Supplementary information

Re-evaluating phoneme frequencies

Supplementary information and materials for this study consist of five parts. This document contains three sections of text-based supplementary information:

- S1: Guide to data and code
- S2: Original wordlist sources
- S3: Tables of results

In addition, the following supplementary materials are downloadable from www.SOMEWHERE.com:

- S4: Data viewer
- S5: Data and code

As the name suggests, S1 is a user guide to the various files and directories in S4 and S5. S2 gives bibliographic details for the original wordlists used in the study. S3 gives extended tables of results, listing maximum likelihood estimates of parameters, goodness-of-fit statistics and p values for each langauage and distribution type.

S4 is found in the downloadable directory *S4_data_viewer*. This directory contains an interactive app for visualising phoneme frequencies in each language, the fit of different distributions, and uncertainty in our results. It was not used at any stage of analysis. The intention is to give a convenient tool for viewing plots in any given language, rather than simply presenting a list of plots for all 168 languages in a long, unweildy document.

S5 is comprised of the remainder of the material downloadable from www.SOMEWHERE.com. This contains all the code and data files needed to replicate the study and the original output we produced saved in an Rdata format. For usage details, consult the guide in S1 below.

S1. Guide to data and code

S5 is downloadable from www.SOMEWHERE.com. This material contains data files and code for replicating the study, plus the original, raw results files generated as output. These are found in four directories, *data*, *fig*, *R* and *results*.

Data files

The *data* directory contains two data spreadsheets in tab-separated format, **Aus_segment_frequencies_2020-05-21.tsv** and **Aus_metadata_2020-05-21.tsv**. The first of these contains frequency data extracted from the Ausphon-Lexicon database. Each row corresponds to one unique phonological segment (identified in the 'match' column). The 'lex_ID' contains a Ausphon-Lexicon's numerical identifier for each language variety. The corresponding common name of the language variety is listed in the 'variety_name' column. The 'count' column contains the segment's raw count in the language's wordlist, 'freq' gives the segment's frequency expressed as a fraction of the total number of segments in the wordlist. 'n_forms' is the number of words in the language's lexicon.

The second file, **Aus_metadata_2020-05-21.tsv**, is a simple key matching Ausphon-Lexicon ID numbers to language variety names.

Figures

The *fig* directory contains the figures that appear in the paper.

Code

The *R* directory contains the R scripts used to conduct the analyses in the study. Analysis was performed with the script **Aus_powerlaw.R**, which is called with a single parameter giving the index of the language to be analyses (between 1 and 168). The script was submitted as a job batch to the Awoonga high performance computer cluster at The University of Queensland, Australia. The Awoonga system has 40 nodes, each consisting of 24 cores (Intel(R) Xeon(R) CPU E5-2670 v3 @ 2.30GHz), with 256 GB of RAM and 300 GB of disk memory, interconnected by a 10 Gigabit Ethernet network. The operating system is CentOS version 7 and batch jobs are submitted via PBS Pro software. A script **compile_MLE_results.R** compiles the many small results file generated by **Aus_powerlaw.R** into the main results files described in the next section. The script **Vuongs_LRT.R** performs Vuong's likelihood ratio tests. The script **create_figs_FrontPsychol.R** generates the figures that appear in the paper.

The first three R scripts are dependent on two R packages, *tidyverse* and *poweRlaw*, for which we used versions 1.3.0 and 0.76.0 respectively. To plot figures we also used the packages *cowplot*, *kableExtra*, *extrafont*, *ggrepel* and *Cairo*, and the fontface *Noto Sans*. These packages are available on CRAN (cran.r-project.org) and if they are not already installed on the user's machine, they can be installed via the standard 'install.packages' command in the R console. The scripts are also dependent on the *data* and *results* directories. As long as these requirements are satisfied, any user should be able to open and run the scripts in R software to reproduce the study's analysis and results. As an alternative to **Aus_powerlaw.R** which is called with a parameter and analyses a single language, we provide **Aus_powerlaw_all_languages.R** which analyses all languages and can be opened in R and run on its own, but be aware that the bootstrapping procedures may take several days to run on a personal machine.

Results files

Results are stored in the *results* directory, and a further subdirectory within it, *individual_results*. The script **Aus_powerlaw.R** produces four results files for each individual language, stored in Rdata format in the *individual_results* directory. The script **compile_MLE_results.R** compiles these into four main results files in Rdata format, saved in the *results* directory. Each of those Rdata files contain four list objects. The four lists are (replacing * with one of 'pl', 'lnorm', 'exp' or 'pois'):

aus_dis*: A list of length 168, where each element in the list is a 'dis*' object (defined in the *poweRlaw* package)—one for each language variety in our language sample. Each element in the list is named with the applicable Ausphon-Lexicon lex_ID. Each dis* object contains the maximum likelihood estimates of the parameters for a given distribution for a particular language. In other words, we use the *poweRlaw* package to fit a particular distribution to the segment frequencies of each language and save the results for each language as an element of a list. The 'dis*' object classes contain a variety of other information, such as a copy of all data points and information on the package version used—see the documentation for the *poweRlaw* package for details.

aus_dis*_xmin: A list of length 168, exactly the same as above, except an x_{min} parameter is estimated first using maximum likelihood and then the distribution is fitted to the remaining frequency values equal to or above x_{min}.

aus_bootstrap_*: A list of length 168, as above. This time, each element of the list is a 'dis*' object which is the result of running the bootstrap procedure (using the 'bootstrap_p' function in the *poweRlaw* package). Each 'dis*' object includes the output of each individual bootstrap iteration.

aus_bootstrap_*_xmin: As above, but with the x_{min} parameter included.

The script **Vuongs_LRT.R** produces one results file in Rdata format, saved in the *results* directory. This file, **Aus_Voungs_LRT.Rdata** contains results of our seven pairwise likelihood ratio test, in seven objects. One, named **lrt_results_e_l**, is the comparion of the exponential and lognormal distributions without

x_{min}, and six named **lrt__results__xmin__*a*__*b*** where a and b are each possible combination of e, l and p, comparing the exponential, lognormal and power law distributions using the x_{min} parameter estimated for the a distribution.

Guide to Data Viewer

S4 is found in the *S4_data_viewer* directory downloadable from www.SOMEWHERE.com. This directory contains an interactive app for visualising phoneme frequency data for each language. The app was produced in R, using the package *shiny* (Chang et al. 2018). In addition the app plots lines corresponding to the fit of each candidate distribution and plots the results of each bootstrapping procedure (including approximate 95% confidence intervals for each parameter). We plan to host the app on the Internet, so it can be viewed simply through an Internet browser. In the meantime, it can be run locally in R. Running the app locally should be simple and need not require any coding or previous experience with R software.

The *S4_data_viewer* directory contains an R file, **app.R**. To run the app, open the **app.R** file in Rstudio and click 'Run App'. Alternatively, if using the regular R console, set the working directory to the location of **app.R** and run the command 'shiny::runApp()'. The app will need to access two other directories, *data* and *results* which also downloadable at www.SOMEWHERE.com.

S2. Original wordlist sources

Adnyamathanha

CHIRILA source: CHIRILA/v2/McEnteeMcKenzie

McEntee, John & Pearl McKenzie. 1992. *Adna-mat-na english dictionary.* Adelaide: the authors. 125 pp.

Phonemic normalization: Coda tap normalized as vibrant. Otherwise, voiced stops, taps and fricatives normalized to lenis obstruents.

Alawa

Sharpe, Margaret C. 2001. *Alawa nanggaya nindanya yalanu junggulu = alawa-kriol-english dictionary.* Prospect, South Australia: Caitlin Press. 245 pp.

Amurdak

Handelsmann, Robert. 1991. *Towards a description of amurdak: a language of northern australia.* University of Melbourne. Melbourne Honours Thesis

Phonemic normalization: Prelateralized stops normalized as flapped laterals.

Angkamuthi

Crowley, Terry. 1983. Uradhi. In R. M. W. Dixon & Barry J. Blake (eds.), *Handbook of australian languages*, vol. 3, 5 vols., 307–428. Amsterdam: John Benjamins

Anguthimri

CHIRILA source: CHIRILA/v1/ASEDA0240

Crowley, Terry. 1989. Mbakwithi vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0240. Canberra

Atampaya

Crowley, Terry. 1983. Uradhi. In R. M. W. Dixon & Barry J. Blake (eds.), *Handbook of australian languages*, vol. 3, 5 vols., 307–428. Amsterdam: John Benjamins

Badimaya

Marmion, Doug. 1995. Badimaya dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0615. Canberra

Phonemic normalization: Double a normalized to long vowel.

Bakanh

Hamilton, Philip. 1997a. *Pakanh Alphabetical Search Index.* Oykangand and Olkola Dictionary. http://www.oocities.org/athens/delphi/2970/pakalpha.htm

Bardi

CHIRILA source: CHIRILA/v1/akl99

Aklif, Gedda & Kimberley Language Resource Centre. 1999. *Ardiyooloon bardi ngaanka: one arm point bardi dictionary.* Halls Creek, WA, Australia: Kimberley Language Resource Centre. 222 pp.

Bidyara

Breen, Gavan. 1973. *Bidyara and gungabula grammar and vocabulary.* Vol. 8 (Linguistic Communications). Melbourne: Monash University. 227 pp.

Bilinarra

Meakins, Felicity, Lauren Campbell, et al. 2013. *Bilinarra to english dictionary.* Batchelor, NT, Australia: Batchelor Press. 264 pp.

Biri

CHIRILA source: CHIRILA/v1/Terrell

Terrill, Angela. 1999. Biri lexicons. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0700. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0700_access.zip

Bularnu

Breen, Gavan. 1988. Bularnu grammar and vocabulary machine-readable files. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0007. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0007_access.zip

Bunuba

Centre, Kimberley Language Resource. 2010. *Bunuba draft dictionary.* Halls Creek, WA, Australia: Kimberley Language Resource Centre. https://www.klrc.org.au/dictionary/bunuba/lexicon/01.htm (26 July, 2018)

Burarra

CHIRILA source: CHIRILA/v1/Glasgow

Glasgow, Kathleen. 1994. *Burarra-gun-nartpa dictionary with english finder list.* SIL

Butchulla

Bell, Jeanie. 2003. *A sketch grammar of the badjala language of gari (fraser island).* University of Melbourne. Melbourne M.A. Thesis

Central Arrernte

Wilkins, David. N.d. Mparntwe arrernte (aranda): studies in the structure and semantics of grammar. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0476. Canberra

Phonemic normalization: Labialized consonants normalized to C + w. Prestopped nasals normalized to stop + nasal sequence. Prepalatalized consonants normalized to j + C.

Dalabon

Evans, Nicholas, Francesca Merlan & Maggie Tukumba. 2004. *A first dictionary of dalabon (ngalkbon).* Maningrida, NT, Australia: Maningrida Arts & Culture. 489 pp.

Dhangu

Zorc, R. David. 2004. Yolngu matha dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0778. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0778_Access.zip

Phonemic normalization: Lenis retroflex stop normalized to retroflex flap.

Dharumbal

CHIRILA source: CHIRILA/v2/ter02

Terrill, Angela. 2002. *Dharumbal: the language of rockhampton, australia* (Pacific Linguistics 525). Canberra: Pacific Linguistics. 108 pp. https://doi.org/10.15144/PL-525

Dhay'yi

Wunungmurra, Djarrayang. 1993. Dhalwangu dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0502. Canberra

Phonemic normalization: Lenis retroflex stop normalized to retroflex flap; all other voicing is allophonic.

Diyari

Austin, Peter K. 1981. *A grammar of diyari, south australia* (Cambridge Studies in Linguistics 32). Cambridge; New York: Cambridge University Press. 269 pp.

Phonemic normalization: Phonetic trill-released stop normalized as stop + trill. Otherwise, voiced stops normalized as taps.

Djabugay

Robertson, Sue & Bruce A. Sommer. 1997. Jaabugay dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0013. Canberra

Djapu

CHIRILA source: CHIRILA/v1/mor83

Morphy, Frances. 1983. Djapu, a yolngu dialect. In R. M. W. Dixon & Barry Blake (eds.), *Handbook of australian languages*, vol. 3, 5 vols., 1–188. Amsterdam: John Benjamins

Phonemic normalization: Lenis retroflex stop normalized to retroflex flap.

Djinang

CHIRILA source: CHIRILA/v1/ASEDA0009

Waters, Bruce E. 1988. Djinang dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0009. Canberra

Phonemic normalization: Glottal closure normalized to a segment phoneme.

Duungidjawu

CHIRILA source: CHIRILA/v2/K&W 04

Kite, Suzanne & Stephen A. Wurm. 2004. *The duungidjawu language of southeast queensland: grammar, texts and vocabulary* (Pacific Linguistics 553). Canberra: Pacific Linguistics. 298 pp. https://doi.org/10.15144/PL-553

Dyirbal

CHIRILA source: CHIRILA/v1/dix72

Dixon, R. M. W. 1972. *The dyirbal language of north queensland.* Cambridge: Cambridge University Press

Emmi

Ford, Lysbeth J. 1998. *A description of the emmi language of the northern territory of australia.* The Australian National University. Canberra dissertation. 446 pp. http://hdl.handle.net/1885/10796 (12 July, 2018)

Erre

Birch, Bruce. 2006. *A first dictionary of erre, mengerrdji and urningangk: three languages from the alligator rivers region of the north western arnhem land, northern territory, australia.* Jabiru, NT, Australia: Gundjeihmi Aboriginal Corporation. 125 pp.

Phonemic normalization: Double stops normalized as fortis.

Gamilaraay

CHIRILA source: CHIRILA/v1/ash03

Ash, Anna, John Giacon & Amanda Lissarrague. 2003. *Gamilaraay, yuwaalaraay & yuwaalayaay dictionary.* Alice Springs, NT, Australia: IAD Press. 344 pp.

Gangulu

CHIRILA source: CHIRILA/v1/Terrell

Terrill, Angela. 1999. Biri lexicons. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0700. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0700_access.zip

Gidabal

CHIRILA source: CHIRILA/v1/cro78

Crowley, Terry. 1978. *The middle clarence dialects of bandjalang*. Vol. 12 (Research and regional studies). Canberra: Australian Institute of Aboriginal Studies

Gooniyandi

Centre, Kimberley Language Resource. 1993. *Gooniyandi wordbook*. Halls Creek, Western Australia: Kimberley Language Resource Centre. 84 pp.

Gugu Badhun

CHIRILA source: CHIRILA/v1/sut73

Sutton, Peter John. 1973. Gugu-badhun and its neighbours. In *Gugu-badhun and its neighbours: a linguistic salvage study*, 24–67. Sydney: Macquarie University

Gumbaynggir

Cooperative, Murrbay Aboriginal {and} Culture. 2001. *A gumbaynggir language dictionary = gumbayngirr bijarr jandaygam*. Canberra: Aboriginal Studies Press. 160 pp.

Gunya

CHIRILA source: CHIRILA/v1/dixbla81

Breen, Gavan. 1981a. Margany and gunya. In R. M. W. Dixon & Barry Blake (eds.), *Handbook of australian languages*, vol. 2, 275–394. Amsterdam: John Benjamins

Gupapuyngu

CHIRILA source: CHIRILA/v1/BL

Lowe, Beulah & Beulah Lowe. 1976. Temporary gupapuyngu dictionary. Milingimbi, NT, Australia

Gurindji

Meakins, Felicity, Patrick McConvell, et al. 2013. *Gurindji to english dictionary*. Batchelor, NT, Australia: Batchelor Press. 596 pp.

Gurr-Goni

Green, Rebecca & Leila Nimbadja (eds.). 2015. *Gurr-goni to english dictionary*. Google-Books-ID: gIGp-DAEACAAJ. Batchelor, NT, Australia: Batchelor Press. 357 pp.

Phonemic normalization: Geminate stops normalized to fortis.

Guugu Yimidhirr

Haviland, John B. 1979. Guugu yimidhirr. In R. M. W. Dixon & Barry Blake (eds.), *Handbook of australian languages*, vol. 1, 5 vols., 26–180. Amsterdam: John Benjamins

Guwamu

CHIRILA source: CHIRILA/v1/Austin 1980

Austin, Peter K. 1980. Guwamu vocabulary and english-guwamu finder list. Cambridge, MA

Iwaidja

Pym, Noreen & Bonnie Larrimore. 2011. *Iwaidja-English Interactive Dictionary.* AuSIL Interactive Dictionary Series A-2. In collab. with Charles E. Grimes & Maarten Lecompte. http://ausil.org/Dictionary/Iwaidja/lexicon/mainintro.htm (23 July, 2018)

Jaru

Tsunoda, Tasaku. 1981. Jaru wordlist. In David Nash (ed.). In collab. with Kathleen Menning, Joyce Hudson & G Cooling, *Sourcebook for central australian languages.* Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0119. Alice Springs, NT, Australia: Institute for Aboriginal Development

Phonemic normalization: iji and uwu normalized as long high vowels.

Jawoyn

Merlan, Francesca & Pascale Jacq. 2005. *Jawoyn-english dictionary and english finder-list.* In collab. with Jawoyn elders. Katherine, NT, Australia: Diwurruwurru-jaru Aboriginal Corporation. 342 pp.

Jiwarli

CHIRILA source: CHIRILA/v2/ASEDA0435

Austin, Peter K. N.d.(a). A dictionary of jiwarli. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0435. Canberra

Kalkatungu

CHIRILA source: CHIRILA/v2/ASEDA0205

Blake, Barry J. 1990a. Kalkatungu vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0205. Canberra

Phonemic normalization: Double short vowels normalized as long.

Karajarri

McKelson, Kevin R. 1989. Studies in karajarri

Kariyarra

Smythe, Sue & Manny Lockyer. N.d. Kariyarra wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0582. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0582_access.zip

Kartujarra

O'Grady, Geoffrey N. 1988a. Gardudjarra wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0067. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0067_access.zip

Kija

CHIRILA source: CHIRILA/v1/bly01

Blyth, Noel. 2001. Wangka dictionary and grammar. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0709. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0709_access.zip

Kok Nar

Sommer, Bruce A. N.d.(b). Koko narr. Fryer Library Bruce Sommer Collection, item UQFL476_b10f03_64, UQFL476_b10f03_65. Brisbane

Koko Bera

Black, Paul D. & Kokoberrin Tribal Aboriginal Corporation. 2007. The kokoberrin and their languages. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item MS 4584

Kugu Nganhcara

CHIRILA source: CHIRILA/v1/ASEDA0021

Smith, Ian & Steve Johnson. 1989. Kugu nganchara. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0021. Canberra

Kukatj

Breen, Gavan. 1991. Kukatj grammar machine-readable files. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0022. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0022_access.zip

Phonemic normalization: Featureless vowel normalized as schwa.

Kukatja

CHIRILA source: CHIRILA/v1/ASEDA0504

Peile, Anthony Rex & Hilaire Valiquette. N.d. A basic kukatja to english dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0504. Canberra

Kuku Yalanji

Hershberger, Henry D. & Ruth Hershberger. 1986. *Kuku-yalanji dictionary.* In collab. with Australian Aborigines Branch Summer Institute of Linguistics. Vol. 7 (Work Papers of SIL - AAIB. Series B). Darwin: Summer Institute of Linguistics, Australian Aborigines Branch. 294 pp.

Kungkari

CHIRILA source: CHIRILA/v1/bre90

Breen, Gavan. 1990a. *Salvage studies of western queensland aboriginal languages* (Pacific Linguistics Series B 105). Canberra: Pacific Linguistics. 177 pp. https://doi.org/10.15144/PL-B105

Kurrama

Dench, Alan C. N.d. Kurrama. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0481. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0481_access.zip

Kurtjar

CHIRILA source: CHIRILA/v1/ASEDA0026

Black, Paul D. & Rolly Gilbert. 1988. Kurtjar dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0026. Canberra

Phonemic normalization: Retroflex glide~tap normalized as glide.

Kuugu Ya'u

Thompson, David A. 1988. "sand beach" language : an outline of kuuku ya'u and umpila. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0027. Canberra

Lardil

Hale, Kenneth & Ngakulmungan Kangka Leman. 1997. *Lardil dictionary: a vocabulary of the language of the lardil people, mornington island, gulf of carpentaria, queensland; with english-lardil finder list.* Gununa, QLD, Australia: Mornington Shire Council. 347 pp.

Larrakia

Harvey, Mark. 2004. *Larrakia dictionary*. Darwin: ATSIC, Yirra Bandoo Aboriginal Corporation. 92 pp.

Limilngan

Harvey, Mark. 2001. *A grammar of limilngan: a language of the mary river region, northern territory, australia* (Pacific Linguistics 516). Canberra: Pacific Linguistics. 209 pp. https://doi.org/10.15144/PL-516

Linngithigh

Hale, Kenneth. 1999. A linngithigh vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0687. Canberra

Phonemic normalization: Trill-released stop normalized as stop + trill. Prenasalized stops normalized to nasal + lenis stop.

Malkana

Gargett, Andrew. 2011. *A salvage grammar of malgana, the language of shark bay, western australia* (Pacific Linguistics 624). Canberra: Pacific Linguistics. 102 pp. https://doi.org/10.15144/PL-624

Malyangapa

Hercus, Luise A. 1989. Maljangapa-wadigali vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0246. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0246_access.zip

Mangala

McKelson, Kevin. 1989a. Mangala wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0220. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0220_access.zip

Margany

CHIRILA source: CHIRILA/v1/bre81

Breen, Gavan. 1981a. Margany and gunya. In R. M. W. Dixon & Barry Blake (eds.), *Handbook of australian languages*, vol. 2, 275–394. Amsterdam: John Benjamins

Marra

Heath, Jeffrey. 1981. *Basic materials in mara: grammar, texts and dictionary* (Pacific Linguistics Series C 60). Canberra: Pacific Linguistics. 534 pp. https://doi.org/10.15144/PL-C60

Martuthunira

Dench, Alan C. 1995. *Martuthunira, a language of the pilbara region of western australia* (Pacific Linguistics Series C 125). Canberra: Pacific Linguistics. 406 pp. https://doi.org/10.15144/PL-C125

Matngele

Zandvoort, Franklin D. 1999. *A grammar of matngele*. University of New England. Armidale, NSW, Australia B.A. (Hons)

Mawng

Singer, Ruth et al. 2015. *Mawng dictionary v1.0*. mawngngaralk.org.au/main/dictionary.php (23 July, 2018)

Mbabaram

Dixon, R. M. W. 1991a. Mbabaram. In R. M. W. Dixon & Barry J. Blake (eds.), *Handbook of australian languages*, vol. 4, 5 vols., 348–402. Melbourne: Oxford University Press

Phonemic normalization: Labialized consonants normalized to C + w. Final schwa treated as a phoneme.

Mengerrdji

Birch, Bruce. 2006. *A first dictionary of erre, mengerrdji and urningangk: three languages from the alligator rivers region of the north western arnhem land, northern territory, australia.* Jabiru, NT, Australia: Gundjeihmi Aboriginal Corporation. 125 pp.

Phonemic normalization: Double stops normalized as fortis.

Miriwoong

Kofod, F. M. 1976. Miriwung - english. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item MS 1896. Canberra

Mirniny

O'Grady, Geoffrey N. & Edward M. Curr. 1988. Mirniny wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0070. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0070_access.zip

Mudburra

Nash, David et al. 1988. Mudburra wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0031. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0031_access.zip

Murrinh-patha

Street, Chester S. 1987. *An introduction to the language and culture of the murrinh-patha.* Darwin: Summer Institute of Linguistics. Australian Aborigines Branch. 117, plus audio cassette

Muruwari

CHIRILA source: CHIRILA/v1/ASEDA0252

Oates, Lynette Frances. 1992. *Muruwari (moo-roo-warri) dictionary: words of an aboriginal language of north-western new south wales.* Albury, NSW, Australia: Graeme van Brummelen, produced with the assistance of the Australian Institute of Aboriginal & Torres Strait Islander Studies. 97 pp.

Nakara

Eather, Bronwyn, Yurrbukka Community & Bawinanga Aboriginal Corporation. 2005. *A first dictionary of na-kara.* In collab. with Jimmy Kalamirnda. Winnellie, NT, Australia: Maningrida Arts & Culture. 199 pp.

Phonemic normalization: Geminate stops normalized to fortis.

Ngaanyatjarra

Glass, Amee. 1988. Ngaanyatjarra wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0033. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0033_access.zip

Ngadjunmaya

Wangka Maya Pilbara Aboriginal Language Centre. 2008. *Ngajumaya dictionary 2008.* South Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 16 pp.

Ngalakgan

CHIRILA source: CHIRILA/v1/mor83

Merlan, Francesca C. 1983. *Ngalakan grammar, texts and vocabulary* (Pacific Linguistics Series B 89). Canberra: Pacific Linguistics. 229 pp. https://doi.org/10.15144/PL-B89

Phonemic normalization: Geminate stops normalized to fortis.

Ngamini

CHIRILA source: CHIRILA/v1/brendn

Breen, Gavan. 1967. Ngamini material. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item MS 117. Canberra

Phonemic normalization: Phonetic trill-released stop normalized as stop + trill. Otherwise, voiced stops normalized as taps.

Ngandi

Heath, Jeffrey. 1978. *Ngandi grammar, texts and dictionary.* Canberra: Australian Institute of Aboriginal Studies

Ngardily

Green, Thomas M. 1988. Ngardily wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0034. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0034_access.zip

Ngarinyin

Coate, Howard H. J. & A. P. Elkin. 1974. *Ngarinjin-english dictionary* (Oceania linguistic monographs 16). Sydney: University of Sydney. 534 pp.

Ngarinyman

Jones, Caroline. 2005. Ngarinman vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0796. Canberra

Ngarla

Brown, Alexander & Brian Geytenbeek. N.d. Ngarla-english dictionary (interim), english-ngarla wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0060. Canberra

Ngarluma

Hale, Kenneth. 1989. Ngarluma wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0037. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0037_access.zip

Ngawun

CHIRILA source: CHIRILA/v2/BreenMayi

Breen, Gavan. 1981b. *The mayi languages of the queensland gulf country* (A.I.A.S. New Series 29). Canberra: Australian Institute of Aboriginal Studies. 238 pp.

Ngiyambaa

CHIRILA source: CHIRILA/v1/don-lex

Donaldson, Tamsin. 1997. *Ngiyambaa wordworld.* Canberra: The Author, Australian Institute of Aboriginal & Torres Strait Islander Studies

Nhanda

CHIRILA source: CHIRILA/v1/ble01

Blevins, Juliette. 2001. *Nhanda: an aboriginal language of western australia* (Oceanic linguistics special publication 30). Honolulu: University of Hawai'i Press. 170 pp.

Nhangu

CHIRILA source: CHIRILA/v1/CB-fieldnotes

James, Bentley. 2003. *Yan-nhangu dictionary.* In collab. with Laurie Baymarrwanga et al. Milingimbi, NT, Australia: B. James. 34 pp.

Nhirrpi

CHIRILA source: CHIRILA/v1/bow-nhi

Bowern, Claire. 1999. Nhirrpi vocabulary, based on fieldnotes of s. a. wurm

Nukunu

CHIRILA source: CHIRILA/v2/her92

Hercus, Luise A. 1992a. *A nukunu dictionary.* Canberra: Department of Linguistics, Australian National University. 51 pp.

Phonemic normalization: Voiced retroflex stop normalized to retroflex tap.

Nungali

Bolt, Janet E., W. G. Hoddinott & F. M. Kofod. 1971. *An elementary grammar of the ngaliwuru language of the northern territory.* Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item MS 211. Canberra: Mimeographed

Nyamal

Burgman, Albert. 2007b. *Nyamal dictionary: english-nyamal finderlist and topical wordlist.* In collab. with Wangka Maya Pilbara Aboriginal Language Centre. South Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 59 pp.

Nyangumarta

Geytenbeek, Brian, Helen Geytenbeek & Wangka Maya Pilbara Aboriginal Language Centre. 1991. *Nyangumarta-english dictionary (interim), with an english-nyangumarta finder list.* Port Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 119 pp.

Nyawaygi

Dixon, R. M. W. 1983. Nyawaygi. In R. M. W. Dixon & Barry J. Blake (eds.), *Handbook of australian languages*, vol. 3, 5 vols., 431–531. Amsterdam: John Benjamins

Nyikina

CHIRILA source: CHIRILA/v1/Stokes

Stokes, Bronwyn. N.d. Nyikina-english: a first lexicon. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0472. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0472_access.zip

Nyiyaparli

O'Grady, Geoffrey N. 1988b. Nyiyabali wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0074. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0074_access.zip

Ogh Angkula

Sommer, Bruce A. N.d.(a). ANkula. Fryer Library Bruce Sommer Collection, item UQFL476_b10f04. Brisbane

Ogh Unyjan

Sommer, Bruce A. N.d.(c). Ogh unydjan. Fryer Library Bruce Sommer Collection, item UQFL476_b09f03_s05. Brisbane

Olkol

Hamilton, Philip. 1997b. *Uw Olkola and Uw Oykangand Alphabetical Search Index*. Oykangand and Olkola Multimedia Dictionary. http://www.oocities.org/athens/delphi/2970/olkola.htm

Oykangand

Hamilton, Philip. 1997b. *Uw Olkola and Uw Oykangand Alphabetical Search Index*. Oykangand and Olkola Multimedia Dictionary. http://www.oocities.org/athens/delphi/2970/olkola.htm

Panyjima

Dench, Alan C. 1991. Panyjima. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0375. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0375_access.zip

Patjtjamalh

Ford, Lysbeth J. 1997. *Batjamalh: dictionary and texts*. Bungendore, NSW, Australia: L.J. Ford. 108 pp.

Payungu

CHIRILA source: CHIRILA/v1/ASEDA0394

Austin, Peter K. N.d.(d). Payungu - english dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0394. Canberra

Pintupi

Hansen, Kenneth & Lesley Hansen. 1992. *Pintupi/luritja dictionary*. 3rd edn. Alice Springs, NT, Australia: Institute for Aboriginal Development. 267 pp.

Pitta Pitta

CHIRILA source: CHIRILA/v1/bla0275

Blake, Barry J. 1990b. Pitta pitta wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0275. Canberra

Purduna

Burgman, Albert. 2007a. *Burduna dictionary: english-burduna wordlist and thematic wordlist*. In collab. with Wangka Maya Pilbara Aboriginal Language Centre. South Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 86 pp.

Putijarra

Centre, Wangka Maya Pilbara Aboriginal Language & Australian Institute of Aboriginal {and} Torres Strait Islander Studies. 2004. *Putijarra-english wordlist, english-putijarra finder topical wordlist &sketch morphology*. South Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 118 pp.

Rembarrnga

McKay, Graham. 2011. Rembarrnga dictionary and grammar. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0607. Canberra. https://iats.ent.sirsidynix.net.au/client/en_AU/external/search/detailnonmodal/ent:$002f$002fSD_ILS$002f0$002fSD_ILS:402512/one?qu=AILEC+0607

Phonemic normalization: Geminate stops normalized to fortis.

Ritharrngu

CHIRILA source: CHIRILA/v1/Heath

Heath, Jeffrey. 1976b. Ritharngu. In Robert M. W. Dixon (ed.), *Grammatical categories in australian languages* (Linguistic series 22), 285–287. Canberra: Australian Institute of Aboriginal Studies

Southern Paakintyi

Hercus, Luise A. N.d.(a). Paakantyi dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0525. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0525_access.zip

Thaayorre

Foote, Tom & Allen Hall. 1993. *Kuuk thaayorre dictionary : thaayorre/english ; september, 1966-92.* Brisbane: Jolien Press. 239 pp.

Thalanyji

CHIRILA source: CHIRILA/v2/ASEDA0437

Austin, Peter K. N.d.(b). A dictionary of thalanyji. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0437. Canberra

Tharrkari

Austin, Peter K. 1992. *A dictionary of tharrgari, western australia.* Bundoora, Victoria, Australia: La Trobe University. 60 pp.

Thaynakwithi

Fletcher, Gloria Thancoupie. 2007. *Thanakupi's guide to language and culture: a thaynakwith dictionary.* North Sydney, NSW, Australia: Jennifer Isaacs Arts & Publishing. 144 pp.

Thirarri

Austin, Peter K. 1981. *A grammar of diyari, south australia* (Cambridge Studies in Linguistics 32). Cambridge; New York: Cambridge University Press. 269 pp.

Phonemic normalization: Phonetic trill-released stop normalized as stop + trill. Otherwise, voiced stops normalized as taps.

Tiwi

Lee, Jenny. 2013. *Tiwi-English Interactive Dictionary.* AuSIL Interactive Dictionary Series A-4. In collab. with Charles E. Grimes & Maarten Lecompte. http://ausil.org/Dictionary/Tiwi/lexicon/main.htm (23 July, 2018)

Phonemic normalization: r + alveolar normalized as retroflex. Following Breen 1979, (w)o is normalized as wa.

Umpila

O'Grady, Geoffrey N. 1988c. Umpila wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0094. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0094_access.zip

Unggumi

McGregor, William. 1985. *Handbook of kimberley languages: word lists.* Vol. 2. Broome: Kimberley Resource Centre

Urninggangg

Birch, Bruce. 2006. *A first dictionary of erre, mengerrdji and urningangk: three languages from the alligator rivers region of the north western arnhem land, northern territory, australia.* Jabiru, NT, Australia: Gundjeihmi Aboriginal Corporation. 125 pp.

Waalubal

CHIRILA source: CHIRILA/v1/cro78

Crowley, Terry. 1978. *The middle clarence dialects of bandjalang.* Vol. 12 (Research and regional studies). Canberra: Australian Institute of Aboriginal Studies

Waanyi

CHIRILA source: CHIRILA/v1/WaanyiDict

Laughren, Mary. 2016. Waanyi dictionary database. Brisbane

Wagiman

Wilson, Stephen & Mark Harvey. 2001. *The Wagiman online dictionary.* The University of Syndey. In collab. with Lulu Martin Dalpbalngali. http://sydney.edu.au/arts/linguistics/research/wagiman/dict/dict.html (9 July, 2018)

Walmajarri

Hudson, Joyce & Eirlys Richards. 1993. Walmajarri dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0167. Canberra

Wambaya

CHIRILA source: CHIRILA/v1/RN Wambaya 29,269,292; NE NA

Wangkatja

Blyth, Noel. 2001. Wangka dictionary and grammar. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0709. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0709_access.zip

Wangkumara

CHIRILA source: CHIRILA/v1/robnd

Robertson, Carol. 1985. *Wangkumara grammar and dictionary.* Sydney: Department of Technical & Further Education, Aboriginal Education Unit. 90 pp.

Phonemic normalization: Double a normalized to long vowel.

Wanyjirra

Senge, Chikako. 2015. *A grammar of wanyjirra, a language of northern australia.* The Australian National University. Canberra dissertation. https://openresearch-repository.anu.edu.au/bitstream/1885/109341/3/Senge%20Thesis%202016.pdf (23 July, 2018)

Wardaman

CHIRILA source: CHIRILA/v1/Merlan NA

Warlmanpa

Nash, David, Kenneth Hale & Gavan Breen. 1984. Preliminary vocabulary of warlmanpa. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0049. Canberra

Warlpiri

CHIRILA source: CHIRILA/v2/WarlpiriDict

Schwartz, Steve. 1996. Walpiri draft dictionary

Warluwarra

Breen, Gavan. 1990b. Warluwara grammar and wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0253. Canberra

Phonemic normalization: Prenasalized stops normalized to nasal + lenis stop. Tense glides normalized to fricatives. Tense lateral normalized to double lateral.

Warndarrang

CHIRILA source: CHIRILA/v1/hea80

Heath, Jeffrey. 1980. *Basic materials in warndarang: grammar, texts and dictionary* (Pacific Linguistics Series B 72). Canberra: Pacific Linguistics. 186 pp. https://doi.org/10.15144/PL-B72

Warnman

CHIRILA source: CHIRILA/v2/ASEDA0334

Centre, Wangka Maya Pilbara Aboriginal Language. N.d. Warnman wordlist. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0334. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0334_Access.zip

Warrgamay

CHIRILA source: CHIRILA/v1/dixbla81

Dixon, R. M. W. 1981. Wargamay. In R. M. W. Dixon & Barry Blake (eds.), *Handbook of australian languages*, vol. 2, 5 vols., 1–145. Amsterdam: John Benjamins

Warriyangga

Austin, Peter K. N.d.(c). A dictionary of warriyangka. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0439. Canberra

Watjarri

Mackman, Doreen (ed.). 2012. *Wajarri dictionary: the language of the murchison region of western australia.* In collab. with Irra Wangga Language Centre & Yamaji Language Aboriginal Corporation. Geraldton, WA, Australia: Irra Wangga Language Centre. 249 pp. http://www.bundiyarra.com.au/wajarriApp/ (23 July, 2018)

Wemba Wemba

Hercus, Luise A. 1992b. *Wembawemba dictionary.* Canberra: L.A. Hercus. 116 pp.

Western Arrernte

Breen, Gavan. 2000. *Introductory dictionary of western arrernte.* In collab. with John Pfitzner. Alice Springs, NT, Australia: IAD Press. 120 pp.

Phonemic normalization: Labialized consonants normalized to C + w. Prestopped nasals normalized to stop + nasal sequence. Prepalatalized consonants normalized to j + C.

Western Wakaya

Breen, Gavan. 2006. Wakaya. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0047. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0047_access.zip (30 July, 2018)

Wik Mungkan

Kilham, Christine et al. 2011. *Wik Mungkan-English Interactive Dictionary.* AuSIL Interactive Dictionary Series A-6. In collab. with Charles E. Grimes & Maarten Lecompte. http://ausil.org/Dictionary/Wik-Mungkan/lexicon/mainintro.htm (26 July, 2018)

Wik-Ngathan

CHIRILA source: CHIRILA/v2/PS

Sutton, Peter. 1995. *Wik-ngathan dictionary.* Prospect, South Australia: Caitlin Press. 182 pp.

Wirangu

Hercus, Luise A. 1999. *A grammar of the wirangu language from the west coast of south australia* (Pacific Linguistics Series C 150). Canberra: Pacific Linguistics. 239 pp. https://doi.org/10.15144/PL-C150

Phonemic normalization: Double a normalized to long vowel.

Wiri

Terrill, Angela. 1999. Biri lexicons. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0700. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0700_access.zip

Worrorra

McGregor, William. 1985. *Handbook of kimberley languages: word lists.* Vol. 2. Broome: Kimberley Resource Centre

Wotjobaluk

Hercus, Luise A. N.d.(b). Wergaia vocabulary 1. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0273. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0273_access.zip

Wubuy

CHIRILA source: CHIRILA/v1/Nunggubuyu Flora Fauna

Heath, Jeffrey. 1976a. Nunggubuyu flora and fauna terminology. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item MS432. Canberra

Phonemic normalization: Morphophonemic w1, w2 represented as their phonemic realizations w,b,k.

Yadhaykenu

Crowley, Terry. 1983. Uradhi. In R. M. W. Dixon & Barry J. Blake (eds.), *Handbook of australian languages*, vol. 3, 5 vols., 307–428. Amsterdam: John Benjamins

Yalarnnga

CHIRILA source: CHIRILA/v1/ASEDA0204

Breen, Gavan & Barry J Blake. N.d. Yalarnnga vocab. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0204. Canberra

Yandruwandha

CHIRILA source: CHIRILA/v1/breyandr

Breen, Gavan. 2004. *Innamincka talk: a grammar of the innamincka dialect of yandruwandha with notes on other dialects* (Pacific Linguistics 558). Canberra: Pacific Linguistics. 245 pp. https://doi.org/10.15144/PL-558

Phonemic normalization: Trill-released stop normalized as stop + trill. Prestopped laterals normalized to stop + lateral sequence.

Yanyuwa

Bradley, John. N.d. Yanyuwa dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0382. Canberra

Phonemic normalization: Prenasalized stops normalized to nasal + stop sequence.

Yarluyandi

CHIRILA source: CHIRILA/v1/ASEDA0251

Hercus, Luise A. N.d.(c). Yarluyandi vocabulary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0251. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0251_access.zip

Yawijibaya

McGregor, William. 1985. *Handbook of kimberley languages: word lists.* Vol. 2. Broome: Kimberley Resource Centre

Yaygir

CHIRILA source: CHIRILA/v1/morelli2011

Morelli, Steve. 2012. *Yaygirr dictionary and grammar.* In collab. with Many Rivers Aboriginal Language Centre. Nambucca Heads, NSW, Australia: Muurrbay Aboriginal Language & Culture Co-operative. 254 pp.

Yidiny

CHIRILA source: CHIRILA/v2/dix91

Dixon, R. M. W. 1991b. *Words of our country : stories, place names, and vocabulary in yidiny, the aboriginal language of the cairns-yarrabah region.* In collab. with Tony Irvine. St Lucia, Qld: University of Queensland Press. 312 pp.

Yindjibarndi

Anderson, Bruce, E. Richards & Summer Institute of Linguistics. N.d. Yindjibarndi dictionary. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0297. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0297_access.zip

Yinhawangka

Centre, Wangka Maya Pilbara Aboriginal Language. 2008. *Yinhawangka dictionary : english-yinhawangka wordlist and topical wordlists 2008 : draft 1.* South Hedland, WA, Australia: Wangka Maya Pilbara Aboriginal Language Centre. 92 pp.

Yintyingka

Verstraete, Jean-Christophe & Bruce Rigsby. 2015. *A grammar and lexicon of yintyingka* (Pacific Linguistics 648). Boston, Berlin: De Gruyter Mouton. 414 pp. https://doi.org/10.1515/9781614519003

Yir Yoront

Alpher, Barry. 1991. *Yir-yoront lexicon: sketch and dictionary of an australian language.* Vol. 6 (Trends in Linguistics: Documentation). Berlin, New York: Mouton de Gruyter

Yorta Yorta

CHIRILA source: CHIRILA/v1/bowmor99

Bowe, Heather & Stephen Morey. 1999. *The yorta yorta (bangerang) language of the murray goulburn including yabula yabula* (Pacific Linguistics Series C 154). Canberra: Pacific Linguistics. 286 pp.

Yulparija

McKelson, Kevin. 1989b. Yulparija. Australian Institute of Aboriginal and Torres Strait Islander Studies, Australian Indigenous Languages Collection, item ASEDA/AILEC 0032. Canberra. http://aiatsis.gov.au/sites/default/files/catalogue_resources/0032_access.zip

Yuwaalaraay

CHIRILA source: CHIRILA/v1/ash03

Ash, Anna, John Giacon & Amanda Lissarrague. 2003. *Gamilaraay, yuwaalaraay & yuwaalayaay dictionary.* Alice Springs, NT, Australia: IAD Press. 344 pp.

Yuwaliyaay

CHIRILA source: CHIRILA/v1/ash03

Ash, Anna, John Giacon & Amanda Lissarrague. 2003. *Gamilaraay, yuwaalaraay & yuwaalayaay dictionary.* Alice Springs, NT, Australia: IAD Press. 344 pp.

S3. Tables of results

The tables below give the results of maximum likelihood estimation for each distribution type and each language variety. Each table contains estimated parameter values, goodness-of-fit (Kolmogorov-Smirnof statistic) and the p value from the bootstrapping procedure.

All tables contain a '**lex ID**' column giving the numerical identifier for the language variety in the Ausphonlex database and a '**language variety**' column giving the common name identifier in the Ausphonlex database. Tables S3.1–S3.8 all contain a 'p' column giving the p value estimated via the bootstrapping procedure and a '**goodness-of-fit**' column giving the Kolmogorov-Smirnov statistic, which quantifies the distance between the fitted distribution and the observed distribution of the data. The rows of each table are ordered by the goodness-of-fit, from best-fitting to worst-fitting.

Table S3.1 reports results for the power law distribution fitted to each language's full segmental inventory (with no x_{min} parameter). It gives the maximum likelihood estimate of the shape parameter, α and the number of contrastive phonological segments in that language variety's segmental inventory (in the 'inventory size' column).

Table S3.2 reports results for the power law distribution with the addition of the x_{min} parameter. Thus, in addition to the shape parameter, α, Table S4.2 also gives the maximum likelihood estimate of x_{min} for each language. The x_{min} parameter is a count number whereby segments that appear fewer than x_{min} times in the wordlist are disregarded. To make the figure comparable between languages, here we report x_{min} as a fraction of the total number of segments in a language's wordlist. The original x_{min} values in count form can be accessed via the results files in S5. The column 'n **segments**' reports the number of unique phonemes in that language's segmental inventory that are at or above x_{min} in frequency (in other words, the number of observations to which the distribution has been fitted) and '**frac. of inventory**' gives the fraction of that language's total segmental inventory to which the distribution has been fitted.

Table S3.3 reports results for the lognormal distribution fitted to each language's full segmental inventory. Maximum likelihood estimates for the *log* mean and *log* SD parameters are given. Table S3.4 reports results for the lognormal distribution with an x_{min} parameter included.

Tables S3.5 and S3.6 cover the exponential distribution, with and without x_{min} respectively. They report maximum likelihood estimates for the λ shape parameter. Likewise, Tables S3.7 and S3.8 cover the Poisson distribution, with and without x_{min}. The shape parameter for the Poisson distribution is also termed λ.

Lastly, Table S3.9 reports results of Vuong's (1989) likelihood ratio test. The test statistic, R, is the ratio of the log likelihood of the data given an exponential distribution model versus a lognormal distribution model (with no x_{min} parameters). The sign of R indicates which of the two models fits best (positive values indicate the exponential distribution is preferred, negative values for the lognormal distribution). Rows are ordered by R. The 'p' column gives a one-sided p value indicating whether the exponential distribution is favoured over the lognormal distribution to a statistically significant degree. The '**signif.**' column indicates whether the p value is considered statistically significant after Bonferroni correction.

Table S3.1. Power law distribution.

lex ID	language variety	α	inventory size	p	goodness-of-fit
865	Diyari	1.69	25	0.25	0.15
866	Thirarri	1.69	25	0.16	0.17
170	Wik-Ngathan	1.67	28	0.07	0.19
162	Adnyamathanha	1.72	29	0.04	0.20
962	Gunya	1.41	31	0.03	0.21
540	Ngiyambaa	1.57	21	0.06	0.22
592	Muruwari	1.64	25	0.04	0.22
821	Gumbaynggir	2.18	19	0.05	0.23
939	Unggumi	1.38	30	0.01	0.25
940	Yawijibaya	1.44	23	0.02	0.25
656	Kuugu Ya'u	1.78	21	0.03	0.25
930	Purduna	1.47	26	0.01	0.26
787	Jawoyn	1.66	27	0.01	0.26
1043	Mbabaram	1.44	27	0.00	0.26
62	Dhay'yi	1.55	26	0.01	0.26
958	Margany	1.35	30	0.00	0.27
1042	Thaayorre	1.51	26	0.01	0.27
949	Kok Nar	1.56	21	0.01	0.27
89	Bunuba	1.37	24	0.02	0.27
977	Warndarrang	1.88	19	0.01	0.27
985	Yaygir	1.64	20	0.02	0.28
13	Dyirbal	1.84	16	0.03	0.28
1003	Murrinh-patha	1.46	25	0.00	0.28
1008	Yuwaalaraay	1.48	21	0.02	0.28
927	Tiwi	1.49	20	0.03	0.28
979	Mawng	1.52	22	0.01	0.29
983	Nhangu	1.50	31	0.00	0.29
495	Nyikina	1.59	20	0.01	0.29
1032	Kuku Yalanji	1.91	16	0.02	0.29
740	Kugu Nganhcara	1.41	30	0.00	0.29
853	Lardil	1.47	25	0.01	0.29
30	Duungidjawu	1.52	23	0.00	0.30
968	Ogh Angkula	1.58	24	0.00	0.30
1002	Yintyingka	1.42	26	0.00	0.30
63	Dharumbal	1.43	20	0.01	0.30
771	Kalkatungu	1.50	26	0.00	0.30
412	Ritharrngu	1.52	31	0.00	0.30
475	Southern Paakintyi	1.49	27	0.00	0.30
835	Gugu Badhun	1.65	17	0.01	0.30
1007	Yuwaliyaay	1.43	21	0.01	0.31
1018	Djapu	1.55	26	0.00	0.31
77	Dhangu	1.45	26	0.00	0.31
518	Yarluyandi	1.38	23	0.00	0.31
807	Gupapuyngu	1.53	31	0.00	0.31
101	Butchulla	1.29	24	0.01	0.32
1012	Warrgamay	1.43	19	0.01	0.32
929	Wanyjirra	1.60	21	0.00	0.32
919	Angkamuthi	1.33	26	0.00	0.32
1009	Gamilaraay	1.47	21	0.01	0.32
427	Yidiny	1.58	19	0.01	0.32
611	Anguthimri	1.26	34	0.00	0.32

lex ID	language variety	α	inventory size	p	goodness-of-fit
978	Wotjobaluk	1.56	19	0.00	0.32
642	Mangala	1.35	22	0.01	0.32
400	Thalanyji	1.35	26	0.00	0.33
200	Western Arrernte	1.49	25	0.00	0.33
91	Bularnu	1.27	30	0.00	0.33
554	Ngarluma	1.54	23	0.00	0.33
1029	Martuthunira	1.34	26	0.00	0.34
546	Yanyuwa	1.37	23	0.01	0.34
697	Kurrama	1.33	27	0.00	0.34
926	Limilngan	1.28	24	0.00	0.34
265	Wardaman	1.48	22	0.00	0.34
252	Warlmanpa	1.29	28	0.00	0.34
443	Payungu	1.32	26	0.00	0.34
572	Ngamini	1.40	23	0.00	0.34
790	Jaru	1.39	23	0.00	0.34
105	Bardi	1.56	24	0.00	0.35
946	Kurtjar	1.51	28	0.00	0.35
1040	Ngarinyin	1.16	27	0.05	0.35
1016	Tharrkari	1.31	32	0.00	0.35
911	Nyawaygi	1.46	18	0.00	0.35
269	Wangkumara	1.31	30	0.00	0.35
925	Larrakia	1.22	29	0.00	0.35
778	Jiwarli	1.37	26	0.00	0.35
237	Warluwarra	1.20	33	0.00	0.35
752	Kija	1.28	24	0.01	0.35
363	Yir Yoront	1.42	26	0.00	0.35
5	Gangulu	1.39	18	0.00	0.35
1026	Gidabal	1.46	20	0.00	0.35
928	Bakanh	1.30	26	0.00	0.35
1031	Ngadjunmaya	1.26	25	0.00	0.36
204	Wemba Wemba	1.44	22	0.00	0.36
921	Gurr-Goni	1.39	27	0.00	0.36
81	Dalabon	1.31	29	0.00	0.36
631	Yalarnnga	1.37	24	0.00	0.36
963	Kungkari	1.34	24	0.00	0.36
800	Guwamu	1.30	21	0.00	0.36
964	Olkol	1.19	31	0.00	0.36
1001	Ngandi	1.20	34	0.00	0.36
1025	Waalubal	1.43	20	0.00	0.36
1006	Central Arrernte	1.52	25	0.00	0.36
996	Emmi	1.31	31	0.00	0.36
965	Oykangand	1.22	31	0.00	0.36
982	Nhirrpi	1.25	30	0.00	0.36
12	Erre	1.23	27	0.00	0.36
847	Ngalakgan	1.31	27	0.00	0.36
957	Ngaanyatjarra	1.52	23	0.00	0.37
94	Biri	1.39	18	0.00	0.37
934	Urningangg	1.23	28	0.00	0.37
417	Yindjibarndi	1.49	25	0.00	0.37
943	Pintupi	1.44	23	0.00	0.37
905	Malkana	1.31	25	0.00	0.37
288	Wangkatja	1.48	23	0.00	0.37

lex ID	language variety	α	inventory size	p	goodness-of-fit
519	Nukunu	1.31	28	0.00	0.37
849	Waanyi	1.30	20	0.01	0.37
945	Wiri	1.38	18	0.00	0.37
1023	Wubuy	1.30	26	0.00	0.38
118	Badimaya	1.30	24	0.00	0.38
38	Djabugay	1.32	19	0.00	0.38
31	Djinang	1.36	25	0.00	0.38
838	Gooniyandi	1.34	23	0.00	0.38
914	Yinhawangka	1.27	26	0.00	0.38
744	Koko Bera	1.55	21	0.00	0.38
618	Mirniny	1.23	25	0.00	0.38
856	Patjtjamalh	1.20	27	0.00	0.38
935	Rembarrnga	1.38	28	0.00	0.39
922	Nakara	1.38	26	0.00	0.39
852	Gurindji	1.27	23	0.01	0.39
845	Iwaidja	1.38	23	0.00	0.39
857	Amurdak	1.23	24	0.00	0.39
621	Mengerrdji	1.22	26	0.00	0.39
848	Wagiman	1.30	27	0.00	0.39
1011	Yorta Yorta	1.23	24	0.00	0.40
228	Warriyangga	1.23	26	0.00	0.40
901	Guugu Yimidhirr	1.46	21	0.00	0.40
952	Ngawun	1.23	22	0.00	0.40
762	Kariyarra	1.27	24	0.00	0.40
760	Kartujarra	1.28	23	0.00	0.41
606	Mudburra	1.23	23	0.00	0.41
85	Burarra	1.44	26	0.00	0.41
534	Nhanda	1.22	33	0.00	0.41
565	Ngarinyman	1.23	23	0.00	0.41
1024	Ngardily	1.35	22	0.00	0.41
242	Warlpiri	1.37	24	0.00	0.41
1021	Watjarri	1.29	26	0.00	0.41
433	Pitta Pitta	1.24	25	0.00	0.41
923	Matngele	1.20	25	0.00	0.42
917	Nyamal	1.19	24	0.00	0.42
967	Thaynakwithi	1.22	32	0.00	0.42
1030	Putijarra	1.18	25	0.00	0.42
462	Panyjima	1.21	25	0.00	0.42
99	Bidyara	1.31	19	0.00	0.42
851	Bilinarra	1.24	23	0.00	0.42
920	Yadhaykenu	1.26	25	0.00	0.42
645	Malyangapa	1.25	25	0.00	0.43
117	Wirangu	1.32	23	0.00	0.43
734	Kukatja	1.33	23	0.00	0.43
598	Yandruwandha	1.20	30	0.00	0.43
493	Nyiyaparli	1.24	22	0.00	0.43
1019	Walmajarri	1.21	23	0.00	0.43
941	Wambaya	1.17	23	0.00	0.44
650	Linngithigh	1.22	27	0.00	0.44
737	Kukatj	1.23	25	0.00	0.44
305	Western Wakaya	1.19	26	0.00	0.44
563	Ngarla	1.21	23	0.00	0.45

lex ID	language variety	α	inventory size	p	goodness-of-fit
377	Umpila	1.25	22	0.00	0.45
910	Nungali	1.38	16	0.00	0.45
767	Karajarri	1.20	21	0.00	0.46
918	Atampaya	1.21	25	0.00	0.46
113	Yulparija	1.19	23	0.00	0.46
966	Wik Mungkan	1.22	26	0.00	0.46
232	Warnman	1.25	23	0.00	0.47
841	Worrorra	1.23	25	0.00	0.47
972	Ogh Unyjan	1.21	25	0.00	0.47
915	Alawa	1.30	21	0.00	0.48
620	Miriwoong	1.17	20	0.00	0.51
863	Marra	1.18	20	0.00	0.52
507	Nyangumarta	1.23	21	0.00	0.53

Table S3.2. Power law distribution with x_{min}.

lex ID	language variety	α	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
919	Angkamuthi	2.39	99	16	0.62	0.99	0.08
1006	Central Arrernte	2.32	158	12	0.48	0.98	0.09
762	Kariyarra	2.54	54	18	0.75	0.97	0.09
288	Wangkatja	2.25	240	19	0.83	0.97	0.09
400	Thalanyji	2.33	85	18	0.69	0.95	0.09
228	Warriyangga	2.37	47	15	0.58	0.95	0.09
972	Ogh Unyjan	3.03	74	15	0.60	0.97	0.09
1024	Ngardily	2.32	56	17	0.77	0.95	0.09
507	Nyangumarta	2.31	178	19	0.90	0.89	0.10
845	Iwaidja	2.76	393	13	0.57	0.98	0.10
778	Jiwarli	2.34	147	17	0.65	0.91	0.10
1030	Putijarra	2.54	171	17	0.68	0.89	0.10
563	Ngarla	2.42	193	17	0.74	0.90	0.10
606	Mudburra	2.71	191	11	0.48	0.97	0.10
170	Wik-Ngathan	3.79	249	12	0.43	0.97	0.11
760	Kartujarra	2.35	147	12	0.52	0.94	0.11
946	Kurtjar	3.36	189	16	0.57	0.90	0.11
1023	Wubuy	2.46	200	14	0.54	0.93	0.11
1003	Murrinh-patha	3.24	101	12	0.48	0.95	0.11
921	Gurr-Goni	2.83	367	15	0.56	0.91	0.11
914	Yinhawangka	2.26	120	20	0.77	0.75	0.11
113	Yulparija	2.39	352	13	0.57	0.93	0.11
963	Kungkari	2.38	29	15	0.62	0.83	0.11
985	Yaygir	3.31	234	12	0.60	0.95	0.11
925	Larrakia	2.99	203	9	0.31	0.98	0.11
1019	Walmajarri	2.52	740	16	0.70	0.86	0.11
162	Adnyamathanha	2.40	206	18	0.62	0.76	0.11
917	Nyamal	2.58	175	13	0.54	0.91	0.12
767	Karajarri	2.67	433	11	0.52	0.93	0.12
12	Erre	3.45	102	11	0.41	0.95	0.12
957	Ngaanyatjarra	2.34	249	19	0.83	0.74	0.12
519	Nukunu	2.19	31	19	0.68	0.54	0.12
967	Thaynakwithi	3.11	112	13	0.41	0.85	0.12
117	Wirangu	2.48	78	13	0.57	0.88	0.12
1040	Ngarinyin	3.34	1922	13	0.48	0.92	0.12
592	Muruwari	2.35	184	15	0.60	0.82	0.12
475	Southern Paakintyi	1.80	59	25	0.93	0.42	0.12
849	Waanyi	2.70	341	12	0.60	0.91	0.12
943	Pintupi	2.29	636	18	0.78	0.68	0.12
852	Gurindji	2.76	1235	11	0.48	0.93	0.12
656	Kuugu Ya'u	2.50	168	15	0.71	0.77	0.12
91	Bularnu	1.98	43	22	0.73	0.48	0.12
929	Wanyjirra	2.66	176	13	0.62	0.84	0.12
1008	Yuwaalaraay	4.30	533	10	0.48	0.96	0.12
631	Yalarnnga	2.45	98	14	0.58	0.80	0.13
77	Dhangu	2.40	53	17	0.65	0.65	0.13
740	Kugu Nganhcara	3.17	107	10	0.33	0.86	0.13
265	Wardaman	2.72	337	15	0.68	0.74	0.13
905	Malkana	2.54	49	13	0.52	0.70	0.13
565	Ngarinyman	2.53	291	12	0.52	0.84	0.13
821	Gumbaynggir	2.94	70	14	0.74	0.70	0.13

lex ID	language variety	α	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
982	Nhirrpi	2.63	43	15	0.50	0.66	0.13
857	Amurdak	2.69	88	11	0.46	0.86	0.13
572	Ngamini	2.45	176	11	0.48	0.90	0.13
863	Marra	2.73	180	12	0.60	0.82	0.13
204	Wemba Wemba	2.95	264	13	0.59	0.80	0.13
865	Diyari	2.24	43	13	0.52	0.58	0.13
81	Dalabon	3.22	681	15	0.52	0.65	0.13
598	Yandruwandha	2.38	170	10	0.33	0.85	0.13
866	Thirarri	2.24	43	13	0.52	0.59	0.13
38	Djabugay	3.01	269	10	0.53	0.91	0.13
952	Ngawun	2.50	59	12	0.55	0.79	0.13
940	Yawijibaya	2.88	57	12	0.52	0.77	0.13
650	Linngithigh	2.75	68	17	0.63	0.51	0.13
493	Nyiyaparli	2.59	48	12	0.55	0.75	0.13
621	Mengerrdji	2.97	85	13	0.50	0.75	0.13
85	Burarra	2.45	380	18	0.69	0.42	0.13
31	Djinang	2.29	319	18	0.72	0.48	0.14
958	Margany	2.49	50	14	0.47	0.68	0.14
744	Koko Bera	4.17	375	9	0.43	0.87	0.14
1012	Warrgamay	2.49	169	13	0.68	0.77	0.14
966	Wik Mungkan	2.54	671	16	0.62	0.57	0.14
101	Butchulla	2.75	85	15	0.62	0.63	0.14
996	Emmi	2.60	53	14	0.45	0.47	0.14
62	Dhay'yi	2.25	149	17	0.65	0.53	0.14
848	Wagiman	2.93	271	15	0.56	0.64	0.14
901	Guugu Yimidhirr	2.71	47	15	0.71	0.60	0.14
734	Kukatja	2.31	742	11	0.48	0.74	0.14
1011	Yorta Yorta	2.91	84	9	0.38	0.86	0.14
915	Alawa	2.70	521	14	0.67	0.65	0.14
554	Ngarluma	2.39	132	18	0.78	0.49	0.14
841	Worrorra	2.65	65	12	0.48	0.57	0.14
232	Warnman	2.21	126	17	0.74	0.40	0.14
807	Gupapuyngu	2.18	212	24	0.77	0.27	0.14
443	Payungu	2.31	84	19	0.73	0.43	0.14
968	Ogh Angkula	3.83	124	11	0.46	0.78	0.14
242	Warlpiri	2.22	718	18	0.75	0.41	0.14
1029	Martuthunira	2.55	170	15	0.58	0.59	0.14
928	Bakanh	2.65	78	16	0.62	0.51	0.14
1002	Yintyingka	2.38	60	16	0.62	0.54	0.14
851	Bilinarra	2.29	240	17	0.74	0.51	0.14
930	Purduna	2.55	112	15	0.58	0.60	0.14
1032	Kuku Yalanji	2.45	334	15	0.94	0.62	0.14
642	Mangala	2.67	296	11	0.50	0.73	0.14
377	Umpila	2.52	129	15	0.68	0.61	0.14
534	Nhanda	2.33	53	20	0.61	0.27	0.14
433	Pitta Pitta	2.22	82	16	0.64	0.48	0.14
89	Bunuba	2.81	141	13	0.54	0.70	0.14
99	Bidyara	2.25	107	15	0.79	0.57	0.14
1031	Ngadjunmaya	2.58	194	8	0.32	0.77	0.14
5	Gangulu	2.91	162	7	0.39	0.91	0.14
941	Wambaya	2.14	221	16	0.70	0.46	0.14
518	Yarluyandi	2.47	61	12	0.52	0.63	0.14

lex ID	language variety	α	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
835	Gugu Badhun	2.61	102	12	0.71	0.70	0.15
462	Panyjima	2.23	68	14	0.56	0.44	0.15
697	Kurrama	2.22	101	17	0.63	0.38	0.15
618	Mirniny	2.47	70	9	0.36	0.67	0.15
918	Atampaya	2.48	80	13	0.52	0.48	0.15
63	Dharumbal	3.01	158	8	0.40	0.87	0.15
771	Kalkatungu	1.97	114	21	0.81	0.21	0.15
269	Wangkumara	1.93	47	24	0.80	0.16	0.15
200	Western Arrernte	2.81	81	9	0.36	0.70	0.15
979	Mawng	2.80	723	11	0.50	0.69	0.15
237	Warluwarra	2.33	161	14	0.42	0.47	0.15
417	Yindjibarndi	2.30	94	18	0.72	0.29	0.15
1021	Watjarri	2.33	129	19	0.73	0.23	0.15
1016	Tharrkari	2.56	60	13	0.41	0.40	0.15
1007	Yuwaliyaay	4.67	627	9	0.43	0.85	0.15
977	Warndarrang	2.82	126	6	0.32	0.86	0.15
1009	Gamilaraay	4.14	289	7	0.33	0.87	0.15
920	Yadhaykenu	2.41	74	15	0.60	0.41	0.15
1018	Djapu	2.33	126	16	0.62	0.30	0.16
949	Kok Nar	3.03	85	13	0.62	0.54	0.16
611	Anguthimri	2.37	41	20	0.59	0.20	0.16
838	Gooniyandi	2.32	216	17	0.74	0.30	0.16
540	Ngiyambaa	3.94	121	6	0.29	0.77	0.16
252	Warlmanpa	2.37	235	8	0.29	0.58	0.16
105	Bardi	2.06	59	22	0.92	0.13	0.16
752	Kija	3.20	481	10	0.42	0.61	0.16
847	Ngalakgan	3.85	229	11	0.41	0.50	0.16
427	Yidiny	3.66	660	6	0.32	0.80	0.16
983	Nhangu	2.51	275	14	0.45	0.28	0.16
934	Urningangg	2.38	74	16	0.57	0.27	0.16
1043	Mbabaram	3.06	41	12	0.44	0.39	0.16
495	Nyikina	2.31	240	14	0.70	0.32	0.16
978	Wotjobaluk	2.95	156	12	0.63	0.53	0.16
1001	Ngandi	3.04	199	13	0.38	0.22	0.17
412	Ritharrngu	2.73	406	6	0.19	0.59	0.17
923	Matngele	3.97	221	10	0.40	0.57	0.17
1025	Waalubal	3.29	360	12	0.60	0.48	0.17
787	Jawoyn	3.73	374	14	0.52	0.32	0.17
645	Malyangapa	2.02	21	18	0.72	0.10	0.17
856	Patjtjamalh	3.29	222	13	0.48	0.43	0.17
945	Wiri	2.19	57	13	0.72	0.39	0.17
118	Badimaya	2.42	136	6	0.25	0.62	0.17
1026	Gidabal	3.30	361	12	0.60	0.43	0.17
911	Nyawaygi	3.31	219	6	0.33	0.82	0.17
926	Limilngan	2.07	49	16	0.67	0.22	0.17
935	Rembarrnga	3.58	263	9	0.32	0.47	0.18
922	Nakara	2.24	127	20	0.77	0.05	0.18
853	Lardil	3.55	663	12	0.48	0.44	0.18
927	Tiwi	2.26	523	14	0.70	0.27	0.18
910	Nungali	3.34	180	10	0.62	0.46	0.18
737	Kukatj	4.64	294	8	0.32	0.58	0.19
962	Gunya	2.25	89	13	0.42	0.07	0.19

lex ID	language variety	α	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
620	Miriwoong	4.07	953	8	0.40	0.54	0.19
94	Biri	2.26	114	13	0.72	0.21	0.19
1042	Thaayorre	5.74	1355	8	0.31	0.89	0.19
939	Unggumi	2.65	66	13	0.43	0.13	0.19
964	Olkol	2.10	164	21	0.68	0.04	0.19
30	Duungidjawu	2.65	89	14	0.61	0.08	0.20
965	Oykangand	2.34	171	19	0.61	0.03	0.20
305	Western Wakaya	2.77	256	11	0.42	0.14	0.21
546	Yanyuwa	1.96	216	18	0.78	0.03	0.21
800	Guwamu	2.21	55	16	0.76	0.05	0.21
13	Dyirbal	3.09	171	11	0.69	0.16	0.22
363	Yir Yoront	3.51	318	14	0.54	0.04	0.23
790	Jaru	3.13	552	12	0.52	0.07	0.23

Table S3.3. Lognormal distribution.

lex ID	language variety	*log* mean	*log* SD	inventory size	p	goodness-of-fit
866	Thirarri	3.20	1.35	25	1.00	0.06
865	Diyari	3.17	1.36	25	0.99	0.06
62	Dhay'yi	5.13	1.06	26	0.96	0.07
771	Kalkatungu	5.32	1.09	26	0.94	0.08
996	Emmi	3.64	1.13	31	0.84	0.08
656	Kuugu Ya'u	5.29	0.85	21	0.96	0.08
821	Gumbaynggir	4.38	0.64	19	0.96	0.08
1018	Djapu	4.93	0.98	26	0.87	0.08
427	Yidiny	6.01	0.77	19	0.97	0.09
475	Southern Paakintyi	5.09	1.12	27	0.78	0.09
645	Malyangapa	3.44	1.22	25	0.76	0.09
962	Gunya	3.68	1.58	31	0.54	0.10
598	Yandruwandha	4.41	1.42	30	0.64	0.10
269	Wangkumara	4.47	1.21	30	0.59	0.10
237	Warluwarra	4.38	1.62	33	0.51	0.10
63	Dharumbal	4.42	1.18	20	0.83	0.10
77	Dhangu	4.08	1.00	26	0.64	0.10
546	Yanyuwa	5.96	1.13	23	0.77	0.10
518	Yarluyandi	3.83	1.23	23	0.71	0.10
5	Gangulu	4.68	1.01	18	0.88	0.10
162	Adnyamathanha	5.16	1.14	29	0.51	0.10
117	Wirangu	4.35	1.03	23	0.72	0.10
740	Kugu Nganhcara	3.85	1.22	30	0.44	0.10
540	Ngiyambaa	3.90	1.04	21	0.71	0.10
200	Western Arrernte	4.01	0.94	25	0.58	0.11
433	Pitta Pitta	4.52	1.25	25	0.61	0.11
744	Koko Bera	5.71	0.63	21	0.75	0.11
94	Biri	5.02	1.02	18	0.83	0.11
204	Wemba Wemba	5.53	0.86	22	0.69	0.11
945	Wiri	4.35	1.05	18	0.79	0.11
982	Nhirrpi	3.39	1.29	30	0.38	0.11
1032	Kuku Yalanji	6.30	0.71	16	0.84	0.11
105	Bardi	4.78	0.94	24	0.52	0.11
983	Nhangu	5.17	1.16	31	0.31	0.11
968	Ogh Angkula	4.49	0.78	24	0.50	0.11
979	Mawng	6.24	1.07	22	0.57	0.12
495	Nyikina	5.61	1.05	20	0.62	0.12
920	Yadhaykenu	4.25	1.21	25	0.47	0.12
935	Rembarrnga	4.99	0.98	28	0.39	0.12
1016	Tharrkari	3.66	1.19	32	0.25	0.12
592	Muruwari	5.00	1.19	25	0.39	0.12
918	Atampaya	4.22	1.24	25	0.45	0.12
901	Guugu Yimidhirr	4.03	0.80	21	0.55	0.12
412	Ritharrngu	5.09	1.16	31	0.22	0.12
1024	Ngardily	4.40	0.99	22	0.49	0.12
927	Tiwi	6.41	1.12	20	0.55	0.12
265	Wardaman	5.94	0.86	22	0.50	0.12
946	Kurtjar	5.13	0.79	28	0.29	0.12
1002	Yintyingka	4.04	1.14	26	0.31	0.12
1006	Central Arrernte	5.16	0.90	25	0.34	0.13
835	Gugu Badhun	4.76	0.88	17	0.57	0.13

lex ID	language variety	*log* mean	*log* SD	inventory size	p	goodness-of-fit
1043	Mbabaram	3.16	1.11	27	0.19	0.13
958	Margany	3.21	1.53	30	0.14	0.13
807	Gupapuyngu	5.66	1.10	31	0.15	0.13
534	Nhanda	3.95	1.25	33	0.13	0.13
1029	Martuthunira	4.96	1.22	26	0.26	0.13
925	Larrakia	4.07	1.70	29	0.19	0.13
1042	Thaayorre	6.44	0.90	26	0.24	0.13
1023	Wubuy	5.02	1.35	26	0.23	0.13
919	Angkamuthi	4.52	1.25	26	0.23	0.13
91	Bularnu	4.09	1.42	30	0.15	0.13
845	Iwaidja	5.77	1.06	23	0.30	0.14
963	Kungkari	3.29	1.32	24	0.21	0.14
631	Yalarnnga	4.36	1.34	24	0.23	0.14
30	Duungidjawu	4.37	1.04	23	0.23	0.14
966	Wik Mungkan	6.50	1.18	26	0.22	0.14
170	Wik-Ngathan	4.94	0.94	28	0.11	0.14
915	Alawa	6.37	0.97	21	0.34	0.14
922	Nakara	5.19	1.07	26	0.15	0.14
118	Badimaya	4.30	1.19	24	0.19	0.15
621	Mengerrdji	3.93	1.36	26	0.14	0.15
99	Bidyara	5.06	1.07	19	0.33	0.15
1009	Gamilaraay	5.07	0.98	21	0.26	0.15
554	Ngarluma	5.16	1.00	23	0.18	0.15
978	Wotjobaluk	4.99	0.89	19	0.29	0.15
929	Wanyjirra	5.12	0.98	21	0.21	0.15
377	Umpila	4.95	1.14	22	0.23	0.15
697	Kurrama	4.51	1.45	27	0.11	0.15
519	Nukunu	3.62	1.23	28	0.09	0.15
852	Gurindji	6.66	1.38	23	0.19	0.15
930	Purduna	4.38	1.29	26	0.09	0.15
952	Ngawun	3.80	1.33	22	0.19	0.15
841	Worrorra	3.91	1.21	25	0.13	0.15
737	Kukatj	4.85	1.24	25	0.14	0.15
572	Ngamini	4.79	1.27	23	0.15	0.15
1003	Murrinh-patha	4.13	1.04	25	0.10	0.15
13	Dyirbal	5.11	0.80	16	0.34	0.15
921	Gurr-Goni	5.73	1.04	27	0.10	0.15
926	Limilngan	3.91	1.50	24	0.12	0.15
85	Burarra	6.15	0.96	26	0.10	0.15
1012	Warrgamay	5.18	1.07	19	0.24	0.15
928	Bakanh	4.23	1.15	26	0.10	0.15
787	Jawoyn	5.56	0.90	27	0.07	0.16
1025	Waalubal	5.76	0.88	20	0.21	0.16
972	Ogh Unyjan	4.14	1.10	25	0.10	0.16
790	Jaru	5.87	1.21	23	0.12	0.16
1026	Gidabal	5.76	0.87	20	0.20	0.16
400	Thalanyji	4.52	1.23	26	0.08	0.16
363	Yir Yoront	5.49	0.88	26	0.09	0.16
985	Yaygir	5.29	0.86	20	0.17	0.16
911	Nyawaygi	4.78	1.06	18	0.20	0.16
848	Wagiman	5.31	1.18	27	0.05	0.16
957	Ngaanyatjarra	5.87	1.00	23	0.09	0.16

lex ID	language variety	*log* mean	*log* SD	inventory size	p	goodness-of-fit
905	Malkana	3.67	1.23	25	0.06	0.17
642	Mangala	5.35	1.26	22	0.10	0.17
1031	Ngadjunmaya	4.71	1.27	25	0.07	0.17
838	Gooniyandi	5.57	1.17	23	0.08	0.17
800	Guwamu	4.28	1.20	21	0.11	0.17
943	Pintupi	6.73	1.13	23	0.07	0.17
853	Lardil	5.94	1.13	25	0.05	0.17
752	Kija	5.58	1.24	24	0.06	0.17
228	Warriyangga	3.74	1.31	26	0.04	0.17
89	Bunuba	4.48	1.31	24	0.05	0.17
288	Wangkatja	5.85	1.10	23	0.06	0.17
939	Unggumi	3.46	1.44	30	0.01	0.17
618	Mirniny	3.84	1.28	25	0.04	0.18
760	Kartujarra	4.88	1.27	23	0.06	0.18
611	Anguthimri	3.36	1.49	34	0.01	0.18
1008	Yuwaalaraay	5.66	1.11	21	0.06	0.18
965	Oykangand	4.88	1.54	31	0.01	0.18
949	Kok Nar	4.24	0.97	21	0.05	0.18
443	Payungu	4.57	1.24	26	0.02	0.18
417	Yindjibarndi	4.79	1.05	25	0.02	0.18
977	Warndarrang	4.48	0.82	19	0.05	0.18
31	Djinang	5.92	1.24	25	0.02	0.18
1007	Yuwaliyaay	5.76	1.14	21	0.04	0.19
940	Yawijibaya	3.33	1.43	23	0.01	0.19
242	Warlpiri	6.82	1.27	24	0.02	0.19
767	Karajarri	5.85	1.35	21	0.04	0.19
847	Ngalakgan	4.90	1.15	27	0.01	0.20
857	Amurdak	3.86	1.59	24	0.01	0.20
1011	Yorta Yorta	3.78	1.41	24	0.01	0.20
650	Linngithigh	4.04	1.35	27	0.01	0.20
462	Panyjima	4.14	1.45	25	0.01	0.20
734	Kukatja	6.51	1.21	23	0.01	0.20
1040	Ngarinyin	6.52	1.94	27	0.01	0.20
914	Yinhawangka	4.99	1.32	26	0.00	0.21
12	Erre	3.75	1.53	27	0.00	0.21
38	Djabugay	5.24	1.21	19	0.02	0.21
934	Urningangg	3.72	1.90	28	0.00	0.21
1001	Ngandi	4.41	1.68	34	0.00	0.21
565	Ngarinyman	5.30	1.55	23	0.01	0.21
81	Dalabon	6.04	1.31	29	0.00	0.21
778	Jiwarli	5.00	1.26	26	0.00	0.22
762	Kariyarra	4.08	1.25	24	0.00	0.22
863	Marra	5.12	1.33	20	0.01	0.22
305	Western Wakaya	4.83	1.64	26	0.00	0.22
606	Mudburra	4.80	1.49	23	0.00	0.23
910	Nungali	5.09	0.95	16	0.02	0.23
493	Nyiyaparli	3.66	1.37	22	0.00	0.23
252	Warlmanpa	3.89	2.28	28	0.00	0.24
964	Olkol	4.77	2.13	31	0.00	0.24
856	Patjtjamalh	4.43	1.95	27	0.00	0.24
1021	Watjarri	4.95	1.37	26	0.00	0.24
941	Wambaya	5.40	1.77	23	0.00	0.24

lex ID	**language variety**	*log* **mean**	*log* **SD**	**inventory size**	p	**goodness-of-fit**
967	Thaynakwithi	4.10	1.55	32	0.00	0.24
851	Bilinarra	5.45	1.66	23	0.00	0.24
563	Ngarla	5.27	1.56	23	0.00	0.24
507	Nyangumarta	5.68	1.17	21	0.00	0.25
849	Waanyi	5.32	1.70	20	0.00	0.25
917	Nyamal	4.58	1.93	24	0.00	0.25
620	Miriwoong	6.27	1.44	20	0.00	0.26
1019	Walmajarri	6.39	1.77	23	0.00	0.26
923	Matngele	4.45	1.82	25	0.00	0.27
101	Butchulla	3.74	1.73	24	0.00	0.27
232	Warnman	4.95	1.59	23	0.00	0.28
1030	Putijarra	4.89	1.74	25	0.00	0.28
113	Yulparija	5.57	1.76	23	0.00	0.30

Table S3.4. Lognormal distribution with x_{min}.

lex ID	lang. variety	*log* mean	*log* SD	x_{min}	n segments	frac. inventory	p	gof
996	Emmi	3.76	0.97	7	29	0.94	1.00	0.05
866	Thirarri	3.20	1.35	11	25	1.00	0.99	0.06
865	Diyari	3.17	1.36	11	25	1.00	0.99	0.06
966	Wik Mungkan	6.77	0.76	257	22	0.85	1.00	0.06
565	Ngarinyman	5.67	0.89	115	19	0.83	1.00	0.06
771	Kalkatungu	5.18	1.11	84	23	0.88	0.99	0.07
841	Worrorra	3.85	1.00	20	23	0.92	0.98	0.07
744	Koko Bera	5.77	0.52	150	19	0.90	0.99	0.07
697	Kurrama	4.90	0.98	45	22	0.81	0.98	0.07
475	Southern Paakintyi	4.74	1.32	69	22	0.81	0.95	0.07
62	Dhay'yi	5.13	1.06	32	26	1.00	0.93	0.07
915	Alawa	6.33	0.79	278	19	0.90	0.98	0.08
1023	Wubuy	5.38	0.94	27	23	0.88	0.94	0.08
656	Kuugu Ya'u	5.37	0.80	73	20	0.95	0.97	0.08
85	Burarra	5.51	1.12	273	22	0.85	0.94	0.08
269	Wangkumara	4.51	1.12	23	27	0.90	0.80	0.08
928	Bakanh	4.63	0.68	34	21	0.81	0.92	0.08
265	Wardaman	6.13	0.65	157	19	0.86	0.97	0.08
952	Ngawun	3.88	1.00	35	16	0.73	0.98	0.08
857	Amurdak	4.34	0.92	21	20	0.83	0.93	0.08
5	Gangulu	4.87	0.83	42	15	0.83	0.98	0.08
1018	Djapu	5.01	0.91	30	25	0.96	0.82	0.08
767	Karajarri	5.71	0.98	233	17	0.81	0.97	0.08
821	Gumbaynggir	4.38	0.64	41	19	1.00	0.93	0.08
606	Mudburra	3.63	1.35	117	17	0.74	0.96	0.08
495	Nyikina	5.88	0.84	75	18	0.90	0.96	0.08
921	Gurr-Goni	5.88	0.80	173	22	0.81	0.87	0.08
946	Kurtjar	5.32	0.57	60	25	0.89	0.78	0.08
621	Mengerrdji	4.71	0.57	46	16	0.62	0.94	0.09
427	Yidiny	6.01	0.77	75	19	1.00	0.94	0.09
1024	Ngardily	1.87	1.63	56	17	0.77	0.94	0.09
1006	Central Arrernte	-6.19	3.11	158	12	0.48	0.97	0.09
288	Wangkatja	2.01	1.98	240	19	0.83	0.95	0.09
851	Bilinarra	5.76	0.94	162	19	0.83	0.93	0.09
925	Larrakia	5.07	0.85	43	18	0.62	0.87	0.09
926	Limilngan	4.46	0.97	25	18	0.75	0.87	0.09
598	Yandruwandha	4.42	1.32	10	29	0.97	0.58	0.09
963	Kungkari	3.45	1.02	11	21	0.88	0.79	0.09
12	Erre	3.27	0.92	102	11	0.41	0.99	0.09
540	Ngiyambaa	4.58	0.61	47	12	0.57	0.94	0.09
31	Djinang	5.32	1.19	266	20	0.80	0.86	0.09
917	Nyamal	4.96	1.02	82	19	0.79	0.88	0.09
620	Miriwoong	6.61	0.65	189	18	0.90	0.92	0.09
863	Marra	4.09	1.13	155	14	0.70	0.95	0.09
1002	Yintyingka	4.45	0.80	32	19	0.73	0.73	0.09
1012	Warrgamay	5.46	0.77	78	16	0.84	0.93	0.09
934	Urningangg	4.90	0.59	51	17	0.61	0.86	0.09
918	Atampaya	4.27	1.04	14	24	0.96	0.67	0.09
237	Warluwarra	4.86	1.19	23	26	0.79	0.51	0.09
170	Wik-Ngathan	5.65	0.46	144	16	0.57	0.86	0.09
941	Wambaya	5.68	1.03	155	18	0.78	0.85	0.09

lex ID	lang. variety	*log* mean	*log* SD	x_{min}	n segments	frac. inventory	p	gof
412	Ritharrngu	5.51	0.84	48	26	0.84	0.54	0.09
962	Gunya	4.58	1.04	27	20	0.65	0.61	0.09
645	Malyangapa	3.44	1.22	1	25	1.00	0.57	0.09
919	Angkamuthi	-3.84	2.65	99	16	0.62	0.86	0.09
204	Wemba Wemba	5.61	0.75	61	21	0.95	0.75	0.10
518	Yarluyandi	3.95	1.12	10	21	0.91	0.66	0.10
982	Nhirrpi	3.57	1.08	4	28	0.93	0.38	0.10
91	Bularnu	3.09	1.59	44	21	0.70	0.58	0.10
377	Umpila	5.05	0.87	37	21	0.95	0.71	0.10
117	Wirangu	3.13	1.37	56	16	0.70	0.82	0.10
228	Warriyangga	2.31	1.48	35	19	0.73	0.72	0.10
752	Kija	5.93	0.74	269	16	0.67	0.88	0.10
923	Matngele	5.22	0.60	69	20	0.80	0.72	0.10
740	Kugu Nganhcara	2.63	1.18	94	12	0.40	0.83	0.10
507	Nyangumarta	2.63	1.73	178	19	0.90	0.80	0.10
760	Kartujarra	5.16	0.90	21	21	0.91	0.66	0.10
63	Dharumbal	4.42	1.18	9	20	1.00	0.70	0.10
847	Ngalakgan	5.25	0.66	53	23	0.85	0.55	0.10
650	Linngithigh	4.41	0.72	21	24	0.89	0.51	0.10
1025	Waalubal	6.11	0.49	209	15	0.75	0.85	0.10
77	Dhangu	4.08	1.00	7	26	1.00	0.42	0.10
546	Yanyuwa	5.96	1.13	27	23	1.00	0.60	0.10
94	Biri	5.31	0.77	70	14	0.78	0.87	0.10
631	Yalarnnga	4.67	1.04	7	22	0.92	0.59	0.10
807	Gupapuyngu	5.00	1.21	212	24	0.77	0.53	0.10
81	Dalabon	6.79	0.47	394	19	0.66	0.68	0.10
778	Jiwarli	0.99	2.02	153	16	0.62	0.85	0.10
99	Bidyara	4.17	1.20	107	15	0.79	0.84	0.10
113	Yulparija	5.62	1.08	242	16	0.70	0.82	0.10
162	Adnyamathanha	5.16	1.14	63	29	1.00	0.33	0.10
945	Wiri	4.52	0.88	30	15	0.83	0.81	0.10
30	Duungidjawu	4.70	0.74	19	20	0.87	0.58	0.10
848	Wagiman	5.70	0.72	53	23	0.85	0.48	0.10
979	Mawng	6.48	0.88	122	20	0.91	0.61	0.10
935	Rembarrnga	5.14	0.80	28	26	0.93	0.33	0.11
400	Thalanyji	-1.73	2.38	85	18	0.69	0.68	0.11
642	Mangala	5.47	0.93	170	16	0.73	0.74	0.11
200	Western Arrernte	4.01	0.94	8	25	1.00	0.36	0.11
957	Ngaanyatjarra	2.71	1.75	249	19	0.83	0.73	0.11
433	Pitta Pitta	4.52	1.25	2	25	1.00	0.37	0.11
1011	Yorta Yorta	4.26	0.80	15	20	0.83	0.50	0.11
232	Warnman	5.68	0.87	202	9	0.39	0.84	0.11
958	Margany	3.60	1.15	62	9	0.30	0.81	0.11
1019	Walmajarri	6.97	0.81	226	20	0.87	0.58	0.11
1001	Ngandi	4.97	0.85	76	25	0.74	0.31	0.11
1030	Putijarra	2.44	1.63	157	18	0.72	0.66	0.11
965	Oykangand	5.52	0.81	61	24	0.77	0.32	0.11
519	Nukunu	1.96	1.61	25	22	0.79	0.38	0.11
1031	Ngadjunmaya	5.17	0.79	35	20	0.80	0.46	0.11
972	Ogh Unyjan	-0.21	1.63	74	15	0.60	0.77	0.11
1032	Kuku Yalanji	6.30	0.71	207	16	1.00	0.76	0.11
105	Bardi	4.90	0.84	23	23	0.96	0.36	0.11

lex ID	lang. variety	*log* mean	*log* SD	x_{min}	n segments	frac. inventory	p	gof
305	Western Wakaya	5.30	0.94	26	23	0.88	0.38	0.11
38	Djabugay	5.66	0.68	186	12	0.63	0.83	0.11
737	Kukatj	5.72	0.38	170	12	0.48	0.73	0.11
1026	Gidabal	6.04	0.55	184	16	0.80	0.62	0.11
592	Muruwari	4.91	1.11	146	17	0.68	0.55	0.11
838	Gooniyandi	4.20	1.37	216	17	0.74	0.60	0.11
985	Yaygir	3.42	1.19	210	13	0.65	0.84	0.11
983	Nhangu	5.17	1.16	28	31	1.00	0.15	0.11
800	Guwamu	4.59	0.86	19	18	0.86	0.50	0.11
101	Butchulla	0.82	1.63	85	15	0.62	0.79	0.11
563	Ngarla	4.11	1.37	168	18	0.78	0.58	0.11
968	Ogh Angkula	4.49	0.78	17	24	1.00	0.28	0.11
852	Gurindji	7.05	0.87	217	20	0.87	0.44	0.11
920	Yadhaykenu	4.25	1.21	2	25	1.00	0.24	0.12
1016	Tharrkari	3.89	1.03	10	27	0.84	0.11	0.12
978	Wotjobaluk	5.13	0.72	59	17	0.89	0.53	0.12
927	Tiwi	6.66	0.94	193	17	0.85	0.51	0.12
929	Wanyjirra	3.45	1.36	138	16	0.76	0.63	0.12
845	Iwaidja	1.03	1.85	393	13	0.57	0.82	0.12
964	Olkol	5.63	1.01	44	25	0.81	0.20	0.12
901	Guugu Yimidhirr	4.03	0.80	7	21	1.00	0.30	0.12
493	Nyiyaparli	3.87	0.87	20	19	0.86	0.35	0.12
443	Payungu	1.55	1.85	85	18	0.69	0.53	0.12
911	Nyawaygi	5.03	0.74	67	15	0.83	0.61	0.12
611	Anguthimri	2.90	1.22	41	20	0.59	0.36	0.12
967	Thaynakwithi	4.78	0.58	44	24	0.75	0.15	0.12
417	Yindjibarndi	4.11	1.20	74	21	0.84	0.29	0.12
572	Ngamini	4.87	1.13	131	12	0.52	0.65	0.12
1003	Murrinh-patha	3.93	0.87	112	9	0.36	0.73	0.12
849	Waanyi	0.77	1.90	341	12	0.60	0.74	0.12
1043	Mbabaram	2.95	0.87	41	12	0.44	0.44	0.12
1042	Thaayorre	6.52	0.83	127	25	0.96	0.14	0.12
1029	Martuthunira	5.07	1.09	13	25	0.96	0.13	0.13
462	Panyjima	5.12	0.81	106	8	0.32	0.64	0.13
534	Nhanda	3.94	1.18	8	32	0.97	0.04	0.13
943	Pintupi	5.91	1.26	550	19	0.83	0.35	0.13
363	Yir Yoront	6.10	0.33	211	15	0.58	0.38	0.13
242	Warlpiri	5.69	1.40	602	20	0.83	0.30	0.13
835	Gugu Badhun	4.76	0.88	28	17	1.00	0.40	0.13
252	Warlmanpa	5.04	1.05	72	20	0.71	0.29	0.13
787	Jawoyn	6.01	0.54	160	20	0.74	0.18	0.13
930	Purduna	4.72	1.05	18	23	0.88	0.11	0.13
905	Malkana	-3.27	2.40	41	16	0.64	0.36	0.13
118	Badimaya	4.47	0.95	18	22	0.92	0.12	0.13
940	Yawijibaya	1.19	1.53	50	13	0.57	0.55	0.13
910	Nungali	4.96	0.76	118	13	0.81	0.54	0.14
554	Ngarluma	5.52	0.95	224	8	0.35	0.63	0.14
734	Kukatja	6.16	1.11	406	19	0.83	0.23	0.14
1021	Watjarri	2.49	1.71	113	21	0.81	0.24	0.14
790	Jaru	6.17	0.87	121	20	0.87	0.13	0.14
922	Nakara	5.08	0.99	84	23	0.88	0.07	0.14
914	Yinhawangka	2.13	1.79	120	20	0.77	0.21	0.14

lex ID	lang. variety	*log* mean	*log* SD	x_{min}	n segments	frac. inventory	p	gof
618	Mirniny	4.15	0.91	10	22	0.88	0.05	0.14
13	Dyirbal	5.20	0.74	70	15	0.94	0.26	0.14
1009	Gamilaraay	5.07	0.98	20	21	1.00	0.08	0.15
853	Lardil	6.27	0.83	87	22	0.88	0.05	0.15
949	Kok Nar	4.68	0.65	96	9	0.43	0.47	0.15
1008	Yuwaalaraay	6.29	0.50	277	14	0.67	0.21	0.15
89	Bunuba	5.02	0.88	40	18	0.75	0.06	0.15
977	Warndarrang	1.60	1.53	126	6	0.32	0.66	0.15
856	Patjtjamalh	5.33	0.75	66	20	0.74	0.04	0.15
1040	Ngarinyin	7.59	0.72	689	18	0.67	0.03	0.17
939	Unggumi	3.46	1.44	3	30	1.00	0.00	0.17
1007	Yuwaliyaay	5.76	1.14	33	21	1.00	0.01	0.19

Table S3.5. Exponential distribution.

lex ID	language variety	λ	inventory size	p	goodness-of-fit
1002	Yintyingka	0.01	26	0.97	0.08
996	Emmi	0.02	31	0.91	0.08
5	Gangulu	0.01	18	0.99	0.09
1018	Djapu	0.01	26	0.94	0.09
1023	Wubuy	0.00	26	0.95	0.09
656	Kuugu Ya'u	0.00	21	0.97	0.09
94	Biri	0.00	18	0.98	0.09
952	Ngawun	0.01	22	0.93	0.09
305	Western Wakaya	0.00	26	0.89	0.10
12	Erre	0.01	27	0.83	0.10
1031	Ngadjunmaya	0.01	25	0.87	0.10
642	Mangala	0.00	22	0.93	0.10
740	Kugu Nganhcara	0.01	30	0.75	0.10
1011	Yorta Yorta	0.01	24	0.85	0.10
945	Wiri	0.01	18	0.94	0.10
845	Iwaidja	0.00	23	0.91	0.10
852	Gurindji	0.00	23	0.96	0.10
621	Mengerrdji	0.01	26	0.79	0.10
540	Ngiyambaa	0.01	21	0.88	0.10
968	Ogh Angkula	0.01	24	0.82	0.11
1043	Mbabaram	0.03	27	0.70	0.11
495	Nyikina	0.00	20	0.92	0.11
979	Mawng	0.00	22	0.92	0.11
807	Gupapuyngu	0.00	31	0.70	0.11
565	Ngarinyman	0.00	23	0.84	0.11
77	Dhangu	0.01	26	0.71	0.11
1003	Murrinh-patha	0.01	25	0.72	0.11
760	Kartujarra	0.00	23	0.80	0.11
752	Kija	0.00	24	0.80	0.11
30	Duungidjawu	0.01	23	0.77	0.11
1001	Ngandi	0.01	34	0.53	0.11
927	Tiwi	0.00	20	0.93	0.11
821	Gumbaynggir	0.01	19	0.82	0.12
928	Bakanh	0.01	26	0.67	0.12
31	Djinang	0.00	25	0.81	0.12
800	Guwamu	0.01	21	0.77	0.12
935	Rembarrnga	0.00	28	0.61	0.12
941	Wambaya	0.00	23	0.78	0.12
170	Wik-Ngathan	0.01	28	0.58	0.12
631	Yalarnnga	0.01	24	0.67	0.12
1012	Warrgamay	0.00	19	0.82	0.12
412	Ritharrngu	0.00	31	0.52	0.12
841	Worrorra	0.01	25	0.62	0.12
63	Dharumbal	0.01	20	0.77	0.12
926	Limilngan	0.01	24	0.65	0.12
790	Jaru	0.00	23	0.79	0.12
851	Bilinarra	0.00	23	0.75	0.12
105	Bardi	0.01	24	0.66	0.12
62	Dhay'yi	0.00	26	0.59	0.12
606	Mudburra	0.00	23	0.68	0.12
838	Gooniyandi	0.00	23	0.71	0.12

lex ID	language variety	λ	inventory size	p	goodness-of-fit
697	Kurrama	0.01	27	0.56	0.12
848	Wagiman	0.00	27	0.55	0.13
1024	Ngardily	0.01	22	0.66	0.13
853	Lardil	0.00	25	0.68	0.13
857	Amurdak	0.01	24	0.57	0.13
737	Kukatj	0.01	25	0.56	0.13
1009	Gamilaraay	0.00	21	0.65	0.13
546	Yanyuwa	0.00	23	0.72	0.13
911	Nyawaygi	0.01	18	0.73	0.13
767	Karajarri	0.00	21	0.72	0.13
99	Bidyara	0.00	19	0.69	0.13
778	Jiwarli	0.00	26	0.49	0.13
963	Kungkari	0.02	24	0.48	0.13
918	Atampaya	0.01	25	0.47	0.14
771	Kalkatungu	0.00	26	0.49	0.14
288	Wangkatja	0.00	23	0.59	0.14
965	Oykangand	0.00	31	0.32	0.14
377	Umpila	0.00	22	0.53	0.14
856	Patjtjamalh	0.00	27	0.39	0.14
650	Linngithigh	0.01	27	0.37	0.14
200	Western Arrernte	0.01	25	0.41	0.14
427	Yidiny	0.00	19	0.68	0.14
443	Payungu	0.01	26	0.40	0.14
563	Ngarla	0.00	23	0.53	0.14
921	Gurr-Goni	0.00	27	0.42	0.14
964	Olkol	0.00	31	0.30	0.14
917	Nyamal	0.00	24	0.44	0.14
978	Wotjobaluk	0.01	19	0.60	0.14
957	Ngaanyatjarra	0.00	23	0.53	0.14
919	Angkamuthi	0.01	26	0.36	0.14
89	Bunuba	0.01	24	0.43	0.14
13	Dyirbal	0.01	16	0.69	0.14
905	Malkana	0.01	25	0.36	0.15
1019	Walmajarri	0.00	23	0.71	0.15
762	Kariyarra	0.01	24	0.39	0.15
1016	Tharrkari	0.01	32	0.20	0.15
118	Badimaya	0.01	24	0.39	0.15
787	Jawoyn	0.00	27	0.34	0.15
417	Yindjibarndi	0.01	25	0.36	0.15
982	Nhirrpi	0.02	30	0.23	0.15
920	Yadhaykenu	0.01	25	0.34	0.15
117	Wirangu	0.01	23	0.40	0.15
929	Wanyjirra	0.00	21	0.47	0.15
949	Kok Nar	0.01	21	0.45	0.15
518	Yarluyandi	0.01	23	0.38	0.15
228	Warriyangga	0.01	26	0.29	0.15
985	Yaygir	0.00	20	0.50	0.15
204	Wemba Wemba	0.00	22	0.43	0.15
493	Nyiyaparli	0.01	22	0.38	0.15
972	Ogh Unyjan	0.01	25	0.30	0.15
835	Gugu Badhun	0.01	17	0.57	0.15
1032	Kuku Yalanji	0.00	16	0.69	0.15

lex ID	language variety	λ	inventory size	p	goodness-of-fit
1030	Putijarra	0.00	25	0.32	0.15
242	Warlpiri	0.00	24	0.68	0.15
592	Muruwari	0.00	25	0.31	0.16
265	Wardaman	0.00	22	0.44	0.16
977	Warndarrang	0.01	19	0.45	0.16
1008	Yuwaalaraay	0.00	21	0.44	0.16
462	Panyjima	0.01	25	0.28	0.16
232	Warnman	0.00	23	0.34	0.16
1029	Martuthunira	0.00	26	0.26	0.16
930	Purduna	0.01	26	0.25	0.16
967	Thaynakwithi	0.01	32	0.15	0.16
113	Yulparija	0.00	23	0.42	0.16
618	Mirniny	0.01	25	0.24	0.16
38	Djabugay	0.00	19	0.45	0.16
734	Kukatja	0.00	23	0.60	0.16
269	Wangkumara	0.01	30	0.14	0.16
85	Burarra	0.00	26	0.33	0.17
400	Thalanyji	0.01	26	0.21	0.17
572	Ngamini	0.00	23	0.27	0.17
611	Anguthimri	0.02	34	0.08	0.17
162	Adnyamathanha	0.00	29	0.16	0.17
554	Ngarluma	0.00	23	0.26	0.17
847	Ngalakgan	0.00	27	0.16	0.17
934	Urningangg	0.01	28	0.15	0.17
363	Yir Yoront	0.00	26	0.19	0.17
237	Warluwarra	0.00	33	0.09	0.17
598	Yandruwandha	0.01	30	0.11	0.17
901	Guugu Yimidhirr	0.01	21	0.26	0.17
1026	Gidabal	0.00	20	0.33	0.17
1007	Yuwaliyaay	0.00	21	0.33	0.17
475	Southern Paakintyi	0.00	27	0.16	0.17
939	Unggumi	0.01	30	0.09	0.17
849	Waanyi	0.00	20	0.34	0.18
865	Diyari	0.02	25	0.15	0.18
866	Thirarri	0.02	25	0.14	0.18
645	Malyangapa	0.02	25	0.14	0.18
433	Pitta Pitta	0.01	25	0.15	0.18
966	Wik Mungkan	0.00	26	0.34	0.18
923	Matngele	0.01	25	0.14	0.18
925	Larrakia	0.01	29	0.09	0.18
1006	Central Arrernte	0.00	25	0.14	0.18
1021	Watjarri	0.00	26	0.13	0.18
1042	Thaayorre	0.00	26	0.25	0.18
1025	Waalubal	0.00	20	0.27	0.18
946	Kurtjar	0.01	28	0.10	0.18
914	Yinhawangka	0.00	26	0.12	0.18
922	Nakara	0.00	26	0.11	0.18
863	Marra	0.00	20	0.22	0.19
91	Bularnu	0.01	30	0.06	0.19
519	Nukunu	0.01	28	0.06	0.19
958	Margany	0.02	30	0.03	0.20
1040	Ngarinyin	0.00	27	0.33	0.20

lex ID	language variety	λ	inventory size	p	goodness-of-fit
962	Gunya	0.01	31	0.02	0.20
534	Nhanda	0.01	33	0.02	0.21
983	Nhangu	0.00	31	0.03	0.21
943	Pintupi	0.00	23	0.25	0.21
940	Yawijibaya	0.02	23	0.04	0.22
744	Koko Bera	0.00	21	0.06	0.22
81	Dalabon	0.00	29	0.03	0.22
507	Nyangumarta	0.00	21	0.05	0.24
915	Alawa	0.00	21	0.07	0.24
910	Nungali	0.00	16	0.05	0.26
101	Butchulla	0.01	24	0.01	0.26
252	Warlmanpa	0.00	28	0.00	0.26
620	Miriwoong	0.00	20	0.04	0.27

Table S3.6. Exponential distribution with x_{min}.

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
1002	Yintyingka	0.01	11	24	0.92	0.98	0.07
925	Larrakia	0.01	21	21	0.72	0.99	0.07
966	Wik Mungkan	0.00	456	19	0.73	1.00	0.07
1023	Wubuy	0.00	12	25	0.96	0.96	0.08
740	Kugu Nganhcara	0.01	11	26	0.87	0.92	0.08
915	Alawa	0.00	250	20	0.95	0.99	0.08
996	Emmi	0.02	2	31	1.00	0.83	0.08
265	Wardaman	0.00	224	18	0.82	0.99	0.09
5	Gangulu	0.01	9	18	1.00	0.98	0.09
427	Yidiny	0.00	164	18	0.95	0.99	0.09
1018	Djapu	0.01	25	26	1.00	0.90	0.09
656	Kuugu Ya'u	0.00	65	21	1.00	0.94	0.09
565	Ngarinyman	0.00	115	19	0.83	0.95	0.09
952	Ngawun	0.01	10	19	0.86	0.92	0.09
377	Umpila	0.01	37	21	0.95	0.92	0.09
697	Kurrama	0.00	7	25	0.93	0.83	0.09
744	Koko Bera	0.01	244	15	0.71	0.97	0.09
935	Rembarrnga	0.01	64	25	0.89	0.83	0.09
94	Biri	0.00	12	18	1.00	0.96	0.09
621	Mengerrdji	0.01	65	15	0.58	0.94	0.10
928	Bakanh	0.01	52	19	0.73	0.84	0.10
495	Nyikina	0.00	67	19	0.95	0.92	0.10
305	Western Wakaya	0.00	1	26	1.00	0.78	0.10
105	Bardi	0.01	79	16	0.67	0.93	0.10
12	Erre	0.01	1	27	1.00	0.70	0.10
921	Gurr-Goni	0.00	173	22	0.81	0.85	0.10
934	Urningangg	0.01	36	21	0.75	0.81	0.10
1031	Ngadjunmaya	0.01	3	25	1.00	0.77	0.10
642	Mangala	0.00	13	22	1.00	0.86	0.10
540	Ngiyambaa	0.01	27	16	0.76	0.87	0.10
1012	Warrgamay	0.00	105	15	0.79	0.95	0.10
926	Limilngan	0.01	4	22	0.92	0.80	0.10
852	Gurindji	0.00	43	22	0.96	0.91	0.10
412	Ritharrngu	0.00	37	29	0.94	0.61	0.10
1011	Yorta Yorta	0.01	14	21	0.88	0.76	0.10
63	Dharumbal	0.01	36	15	0.75	0.92	0.10
170	Wik-Ngathan	0.01	230	13	0.46	0.93	0.10
946	Kurtjar	0.01	153	19	0.68	0.81	0.10
965	Oykangand	0.00	58	25	0.81	0.66	0.10
1043	Mbabaram	0.03	4	26	0.96	0.57	0.10
945	Wiri	0.01	6	18	1.00	0.90	0.10
863	Marra	0.00	67	19	0.95	0.88	0.10
845	Iwaidja	0.00	24	23	1.00	0.80	0.10
857	Amurdak	0.01	2	23	0.96	0.73	0.10
1001	Ngandi	0.01	3	33	0.97	0.45	0.10
807	Gupapuyngu	0.00	50	30	0.97	0.50	0.11
968	Ogh Angkula	0.01	17	24	1.00	0.68	0.11
767	Karajarri	0.00	111	19	0.90	0.83	0.11
204	Wemba Wemba	0.00	97	20	0.91	0.78	0.11
81	Dalabon	0.00	581	18	0.62	0.87	0.11
30	Duungidjawu	0.01	43	19	0.83	0.80	0.11

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
821	Gumbaynggir	0.02	62	15	0.79	0.85	0.11
979	Mawng	0.00	86	22	1.00	0.81	0.11
752	Kija	0.00	269	16	0.67	0.88	0.11
964	Olkol	0.00	3	28	0.90	0.49	0.11
611	Anguthimri	0.01	7	28	0.82	0.38	0.11
851	Bilinarra	0.00	162	19	0.83	0.80	0.11
77	Dhangu	0.01	7	26	1.00	0.53	0.11
939	Unggumi	0.01	9	24	0.80	0.52	0.11
1003	Murrinh-patha	0.01	8	25	1.00	0.54	0.11
760	Kartujarra	0.00	4	23	1.00	0.64	0.11
927	Tiwi	0.00	88	20	1.00	0.82	0.11
848	Wagiman	0.00	130	22	0.81	0.64	0.11
232	Warnman	0.00	202	9	0.39	0.95	0.12
941	Wambaya	0.00	5	22	0.96	0.62	0.12
620	Miriwoong	0.00	536	14	0.70	0.90	0.12
31	Djinang	0.00	24	25	1.00	0.57	0.12
38	Djabugay	0.00	186	12	0.63	0.90	0.12
800	Guwamu	0.01	3	21	1.00	0.61	0.12
917	Nyamal	0.00	3	22	0.92	0.57	0.12
972	Ogh Unyjan	0.01	36	21	0.84	0.46	0.12
790	Jaru	0.00	43	22	0.96	0.59	0.12
650	Linngithigh	0.01	33	23	0.85	0.45	0.12
911	Nyawaygi	0.01	67	15	0.83	0.82	0.12
847	Ngalakgan	0.01	119	20	0.74	0.58	0.12
631	Yalarnnga	0.01	6	24	1.00	0.48	0.12
841	Worrorra	0.01	1	25	1.00	0.42	0.12
923	Matngele	0.01	109	18	0.72	0.65	0.12
978	Wotjobaluk	0.01	83	16	0.84	0.71	0.12
62	Dhay'yi	0.00	228	10	0.38	0.66	0.12
771	Kalkatungu	0.00	45	24	0.92	0.40	0.12
967	Thaynakwithi	0.01	67	23	0.72	0.38	0.12
737	Kukatj	0.01	35	23	0.92	0.39	0.12
606	Mudburra	0.00	2	23	1.00	0.48	0.12
943	Pintupi	0.00	415	20	0.87	0.71	0.12
838	Gooniyandi	0.00	15	23	1.00	0.49	0.12
901	Guugu Yimidhirr	0.02	26	19	0.90	0.52	0.13
1025	Waalubal	0.00	372	11	0.55	0.83	0.13
962	Gunya	0.01	11	25	0.81	0.31	0.13
1024	Ngardily	0.01	5	22	1.00	0.45	0.13
853	Lardil	0.00	50	25	1.00	0.40	0.13
963	Kungkari	0.01	50	7	0.29	0.78	0.13
1009	Gamilaraay	0.00	20	21	1.00	0.46	0.13
546	Yanyuwa	0.00	27	23	1.00	0.44	0.13
856	Patjtjamalh	0.00	2	25	0.93	0.27	0.13
99	Bidyara	0.00	7	19	1.00	0.51	0.13
778	Jiwarli	0.00	11	26	1.00	0.25	0.13
918	Atampaya	0.01	1	25	1.00	0.26	0.14
940	Yawijibaya	0.01	10	18	0.78	0.41	0.14
1032	Kuku Yalanji	0.00	378	12	0.75	0.76	0.14
288	Wangkatja	0.00	48	23	1.00	0.32	0.14
237	Warluwarra	0.00	23	26	0.79	0.15	0.14
1026	Gidabal	0.00	284	14	0.70	0.61	0.14

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
200	Western Arrernte	0.01	8	25	1.00	0.19	0.14
958	Margany	0.01	7	24	0.80	0.18	0.14
443	Payungu	0.01	5	26	1.00	0.18	0.14
563	Ngarla	0.00	2	23	1.00	0.27	0.14
519	Nukunu	0.01	53	9	0.32	0.67	0.14
1019	Walmajarri	0.00	226	20	0.87	0.40	0.14
957	Ngaanyatjarra	0.00	57	23	1.00	0.25	0.14
919	Angkamuthi	0.01	5	26	1.00	0.15	0.14
89	Bunuba	0.01	7	24	1.00	0.20	0.14
13	Dyirbal	0.01	59	16	1.00	0.51	0.14
905	Malkana	0.01	2	25	1.00	0.15	0.15
985	Yaygir	0.00	107	17	0.85	0.36	0.15
762	Kariyarra	0.01	2	24	1.00	0.17	0.15
1016	Tharrkari	0.01	2	32	1.00	0.05	0.15
910	Nungali	0.01	115	14	0.88	0.61	0.15
118	Badimaya	0.01	3	24	1.00	0.17	0.15
787	Jawoyn	0.00	64	27	1.00	0.11	0.15
417	Yindjibarndi	0.01	17	25	1.00	0.15	0.15
982	Nhirrpi	0.02	1	30	1.00	0.06	0.15
920	Yadhaykenu	0.01	2	25	1.00	0.14	0.15
117	Wirangu	0.01	4	23	1.00	0.18	0.15
592	Muruwari	0.00	66	20	0.80	0.25	0.15
598	Yandruwandha	0.00	92	14	0.47	0.35	0.15
929	Wanyjirra	0.00	36	21	1.00	0.25	0.15
949	Kok Nar	0.01	13	21	1.00	0.23	0.15
518	Yarluyandi	0.01	4	23	1.00	0.16	0.15
228	Warriyangga	0.01	1	26	1.00	0.11	0.15
252	Warlmanpa	0.00	6	22	0.79	0.18	0.15
475	Southern Paakintyi	0.00	106	18	0.67	0.21	0.15
400	Thalanyji	0.00	161	7	0.27	0.59	0.15
85	Burarra	0.00	284	21	0.81	0.18	0.15
493	Nyiyaparli	0.01	1	22	1.00	0.17	0.15
462	Panyjima	0.01	106	8	0.32	0.60	0.15
113	Yulparija	0.00	151	20	0.87	0.22	0.15
645	Malyangapa	0.01	57	7	0.28	0.60	0.15
835	Gugu Badhun	0.01	28	17	1.00	0.36	0.15
1030	Putijarra	0.00	1	25	1.00	0.10	0.15
242	Warlpiri	0.00	63	24	1.00	0.33	0.15
849	Waanyi	0.00	211	15	0.75	0.39	0.15
433	Pitta Pitta	0.00	150	7	0.28	0.60	0.16
977	Warndarrang	0.01	35	19	1.00	0.23	0.16
1008	Yuwaalaraay	0.00	39	21	1.00	0.19	0.16
1029	Martuthunira	0.00	8	26	1.00	0.08	0.16
930	Purduna	0.01	12	26	1.00	0.08	0.16
1042	Thaayorre	0.00	208	24	0.92	0.09	0.16
914	Yinhawangka	0.00	220	8	0.31	0.57	0.16
618	Mirniny	0.01	1	25	1.00	0.07	0.16
572	Ngamini	0.00	17	22	0.96	0.10	0.16
734	Kukatja	0.00	35	23	1.00	0.22	0.16
269	Wangkumara	0.01	4	30	1.00	0.02	0.16
363	Yir Yoront	0.00	44	25	0.96	0.04	0.17
162	Adnyamathanha	0.00	63	29	1.00	0.02	0.17

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
554	Ngarluma	0.00	30	23	1.00	0.08	0.17
507	Nyangumarta	0.00	307	9	0.43	0.54	0.17
1007	Yuwaliyaay	0.00	33	21	1.00	0.09	0.17
865	Diyari	0.01	13	23	0.92	0.04	0.17
866	Thirarri	0.01	13	23	0.92	0.03	0.17
534	Nhanda	0.00	106	6	0.18	0.52	0.18
1006	Central Arrernte	0.00	27	25	1.00	0.02	0.18
1021	Watjarri	0.00	5	26	1.00	0.02	0.18
922	Nakara	0.00	14	26	1.00	0.02	0.18
101	Butchulla	0.01	85	15	0.62	0.14	0.19
91	Bularnu	0.01	2	30	1.00	0.00	0.19
983	Nhangu	0.00	130	19	0.61	0.02	0.19
1040	Ngarinyin	0.00	2	27	1.00	0.05	0.20

Table S3.7. Poisson distribution.

lex ID	language variety	λ	inventory size	p	goodness-of-fit
972	Ogh Unyjan	94.24	25	0	0.45
946	Kurtjar	218.96	28	0	0.46
363	Yir Yoront	325.35	26	0	0.46
940	Yawijibaya	67.52	23	0	0.46
967	Thaynakwithi	114.44	32	0	0.46
787	Jawoyn	387.26	27	0	0.47
81	Dalabon	726.28	29	0	0.47
928	Bakanh	110.96	26	0	0.47
821	Gumbaynggir	108.68	19	0	0.47
934	Urningangg	107.14	28	0	0.47
1008	Yuwaalaraay	471.62	21	0	0.48
1007	Yuwaliyaay	520.43	21	0	0.48
1009	Gamilaraay	236.52	21	0	0.48
949	Kok Nar	107.81	21	0	0.49
101	Butchulla	113.88	24	0	0.49
1025	Waalubal	424.70	20	0	0.50
621	Mengerrdji	91.58	26	0	0.50
1026	Gidabal	424.95	20	0	0.50
744	Koko Bera	357.86	21	0	0.50
968	Ogh Angkula	120.38	24	0	0.50
170	Wik-Ngathan	219.75	28	0	0.50
939	Unggumi	75.20	30	0	0.50
1043	Mbabaram	40.44	27	0	0.51
540	Ngiyambaa	82.86	21	0	0.51
848	Wagiman	334.41	27	0	0.51
847	Ngalakgan	208.44	27	0	0.51
923	Matngele	182.64	25	0	0.51
856	Patjtjamalh	215.96	27	0	0.52
1040	Ngarinyin	1850.44	27	0	0.52
901	Guugu Yimidhirr	75.29	21	0	0.52
1003	Murrinh-patha	100.64	25	0	0.52
853	Lardil	645.00	25	0	0.52
38	Djabugay	313.21	19	0	0.52
790	Jaru	638.04	23	0	0.52
800	Guwamu	125.10	21	0	0.52
89	Bunuba	178.71	24	0	0.53
996	Emmi	64.35	31	0	0.53
1002	Yintyingka	98.00	26	0	0.53
958	Margany	64.53	30	0	0.53
30	Duungidjawu	124.96	23	0	0.53
910	Nungali	227.00	16	0	0.54
985	Yaygir	287.10	20	0	0.54
1042	Thaayorre	890.58	26	0	0.54
978	Wotjobaluk	207.63	19	0	0.54
857	Amurdak	104.25	24	0	0.54
493	Nyiyaparli	69.91	22	0	0.54
965	Oykangand	272.42	31	0	0.54
650	Linngithigh	97.48	27	0	0.54
979	Mawng	876.68	22	0	0.55
611	Anguthimri	64.97	34	0	0.55
737	Kukatj	203.48	25	0	0.55

lex ID	language variety	λ	inventory size	p	goodness-of-fit
265	Wardaman	521.77	22	0	0.55
1001	Ngandi	188.32	34	0	0.55
5	Gangulu	167.00	18	0	0.56
1011	Yorta Yorta	84.08	24	0	0.56
740	Kugu Nganhcara	88.50	30	0	0.56
427	Yidiny	540.42	19	0	0.56
94	Biri	234.56	18	0	0.56
911	Nyawaygi	187.61	18	0	0.56
620	Miriwoong	833.75	20	0	0.56
12	Erre	86.89	27	0	0.56
63	Dharumbal	150.30	20	0	0.56
841	Worrorra	85.52	25	0	0.56
852	Gurindji	1478.43	23	0	0.57
952	Ngawun	84.55	22	0	0.57
1012	Warrgamay	284.79	19	0	0.58
252	Warlmanpa	236.82	28	0	0.58
982	Nhirrpi	59.30	30	0	0.58
305	Western Wakaya	267.12	26	0	0.58
983	Nhangu	347.97	31	0	0.58
752	Kija	455.75	24	0	0.58
1032	Kuku Yalanji	754.31	16	0	0.58
915	Alawa	819.76	21	0	0.58
926	Limilngan	110.79	24	0	0.58
105	Bardi	184.71	24	0	0.58
977	Warndarrang	136.95	19	0	0.59
642	Mangala	385.36	22	0	0.59
1016	Tharrkari	75.97	32	0	0.59
443	Payungu	183.73	26	0	0.59
228	Warriyangga	80.85	26	0	0.59
377	Umpila	222.73	22	0	0.59
945	Wiri	122.78	18	0	0.60
204	Wemba Wemba	347.82	22	0	0.60
495	Nyikina	468.55	20	0	0.60
927	Tiwi	1100.60	20	0	0.60
925	Larrakia	153.24	29	0	0.60
922	Nakara	320.04	26	0	0.60
1031	Ngadjunmaya	202.72	25	0	0.60
606	Mudburra	242.65	23	0	0.60
935	Rembarrnga	221.36	28	0	0.61
905	Malkana	73.96	25	0	0.61
518	Yarluyandi	91.30	23	0	0.61
845	Iwaidja	525.39	23	0	0.61
851	Bilinarra	503.00	23	0	0.61
546	Yanyuwa	675.48	23	0	0.61
941	Wambaya	508.91	23	0	0.61
77	Dhangu	95.31	26	0	0.61
237	Warluwarra	215.64	33	0	0.61
534	Nhanda	103.94	33	0	0.61
412	Ritharrngu	309.90	31	0	0.61
200	Western Arrernte	91.60	25	0	0.61
598	Yandruwandha	185.47	30	0	0.62
118	Badimaya	132.67	24	0	0.62

lex ID	language variety	λ	inventory size	p	goodness-of-fit
921	Gurr-Goni	482.26	27	0	0.62
920	Yadhaykenu	129.72	25	0	0.62
966	Wik Mungkan	1043.19	26	0	0.62
417	Yindjibarndi	203.44	25	0	0.62
929	Wanyjirra	271.71	21	0	0.63
963	Kungkari	52.79	24	0	0.63
697	Kurrama	198.04	27	0	0.63
930	Purduna	173.77	26	0	0.63
838	Gooniyandi	453.43	23	0	0.63
1029	Martuthunira	263.35	26	0	0.63
863	Marra	264.95	20	0	0.63
1024	Ngardily	125.36	22	0	0.64
964	Olkol	349.77	31	0	0.64
645	Malyangapa	58.48	25	0	0.64
592	Muruwari	320.88	25	0	0.64
849	Waanyi	487.40	20	0	0.64
962	Gunya	119.39	31	0	0.64
771	Kalkatungu	373.27	26	0	0.64
1018	Djapu	224.62	26	0	0.64
618	Mirniny	86.96	25	0	0.64
807	Gupapuyngu	520.52	31	0	0.65
565	Ngarinyman	409.91	23	0	0.65
656	Kuugu Ya'u	305.86	21	0	0.65
117	Wirangu	126.04	23	0	0.65
1023	Wubuy	294.08	26	0	0.65
760	Kartujarra	238.70	23	0	0.65
919	Angkamuthi	180.88	26	0	0.65
99	Bidyara	246.11	19	0	0.65
1019	Walmajarri	1323.57	23	0	0.65
232	Warnman	295.09	23	0	0.65
943	Pintupi	1476.22	23	0	0.65
85	Burarra	739.81	26	0	0.65
631	Yalarnnga	159.67	24	0	0.65
62	Dhay'yi	296.73	26	0	0.65
778	Jiwarli	289.15	26	0	0.65
762	Kariyarra	105.88	24	0	0.66
917	Nyamal	254.75	24	0	0.66
767	Karajarri	599.05	21	0	0.66
572	Ngamini	252.83	23	0	0.66
865	Diyari	75.92	25	0	0.67
866	Thirarri	75.96	25	0	0.67
475	Southern Paakintyi	314.19	27	0	0.67
91	Bularnu	138.10	30	0	0.67
507	Nyangumarta	459.86	21	0	0.67
957	Ngaanyatjarra	579.57	23	0	0.67
918	Atampaya	124.20	25	0	0.67
1030	Putijarra	297.56	25	0	0.67
13	Dyirbal	242.94	16	0	0.68
31	Djinang	673.56	25	0	0.68
400	Thalanyji	175.85	26	0	0.69
835	Gugu Badhun	175.12	17	0	0.69
113	Yulparija	581.22	23	0	0.70

lex ID	language variety	λ	inventory size	p	goodness-of-fit
554	Ngarluma	293.39	23	0	0.70
288	Wangkatja	610.09	23	0	0.70
734	Kukatja	1174.91	23	0	0.70
269	Wangkumara	172.03	30	0	0.70
462	Panyjima	129.20	25	0	0.70
519	Nukunu	72.00	28	0	0.70
563	Ngarla	392.61	23	0	0.71
242	Warlpiri	1704.25	24	0	0.71
1006	Central Arrernte	287.80	25	0	0.72
162	Adnyamathanha	412.69	29	0	0.72
433	Pitta Pitta	173.60	25	0	0.72
914	Yinhawangka	283.50	26	0	0.73
1021	Watjarri	279.65	26	0	0.75

Table S3.8. Poisson distribution with x_{min}.

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
1002	Yintyingka	0.01	11	24	0.92	0.98	0.07
925	Larrakia	0.01	21	21	0.72	0.99	0.07
966	Wik Mungkan	0.00	456	19	0.73	1.00	0.07
1023	Wubuy	0.00	12	25	0.96	0.96	0.08
740	Kugu Nganhcara	0.01	11	26	0.87	0.92	0.08
915	Alawa	0.00	250	20	0.95	0.99	0.08
996	Emmi	0.02	2	31	1.00	0.83	0.08
265	Wardaman	0.00	224	18	0.82	0.99	0.09
5	Gangulu	0.01	9	18	1.00	0.98	0.09
427	Yidiny	0.00	164	18	0.95	0.99	0.09
1018	Djapu	0.01	25	26	1.00	0.90	0.09
656	Kuugu Ya'u	0.00	65	21	1.00	0.94	0.09
565	Ngarinyman	0.00	115	19	0.83	0.95	0.09
952	Ngawun	0.01	10	19	0.86	0.92	0.09
377	Umpila	0.01	37	21	0.95	0.92	0.09
697	Kurrama	0.00	7	25	0.93	0.83	0.09
744	Koko Bera	0.01	244	15	0.71	0.97	0.09
935	Rembarrnga	0.01	64	25	0.89	0.83	0.09
94	Biri	0.00	12	18	1.00	0.96	0.09
621	Mengerrdji	0.01	65	15	0.58	0.94	0.10
928	Bakanh	0.01	52	19	0.73	0.84	0.10
495	Nyikina	0.00	67	19	0.95	0.92	0.10
305	Western Wakaya	0.00	1	26	1.00	0.78	0.10
105	Bardi	0.01	79	16	0.67	0.93	0.10
12	Erre	0.01	1	27	1.00	0.70	0.10
921	Gurr-Goni	0.00	173	22	0.81	0.85	0.10
934	Urningangg	0.01	36	21	0.75	0.81	0.10
1031	Ngadjunmaya	0.01	3	25	1.00	0.77	0.10
642	Mangala	0.00	13	22	1.00	0.86	0.10
540	Ngiyambaa	0.01	27	16	0.76	0.87	0.10
1012	Warrgamay	0.00	105	15	0.79	0.95	0.10
926	Limilngan	0.01	4	22	0.92	0.80	0.10
852	Gurindji	0.00	43	22	0.96	0.91	0.10
412	Ritharrngu	0.00	37	29	0.94	0.61	0.10
1011	Yorta Yorta	0.01	14	21	0.88	0.76	0.10
63	Dharumbal	0.01	36	15	0.75	0.92	0.10
170	Wik-Ngathan	0.01	230	13	0.46	0.93	0.10
946	Kurtjar	0.01	153	19	0.68	0.81	0.10
965	Oykangand	0.00	58	25	0.81	0.66	0.10
1043	Mbabaram	0.03	4	26	0.96	0.57	0.10
945	Wiri	0.01	6	18	1.00	0.90	0.10
863	Marra	0.00	67	19	0.95	0.88	0.10
845	Iwaidja	0.00	24	23	1.00	0.80	0.10
857	Amurdak	0.01	2	23	0.96	0.73	0.10
1001	Ngandi	0.01	3	33	0.97	0.45	0.10
807	Gupapuyngu	0.00	50	30	0.97	0.50	0.11
968	Ogh Angkula	0.01	17	24	1.00	0.68	0.11
767	Karajarri	0.00	111	19	0.90	0.83	0.11
204	Wemba Wemba	0.00	97	20	0.91	0.78	0.11
81	Dalabon	0.00	581	18	0.62	0.87	0.11
30	Duungidjawu	0.01	43	19	0.83	0.80	0.11

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
821	Gumbaynggir	0.02	62	15	0.79	0.85	0.11
979	Mawng	0.00	86	22	1.00	0.81	0.11
752	Kija	0.00	269	16	0.67	0.88	0.11
964	Olkol	0.00	3	28	0.90	0.49	0.11
611	Anguthimri	0.01	7	28	0.82	0.38	0.11
851	Bilinarra	0.00	162	19	0.83	0.80	0.11
77	Dhangu	0.01	7	26	1.00	0.53	0.11
939	Unggumi	0.01	9	24	0.80	0.52	0.11
1003	Murrinh-patha	0.01	8	25	1.00	0.54	0.11
760	Kartujarra	0.00	4	23	1.00	0.64	0.11
927	Tiwi	0.00	88	20	1.00	0.82	0.11
848	Wagiman	0.00	130	22	0.81	0.64	0.11
232	Warnman	0.00	202	9	0.39	0.95	0.12
941	Wambaya	0.00	5	22	0.96	0.62	0.12
620	Miriwoong	0.00	536	14	0.70	0.90	0.12
31	Djinang	0.00	24	25	1.00	0.57	0.12
38	Djabugay	0.00	186	12	0.63	0.90	0.12
800	Guwamu	0.01	3	21	1.00	0.61	0.12
917	Nyamal	0.00	3	22	0.92	0.57	0.12
972	Ogh Unyjan	0.01	36	21	0.84	0.46	0.12
790	Jaru	0.00	43	22	0.96	0.59	0.12
650	Linngithigh	0.01	33	23	0.85	0.45	0.12
911	Nyawaygi	0.01	67	15	0.83	0.82	0.12
847	Ngalakgan	0.01	119	20	0.74	0.58	0.12
631	Yalarnnga	0.01	6	24	1.00	0.48	0.12
841	Worrorra	0.01	1	25	1.00	0.42	0.12
923	Matngele	0.01	109	18	0.72	0.65	0.12
978	Wotjobaluk	0.01	83	16	0.84	0.71	0.12
62	Dhay'yi	0.00	228	10	0.38	0.66	0.12
771	Kalkatungu	0.00	45	24	0.92	0.40	0.12
967	Thaynakwithi	0.01	67	23	0.72	0.38	0.12
737	Kukatj	0.01	35	23	0.92	0.39	0.12
606	Mudburra	0.00	2	23	1.00	0.48	0.12
943	Pintupi	0.00	415	20	0.87	0.71	0.12
838	Gooniyandi	0.00	15	23	1.00	0.49	0.12
901	Guugu Yimidhirr	0.02	26	19	0.90	0.52	0.13
1025	Waalubal	0.00	372	11	0.55	0.83	0.13
962	Gunya	0.01	11	25	0.81	0.31	0.13
1024	Ngardily	0.01	5	22	1.00	0.45	0.13
853	Lardil	0.00	50	25	1.00	0.40	0.13
963	Kungkari	0.01	50	7	0.29	0.78	0.13
1009	Gamilaraay	0.00	20	21	1.00	0.46	0.13
546	Yanyuwa	0.00	27	23	1.00	0.44	0.13
856	Patjtjamalh	0.00	2	25	0.93	0.27	0.13
99	Bidyara	0.00	7	19	1.00	0.51	0.13
778	Jiwarli	0.00	11	26	1.00	0.25	0.13
918	Atampaya	0.01	1	25	1.00	0.26	0.14
940	Yawijibaya	0.01	10	18	0.78	0.41	0.14
1032	Kuku Yalanji	0.00	378	12	0.75	0.76	0.14
288	Wangkatja	0.00	48	23	1.00	0.32	0.14
237	Warluwarra	0.00	23	26	0.79	0.15	0.14
1026	Gidabal	0.00	284	14	0.70	0.61	0.14

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
200	Western Arrernte	0.01	8	25	1.00	0.19	0.14
958	Margany	0.01	7	24	0.80	0.18	0.14
443	Payungu	0.01	5	26	1.00	0.18	0.14
563	Ngarla	0.00	2	23	1.00	0.27	0.14
519	Nukunu	0.01	53	9	0.32	0.67	0.14
1019	Walmajarri	0.00	226	20	0.87	0.40	0.14
957	Ngaanyatjarra	0.00	57	23	1.00	0.25	0.14
919	Angkamuthi	0.01	5	26	1.00	0.15	0.14
89	Bunuba	0.01	7	24	1.00	0.20	0.14
13	Dyirbal	0.01	59	16	1.00	0.51	0.14
905	Malkana	0.01	2	25	1.00	0.15	0.15
985	Yaygir	0.00	107	17	0.85	0.36	0.15
762	Kariyarra	0.01	2	24	1.00	0.17	0.15
1016	Tharrkari	0.01	2	32	1.00	0.05	0.15
910	Nungali	0.01	115	14	0.88	0.61	0.15
118	Badimaya	0.01	3	24	1.00	0.17	0.15
787	Jawoyn	0.00	64	27	1.00	0.11	0.15
417	Yindjibarndi	0.01	17	25	1.00	0.15	0.15
982	Nhirrpi	0.02	1	30	1.00	0.06	0.15
920	Yadhaykenu	0.01	2	25	1.00	0.14	0.15
117	Wirangu	0.01	4	23	1.00	0.18	0.15
592	Muruwari	0.00	66	20	0.80	0.25	0.15
598	Yandruwandha	0.00	92	14	0.47	0.35	0.15
929	Wanyjirra	0.00	36	21	1.00	0.25	0.15
949	Kok Nar	0.01	13	21	1.00	0.23	0.15
518	Yarluyandi	0.01	4	23	1.00	0.16	0.15
228	Warriyangga	0.01	1	26	1.00	0.11	0.15
252	Warlmanpa	0.00	6	22	0.79	0.18	0.15
475	Southern Paakintyi	0.00	106	18	0.67	0.21	0.15
400	Thalanyji	0.00	161	7	0.27	0.59	0.15
85	Burarra	0.00	284	21	0.81	0.18	0.15
493	Nyiyaparli	0.01	1	22	1.00	0.17	0.15
462	Panyjima	0.01	106	8	0.32	0.60	0.15
113	Yulparija	0.00	151	20	0.87	0.22	0.15
645	Malyangapa	0.01	57	7	0.28	0.60	0.15
835	Gugu Badhun	0.01	28	17	1.00	0.36	0.15
1030	Putijarra	0.00	1	25	1.00	0.10	0.15
242	Warlpiri	0.00	63	24	1.00	0.33	0.15
849	Waanyi	0.00	211	15	0.75	0.39	0.15
433	Pitta Pitta	0.00	150	7	0.28	0.60	0.16
977	Warndarrang	0.01	35	19	1.00	0.23	0.16
1008	Yuwaalaraay	0.00	39	21	1.00	0.19	0.16
1029	Martuthunira	0.00	8	26	1.00	0.08	0.16
930	Purduna	0.01	12	26	1.00	0.08	0.16
1042	Thaayorre	0.00	208	24	0.92	0.09	0.16
914	Yinhawangka	0.00	220	8	0.31	0.57	0.16
618	Mirniny	0.01	1	25	1.00	0.07	0.16
572	Ngamini	0.00	17	22	0.96	0.10	0.16
734	Kukatja	0.00	35	23	1.00	0.22	0.16
269	Wangkumara	0.01	4	30	1.00	0.02	0.16
363	Yir Yoront	0.00	44	25	0.96	0.04	0.17
162	Adnyamathanha	0.00	63	29	1.00	0.02	0.17

lex ID	language variety	λ	x_{min}	n segments	frac. of inventory	p	goodness-of-fit
554	Ngarluma	0.00	30	23	1.00	0.08	0.17
507	Nyangumarta	0.00	307	9	0.43	0.54	0.17
1007	Yuwaliyaay	0.00	33	21	1.00	0.09	0.17
865	Diyari	0.01	13	23	0.92	0.04	0.17
866	Thirarri	0.01	13	23	0.92	0.03	0.17
534	Nhanda	0.00	106	6	0.18	0.52	0.18
1006	Central Arrernte	0.00	27	25	1.00	0.02	0.18
1021	Watjarri	0.00	5	26	1.00	0.02	0.18
922	Nakara	0.00	14	26	1.00	0.02	0.18
101	Butchulla	0.01	85	15	0.62	0.14	0.19
91	Bularnu	0.01	2	30	1.00	0.00	0.19
983	Nhangu	0.00	130	19	0.61	0.02	0.19
1040	Ngarinyin	0.00	2	27	1.00	0.05	0.20

Table S3.9. Comparing exponential and lognormal distributions using Vuong's likelihood ratio test.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
967	Thaynakwithi	3.88	0.000	**
81	Dalabon	3.83	0.000	*
650	Linngithigh	3.63	0.000	*
923	Matngele	2.58	0.005	
1007	Yuwaliyaay	2.56	0.005	
30	Duungidjawu	2.53	0.006	
621	Mengerrdji	2.44	0.007	
493	Nyiyaparli	2.40	0.008	
38	Djabugay	2.39	0.008	
1008	Yuwaalaraay	2.37	0.009	
911	Nyawaygi	2.31	0.010	
305	Western Wakaya	2.14	0.016	
113	Yulparija	2.06	0.020	
620	Miriwoong	2.03	0.021	
737	Kukatj	1.99	0.023	
847	Ngalakgan	1.98	0.024	
853	Lardil	1.96	0.025	
232	Warnman	1.90	0.028	
563	Ngarla	1.89	0.029	
12	Erre	1.89	0.029	
851	Bilinarra	1.88	0.030	
565	Ngarinyman	1.86	0.031	
170	Wik-Ngathan	1.86	0.032	
852	Gurindji	1.85	0.032	
928	Bakanh	1.80	0.036	
1019	Walmajarri	1.79	0.037	
848	Wagiman	1.70	0.044	
752	Kija	1.69	0.045	
1030	Putijarra	1.68	0.046	
1012	Warrgamay	1.67	0.048	
863	Marra	1.63	0.051	
965	Oykangand	1.62	0.052	
734	Kukatja	1.60	0.055	
1009	Gamilaraay	1.56	0.060	
1011	Yorta Yorta	1.51	0.066	
941	Wambaya	1.49	0.068	
606	Mudburra	1.49	0.069	
949	Kok Nar	1.47	0.071	
767	Karajarri	1.43	0.076	
31	Djinang	1.37	0.085	
787	Jawoyn	1.32	0.094	
642	Mangala	1.24	0.108	
760	Kartujarra	1.21	0.113	
1001	Ngandi	1.17	0.121	
838	Gooniyandi	1.15	0.125	
790	Jaru	1.13	0.129	
1023	Wubuy	1.11	0.134	
921	Gurr-Goni	1.08	0.141	

lex ID	language variety	R	p	signif.
762	Kariyarra	1.07	0.143	
1021	Watjarri	1.05	0.147	
800	Guwamu	1.05	0.147	
856	Patjtjamalh	1.01	0.155	
952	Ngawun	0.95	0.170	
978	Wotjobaluk	0.95	0.172	
1002	Yintyingka	0.94	0.174	
849	Waanyi	0.92	0.178	
857	Amurdak	0.91	0.182	
507	Nyangumarta	0.90	0.185	
1042	Thaayorre	0.88	0.189	
377	Umpila	0.88	0.189	
972	Ogh Unyjan	0.88	0.190	
934	Urningangg	0.87	0.193	
841	Worrorra	0.81	0.208	
966	Wik Mungkan	0.81	0.208	
1031	Ngadjunmaya	0.81	0.210	
540	Ngiyambaa	0.78	0.217	
917	Nyamal	0.77	0.220	
1003	Murrinh-patha	0.77	0.220	
462	Panyjima	0.77	0.221	
1043	Mbabaram	0.75	0.226	
495	Nyikina	0.75	0.226	
363	Yir Yoront	0.70	0.243	
910	Nungali	0.69	0.244	
996	Emmi	0.66	0.255	
914	Yinhawangka	0.66	0.256	
242	Warlpiri	0.66	0.256	
1026	Gidabal	0.65	0.256	
99	Bidyara	0.65	0.259	
964	Olkol	0.64	0.262	
618	Mirniny	0.62	0.267	
94	Biri	0.62	0.268	
1025	Waalubal	0.60	0.273	
963	Kungkari	0.58	0.281	
979	Mawng	0.57	0.285	
228	Warriyangga	0.54	0.293	
926	Limilngan	0.54	0.296	
945	Wiri	0.54	0.296	
929	Wanyjirra	0.53	0.299	
740	Kugu Nganhcara	0.53	0.299	
63	Dharumbal	0.50	0.308	
935	Rembarrnga	0.48	0.317	
631	Yalarnnga	0.47	0.319	
697	Kurrama	0.47	0.321	
985	Yaygir	0.45	0.326	
5	Gangulu	0.44	0.332	
918	Atampaya	0.39	0.350	
1040	Ngarinyin	0.37	0.356	
105	Bardi	0.36	0.358	
845	Iwaidja	0.36	0.361	
13	Dyirbal	0.35	0.362	

lex ID	language variety	R	p	signif.
915	Alawa	0.34	0.366	
118	Badimaya	0.32	0.373	
265	Wardaman	0.32	0.375	
946	Kurtjar	0.30	0.381	
1029	Martuthunira	0.28	0.392	
835	Gugu Badhun	0.25	0.401	
546	Yanyuwa	0.25	0.403	
204	Wemba Wemba	0.23	0.409	
778	Jiwarli	0.21	0.416	
417	Yindjibarndi	0.21	0.417	
433	Pitta Pitta	0.21	0.418	
905	Malkana	0.20	0.422	
89	Bunuba	0.16	0.435	
611	Anguthimri	0.13	0.447	
443	Payungu	0.13	0.447	
412	Ritharrngu	0.10	0.459	
400	Thalanyji	0.10	0.462	
101	Butchulla	0.07	0.471	
1024	Ngardily	0.01	0.495	
288	Wangkatja	0.00	0.501	
656	Kuugu Ya'u	-0.01	0.504	
957	Ngaanyatjarra	-0.01	0.505	
920	Yadhaykenu	-0.02	0.509	
925	Larrakia	-0.03	0.511	
427	Yidiny	-0.03	0.513	
1018	Djapu	-0.04	0.517	
117	Wirangu	-0.07	0.530	
807	Gupapuyngu	-0.08	0.530	
821	Gumbaynggir	-0.09	0.535	
62	Dhay'yi	-0.10	0.541	
645	Malyangapa	-0.11	0.543	
982	Nhirrpi	-0.12	0.549	
77	Dhangu	-0.14	0.555	
940	Yawijibaya	-0.18	0.570	
901	Guugu Yimidhirr	-0.18	0.571	
519	Nukunu	-0.20	0.581	
968	Ogh Angkula	-0.21	0.581	
919	Angkamuthi	-0.26	0.602	
1032	Kuku Yalanji	-0.26	0.603	
85	Burarra	-0.27	0.607	
930	Purduna	-0.33	0.628	
943	Pintupi	-0.33	0.628	
598	Yandruwandha	-0.34	0.631	
939	Unggumi	-0.34	0.634	
927	Tiwi	-0.35	0.636	
977	Warndarrang	-0.35	0.636	
518	Yarluyandi	-0.38	0.649	
592	Muruwari	-0.40	0.654	
922	Nakara	-0.45	0.673	
534	Nhanda	-0.45	0.674	
554	Ngarluma	-0.47	0.679	
572	Ngamini	-0.49	0.689	

lex ID	language variety	R	p	signif.
744	Koko Bera	-0.50	0.691	
252	Warlmanpa	-0.55	0.709	
771	Kalkatungu	-0.59	0.722	
91	Bularnu	-0.59	0.724	
269	Wangkumara	-0.64	0.740	
958	Margany	-0.66	0.744	
237	Warluwarra	-0.67	0.749	
983	Nhangu	-0.72	0.765	
1016	Tharrkari	-0.85	0.803	
475	Southern Paakintyi	-0.99	0.839	
962	Gunya	-1.02	0.846	
865	Diyari	-1.06	0.855	
866	Thirarri	-1.06	0.855	
200	Western Arrernte	-1.06	0.855	
162	Adnyamathanha	-1.34	0.909	
1006	Central Arrernte	-1.60	0.946	

Table S3.10. Comparing exponential and lognormal distributions with x_{min} using Vuong's likelihood ratio test.

Part A. Using x_{min} from the exponential fit. $R > 0$ favours exponential.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
856	Patjtjamalh	2.68	0.004	
1007	Yuwaliyaay	2.56	0.005	
493	Nyiyaparli	2.40	0.008	
1008	Yuwaalaraay	2.37	0.009	
964	Olkol	2.21	0.013	
305	Western Wakaya	2.14	0.016	
853	Lardil	1.96	0.025	
563	Ngarla	1.89	0.029	
12	Erre	1.89	0.029	
1030	Putijarra	1.68	0.046	
252	Warlmanpa	1.60	0.055	
734	Kukatja	1.60	0.055	
1009	Gamilaraay	1.56	0.060	
606	Mudburra	1.49	0.069	
934	Urningangg	1.47	0.071	
917	Nyamal	1.47	0.071	
949	Kok Nar	1.47	0.071	
1001	Ngandi	1.40	0.080	
540	Ngiyambaa	1.39	0.082	
31	Djinang	1.37	0.085	
965	Oykangand	1.37	0.086	
941	Wambaya	1.36	0.086	
787	Jawoyn	1.32	0.094	
642	Mangala	1.24	0.108	
857	Amurdak	1.22	0.111	
760	Kartujarra	1.21	0.113	
978	Wotjobaluk	1.20	0.115	
838	Gooniyandi	1.15	0.125	
762	Kariyarra	1.07	0.143	
1023	Wubuy	1.05	0.146	
1021	Watjarri	1.05	0.147	
800	Guwamu	1.05	0.147	
790	Jaru	0.95	0.171	
852	Gurindji	0.93	0.176	
1042	Thaayorre	0.86	0.194	
940	Yawijibaya	0.82	0.207	
841	Worrorra	0.81	0.208	
1002	Yintyingka	0.81	0.209	
1031	Ngadjunmaya	0.81	0.210	
926	Limilngan	0.78	0.218	
1043	Mbabaram	0.78	0.219	
1003	Murrinh-patha	0.77	0.220	
737	Kukatj	0.74	0.230	
495	Nyikina	0.72	0.236	
952	Ngawun	0.71	0.239	
427	Yidiny	0.70	0.242	
62	Dhay'yi	0.68	0.250	

lex ID	language variety	R	p	signif.
996	Emmi	0.66	0.255	
242	Warlpiri	0.66	0.256	
99	Bidyara	0.65	0.259	
618	Mirniny	0.62	0.267	
697	Kurrama	0.62	0.268	
94	Biri	0.62	0.268	
81	Dalabon	0.58	0.280	
979	Mawng	0.57	0.285	
228	Warriyangga	0.54	0.293	
925	Larrakia	0.54	0.295	
611	Anguthimri	0.54	0.295	
945	Wiri	0.54	0.296	
645	Malyangapa	0.54	0.296	
105	Bardi	0.53	0.297	
929	Wanyjirra	0.53	0.299	
400	Thalanyji	0.50	0.309	
30	Duungidjawu	0.48	0.317	
631	Yalarnnga	0.47	0.319	
963	Kungkari	0.46	0.324	
5	Gangulu	0.44	0.332	
918	Atampaya	0.39	0.350	
63	Dharumbal	0.37	0.355	
1040	Ngarinyin	0.37	0.356	
845	Iwaidja	0.36	0.361	
13	Dyirbal	0.35	0.362	
118	Badimaya	0.32	0.373	
740	Kugu Nganhcara	0.31	0.377	
923	Matngele	0.29	0.386	
946	Kurtjar	0.28	0.389	
1029	Martuthunira	0.28	0.392	
621	Mengerrdji	0.26	0.398	
835	Gugu Badhun	0.25	0.401	
546	Yanyuwa	0.25	0.403	
911	Nyawaygi	0.24	0.404	
433	Pitta Pitta	0.24	0.405	
363	Yir Yoront	0.24	0.406	
778	Jiwarli	0.21	0.416	
417	Yindjibarndi	0.21	0.417	
1012	Warrgamay	0.21	0.419	
905	Malkana	0.20	0.422	
901	Guugu Yimidhirr	0.20	0.422	
821	Gumbaynggir	0.19	0.424	
89	Bunuba	0.16	0.435	
752	Kija	0.16	0.437	
412	Ritharrngu	0.14	0.444	
620	Miriwoong	0.14	0.444	
443	Payungu	0.13	0.447	
972	Ogh Unyjan	0.12	0.452	
38	Djabugay	0.12	0.452	
232	Warnman	0.12	0.453	
915	Alawa	0.11	0.456	
1032	Kuku Yalanji	0.05	0.479	

lex ID	language variety	R	p	signif.
1025	Waalubal	0.05	0.482	
534	Nhanda	0.05	0.482	
507	Nyangumarta	0.04	0.485	
939	Unggumi	0.03	0.486	
1024	Ngardily	0.01	0.495	
288	Wangkatja	0.00	0.501	
744	Koko Bera	0.00	0.502	
656	Kuugu Ya'u	-0.01	0.504	
957	Ngaanyatjarra	-0.01	0.505	
920	Yadhaykenu	-0.02	0.509	
1018	Djapu	-0.04	0.517	
204	Wemba Wemba	-0.05	0.519	
170	Wik-Ngathan	-0.05	0.522	
117	Wirangu	-0.07	0.530	
1026	Gidabal	-0.08	0.532	
914	Yinhawangka	-0.09	0.538	
982	Nhirrpi	-0.12	0.549	
377	Umpila	-0.13	0.551	
1011	Yorta Yorta	-0.13	0.552	
77	Dhangu	-0.14	0.555	
966	Wik Mungkan	-0.15	0.561	
985	Yaygir	-0.18	0.570	
592	Muruwari	-0.18	0.570	
807	Gupapuyngu	-0.18	0.571	
650	Linngithigh	-0.20	0.578	
968	Ogh Angkula	-0.21	0.581	
935	Rembarrnga	-0.21	0.582	
462	Panyjima	-0.21	0.584	
848	Wagiman	-0.21	0.585	
863	Marra	-0.23	0.590	
919	Angkamuthi	-0.26	0.602	
519	Nukunu	-0.29	0.615	
767	Karajarri	-0.30	0.618	
928	Bakanh	-0.31	0.621	
930	Purduna	-0.33	0.628	
910	Nungali	-0.34	0.632	
927	Tiwi	-0.35	0.636	
977	Warndarrang	-0.35	0.636	
518	Yarluyandi	-0.38	0.649	
265	Wardaman	-0.42	0.665	
922	Nakara	-0.45	0.673	
983	Nhangu	-0.46	0.679	
554	Ngarluma	-0.47	0.679	
851	Bilinarra	-0.47	0.681	
962	Gunya	-0.49	0.687	
958	Margany	-0.49	0.687	
565	Ngarinyman	-0.53	0.701	
967	Thaynakwithi	-0.54	0.706	
598	Yandruwandha	-0.55	0.709	
921	Gurr-Goni	-0.57	0.715	
849	Waanyi	-0.58	0.720	
572	Ngamini	-0.59	0.721	

lex ID	language variety	R	p	signif.
847	Ngalakgan	-0.59	0.723	
91	Bularnu	-0.59	0.724	
269	Wangkumara	-0.64	0.740	
475	Southern Paakintyi	-0.66	0.745	
237	Warluwarra	-0.78	0.783	
101	Butchulla	-0.79	0.786	
85	Burarra	-0.81	0.791	
113	Yulparija	-0.81	0.792	
943	Pintupi	-0.84	0.799	
1016	Tharrkari	-0.85	0.803	
865	Diyari	-0.98	0.837	
866	Thirarri	-0.99	0.839	
1019	Walmajarri	-1.00	0.841	
771	Kalkatungu	-1.05	0.852	
200	Western Arrernte	-1.06	0.855	
162	Adnyamathanha	-1.34	0.909	
1006	Central Arrernte	-1.60	0.946	

Table S3.10. Comparing exponential and lognormal distributions with x_{min} using Vuong's likelihood ratio test.

Part B. Using x_{min} from the lognormal fit. $R > 0$ favours lognormal.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
1021	Watjarri	1.45	0.074	
762	Kariyarra	1.37	0.085	
919	Angkamuthi	1.36	0.087	
162	Adnyamathanha	1.34	0.091	
1016	Tharrkari	1.32	0.093	
905	Malkana	1.32	0.094	
91	Bularnu	1.29	0.099	
1006	Central Arrernte	1.27	0.102	
914	Yinhawangka	1.23	0.109	
400	Thalanyji	1.23	0.109	
957	Ngaanyatjarra	1.21	0.113	
1030	Putijarra	1.21	0.113	
519	Nukunu	1.20	0.116	
228	Warriyangga	1.17	0.122	
507	Nyangumarta	1.16	0.124	
288	Wangkatja	1.15	0.125	
922	Nakara	1.11	0.132	
443	Payungu	1.11	0.133	
269	Wangkumara	1.08	0.139	
200	Western Arrernte	1.06	0.145	
866	Thirarri	1.06	0.145	
865	Diyari	1.06	0.145	
242	Warlpiri	1.06	0.145	
363	Yir Yoront	1.05	0.146	
778	Jiwarli	1.05	0.147	
534	Nhanda	1.02	0.154	
563	Ngarla	1.01	0.156	
943	Pintupi	1.00	0.158	
1019	Walmajarri	1.00	0.159	
838	Gooniyandi	0.99	0.161	
1024	Ngardily	0.98	0.164	
417	Yindjibarndi	0.97	0.165	
918	Atampaya	0.96	0.168	
598	Yandruwandha	0.95	0.171	
771	Kalkatungu	0.94	0.172	
734	Kukatja	0.94	0.173	
967	Thaynakwithi	0.93	0.176	
807	Gupapuyngu	0.92	0.178	
982	Nhirrpi	0.89	0.187	
940	Yawijibaya	0.88	0.189	
606	Mudburra	0.85	0.196	
117	Wirangu	0.85	0.197	
493	Nyiyaparli	0.83	0.203	
31	Djinang	0.82	0.206	
475	Southern Paakintyi	0.82	0.207	
963	Kungkari	0.82	0.207	
118	Badimaya	0.81	0.208	

lex ID	language variety	R	p	signif.
81	Dalabon	0.80	0.213	
929	Wanyjirra	0.79	0.213	
101	Butchulla	0.79	0.214	
85	Burarra	0.78	0.216	
237	Warluwarra	0.78	0.217	
845	Iwaidja	0.78	0.219	
972	Ogh Unyjan	0.77	0.220	
611	Anguthimri	0.76	0.223	
917	Nyamal	0.76	0.223	
946	Kurtjar	0.76	0.225	
618	Mirniny	0.75	0.226	
849	Waanyi	0.73	0.233	
572	Ngamini	0.72	0.234	
983	Nhangu	0.72	0.235	
841	Worrorra	0.70	0.242	
787	Jawoyn	0.70	0.242	
985	Yaygir	0.70	0.243	
1031	Ngadjunmaya	0.68	0.248	
767	Karajarri	0.64	0.260	
113	Yulparija	0.64	0.260	
252	Warlmanpa	0.64	0.262	
1011	Yorta Yorta	0.63	0.265	
941	Wambaya	0.62	0.266	
737	Kukatj	0.62	0.267	
697	Kurrama	0.62	0.268	
863	Marra	0.62	0.268	
518	Yarluyandi	0.62	0.269	
927	Tiwi	0.60	0.274	
99	Bidyara	0.60	0.274	
740	Kugu Nganhcara	0.59	0.277	
642	Mangala	0.59	0.279	
592	Muruwari	0.58	0.281	
1001	Ngandi	0.58	0.281	
921	Gurr-Goni	0.57	0.285	
1043	Mbabaram	0.56	0.288	
412	Ritharrngu	0.55	0.290	
170	Wik-Ngathan	0.55	0.290	
848	Wagiman	0.55	0.292	
857	Amurdak	0.54	0.295	
565	Ngarinyman	0.53	0.299	
1025	Waalubal	0.52	0.302	
847	Ngalakgan	0.50	0.307	
265	Wardaman	0.49	0.311	
935	Rembarrnga	0.49	0.314	
966	Wik Mungkan	0.49	0.314	
977	Warndarrang	0.48	0.317	
851	Bilinarra	0.47	0.319	
650	Linngithigh	0.47	0.321	
744	Koko Bera	0.46	0.322	
620	Miriwoong	0.46	0.323	
1008	Yuwaalaraay	0.46	0.323	
934	Urningangg	0.44	0.328	

lex ID	language variety	R	p	signif.
1040	Ngarinyin	0.43	0.333	
621	Mengerrdji	0.39	0.347	
760	Kartujarra	0.38	0.351	
962	Gunya	0.38	0.354	
930	Purduna	0.37	0.355	
958	Margany	0.37	0.356	
1018	Djapu	0.35	0.363	
952	Ngawun	0.35	0.364	
12	Erre	0.35	0.364	
939	Unggumi	0.34	0.366	
928	Bakanh	0.32	0.373	
910	Nungali	0.32	0.373	
656	Kuugu Ya'u	0.30	0.381	
1026	Gidabal	0.28	0.389	
1032	Kuku Yalanji	0.26	0.397	
923	Matngele	0.26	0.399	
105	Bardi	0.24	0.406	
790	Jaru	0.23	0.408	
462	Panyjima	0.21	0.416	
968	Ogh Angkula	0.21	0.419	
1003	Murrinh-patha	0.19	0.425	
901	Guugu Yimidhirr	0.18	0.429	
30	Duungidjawu	0.14	0.444	
77	Dhangu	0.14	0.445	
204	Wemba Wemba	0.13	0.447	
377	Umpila	0.13	0.449	
852	Gurindji	0.13	0.449	
1023	Wubuy	0.12	0.451	
5	Gangulu	0.12	0.452	
645	Malyangapa	0.11	0.457	
62	Dhay'yi	0.10	0.459	
979	Mawng	0.10	0.460	
821	Gumbaynggir	0.09	0.465	
89	Bunuba	0.08	0.467	
1029	Martuthunira	0.07	0.472	
631	Yalarnnga	0.06	0.478	
856	Patjtjamalh	0.04	0.483	
427	Yidiny	0.03	0.487	
540	Ngiyambaa	0.03	0.488	
920	Yadhaykenu	0.02	0.491	
800	Guwamu	0.01	0.495	
554	Ngarluma	0.01	0.498	
13	Dyirbal	-0.01	0.503	
996	Emmi	-0.02	0.508	
94	Biri	-0.08	0.533	
495	Nyikina	-0.09	0.535	
915	Alawa	-0.11	0.544	
925	Larrakia	-0.12	0.547	
232	Warnman	-0.12	0.547	
38	Djabugay	-0.12	0.548	
853	Lardil	-0.13	0.551	
752	Kija	-0.16	0.563	

lex ID	language variety	R	p	signif.
1012	Warrgamay	-0.17	0.566	
433	Pitta Pitta	-0.21	0.582	
911	Nyawaygi	-0.24	0.596	
546	Yanyuwa	-0.25	0.597	
835	Gugu Badhun	-0.25	0.599	
945	Wiri	-0.26	0.603	
978	Wotjobaluk	-0.26	0.604	
305	Western Wakaya	-0.28	0.609	
1002	Yintyingka	-0.34	0.633	
949	Kok Nar	-0.37	0.643	
926	Limilngan	-0.40	0.654	
63	Dharumbal	-0.50	0.692	
1042	Thaayorre	-0.50	0.693	
965	Oykangand	-0.63	0.736	
1009	Gamilaraay	-1.56	0.940	
964	Olkol	-1.73	0.958	
1007	Yuwaliyaay	-2.56	0.995	

Table S3.11. Comparing power law and exponential distributions with x_{min} using Vuong's likelihood ratio test.

Part A. Using x_{min} from the power law fit. $R > 0$ favours power law.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
1042	Thaayorre	3.19	0.001	
982	Nhirrpi	1.80	0.036	
200	Western Arrernte	1.73	0.042	
1016	Tharrkari	1.70	0.045	
162	Adnyamathanha	1.58	0.057	
1007	Yuwaliyaay	1.58	0.057	
534	Nhanda	1.54	0.061	
762	Kariyarra	1.49	0.069	
790	Jaru	1.41	0.079	
1040	Ngarinyin	1.36	0.086	
930	Purduna	1.31	0.094	
935	Rembarrnga	1.31	0.095	
905	Malkana	1.26	0.103	
1021	Watjarri	1.26	0.104	
620	Miriwoong	1.25	0.106	
919	Angkamuthi	1.25	0.106	
89	Bunuba	1.24	0.108	
847	Ngalakgan	1.22	0.112	
554	Ngarluma	1.21	0.113	
1006	Central Arrernte	1.20	0.115	
918	Atampaya	1.19	0.117	
968	Ogh Angkula	1.16	0.122	
1030	Putijarra	1.14	0.127	
1029	Martuthunira	1.11	0.133	
920	Yadhaykenu	1.11	0.133	
1008	Yuwaalaraay	1.10	0.136	
443	Payungu	1.10	0.136	
400	Thalanyji	1.09	0.137	
940	Yawijibaya	1.09	0.137	
81	Dalabon	1.04	0.150	
1009	Gamilaraay	1.01	0.156	
563	Ngarla	1.00	0.158	
778	Jiwarli	0.99	0.160	
914	Yinhawangka	0.99	0.162	
91	Bularnu	0.97	0.167	
519	Nukunu	0.95	0.170	
288	Wangkatja	0.95	0.171	
518	Yarluyandi	0.94	0.173	
957	Ngaanyatjarra	0.93	0.177	
917	Nyamal	0.92	0.178	
228	Warriyangga	0.90	0.184	
1019	Walmajarri	0.89	0.186	
985	Yaygir	0.89	0.187	
958	Margany	0.89	0.187	
963	Kungkari	0.88	0.189	
507	Nyangumarta	0.87	0.192	
1001	Ngandi	0.87	0.193	

lex ID	language variety	R	p	signif.
853	Lardil	0.86	0.194	
572	Ngamini	0.86	0.196	
787	Jawoyn	0.84	0.199	
117	Wirangu	0.82	0.206	
631	Yalarnnga	0.82	0.206	
606	Mudburra	0.82	0.207	
910	Nungali	0.80	0.212	
433	Pitta Pitta	0.80	0.213	
943	Pintupi	0.79	0.214	
922	Nakara	0.76	0.225	
841	Worrorra	0.76	0.225	
237	Warluwarra	0.75	0.226	
85	Burarra	0.71	0.239	
242	Warlpiri	0.70	0.240	
1024	Ngardily	0.70	0.243	
1011	Yorta Yorta	0.70	0.243	
921	Gurr-Goni	0.68	0.249	
929	Wanyjirra	0.66	0.253	
13	Dyirbal	0.66	0.256	
845	Iwaidja	0.65	0.257	
939	Unggumi	0.65	0.257	
857	Amurdak	0.65	0.258	
417	Yindjibarndi	0.65	0.258	
618	Mirniny	0.64	0.262	
101	Butchulla	0.63	0.265	
972	Ogh Unyjan	0.63	0.265	
269	Wangkumara	0.62	0.268	
849	Waanyi	0.61	0.271	
767	Karajarri	0.60	0.275	
979	Mawng	0.60	0.275	
493	Nyiyaparli	0.59	0.278	
852	Gurindji	0.59	0.279	
462	Panyjima	0.58	0.280	
856	Patjtjamalh	0.57	0.285	
866	Thirarri	0.55	0.292	
983	Nhangu	0.54	0.295	
865	Diyari	0.54	0.296	
838	Gooniyandi	0.52	0.301	
232	Warnman	0.51	0.304	
77	Dhangu	0.50	0.310	
642	Mangala	0.49	0.312	
645	Malyangapa	0.47	0.318	
740	Kugu Nganhcara	0.47	0.319	
475	Southern Paakintyi	0.45	0.326	
31	Djinang	0.43	0.332	
113	Yulparija	0.42	0.336	
835	Gugu Badhun	0.42	0.338	
863	Marra	0.42	0.339	
927	Tiwi	0.40	0.345	
1003	Murrinh-patha	0.37	0.354	
377	Umpila	0.37	0.356	
967	Thaynakwithi	0.36	0.361	

lex ID	language variety	R	p	signif.
807	Gupapuyngu	0.34	0.365	
977	Warndarrang	0.34	0.365	
848	Wagiman	0.34	0.367	
949	Kok Nar	0.33	0.369	
760	Kartujarra	0.33	0.370	
650	Linngithigh	0.32	0.374	
5	Gangulu	0.31	0.378	
565	Ngarinyman	0.30	0.381	
611	Anguthimri	0.29	0.386	
598	Yandruwandha	0.28	0.388	
63	Dharumbal	0.28	0.388	
592	Muruwari	0.28	0.391	
1023	Wubuy	0.27	0.395	
851	Bilinarra	0.26	0.399	
697	Kurrama	0.24	0.405	
925	Larrakia	0.23	0.409	
941	Wambaya	0.22	0.411	
204	Wemba Wemba	0.22	0.414	
952	Ngawun	0.21	0.416	
771	Kalkatungu	0.21	0.418	
966	Wik Mungkan	0.20	0.419	
1031	Ngadjunmaya	0.19	0.423	
915	Alawa	0.18	0.427	
38	Djabugay	0.16	0.438	
901	Guugu Yimidhirr	0.15	0.440	
99	Bidyara	0.15	0.442	
1043	Mbabaram	0.11	0.456	
996	Emmi	0.11	0.456	
412	Ritharrngu	0.10	0.459	
12	Erre	0.10	0.461	
734	Kukatja	0.09	0.464	
800	Guwamu	0.08	0.467	
540	Ngiyambaa	0.08	0.467	
962	Gunya	0.07	0.471	
118	Badimaya	0.07	0.472	
62	Dhay'yi	0.07	0.473	
656	Kuugu Ya'u	0.06	0.475	
752	Kija	0.05	0.480	
1032	Kuku Yalanji	0.00	0.498	
252	Warlmanpa	-0.02	0.509	
265	Wardaman	-0.04	0.516	
1018	Djapu	-0.08	0.531	
105	Bardi	-0.10	0.538	
170	Wik-Ngathan	-0.12	0.547	
744	Koko Bera	-0.12	0.549	
978	Wotjobaluk	-0.13	0.552	
427	Yidiny	-0.13	0.553	
546	Yanyuwa	-0.15	0.558	
1012	Warrgamay	-0.15	0.558	
911	Nyawaygi	-0.16	0.565	
821	Gumbaynggir	-0.19	0.577	
923	Matngele	-0.19	0.577	

lex ID	language variety	R	p	signif.
305	Western Wakaya	-0.22	0.588	
926	Limilngan	-0.24	0.596	
495	Nyikina	-0.26	0.602	
94	Biri	-0.29	0.616	
928	Bakanh	-0.33	0.629	
621	Mengerrdji	-0.37	0.643	
1002	Yintyingka	-0.37	0.645	
946	Kurtjar	-0.39	0.652	
945	Wiri	-0.40	0.656	
1026	Gidabal	-0.45	0.672	
1025	Waalubal	-0.53	0.702	
30	Duungidjawu	-0.75	0.772	
964	Olkol	-0.75	0.772	
737	Kukatj	-0.77	0.779	
965	Oykangand	-0.90	0.817	
934	Urningangg	-1.25	0.895	
363	Yir Yoront	-1.87	0.969	

Table S3.11. Comparing power law and exponential distributions with x_{min} using Vuong's likelihood ratio test.

Part B. Using x_{min} from the exponential fit. $R > 0$ favours exponential.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
363	Yir Yoront	4.52	0.000	**
841	Worrorra	4.44	0.000	**
918	Atampaya	4.40	0.000	**
996	Emmi	4.34	0.000	**
1024	Ngardily	3.99	0.000	**
117	Wirangu	3.88	0.000	**
964	Olkol	3.86	0.000	**
618	Mirniny	3.83	0.000	*
228	Warriyangga	3.69	0.000	*
99	Bidyara	3.66	0.000	*
920	Yadhaykenu	3.59	0.000	*
968	Ogh Angkula	3.56	0.000	*
1031	Ngadjunmaya	3.46	0.000	*
982	Nhirrpi	3.37	0.000	
305	Western Wakaya	3.35	0.000	
737	Kukatj	3.31	0.000	
800	Guwamu	3.27	0.001	
852	Gurindji	3.25	0.001	
493	Nyiyaparli	3.24	0.001	
762	Kariyarra	3.24	0.001	
760	Kartujarra	3.21	0.001	
845	Iwaidja	3.16	0.001	
856	Patjtjamalh	3.14	0.001	
77	Dhangu	3.12	0.001	
94	Biri	3.08	0.001	
12	Erre	3.07	0.001	
941	Wambaya	3.06	0.001	
118	Badimaya	3.04	0.001	
917	Nyamal	3.02	0.001	
5	Gangulu	2.97	0.001	
563	Ngarla	2.95	0.002	
945	Wiri	2.94	0.002	
1016	Tharrkari	2.94	0.002	
838	Gooniyandi	2.93	0.002	
1009	Gamilaraay	2.87	0.002	
1030	Putijarra	2.84	0.002	
926	Limilngan	2.83	0.002	
697	Kurrama	2.83	0.002	
606	Mudburra	2.83	0.002	
734	Kukatja	2.81	0.002	
1003	Murrinh-patha	2.81	0.003	
252	Warlmanpa	2.77	0.003	
905	Malkana	2.72	0.003	
546	Yanyuwa	2.68	0.004	
1042	Thaayorre	2.67	0.004	
443	Payungu	2.65	0.004	
269	Wangkumara	2.64	0.004	

lex ID	language variety	R	p	signif.
740	Kugu Nganhcara	2.62	0.004	
1021	Watjarri	2.55	0.005	
1029	Martuthunira	2.55	0.005	
1023	Wubuy	2.50	0.006	
1040	Ngarinyin	2.48	0.007	
857	Amurdak	2.48	0.007	
1001	Ngandi	2.46	0.007	
31	Djinang	2.43	0.008	
1002	Yintyingka	2.37	0.009	
1043	Mbabaram	2.36	0.009	
790	Jaru	2.36	0.009	
1007	Yuwaliyaay	2.35	0.009	
1018	Djapu	2.32	0.010	
642	Mangala	2.32	0.010	
949	Kok Nar	2.31	0.010	
919	Angkamuthi	2.31	0.011	
787	Jawoyn	2.31	0.011	
965	Oykangand	2.29	0.011	
377	Umpila	2.28	0.011	
853	Lardil	2.25	0.012	
91	Bularnu	2.24	0.012	
204	Wemba Wemba	2.23	0.013	
807	Gupapuyngu	2.23	0.013	
417	Yindjibarndi	2.16	0.015	
1008	Yuwaalaraay	2.15	0.016	
957	Ngaanyatjarra	2.14	0.016	
242	Warlpiri	2.12	0.017	
778	Jiwarli	2.06	0.020	
771	Kalkatungu	2.02	0.022	
952	Ngawun	2.01	0.022	
925	Larrakia	2.01	0.022	
1011	Yorta Yorta	1.92	0.028	
30	Duungidjawu	1.91	0.028	
835	Gugu Badhun	1.90	0.029	
979	Mawng	1.89	0.029	
554	Ngarluma	1.88	0.030	
495	Nyikina	1.85	0.032	
518	Yarluyandi	1.85	0.032	
89	Bunuba	1.85	0.032	
288	Wangkatja	1.84	0.033	
929	Wanyjirra	1.82	0.035	
922	Nakara	1.80	0.036	
592	Muruwari	1.80	0.036	
650	Linngithigh	1.79	0.037	
63	Dharumbal	1.78	0.038	
631	Yalarnnga	1.78	0.038	
412	Ritharrngu	1.75	0.040	
767	Karajarri	1.72	0.042	
611	Anguthimri	1.72	0.043	
200	Western Arrernte	1.71	0.044	
656	Kuugu Ya'u	1.66	0.048	
934	Urningangg	1.63	0.052	

lex ID	language variety	R	p	signif.
939	Unggumi	1.61	0.054	
13	Dyirbal	1.60	0.055	
911	Nyawaygi	1.59	0.056	
923	Matngele	1.59	0.056	
863	Marra	1.55	0.061	
427	Yidiny	1.54	0.062	
927	Tiwi	1.50	0.066	
940	Yawijibaya	1.49	0.068	
1006	Central Arrernte	1.49	0.068	
1012	Warrgamay	1.46	0.073	
928	Bakanh	1.45	0.074	
915	Alawa	1.40	0.080	
265	Wardaman	1.40	0.081	
921	Gurr-Goni	1.39	0.082	
1026	Gidabal	1.36	0.087	
958	Margany	1.33	0.092	
978	Wotjobaluk	1.31	0.096	
946	Kurtjar	1.30	0.097	
744	Koko Bera	1.28	0.101	
572	Ngamini	1.24	0.108	
540	Ngiyambaa	1.23	0.109	
1019	Walmajarri	1.23	0.109	
962	Gunya	1.22	0.111	
621	Mengerrdji	1.19	0.116	
977	Warndarrang	1.19	0.117	
966	Wik Mungkan	1.19	0.118	
930	Purduna	1.13	0.130	
565	Ngarinyman	1.08	0.139	
985	Yaygir	1.04	0.149	
62	Dhay'yi	1.03	0.151	
38	Djabugay	1.02	0.155	
935	Rembarrnga	1.00	0.159	
901	Guugu Yimidhirr	0.97	0.166	
105	Bardi	0.96	0.168	
237	Warluwarra	0.94	0.174	
848	Wagiman	0.91	0.182	
752	Kija	0.89	0.185	
849	Waanyi	0.86	0.195	
972	Ogh Unyjan	0.86	0.196	
113	Yulparija	0.85	0.197	
81	Dalabon	0.83	0.202	
1025	Waalubal	0.79	0.215	
851	Bilinarra	0.77	0.220	
821	Gumbaynggir	0.74	0.231	
598	Yandruwandha	0.70	0.242	
1032	Kuku Yalanji	0.65	0.259	
400	Thalanyji	0.64	0.261	
620	Miriwoong	0.61	0.269	
963	Kungkari	0.61	0.270	
847	Ngalakgan	0.59	0.276	
462	Panyjima	0.59	0.277	
232	Warnman	0.58	0.282	

lex ID	language variety	R	p	signif.
645	Malyangapa	0.55	0.290	
170	Wik-Ngathan	0.55	0.293	
967	Thaynakwithi	0.52	0.301	
914	Yinhawangka	0.44	0.330	
433	Pitta Pitta	0.44	0.331	
507	Nyangumarta	0.35	0.363	
519	Nukunu	0.33	0.370	
943	Pintupi	0.33	0.371	
983	Nhangu	0.30	0.384	
534	Nhanda	0.26	0.398	
910	Nungali	0.23	0.407	
866	Thirarri	0.12	0.452	
865	Diyari	0.08	0.467	
162	Adnyamathanha	0.03	0.489	
475	Southern Paakintyi	-0.07	0.527	
85	Burarra	-0.24	0.596	
101	Butchulla	-0.63	0.735	

Table S3.12. Comparing power law and lognormal distributions with x_{min} using Vuong's likelihood ratio test.

Part A. Using x_{min} from the power law fit. $R > 0$ favours power law.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
1042	Thaayorre	3.19	0.001	
982	Nhirrpi	1.80	0.036	
200	Western Arrernte	1.73	0.042	
1016	Tharrkari	1.70	0.045	
162	Adnyamathanha	1.58	0.057	
1007	Yuwaliyaay	1.58	0.057	
534	Nhanda	1.54	0.061	
762	Kariyarra	1.49	0.069	
790	Jaru	1.41	0.079	
1040	Ngarinyin	1.36	0.086	
930	Purduna	1.31	0.094	
935	Rembarrnga	1.31	0.095	
905	Malkana	1.26	0.103	
1021	Watjarri	1.26	0.104	
620	Miriwoong	1.25	0.106	
919	Angkamuthi	1.25	0.106	
89	Bunuba	1.24	0.108	
847	Ngalakgan	1.22	0.112	
554	Ngarluma	1.21	0.113	
1006	Central Arrernte	1.20	0.115	
918	Atampaya	1.19	0.117	
968	Ogh Angkula	1.16	0.122	
1030	Putijarra	1.14	0.127	
1029	Martuthunira	1.11	0.133	
920	Yadhaykenu	1.11	0.133	
1008	Yuwaalaraay	1.10	0.136	
443	Payungu	1.10	0.136	
400	Thalanyji	1.09	0.137	
940	Yawijibaya	1.09	0.137	
81	Dalabon	1.04	0.150	
1009	Gamilaraay	1.01	0.156	
563	Ngarla	1.00	0.158	
778	Jiwarli	0.99	0.160	
914	Yinhawangka	0.99	0.162	
91	Bularnu	0.97	0.167	
519	Nukunu	0.95	0.170	
288	Wangkatja	0.95	0.171	
518	Yarluyandi	0.94	0.173	
957	Ngaanyatjarra	0.93	0.177	
917	Nyamal	0.92	0.178	
228	Warriyangga	0.90	0.184	
1019	Walmajarri	0.89	0.186	
985	Yaygir	0.89	0.187	
958	Margany	0.89	0.187	
963	Kungkari	0.88	0.189	
507	Nyangumarta	0.87	0.192	
1001	Ngandi	0.87	0.193	

lex ID	language variety	R	p	signif.
853	Lardil	0.86	0.194	
572	Ngamini	0.86	0.196	
787	Jawoyn	0.84	0.199	
117	Wirangu	0.82	0.206	
631	Yalarnnga	0.82	0.206	
606	Mudburra	0.82	0.207	
910	Nungali	0.80	0.212	
433	Pitta Pitta	0.80	0.213	
943	Pintupi	0.79	0.214	
922	Nakara	0.76	0.225	
841	Worrorra	0.76	0.225	
237	Warluwarra	0.75	0.226	
85	Burarra	0.71	0.239	
242	Warlpiri	0.70	0.240	
1024	Ngardily	0.70	0.243	
1011	Yorta Yorta	0.70	0.243	
921	Gurr-Goni	0.68	0.249	
929	Wanyjirra	0.66	0.253	
13	Dyirbal	0.66	0.256	
845	Iwaidja	0.65	0.257	
939	Unggumi	0.65	0.257	
857	Amurdak	0.65	0.258	
417	Yindjibarndi	0.65	0.258	
618	Mirniny	0.64	0.262	
101	Butchulla	0.63	0.265	
972	Ogh Unyjan	0.63	0.265	
269	Wangkumara	0.62	0.268	
849	Waanyi	0.61	0.271	
767	Karajarri	0.60	0.275	
979	Mawng	0.60	0.275	
493	Nyiyaparli	0.59	0.278	
852	Gurindji	0.59	0.279	
462	Panyjima	0.58	0.280	
856	Patjtjamalh	0.57	0.285	
866	Thirarri	0.55	0.292	
983	Nhangu	0.54	0.295	
865	Diyari	0.54	0.296	
838	Gooniyandi	0.52	0.301	
232	Warnman	0.51	0.304	
77	Dhangu	0.50	0.310	
642	Mangala	0.49	0.312	
645	Malyangapa	0.47	0.318	
740	Kugu Nganhcara	0.47	0.319	
475	Southern Paakintyi	0.45	0.326	
31	Djinang	0.43	0.332	
113	Yulparija	0.42	0.336	
835	Gugu Badhun	0.42	0.338	
863	Marra	0.42	0.339	
927	Tiwi	0.40	0.345	
1003	Murrinh-patha	0.37	0.354	
377	Umpila	0.37	0.356	
967	Thaynakwithi	0.36	0.361	

lex ID	language variety	R	p	signif.
807	Gupapuyngu	0.34	0.365	
977	Warndarrang	0.34	0.365	
848	Wagiman	0.34	0.367	
949	Kok Nar	0.33	0.369	
760	Kartujarra	0.33	0.370	
650	Linngithigh	0.32	0.374	
5	Gangulu	0.31	0.378	
565	Ngarinyman	0.30	0.381	
611	Anguthimri	0.29	0.386	
598	Yandruwandha	0.28	0.388	
63	Dharumbal	0.28	0.388	
592	Muruwari	0.28	0.391	
1023	Wubuy	0.27	0.395	
851	Bilinarra	0.26	0.399	
697	Kurrama	0.24	0.405	
925	Larrakia	0.23	0.409	
941	Wambaya	0.22	0.411	
204	Wemba Wemba	0.22	0.414	
952	Ngawun	0.21	0.416	
771	Kalkatungu	0.21	0.418	
966	Wik Mungkan	0.20	0.419	
1031	Ngadjunmaya	0.19	0.423	
915	Alawa	0.18	0.427	
38	Djabugay	0.16	0.438	
901	Guugu Yimidhirr	0.15	0.440	
99	Bidyara	0.15	0.442	
1043	Mbabaram	0.11	0.456	
996	Emmi	0.11	0.456	
412	Ritharrngu	0.10	0.459	
12	Erre	0.10	0.461	
734	Kukatja	0.09	0.464	
800	Guwamu	0.08	0.467	
540	Ngiyambaa	0.08	0.467	
962	Gunya	0.07	0.471	
118	Badimaya	0.07	0.472	
62	Dhay'yi	0.07	0.473	
656	Kuugu Ya'u	0.06	0.475	
752	Kija	0.05	0.480	
1032	Kuku Yalanji	0.00	0.498	
252	Warlmanpa	-0.02	0.509	
265	Wardaman	-0.04	0.516	
1018	Djapu	-0.08	0.531	
105	Bardi	-0.10	0.538	
170	Wik-Ngathan	-0.12	0.547	
744	Koko Bera	-0.12	0.549	
978	Wotjobaluk	-0.13	0.552	
427	Yidiny	-0.13	0.553	
546	Yanyuwa	-0.15	0.558	
1012	Warrgamay	-0.15	0.558	
911	Nyawaygi	-0.16	0.565	
821	Gumbaynggir	-0.19	0.577	
923	Matngele	-0.19	0.577	

lex ID	language variety	R	p	signif.
305	Western Wakaya	-0.22	0.588	
926	Limilngan	-0.24	0.596	
495	Nyikina	-0.26	0.602	
94	Biri	-0.29	0.616	
928	Bakanh	-0.33	0.629	
621	Mengerrdji	-0.37	0.643	
1002	Yintyingka	-0.37	0.645	
946	Kurtjar	-0.39	0.652	
945	Wiri	-0.40	0.656	
1026	Gidabal	-0.45	0.672	
1025	Waalubal	-0.53	0.702	
30	Duungidjawu	-0.75	0.772	
964	Olkol	-0.75	0.772	
737	Kukatj	-0.77	0.779	
965	Oykangand	-0.90	0.817	
934	Urningangg	-1.25	0.895	
363	Yir Yoront	-1.87	0.969	

Table S3.12. Comparing power law and lognormal distributions with x_{min} using Vuong's likelihood ratio test.

Part B. Using x_{min} from the lognormal fit. $R > 0$ favours lognormal.

* $p < 0.05$ after Bonferroni correction. ** $p < 0.01$ after Bonferroni correction.

lex ID	language variety	R	p	signif.
363	Yir Yoront	4.52	0.000	**
841	Worrorra	4.44	0.000	**
918	Atampaya	4.40	0.000	**
996	Emmi	4.34	0.000	**
1024	Ngardily	3.99	0.000	**
117	Wirangu	3.88	0.000	**
964	Olkol	3.86	0.000	**
618	Mirniny	3.83	0.000	*
228	Warriyangga	3.69	0.000	*
99	Bidyara	3.66	0.000	*
920	Yadhaykenu	3.59	0.000	*
968	Ogh Angkula	3.56	0.000	*
1031	Ngadjunmaya	3.46	0.000	*
982	Nhirrpi	3.37	0.000	
305	Western Wakaya	3.35	0.000	
737	Kukatj	3.31	0.000	
800	Guwamu	3.27	0.001	
852	Gurindji	3.25	0.001	
493	Nyiyaparli	3.24	0.001	
762	Kariyarra	3.24	0.001	
760	Kartujarra	3.21	0.001	
845	Iwaidja	3.16	0.001	
856	Patjtjamalh	3.14	0.001	
77	Dhangu	3.12	0.001	
94	Biri	3.08	0.001	
12	Erre	3.07	0.001	
941	Wambaya	3.06	0.001	
118	Badimaya	3.04	0.001	
917	Nyamal	3.02	0.001	
5	Gangulu	2.97	0.001	
563	Ngarla	2.95	0.002	
945	Wiri	2.94	0.002	
1016	Tharrkari	2.94	0.002	
838	Gooniyandi	2.93	0.002	
1009	Gamilaraay	2.87	0.002	
1030	Putijarra	2.84	0.002	
926	Limilngan	2.83	0.002	
697	Kurrama	2.83	0.002	
606	Mudburra	2.83	0.002	
734	Kukatja	2.81	0.002	
1003	Murrinh-patha	2.81	0.003	
252	Warlmanpa	2.77	0.003	
905	Malkana	2.72	0.003	
546	Yanyuwa	2.68	0.004	
1042	Thaayorre	2.67	0.004	
443	Payungu	2.65	0.004	
269	Wangkumara	2.64	0.004	

lex ID	language variety	R	p	signif.
740	Kugu Nganhcara	2.62	0.004	
1021	Watjarri	2.55	0.005	
1029	Martuthunira	2.55	0.005	
1023	Wubuy	2.50	0.006	
1040	Ngarinyin	2.48	0.007	
857	Amurdak	2.48	0.007	
1001	Ngandi	2.46	0.007	
31	Djinang	2.43	0.008	
1002	Yintyingka	2.37	0.009	
1043	Mbabaram	2.36	0.009	
790	Jaru	2.36	0.009	
1007	Yuwaliyaay	2.35	0.009	
1018	Djapu	2.32	0.010	
642	Mangala	2.32	0.010	
949	Kok Nar	2.31	0.010	
919	Angkamuthi	2.31	0.011	
787	Jawoyn	2.31	0.011	
965	Oykangand	2.29	0.011	
377	Umpila	2.28	0.011	
853	Lardil	2.25	0.012	
91	Bularnu	2.24	0.012	
204	Wemba Wemba	2.23	0.013	
807	Gupapuyngu	2.23	0.013	
417	Yindjibarndi	2.16	0.015	
1008	Yuwaalaraay	2.15	0.016	
957	Ngaanyatjarra	2.14	0.016	
242	Warlpiri	2.12	0.017	
778	Jiwarli	2.06	0.020	
771	Kalkatungu	2.02	0.022	
952	Ngawun	2.01	0.022	
925	Larrakia	2.01	0.022	
1011	Yorta Yorta	1.92	0.028	
30	Duungidjawu	1.91	0.028	
835	Gugu Badhun	1.90	0.029	
979	Mawng	1.89	0.029	
554	Ngarluma	1.88	0.030	
495	Nyikina	1.85	0.032	
518	Yarluyandi	1.85	0.032	
89	Bunuba	1.85	0.032	
288	Wangkatja	1.84	0.033	
929	Wanyjirra	1.82	0.035	
922	Nakara	1.80	0.036	
592	Muruwari	1.80	0.036	
650	Linngithigh	1.79	0.037	
63	Dharumbal	1.78	0.038	
631	Yalarnnga	1.78	0.038	
412	Ritharrngu	1.75	0.040	
767	Karajarri	1.72	0.042	
611	Anguthimri	1.72	0.043	
200	Western Arrernte	1.71	0.044	
656	Kuugu Ya'u	1.66	0.048	
934	Urningangg	1.63	0.052	

lex ID	language variety	R	p	signif.
939	Unggumi	1.61	0.054	
13	Dyirbal	1.60	0.055	
911	Nyawaygi	1.59	0.056	
923	Matngele	1.59	0.056	
863	Marra	1.55	0.061	
427	Yidiny	1.54	0.062	
927	Tiwi	1.50	0.066	
940	Yawijibaya	1.49	0.068	
1006	Central Arrernte	1.49	0.068	
1012	Warrgamay	1.46	0.073	
928	Bakanh	1.45	0.074	
915	Alawa	1.40	0.080	
265	Wardaman	1.40	0.081	
921	Gurr-Goni	1.39	0.082	
1026	Gidabal	1.36	0.087	
958	Margany	1.33	0.092	
978	Wotjobaluk	1.31	0.096	
946	Kurtjar	1.30	0.097	
744	Koko Bera	1.28	0.101	
572	Ngamini	1.24	0.108	
540	Ngiyambaa	1.23	0.109	
1019	Walmajarri	1.23	0.109	
962	Gunya	1.22	0.111	
621	Mengerrdji	1.19	0.116	
977	Warndarrang	1.19	0.117	
966	Wik Mungkan	1.19	0.118	
930	Purduna	1.13	0.130	
565	Ngarinyman	1.08	0.139	
985	Yaygir	1.04	0.149	
62	Dhay'yi	1.03	0.151	
38	Djabugay	1.02	0.155	
935	Rembarrnga	1.00	0.159	
901	Guugu Yimidhirr	0.97	0.166	
105	Bardi	0.96	0.168	
237	Warluwarra	0.94	0.174	
848	Wagiman	0.91	0.182	
752	Kija	0.89	0.185	
849	Waanyi	0.86	0.195	
972	Ogh Unyjan	0.86	0.196	
113	Yulparija	0.85	0.197	
81	Dalabon	0.83	0.202	
1025	Waalubal	0.79	0.215	
851	Bilinarra	0.77	0.220	
821	Gumbaynggir	0.74	0.231	
598	Yandruwandha	0.70	0.242	
1032	Kuku Yalanji	0.65	0.259	
400	Thalanyji	0.64	0.261	
620	Miriwoong	0.61	0.269	
963	Kungkari	0.61	0.270	
847	Ngalakgan	0.59	0.276	
462	Panyjima	0.59	0.277	
232	Warnman	0.58	0.282	

lex ID	language variety	R	p	signif.
645	Malyangapa	0.55	0.290	
170	Wik-Ngathan	0.55	0.293	
967	Thaynakwithi	0.52	0.301	
914	Yinhawangka	0.44	0.330	
433	Pitta Pitta	0.44	0.331	
507	Nyangumarta	0.35	0.363	
519	Nukunu	0.33	0.370	
943	Pintupi	0.33	0.371	
983	Nhangu	0.30	0.384	
534	Nhanda	0.26	0.398	
910	Nungali	0.23	0.407	
866	Thirarri	0.12	0.452	
865	Diyari	0.08	0.467	
162	Adnyamathanha	0.03	0.489	
475	Southern Paakintyi	-0.07	0.527	
85	Burarra	-0.24	0.596	
101	Butchulla	-0.63	0.735	

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