Second Language Speech Data:

challenges in creating a corpus of English-L2 speech for open access

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Importance of sharing data

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Replication crises

- reproducibility, replication, critique → development of the field
- *“with great results come great responsibility”*

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- Example 1 [McElreath 2020]: 2015, high-impact journal, 1170 children, negative association between religiosity and generosity
  - → countries (categorical) were entered as continuous
  - → Canada (country #2) was twice as much country as the US (country #1)
  - paper retracted, happy ending because data was shared

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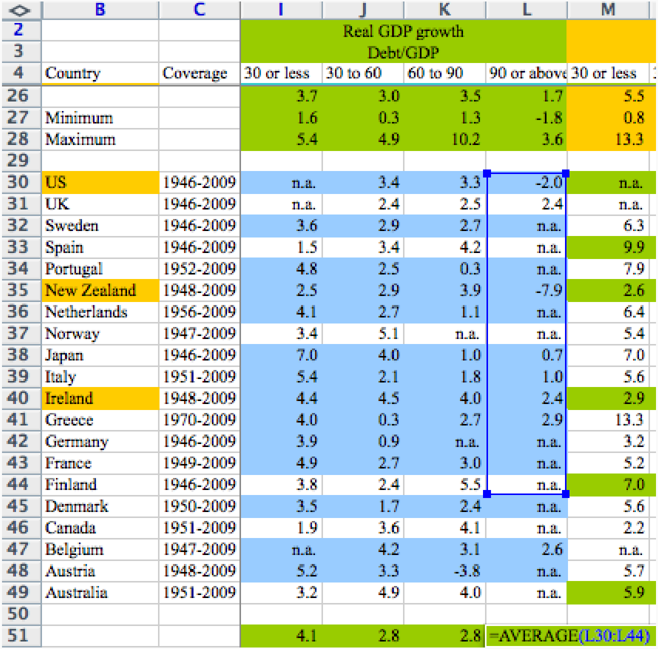
- Example 2 [McElreath 2020]:
  - 2010: "Growth in a time of debt" by Reinhart & Rogoff
  - 2013: "Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff" by Herndon, Ash & Pollin



◇	B	C	I	J	K	L	M
2			Real GDP growth				
3			Debt/GDP				
4	Country	Coverage	30 or less	30 to 60	60 to 90	90 or above	30 or less
26			3.7	3.0	3.5	1.7	5.5
27	Minimum		1.6	0.3	1.3	-1.8	0.8
28	Maximum		5.4	4.9	10.2	3.6	13.3
29							
30	US	1946-2009	n.a.	3.4	3.3	-2.0	n.a.
31	UK	1946-2009	n.a.	2.4	2.5	2.4	n.a.
32	Sweden	1946-2009	3.6	2.9	2.7	n.a.	6.3
33	Spain	1946-2009	1.5	3.4	4.2	n.a.	9.9
34	Portugal	1952-2009	4.8	2.5	0.3	n.a.	7.9
35	New Zealand	1948-2009	2.5	2.9	3.9	-7.9	2.6
36	Netherlands	1956-2009	4.1	2.7	1.1	n.a.	6.4
37	Norway	1947-2009	3.4	5.1	n.a.	n.a.	5.4
38	Japan	1946-2009	7.0	4.0	1.0	0.7	7.0
39	Italy	1951-2009	5.4	2.1	1.8	1.0	5.6
40	Ireland	1948-2009	4.4	4.5	4.0	2.4	2.9
41	Greece	1970-2009	4.0	0.3	2.7	2.9	13.3
42	Germany	1946-2009	3.9	0.9	n.a.	n.a.	3.2
43	France	1949-2009	4.9	2.7	3.0	n.a.	5.2
44	Finland	1946-2009	3.8	2.4	5.5	n.a.	7.0
45	Denmark	1950-2009	3.5	1.7	2.4	n.a.	5.6
46	Canada	1951-2009	1.9	3.6	4.1	n.a.	2.2
47	Belgium	1947-2009	n.a.	4.2	3.1	2.6	n.a.
48	Austria	1948-2009	5.2	3.3	-3.8	n.a.	5.7
49	Australia	1951-2009	3.2	4.9	4.0	n.a.	5.9
50							
51			4.1	2.8	2.8	=AVERAGE(L30:L44)	

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Again, happy ending because data was shared (upon request), but...

what if data hadn't been shared?

what about those that are never shared?

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- When researchers are contacted to share data (data sets, scripts, procedures)
    - don’t reply
    - don’t have the data / all files / details anymore
    - files are disorganize; can’t remember which ones are the most recent, actually used in the paper

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→ Include data sharing in your research project to be submitted to an ethics committee

Our project

Our project

Collect and publicly share longitudinal speech data of English-L2 by Brazilians

(Rosane Silveira, Ronaldo Lima Jr., Ubiratã Alves, Clerton Barboza)

- We're trying to do as we preach:
  - → Interab 12
  - → Silveira, R., R. M. Lima Jr., U. K. Alves & C. L. Barboza (2020) Construção de um banco de dados para pesquisas em fonética e fonologia de L2: um projeto interinstitucional, *Revista Colineares*, 7(1):81–113.
- Still needed: that researchers (users of our corpora) share their analysis files

Goal

- Longitudinal speech data of English-L2 by Brazilian learners

  → 4 different states (RS, SC, RN, CE)

  - undergrads of English Language Teaching +
    undergrads of Executive Secretariat +
    learners in a language course
  - Portuguese-L1 also recorded

Challenges & Possibilities

- Creating an instrument to collect as much as possible in a feasible manner

  → Proficiency in English

  image description + assessment of four judges

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  → 2 tests of production in Portuguese (vowels and consonants)

  "Em x *e* y *temos* z*"* & *"*x *e* y *têm uma/duas sílaba(s)"*

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  → 2 tests of production in Portuguese (vowels and consonants)

  "Em x e y temos z" & *"x e y têm uma/duas sílaba(s)"*

  → 3 tests of production in English (vowels, consonants, syllables)

  "I said x e y before I said z" & *"x and y don't sound like z"*

Challenges & Possibilities

Proficiency	**Image description** [30s, Likert, CEFR]
Production in Portuguese	**Test 1**: oral stressed vowels [70 words, 10 per vowel] **Test 2**: plosives and rhotics in onset; rhotics, lateral and nasals in coda; hetero-syllabic consonant clusters [68 words]
Production in English	**Test 1**: stressed vowels; plosives [38 words] **Test 2**: tautosyllabic consonant clusters; rhotics, laterals, nasals [39 words] **Test 3**: complex codas; dental fricatives; final -ed & -s [109 words]

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- Some data from SC and RN

  → CE and RS ready to start

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- Infrastructure for high-quality recordings

  → soundproof booths in SC, RS and CE

  → high-quality recorders in silent rooms in RN

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- Pandemic

  → recordings continued in RN (on-line)

  → recordings paused in SC

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- Sharing the data (in a user-friendly interface)

  → grant (RNP, IBICT, CNPq) for data repositories

  (Juliana Soares Lima – Federal University of Ceará)

  → writing the Data Management Plan (DMP)

  → hopefully soon in dataverse

Changes/additions to be implemented

Data collection in CE and RS will still begin and could use changes/additions

- Collect data of students reading a text? Speaking freely?
- Collect production data of Portuguese-L1 every semester as well?
- Other?

Questions?

Suggestions?