

ASA Spring 2020

View Abstract

CONTROL ID: 3373170**TITLE:** Estimation of the Frequency of Occurrence of Italian Phonemes**AUTHORS (FIRST NAME, LAST NAME):** Javier Arango¹, Stephanie Yao¹, Alec DeCaprio¹, Sunwoo Baik², Stefanie Shattuck-Hufnagel², Maria-Gabriella Di Benedetto³**INSTITUTIONS (ALL):** 1. Radcliffe Institute for Advanced Study at Harvard University, Cambridge, MA, United States.

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ABSTRACT BODY:

Abstract (200 words): The purpose of this project was to derive a reliable estimate of the frequency of occurrence of the 30 phonemes – plus consonant geminated counterparts- of the Italian language, based on the transcription of written reference texts. Since no comparable dataset was found in previous literature, the present analysis may serve as a reference in future studies. Four textual sources were considered: *Come si fa una tesi di laurea* by Umberto Eco, *I promessi sposi* by Alessandro Manzoni, a recent article in *Corriere della Sera* (a popular daily Italian newspaper), and *In altre parole* by Jhumpa Lahiri. The sources were chosen to represent varied genres, subject matter, time periods, and writing styles. Results of the analysis, which also included an analysis of variance, showed that, for all sources, the frequencies of occurrence reached relatively stable values after about 6,000 phonemes (approx. 1,250 words), varying by <0.5%. Estimated frequencies were as follows: /a/:11.92%,/e/:10.07%,/i/:9.17%,/o/:8.71%,/n/:7.33%,/r/:6.42%,/t/:4.99%,/l/:4.29%,/d/:4.21%,/s/:4.21%,/k/:3.83%,/p/:2.88%,/u/:2.52%,/m/:2.47%,/ɛ/:2.24%,/v/:1.83%,/j/:1.80%,/w/:1.16%,/ll/:1.09%,/ɔ/:1.08%,/tt/:0.91%,/ff/:0.86%,/g/:0.76%,/f/:0.74%,/b/:0.71%,/ss/:0.53%,/tsts/:0.42%,/dʒ/:0.38%,/ts/:0.34%,/dʒdʒ/:0.24%,/bb/:0.23%,/kk/:0.21%,/ɲɲ/:0.19%,/nn/:0.18%,/rr/:0.17%,/pp/:0.15%,/ʃʃ/:0.14%,/ff/:0.12%,/ff/:0.08%,/mm/:0.08%,/tʃtʃ/:0.08%,/k/:0.06%,/f/:0.06%,/z/:0.04%,/vv/:0.03%,/dzdz/:0.03%,/dz/:0.03%,/dd/:0.01%,/ɲ/: <0.01%.

CURRENT TECHNICAL COMMITTEE: Speech Communication**CURRENT SPECIAL SESSION. IF NOT SUBMITTING TO A SPECIAL SESSION, CHOOSE "NONE SELECTED.":** None Selected**PRESENTATION TYPE:** Contributed Submission : Poster**PRESENTER:** Javier Arango**AWARDS:** ASA Best Paper Awards For Students and Young Presenters**AV Equipment:** (none)**Additional Comments:** (none)**PACS Numbers:** 43.72.Ne**AUTHORS (ADDRESS & EMAIL):****Name:** Javier Arango**Address 1:** 10 Garden St.**Address 2:** (none)**City:** Cambridge**State:** MA**Postal Code/Zip:** 02138**Country:** United States**E-mail:** jarango@college.harvard.edu

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