1969	1.312	3.871	0,3389
1970-1979	1.504	4.275	0,3518
1980-1989	2.302	5.853	0,3933
1990-1999	2.271	5.307	0,4279

Figure 1: Development of types, tokens and TTR in the 20th century

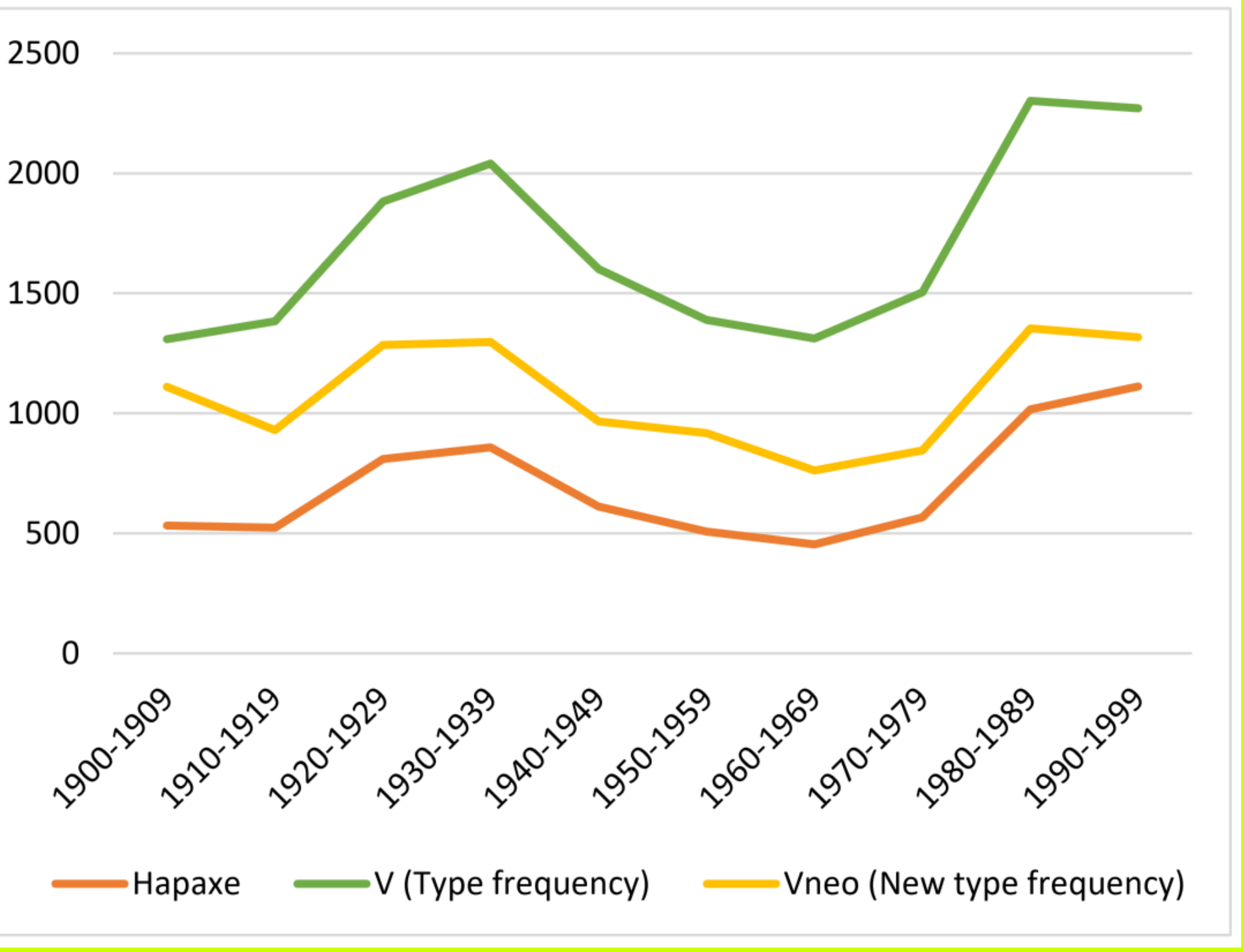


Figure 2: Frequency developments: hapax legomena, type frequency V and new type frequency V_{neo}

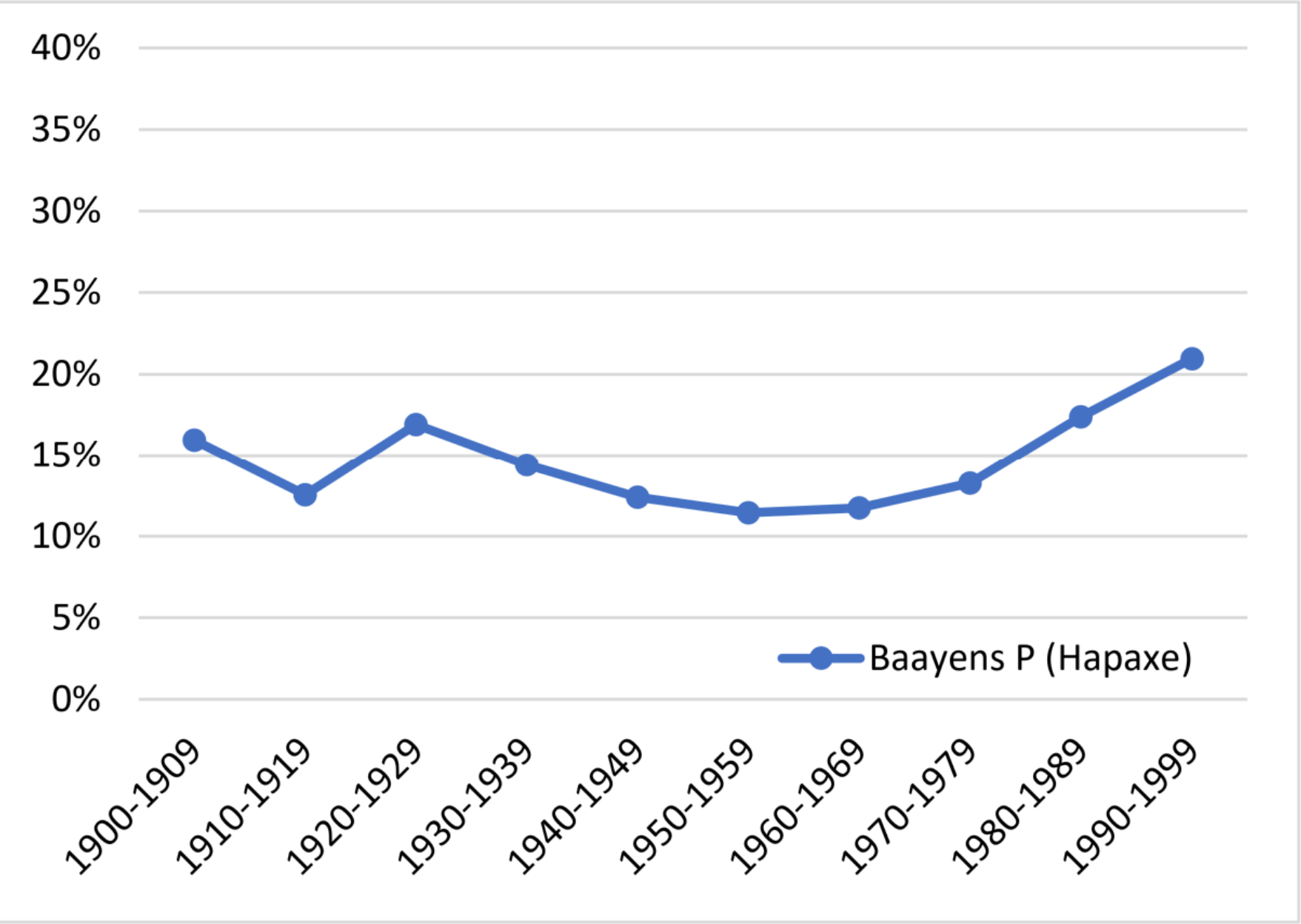


Figure 3: Development of Baayen’s P

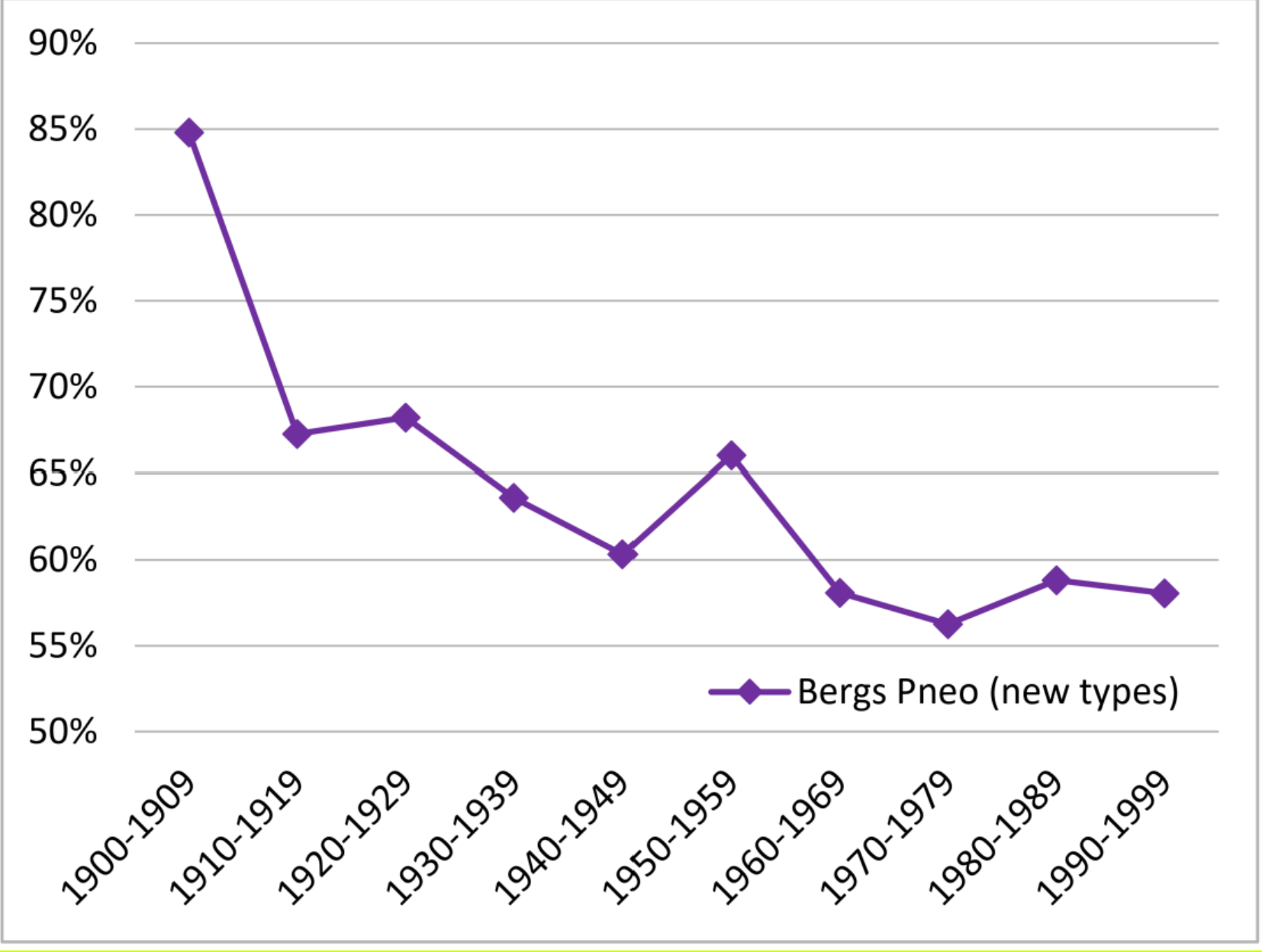


Figure 4: Development of Berg’s P_{neo}

- Problem 3: Hapax legomena are overestimated towards the end of a time span. The last decades of Baayen’s P may not be as reliable to interpret.
- Problem 4: New types are (per definitionem) overestimated towards the beginning of a time span. The first decades of Berg’s P_{neo} cannot be reliably interpreted.
- Problem 5: How to interpret a stable P_{neo} ? If the amount of types used increases over time, a stable level of productivity would require an increase in new types.

Conclusion:

Proper noun compounding is a highly productive word formation pattern. The productivity appears to be rather stable over the course of the 20th century.

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