Estimating literary readability through lexical & syntactic complexity.

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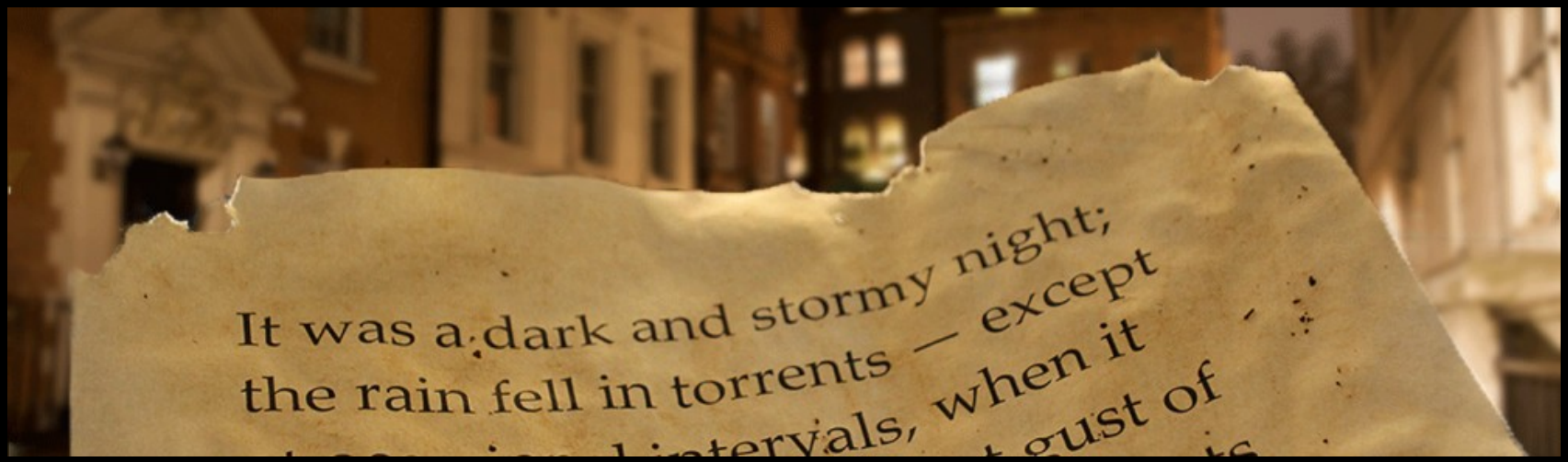
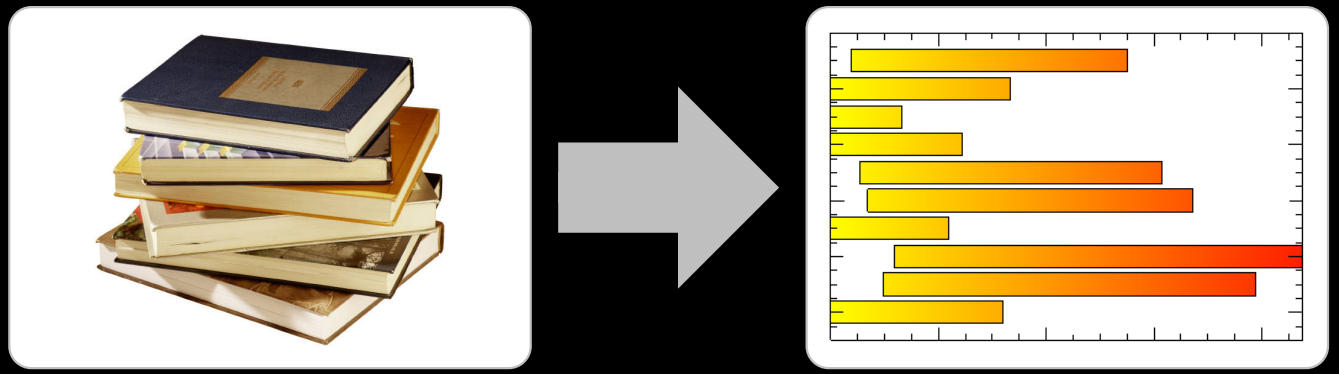


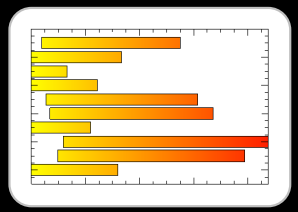
The Riddle of Literary Quality

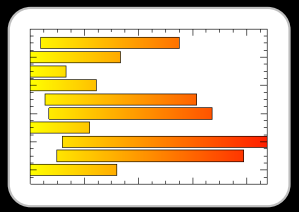
- The Riddle of Literary Quality aims to find properties which make certain texts literary.



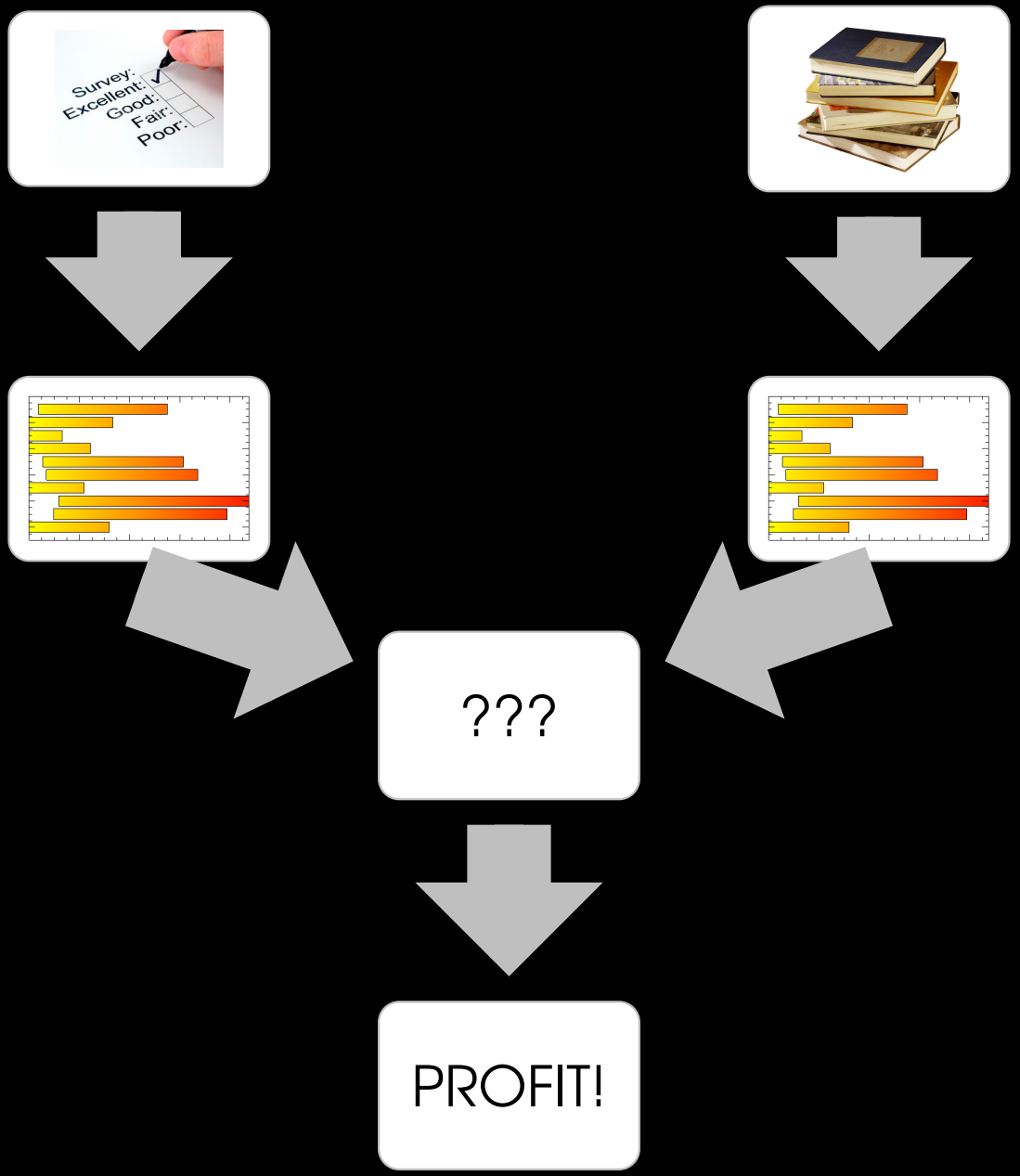
- Literary complexity, the idea that literary texts are more complex than others, is one such property.

The project





The project



Readability

Simple readability measures use superficial features:

- words per sentence
- syllables per word

$\Rightarrow$ two-parameter multiple regression equations

Readability

Vocabulary-based tests

- fixed word lists & frequencies (Lexile)
- smoothed unigram model (C & C, 2004)

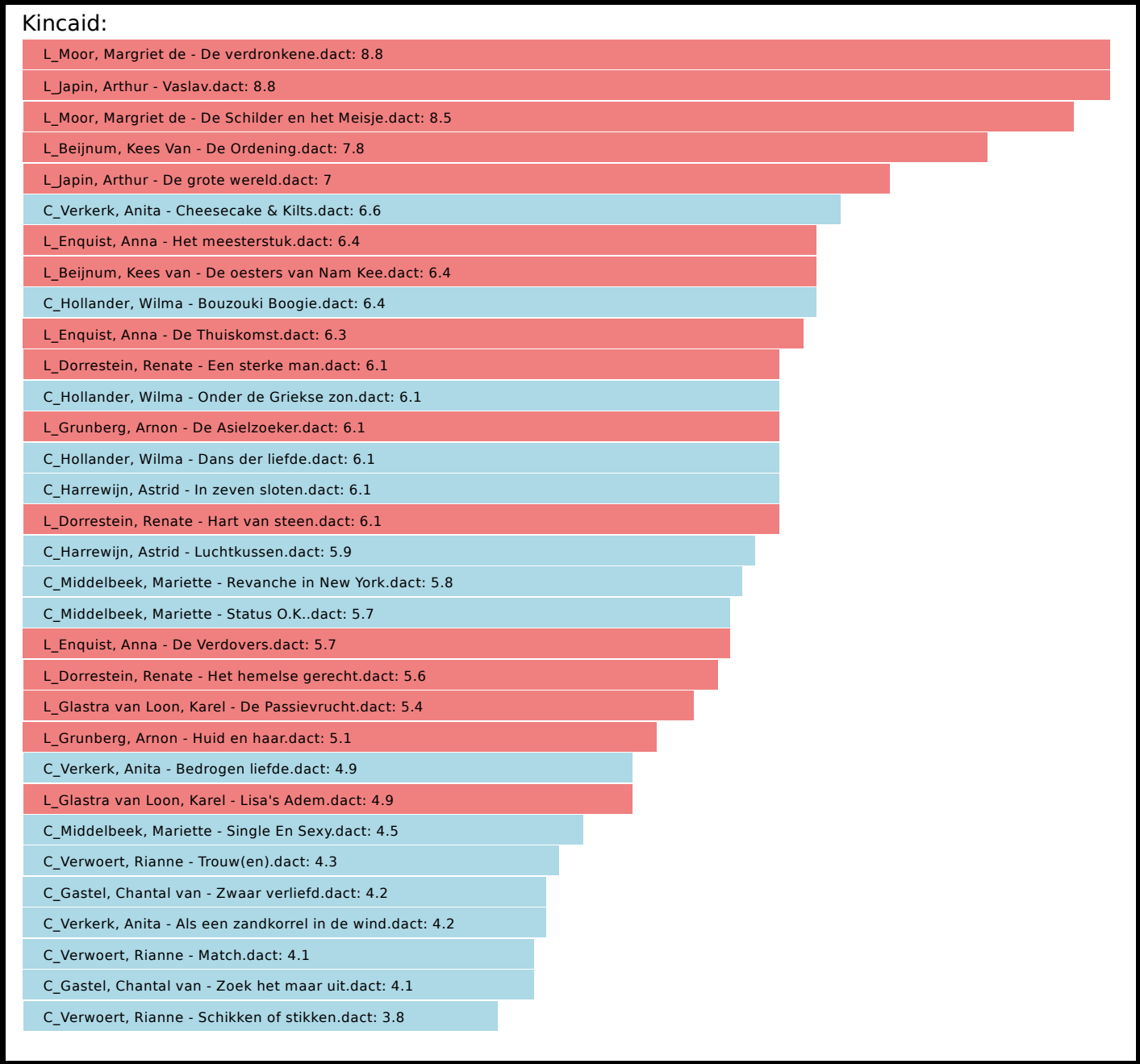
The Lexile framework for reading. http://www.lexile.com Collins-Thompson & Callan (2004). A language modeling approach to predicting reading difficulty. In Proc. of HLT/NAACL, pp. 193–200.

Measuring success

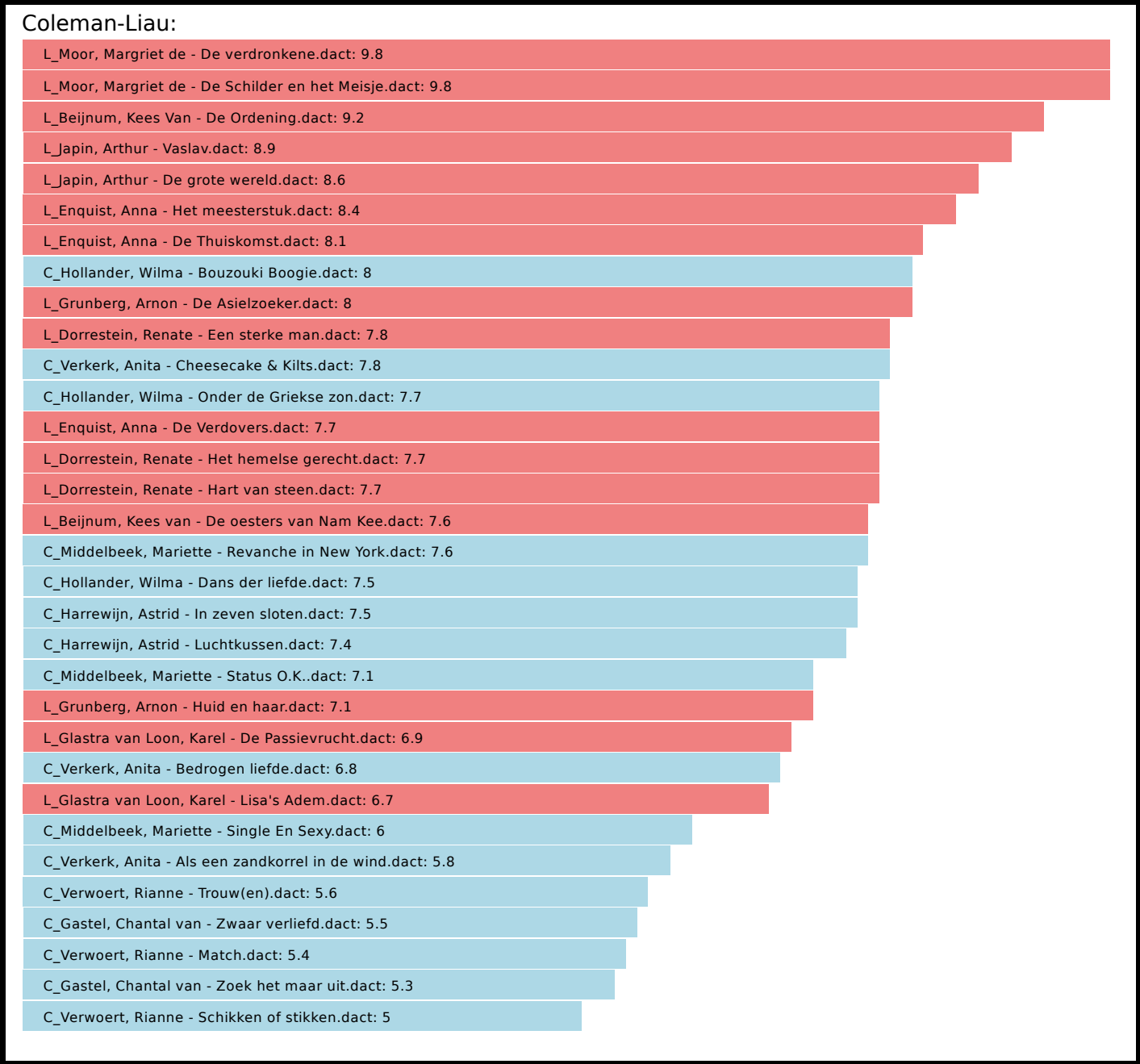
- Ashok et al. (2013) report an inverse correlation between simple readability measures and literary success.
- Basically, more VPs => more readability, but less success.

Ashok, Feng and Choi (2013). Success with Style—Using Writing Style to Predict the Success of Novels. EMNLP

Kincaid measure

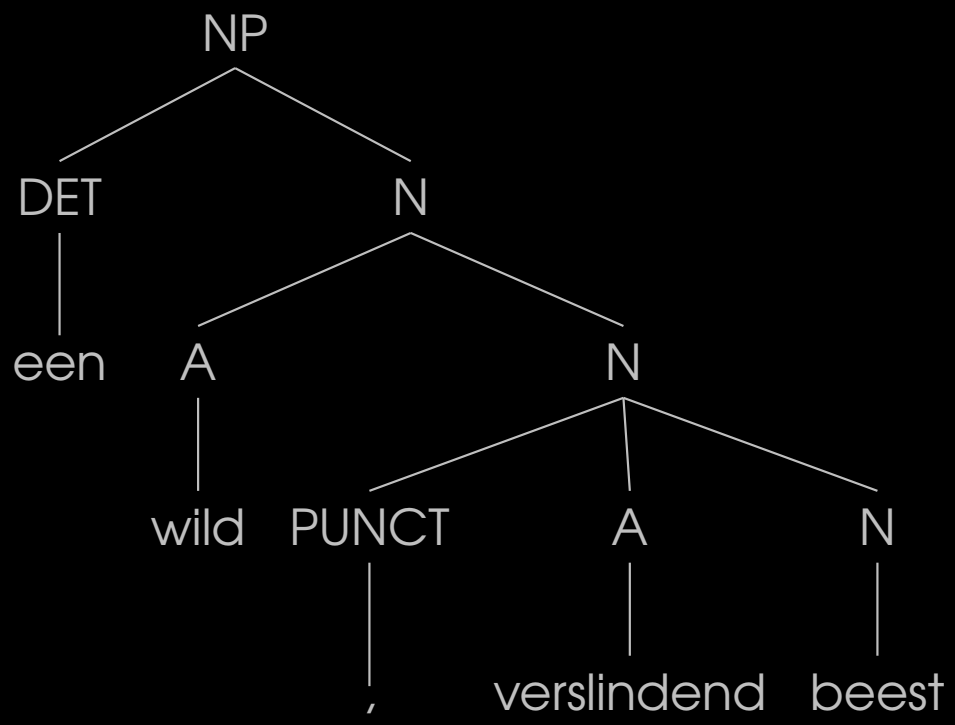


Coleman-Lau measure



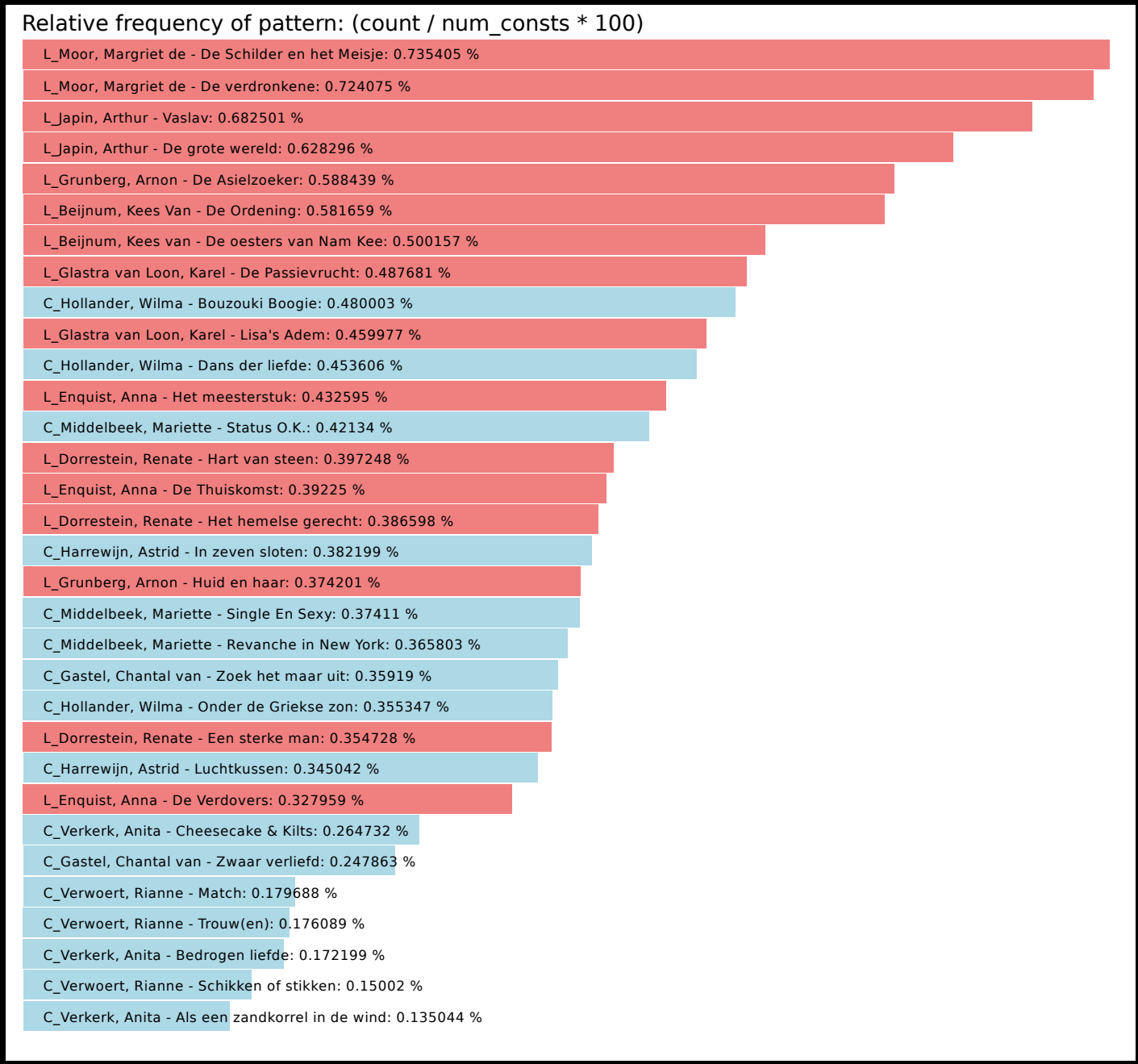
Syntactic patterns

- Parse sentences in books
- Count occurrences of `complex' patterns with query engine

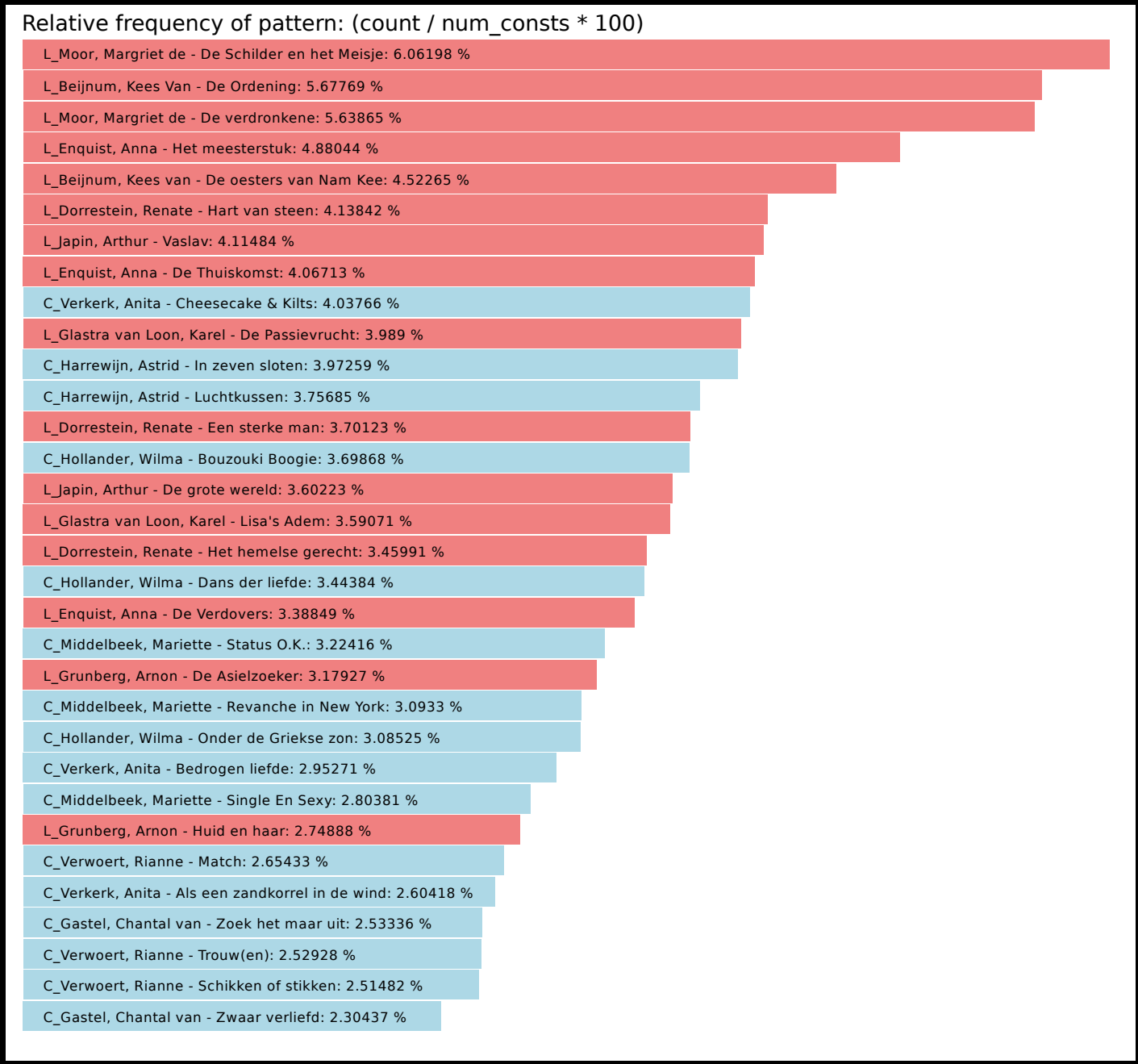


Jautze, Koolen, van Cranenburgh, de Jong (2013). From high heels to (...): a syntactic investigation of chick lit and literature. Proc. of CLFL.

Relative clauses



NP modifiers



Outliers

	Kincaid	Coleman	Rel.	NP mod
Verkerk - Cheesecake	+	+	-	+
Hollander - Bouzouki	+	+	+	-
Dorrestein - Hemelse Gerecht	-	+/-	+/-	+/-
Dorrestein - Sterke Man	+/-	+	-	+/-
Enquist - Verdovers	-	+/-	-	+/-
Glastra van Loon	-	-	+	+
Grunberg - Huid en Haar	-	-	+/-	-

+ = `complex'
- = `simple'

Other measures

Syntactic & higher-level complexity

- Perplexity: *n*-gram model (Schwarm & Ostendorf, 2005)
- Coherence (Graesser et al., 2004)
  - Co-reference chains make text more cohesive
  - Connectives between sentences

Schwarm & Ostendorf (2005). Reading level assessment using SVM and stat. lang. models. Proc. of ACL, pp. 523–530.

Graesser et al. (2004). Coh-Metrix (...) BRMIC (36), pp. 193–202.

Beyond syntax: narrative complexity

- Slow vs. fast pace
- Linear vs. non-linear timeline
- Multiple narrators

Conclusion

Either . . .

- Some chick lit is more complex, some literature is simpler?
- . . . or not all complexity is in the lexical & syntactic realm

That’s all, folks!