

Appendix: Critical sentences used in Experiment 2 and Experiment 3 and statistical model summaries

Table A. Critical sentences used in Experiment 2. Underlined words are the critical items also used in the lexical decision task.

Critical /z/ sentences for Experiment 2

To look like a career woman, Jenny bought a brand new blazer.

They broke new land for the big condo building with the yellow bulldozer.

In fighting for the equality of women, Mary believed in feminism.

All the cold food melted in the broken freezer.

The line where land and water meet can be called a horizon.

The teacher told the graduate who loved writing to go into journalism.

After the wedding, the new couple departed in a black limousine.

After the wedding, everyone thanked the party organizer.

In order to live in a healthy environment with clean air, we need to protect the ozone.

The lawyer defended her client to keep him from going to prison.

After living in Vancouver for a decade, the woman finally became a permanent resident.

The chemical beaker needed to be cleaned without leaving any residue.

The ranger took down the bear with a tranquilizer.

The maternity ward doctor paid the mother a visit.

Table B. Critical sentences used in Experiment 3. Underlined words are the critical items also used in the lexical decision task.

Critical /s/ sentences for Experiment 3

By revealing a prior criminal record, the man running for governor had to drop the candidacy.

The man played poker every Monday at the casino.

The old car didn't have bluetooth, and could only play a cassette.

Particularly in Japan, raw meat can be called a delicacy.

My grandma loved to knit in her rocking chair by the fireside.

When walking in the cold winter by the edge of a roof, John got hit by a falling icicle.

Karen took off her headphone in order to be a better listener.

Wearing a helmet and a leather coat, the man revved the motorcycle.

If they comment on your driving while in the back of the car, they are a terrible passenger.

The chart confirmed the data that more people fell in the top 95 percentile.

When people could no longer afford the content, they turned to online piracy

In a drug trial, half the people get treatment and the other half get a placebo.

On Broadway, two important people are the director and the producer.

He dropped the candy wrapper into the garbage receptacle.

Table C. Novel /z/ and /s/ words used as stimuli in the lexical decision test phase in Experiments 2 and 3, respectively. /z/ words were produced with either [s] or [ʒ] and /s/ words were produced with either [z] or [ʃ].

/z/ words for lexical decision		/s/ words for lexical decision	
bazaar	misery	accuracy	episode
bazooka	music	aerosol	facade
blizzard	peasant	assembly	idiocy
closet	physique	assortment	legacy
cruiser	plagiarism	asylum	leprosy
cuisine	reprisal	bicycle	lunacy
dozen	resentment	carousel	officer
fertilizer	rosary	casserole	persona
gazelle	treason	crusade	recipe
gymnasium	uprising	dinosaur	tricycle
inquisitor	wizardry	dosage	underside

Table D. Population level parameter posterior mean estimates and 95 % credible intervals for the /z/-devoicing learning model in Experiment 2.

Parameter	β	Est. Error	95% Credible		Pr(β) < 0 <i>or</i> Pr(β) > 0
			Interval		
Intercept	2.09	0.21	1.69	2.53	1.00
Item Type: Filler	3.96	0.20	3.59	4.37	1.00
Item Type: Heard [s]	1.39	0.52	0.36	2.40	0.99
Item Type: Heard [ʒ]	-2.68	0.60	-3.90	-1.55	1.00
Condition: Control	0.30	0.14	0.02	0.59	0.98
Item Type Filler × Condition: Control	0.25	0.11	0.04	0.48	0.99
Item Type: Heard [s] × Condition: Control	-0.76	0.26	-1.27	-0.28	1.00
Item Type: Heard [ʒ] × Condition: Control	-0.44	0.46	-1.34	0.48	0.84

Table E. Population level parameter posterior mean estimates and 95 % credible intervals for the /z/-devoicing generalization model in Experiment 2.

Parameter	β	Est. Error	95% Credible Interval		$\Pr(\beta) < 0$ <i>or</i> $\Pr(\beta) > 0$
Intercept	1.04	0.30	0.47	1.63	1.00
Item Type: Novel [s]	1.16	0.30	0.59	1.76	1.00
Item Type: Heard [ʒ]	-1.74	0.31	-2.35	-1.14	1.00
Item Type: Novel [ʒ]	-2.23	0.29	-2.82	-1.68	1.00
Condition: Control	-0.14	0.25	-0.63	0.34	0.71
Item Type Novel [s] × Condition: Control	0.13	0.22	-0.28	0.56	0.73
Item Type: Heard [ʒ] × Condition: Control	0.06	0.25	-0.42	0.56	0.61
Item Type Novel [ʒ] × Condition: Control	0.20	0.20	-0.18	0.59	0.85

Table F. Population level parameter posterior mean estimates and 95 % credible intervals for the /s/-voicing learning model in Experiment 3.

Parameter	β	Est. Error	95% Credible Interval		Pr(β) < 0 <i>or</i> Pr(β) > 0
Intercept	1.79	0.20	1.41	2.20	1.00
Item Type: Filler	4.13	0.19	3.77	4.52	1.00
Item Type : Heard [z]	-0.64	0.57	-1.76	0.47	0.87
Item Type: Heard [j]	-3.38	0.69	-4.76	-2.06	1.00
Condition: Control	0.09	0.11	-0.12	0.31	0.80
Item Type: Filler \times Condition: Control	0.32	0.09	0.16	0.49	1.00
Item Type: Heard [z] \times Condition: Control	-0.57	0.35	-1.27	0.10	0.95
Item Type: Heard [j] \times Condition: Control	-0.51	0.47	-1.43	0.40	0.87

Table G. Population level parameter posterior mean estimates and 95 % credible intervals for the /s/-voicing generalization model in Experiment 3.

Parameter	β	Est. Error	95% Credible Interval		$\Pr(\beta) < 0$ <i>or</i> $\Pr(\beta) > 0$
Intercept	-0.87	0.44	-1.75	-0.04	0.98
Item Type: Novel [z]	0.32	0.26	-0.19	0.84	0.90
Item Type: Heard [ʃ]	-0.95	0.29	-1.55	-0.41	1.00
Item Type: Novel [ʃ]	-1.16	0.31	-1.80	-0.56	1.00
Condition: Control	-0.57	0.37	-1.30	0.17	0.94
Item Type: Novel [z] × Condition: Control	-0.07	0.19	-0.45	0.30	0.35
Item Type: Heard [ʃ] × Condition: Control	0.10	0.19	-0.29	0.47	0.71
Item Type: Novel [ʃ] × Condition: Control	-0.10	0.21	-0.54	0.30	0.68