

Tools for Researching Vocabulary
P.M. Meara & I. Miralpeix (2017)
Bristol, UK: Multilingual Matters (280 pages)
ISBN: 978-1-78309-645-9

Review by Jon Clenton

Hiroshima University

doi: <http://dx.doi.org/10.7820/vli.v05.1.clenton>

Paul Meara is a genius. This book demonstrates it. This hugely impressive work presents 11 chapters, each describing a utility designed to explore an aspect or aspects of vocabulary knowledge. The book is a tour de force, comprising six sections, serving to demonstrate the humongous achievement of Paul Meara's contribution to the field. The book is accessible to all, but of course ideally suited to vocabulary researchers (from undergraduate to postgraduate). Meara and Miralpeix's volume presents each chapter in the same format, in short: a brief introduction to the program or tool under review, a description of where to access it, how to use it, screenshots, a published paper that uses the program, a reflection relating to where we are now, and a set of questions for readers to follow up on. What follows is a brief description of each of these chapters, presented under each of their section headings.

Part 1: Processing Vocabulary Data

Chapter 1 begins this volume with a description of two programs (V_Words and V_Lists) described as useful for carrying out basic operation on vocabulary data. The chapter is divided into two sections, the first of which describes V_Words. V_Words is described as a small utility program that turns texts into word lists, producing a basic count of all types and tokens in a chosen text. The text directs interested parties towards an online link and presents a basic description of how to use the program. A screenshot produced by V_Words is included in the text, showing token, type, and frequency lists. Section 2 of this chapter describes V_Lists. V_Lists is a utility designed to carry out basic operations on word lists. The text describes that once a user has entered two word lists into V_Lists, the utility then reports lists in three formats: words that appear in one of the lists, words that appear in both of the lists, and a cumulative list that contains words that appear in either of the original lists entered by the user. The generated output can then be used to perform different types of analyses, which I would suggest interested parties pursue. The chapter concludes with comparisons using the programs with an earlier paper (Morgan, 1926) which was originally designed to do the same job manually.

Part 2: Measuring Lexical Variation, Sophistication, and Originality

Chapter 2 describes D_Tools, a utility to compute the lexical richness of a text. The program bases its computation on a statistic (called D) and uses raw text. The chapter describes that D is based on Malvern and Richards's (2004) *vocd-D* and is basically a type/token measure (part of a larger family of statistics which uses type to token ratio (TTR) to explore lexical richness). There is detailed description outlining the complexity of this earlier measure, complex because length of text influences TTR. The text describes the computation D_Tools uses, and directs potential users towards a link. The text includes screenshots of D_Tools and compares data with those generated by *vocd*, reporting that correlations are usually very high. The chapter concludes with reflections on an earlier paper (Miralpeix, 2006) and highlights the need for other approaches to measure lexical richness – reporting McCarthy's view that D remains “the best yet attempt at a lexical diversity thermometer.”

Chapter 3 describes P_Lex, a measure to assess the vocabulary produced by L2 learners. The authors highlight two motivations for P_Lex: the first relates to the lack of an efficient measure of lexical sophistication (despite D being “good at” measuring lexical diversity) and the second relates to the need to assess short texts learners produce (as opposed to texts of 200–300 words produced by tasks such as D or Lexical Frequency Profile of Laufer & Nations, 1995). The resulting utility is P_Lex which uses relatively short texts, and which the authors consider to be more reliable with longer texts. They describe P_Lex as being “surprisingly effective” that works “for practical purposes.” The text presents screenshots of P_Lex in operation. The second half of the chapter presents an earlier paper (Meara & Bell, 2001), with subsequent reflections describing where this specific field is currently. The authors describe P_Lex as a simple tool, with data it generates easily comparable with other variables. However, while comparisons with other measures suggest that it is a “robust” tool, results reportedly need to be treated with caution, as “P_Lex is not backed up by a proper theory.”

Chapter 4 describes two utilities that constitute the Lexical Signatures suite. The first utility is a description of V_LexSig, a program that compares the input of two texts with a binary coding in terms of a target word list. The binary coding provides a compact and economical way of describing texts, providing a means to identify lexical similarities and differences. Screenshots are presented in the text. The second utility is SigSorter, which uses V_LexSig as input, and presents different signatures from a data set in order of their relative frequency in the data set. The background reading presented in the text is from Meara, Jacobs, and Roders (2002). The subsequent reflection describes a response to researchers pursuing type-/token-based measures. The reflection presents a discussion in which the authors compare L2 written texts and “surprisingly” find considerable variation as well as a very large number of unique signatures. The discussion centres around the expectation that beginner level texts would be very similar to one another compared with those generated by more advanced L2 learners.

Chapter 5 presents V_Unique, a utility to measure lexical originality. The test was intended as a means to collect test taker words and then compare these words

with other words produced by other test takers. The test is described as useful for learners as well as researchers to explore lexical originality. In general, the authors report minimal overlap between subject data sets. The background reading presented in this section is an adapted unpublished MA thesis by Tzima and Miralpeix (2015); their study is unique because they examine the production of single word lists by way of contrast to earlier studies that deal with texts. The ensuing reflection describes the Tzima and Miralpeix study as exploratory but has the potential to be used to measure other dimensions of vocabulary knowledge, such as recall ability, as well as lexical availability.

Part 3: Estimating Vocabulary Size

Chapter 6 describes the V_YesNo test, which is based on the Eurocentres Vocabulary Size Test (EVST; Meara & Jones, 1990). The original program came from the need for a “quick and dirty” test to efficiently describe the L2 proficiency of speakers taking part in experimental studies. The appeal and advantage of this test is its simplicity, asking whether subjects know an item or not, as opposed to providing multiple choice prompts, for instance. The authors highlight several advantages of this kind of test, one being that students like it. The test, they describe, turned out to be a surprisingly powerful tool. One finding was the “fairly good correlation” with scores for other language skills. The background reading for the test is from Meara and Jones’ (1988) paper. The subsequent reflection highlights a number of issues that arose, and which the authors suggest that they had failed to consider in the earlier study. One issue stems from the false alarm and real word guess combination, from which the authors discuss a number of experimental hurdles and worthy areas of reconsideration for this test.

Chapter 7 describes V_size, which is part of an ongoing attempt to measure the productive vocabulary of L2 speakers, and is a task that the authors report can make statements such as “this text looks as though it was generated by a person whose productive vocabulary is about 5500 words.” The task scores relate to Zipf’s law (which argues for a straightforward relationship between the number of times a word appears in a corpus and its rank order in a frequency list generated from that corpus) and assume that the text produced by a test taker relates to a characteristic frequency profile. The screenshots presented in the text highlight how V_size operates in practice. The background reading for this chapter is from Gesa (2015), adapted from an unpublished MA thesis, and the subsequent reflection sections suggest that further work is needed with this task. However, despite reservations that the test is only as good as the theory on which it is based, the authors suggest it “might reasonably be expected to be used to obtain reliable estimates.”

Chapter 8 outlines a task designed to investigate productive vocabulary size called V_Capture. V_Capture, is “based on an idea developed by biologists interested in counting the number of species in a test area, or the number of animals of a particular type in a test area.” The task, according to the authors, should be “treated with considerable caution,” given that the analogy between species or animal counts and word counts is not straightforward. The task takes two data sets as input, both from an L2 learner, and then uses “Petersen estimates” to predict the productive vocabulary available to the learner. The background reading for this

chapter is from Meara and Alcoy (2010), which presents an analogy between words and frogs. The reflection discusses potential tweaks to the approach taken by Meara and Alcoy, with a lot of discussion reserved for the nature of the capture task given to subjects. The authors discuss alternatives to essay writing tasks and suggest that a “good alternative” is a word association task which might result in more meaningful results.

Part 4: Measuring Lexical Access

Chapter 9 describes a word recognition task, *Q_Lex*, an exploratory utility designed to assess the ease with which an L2 learner can access a small set of high-frequency words. The task is based on a multidimensional characterization of L2 vocabularies. Rather than thinking of vocabulary in a single continuum, *Q_Lex* bases its task on the lexicon consisting of two or three dimensions and assesses subjects based on the assumption that L2 processing is different from that of processing in the L1. *Q_Lex* presents words hidden in a string of letters, the task for the subject being to identify the hidden word. L1 task performance is then compared with L2 task performance, and it presents an index of lexical accessibility. The text shows screenshots of *Q_Lex* in action. The background reading presented in this chapter is from Meara (1986), and the subsequent reflection calls for more research in this “interesting area” in order to respond to questions about how words are learned in a second language. The chapter highlights the complexities involved in learning a second language, the discussion of which relates to such diverse subjects as the guillotine, floppy disk drives, and experimental psychology.

Part 5: Assessing Aptitude for L2 Vocabulary Learning

Chapter 10 discusses *LLAMA_B*, which deals with language aptitude, specifically with vocabulary acquisition (learning names for things). Motivation for this particular task stems, according to the authors, from the need to elicit a critical attitude from MA students at Swansea University. The background reading for this chapter is from Rogers (in press), a report written specifically for this volume. The reading and the subsequent reflection is interesting, highlighting that the *LLAMA_B* task taken appears to result in students evaluating the task and then produces content for subsequent studies. The issues raised by the *LLAMA_B* task, according to the authors, appear to have generated a whole series of discussions about the nature of language aptitude in terms of the skills necessary to contribute to overall language learning performance. The chapter concludes with discussions relating to the success of the task and suggests that it might be good at distinguishing between good and poor language learners. The authors also report the large volume of interest the task has attracted.

Part 6: Modelling Vocabulary Growth

Chapter 11 discusses the Mezzonfanti program, which is a different utility compared with the other utilities described in this volume and was named after Professor Mezzonfanti from Bologna University (1774–1849) who reportedly could

speak a large number of languages. The Mezzonfanti task is a simulator designed to investigate the way different languages might interact with each other. The task is based on a “little-known” paper by Riegel (1968) who argued for a model of vocabulary acquisition consisting of three factors and resulting in a general formula. The task allows users to simulate with these three parameters and explore what happens when an individual learns two languages either in early childhood or later as an adult. The text presents Mezzonfanti utility screenshots in action. The background reading for this chapter is from Meara (2001), and the subsequent reflection discusses a number of interrelated concerns that stem from the use of such simulations: the lack of modelling use in applied linguistics research, the implications for overburdening learners with a large amount of vocabulary study, the potential interaction between start age and time spent on an L2 course, and the psycholinguistic ability to notice new words in an environment. The chapter concludes with a call for researchers to train themselves for writing computer programs necessary to explore further.

In conclusion/Envoi

To restate, and to conclude, this book represents a huge body of work, the work of a genius. From this standpoint alone, the book is very impressive. Yet the book is not only impressive in this specific regard. The level of detail, argumentation, and insistence that we researchers explore beyond the standard also drive this book. The closing “envoi” calls for researchers to “explore issues in L2 vocabulary acquisition in ways that area uncommon in Applied Linguistics research” is what the current volume represents. While the concluding section suggests that the programs in this collection are “works in progress,” there is a critical underpinning that keeps us wanting to know more. It is precisely this point that propels not only Paul Meara’s work, but any of those individuals who choose to follow up on his huge contribution to this ever-evolving field. To conclude, with Meara and Miralpeix (2017, p. 258): “we hope that the programs in this book will open up for you a world which goes beyond the sometimes very limited horizons of traditional vocabulary research projects.”

Jon Clenton
Hiroshima University