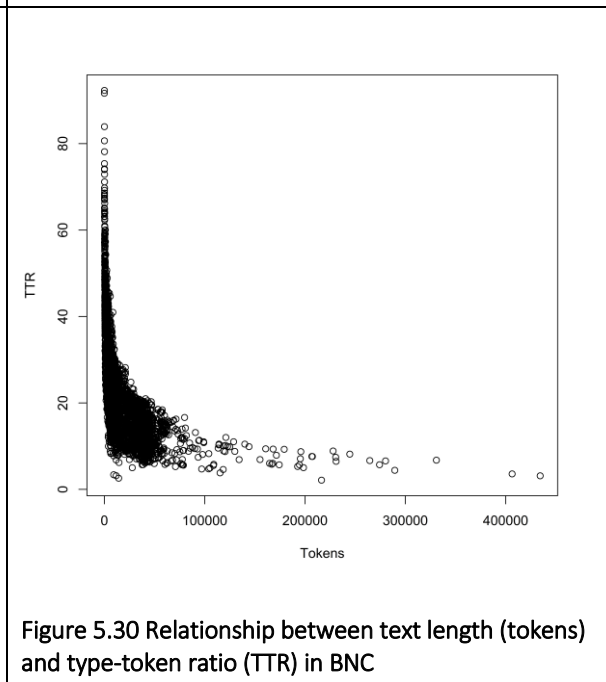
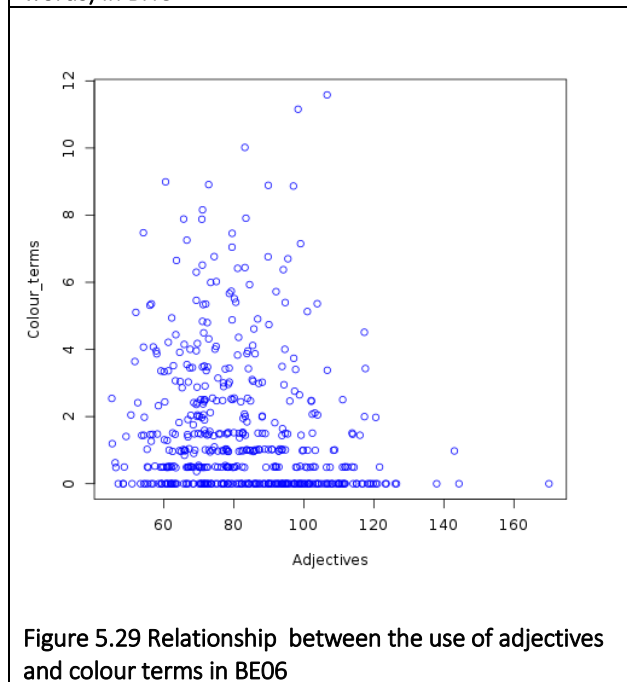
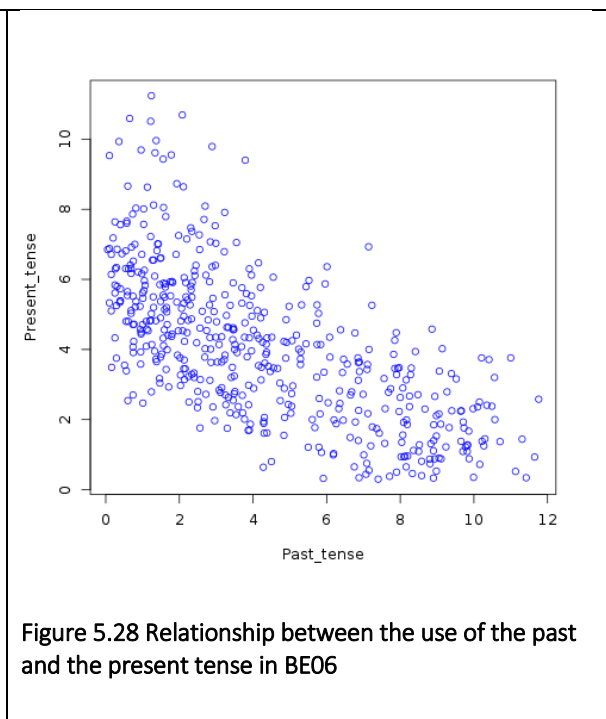
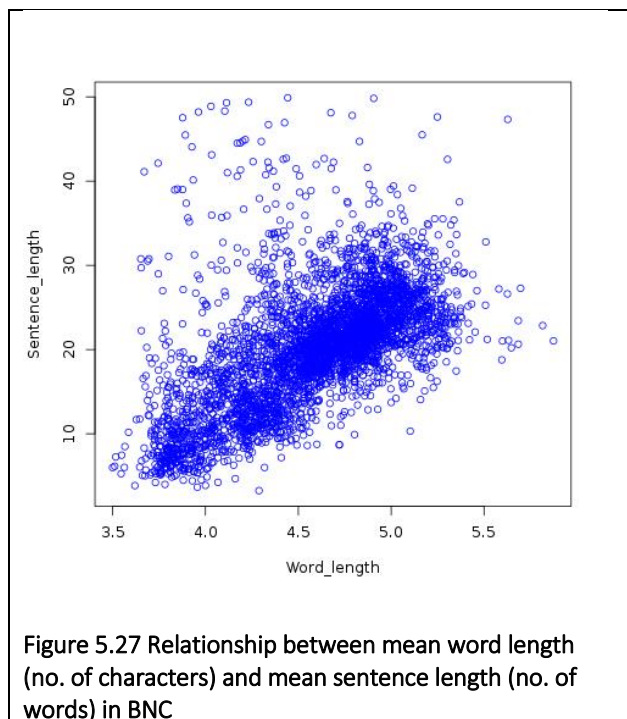


### Chapter 5: Exercises

- 1) Manually calculate the Pearson’s and Spearman’s correlations between verbs and adjectives in ten randomly selected texts from BE06. The data is provided below:

<b>Verbs</b>	169.9	135.0	161.7	183.0	163.1	190.8	140.7	213.9	218.0	165.2
<b>Adjectives</b>	96.0	102.6	91.9	76.5	98.8	77.6	68.4	60.3	74.4	76.5

- 2) What can you tell about the relationship between the variables in the four graphs below?



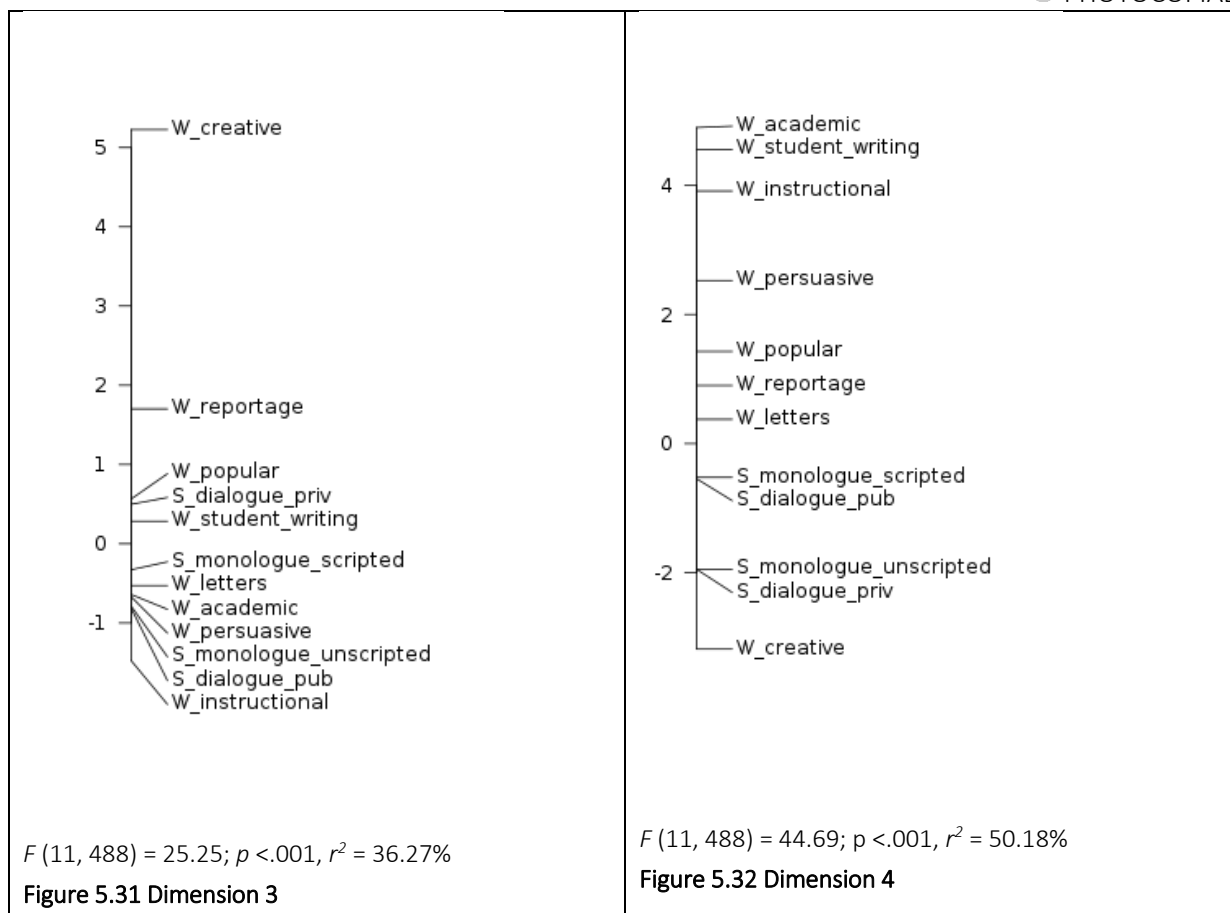
- 3) Each Brown family corpus is divided into 15 different types of texts listed below (see also section 1.4). **A** (Press: reportage), **B** (Press: editorial), **C** (Press: reviews), **D** (Religion), **E** (Skills, trades and hobbies), **F** (Popular lore), **G** (Belles lettres, biography, essays), **H** (Miscellaneous government documents, foundation reports, industry reports, college catalogue, industry house organ), **J** (Learned and scientific writings), **K** (General fiction), **L** (Mystery and detective fiction), **M** (Science fiction), **N** (Adventure and western fiction), **P** (Romance and love story), **R** (Humour).

This classification is very useful; however, for some purposes it might be too detailed. Group the individual text types into larger categories based on their functional similarity. Then design a study in which you could verify your grouping.

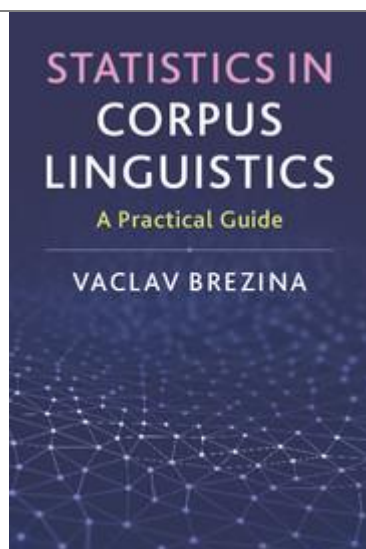
- 4) The following are factor loadings of Factors 3 and 4 based on the Multidimensional analysis of New Zealand English from section 5.5. The dimension plots are also provided. Interpret each factor functionally as a dimension. Create labels for these dimensions.

**Table 5.7 Results of Factor analysis of NZ English: Factor loadings of Factors 3 and 4**

Features	Factor 3 loadings	Features	Factor 4 loadings
past tense (1)	1.099	nominalizations (14)	0.618
third-person personal pronouns (8)	0.461	conjuncts (45)	0.499
attributive adjectives (40)	-0.304	agentless passives (17)	0.36
present tense (3)	-0.583	by-passives (18)	0.347
		time adverbials (5)	-0.444
		place adverbials (4)	-0.504



5) Use the data provided on the Companion website and the MD tool to compare registers in current British and American English.



Brezina, V. (2018). [\*Statistics in Corpus Linguistics: A Practical Guide\*](#). Cambridge: Cambridge University Press.

Do you use language corpora in your research or study, but find that you struggle with statistics? This practical introduction will equip you to understand the key principles of statistical thinking and apply these concepts to your own research, without the need for prior statistical knowledge. The book gives step-by-step guidance through the process of statistical analysis and provides multiple examples of how statistical techniques can be used to analyse and visualise linguistic data. It also includes a useful selection of discussion questions and exercises which you can use to check your understanding.

The book comes with a Companion website, which provides additional materials (answers to exercises, datasets, advanced materials, teaching slides etc.) and [Lancaster Stats Tools online](#), a free click-and-analyse statistical tool for easy calculation of the statistical measures discussed in the book.