

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
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 Platform: x86_64-w64-mingw32/x64 (64-bit)

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```
> summary(training_AusE, prob=0.89)
Family: categorical
Links: mudress = logit; muface = logit; mufleece = logit; mufoot = logit; mugoat = logit; mugoose = logit; mukit = logit; mulot = log
it; mumouth = logit; munurse = logit; mupalm = logit; muprice = logit; mustrut = logit; muthought = logit; mutrap = logit
Formula: vowel_name ~ duration_logRS + F1_DCT0RS + F1_DCT1RS + F1_DCT2RS + F2_DCT0RS + F2_DCT1RS + F2_DCT2RS + F3_DCT0RS + F3_DCT1RS +
F3_DCT2RS
Data: AusE (Number of observations: 957)
Draws: 4 chains, each with iter = 4000; warmup = 1000; thin = 1;
       total post-warmup draws = 12000
```

Population-Level Effects:

	Estimate	Est.Error	1-89% CI	u-89% CI	Rhat	Bulk_ESS	Tail_ESS
mudress_Intercept	-0.39	1.50	-2.74	2.04	1.00	3362	5768
muface_Intercept	-5.73	2.55	-9.90	-2.00	1.00	5121	6450
mufleece_Intercept	-20.77	4.96	-29.01	-13.33	1.00	5722	7091
mufoot_Intercept	-9.59	3.11	-14.84	-4.86	1.00	5060	6766
mugoat_Intercept	3.47	1.17	1.71	5.48	1.00	2765	4789
mugoose_Intercept	-3.96	2.14	-7.48	-0.71	1.00	4735	6420
mukit_Intercept	-17.64	4.71	-25.74	-10.72	1.00	5485	6798
mulot_Intercept	1.99	1.39	-0.17	4.26	1.00	2934	5245
mumouth_Intercept	-7.42	2.40	-11.38	-3.72	1.00	5023	7153
munurse_Intercept	4.08	1.24	2.21	6.16	1.00	2644	4829
mupalm_Intercept	-7.53	2.34	-11.39	-3.86	1.00	4804	7964
muprice_Intercept	-8.56	2.40	-12.53	-4.94	1.00	4726	6789
mustrut_Intercept	-5.01	1.97	-8.23	-1.95	1.00	4295	5879
muthought_Intercept	-9.20	3.21	-14.58	-4.38	1.00	5273	6185
mutrap_Intercept	-9.91	2.30	-13.70	-6.33	1.00	4511	7253
mudress_duration_logRS	-9.64	1.92	-12.73	-6.64	1.00	6089	8073
mudress_F1_DCT0RS	10.74	3.28	5.95	16.29	1.00	3885	3980
mudress_F1_DCT1RS	-4.25	1.60	-6.86	-1.73	1.00	7265	7762

mudress_F1_DCT2RS	-0.21	1.03	-1.83	1.43	1.00	9303	9137
mudress_F2_DCT0RS	18.13	3.39	12.84	23.66	1.00	4728	6943
mudress_F2_DCT1RS	16.29	2.45	12.43	20.22	1.00	3123	5183
mudress_F2_DCT2RS	-1.30	0.97	-2.89	0.22	1.00	9383	8595
mudress_F3_DCT0RS	-1.90	1.16	-3.82	-0.10	1.00	6339	8373
mudress_F3_DCT1RS	-0.25	0.96	-1.79	1.27	1.00	6598	8231
mudress_F3_DCT2RS	0.21	0.89	-1.19	1.65	1.00	7772	8682
muface_duration_logRS	-0.97	1.69	-3.78	1.58	1.00	14063	8755
muface_F1_DCT0RS	2.49	2.89	-1.29	7.63	1.00	5328	4358
muface_F1_DCT1RS	10.04	2.08	6.89	13.53	1.00	6468	7185
muface_F1_DCT2RS	2.83	1.17	1.02	4.80	1.00	8720	8831
muface_F2_DCT0RS	19.70	4.52	13.00	27.30	1.00	5222	6048
muface_F2_DCT1RS	13.51	2.29	9.96	17.30	1.00	3736	6238
muface_F2_DCT2RS	1.22	1.01	-0.37	2.88	1.00	8503	8763
muface_F3_DCT0RS	-2.80	1.66	-5.63	-0.33	1.00	7713	7615
muface_F3_DCT1RS	-2.81	1.25	-4.83	-0.86	1.00	8103	8178
muface_F3_DCT2RS	0.36	1.19	-1.50	2.29	1.00	11317	8677
mufleece_duration_logRS	0.71	1.61	-1.73	3.39	1.00	9702	8248
mufleece_F1_DCT0RS	-24.50	5.52	-33.63	-16.18	1.00	4442	6710
mufleece_F1_DCT1RS	5.68	2.11	2.34	9.13	1.00	6949	8393
mufleece_F1_DCT2RS	1.80	1.46	-0.39	4.25	1.00	10415	8822
mufleece_F2_DCT0RS	26.79	6.16	17.37	36.95	1.00	5209	6971
mufleece_F2_DCT1RS	20.51	3.11	15.80	25.67	1.00	3707	7074
mufleece_F2_DCT2RS	-0.22	0.98	-1.79	1.36	1.00	8419	8533
mufleece_F3_DCT0RS	2.88	2.04	-0.12	6.40	1.00	10675	8903
mufleece_F3_DCT1RS	-4.38	1.69	-7.18	-1.78	1.00	7261	8055
mufleece_F3_DCT2RS	-0.93	1.54	-3.47	1.45	1.00	13071	9105
mufoot_duration_logRS	-4.19	1.92	-7.37	-1.19	1.00	6384	8007
mufoot_F1_DCT0RS	-30.56	5.86	-40.19	-21.69	1.00	3838	6057
mufoot_F1_DCT1RS	-1.80	2.00	-5.33	1.03	1.00	8672	6913
mufoot_F1_DCT2RS	-1.41	1.30	-3.58	0.56	1.00	8555	8829
mufoot_F2_DCT0RS	-13.67	3.57	-19.49	-8.11	1.00	3705	5715
mufoot_F2_DCT1RS	13.41	2.67	9.29	17.81	1.00	2921	6297
mufoot_F2_DCT2RS	1.33	1.18	-0.49	3.27	1.00	10599	9146
mufoot_F3_DCT0RS	5.90	2.18	2.58	9.61	1.00	6273	6979
mufoot_F3_DCT1RS	1.75	1.88	-1.04	4.97	1.00	12632	8475
mufoot_F3_DCT2RS	-0.06	2.04	-3.30	3.16	1.00	14569	8061
mugoat_duration_logRS	-0.29	1.15	-2.15	1.52	1.00	12430	9331
mugoat_F1_DCT0RS	1.20	2.27	-1.90	5.13	1.00	4860	4156
mugoat_F1_DCT1RS	4.31	1.34	2.23	6.52	1.00	7417	8291
mugoat_F1_DCT2RS	0.42	0.81	-0.85	1.73	1.00	9629	9072
mugoat_F2_DCT0RS	2.39	2.34	-0.85	6.49	1.00	4834	6490
mugoat_F2_DCT1RS	7.82	1.64	5.36	10.60	1.00	3411	5145
mugoat_F2_DCT2RS	0.54	0.84	-0.76	1.92	1.00	10414	10058
mugoat_F3_DCT0RS	-1.89	1.01	-3.58	-0.32	1.00	7926	8227
mugoat_F3_DCT1RS	-0.14	0.86	-1.52	1.21	1.00	7139	7827
mugoat_F3_DCT2RS	-0.26	0.98	-1.85	1.29	1.00	10164	9939
mugoose_duration_logRS	0.73	1.42	-1.45	3.08	1.00	9130	8917
mugoose_F1_DCT0RS	-21.75	4.73	-29.57	-14.60	1.00	4169	5184
mugoose_F1_DCT1RS	0.22	1.50	-2.17	2.62	1.00	8286	9155
mugoose_F1_DCT2RS	-1.26	1.32	-3.46	0.77	1.00	10559	8703

mugoose_F2_DCT0RS	6.34	3.95	0.62	13.06	1.00	4748	6530
mugoose_F2_DCT1RS	11.50	2.43	7.74	15.47	1.00	3204	6253
mugoose_F2_DCT2RS	1.25	0.98	-0.28	2.87	1.00	7910	7776
mugoose_F3_DCT0RS	-0.38	1.36	-2.61	1.79	1.00	9689	8639
mugoose_F3_DCT1RS	-0.61	1.36	-2.84	1.47	1.00	8729	8970
mugoose_F3_DCT2RS	0.83	1.37	-1.31	3.04	1.00	12743	9685
mukit_duration_logRS	-15.89	3.04	-20.92	-11.23	1.00	7015	7230
mukit_F1_DCT0RS	-5.71	4.89	-14.54	0.51	1.00	5074	6971
mukit_F1_DCT1RS	-2.82	2.09	-6.39	0.25	1.00	8744	8555
mukit_F1_DCT2RS	-0.62	1.63	-3.34	1.87	1.00	12625	9291
mukit_F2_DCT0RS	33.21	6.70	23.09	44.52	1.00	5291	6277
mukit_F2_DCT1RS	24.57	3.56	19.14	30.47	1.00	3767	7080
mukit_F2_DCT2RS	-1.21	1.25	-3.27	0.70	1.00	10634	8772
mukit_F3_DCT0RS	-0.30	1.70	-3.07	2.32	1.00	11689	8700
mukit_F3_DCT1RS	-2.71	1.90	-5.95	0.09	1.00	8634	8075
mukit_F3_DCT2RS	-0.35	1.48	-2.82	1.95	1.00	13550	9576
mulot_duration_logRS	-3.07	1.64	-5.76	-0.55	1.00	5828	8516
mulot_F1_DCT0RS	2.94	3.11	-1.22	8.53	1.00	3748	4232
mulot_F1_DCT1RS	-2.05	1.54	-4.70	0.25	1.00	8542	7306
mulot_F1_DCT2RS	-0.63	1.00	-2.23	0.95	1.00	7977	9034
mulot_F2_DCT0RS	-10.31	3.00	-15.19	-5.65	1.00	3651	5523
mulot_F2_DCT1RS	9.72	2.45	5.93	13.79	1.00	3044	6179
mulot_F2_DCT2RS	0.09	1.01	-1.52	1.69	1.00	10692	9459
mulot_F3_DCT0RS	3.13	1.31	1.10	5.29	1.00	5387	7759
mulot_F3_DCT1RS	-1.96	1.20	-3.93	-0.09	1.00	7598	8302
mulot_F3_DCT2RS	-0.48	1.28	-2.61	1.50	1.00	11825	8783
mumouth_duration_logRS	-0.02	1.65	-2.61	2.60	1.00	7394	8466
mumouth_F1_DCT0RS	24.28	4.91	16.88	32.42	1.00	3939	4687
mumouth_F1_DCT1RS	-3.53	1.42	-5.84	-1.37	1.00	6853	8072
mumouth_F1_DCT2RS	-1.87	1.16	-3.76	-0.04	1.00	8375	9208
mumouth_F2_DCT0RS	-1.80	2.73	-6.74	1.92	1.00	5304	5765
mumouth_F2_DCT1RS	22.49	2.74	18.22	26.91	1.00	3258	5915
mumouth_F2_DCT2RS	-1.02	0.95	-2.57	0.47	1.00	8114	8859
mumouth_F3_DCT0RS	-2.41	1.22	-4.38	-0.51	1.00	5504	8360
mumouth_F3_DCT1RS	-2.23	0.99	-3.85	-0.71	1.00	5425	7048
mumouth_F3_DCT2RS	0.13	0.80	-1.12	1.42	1.00	6044	7448
munurse_duration_logRS	1.86	1.51	-0.43	4.37	1.00	7911	8960
munurse_F1_DCT0RS	2.66	2.74	-0.98	7.64	1.00	4022	3784
munurse_F1_DCT1RS	-4.89	1.68	-7.61	-2.29	1.00	7538	8400
munurse_F1_DCT2RS	0.83	1.01	-0.77	2.49	1.00	9101	9092
munurse_F2_DCT0RS	4.56	2.76	0.43	9.14	1.00	4203	7040
munurse_F2_DCT1RS	12.63	2.49	8.70	16.66	1.00	3505	6622
munurse_F2_DCT2RS	-1.73	1.05	-3.46	-0.08	1.00	10447	9021
munurse_F3_DCT0RS	1.37	1.14	-0.43	3.24	1.00	7346	8401
munurse_F3_DCT1RS	-0.82	0.98	-2.42	0.71	1.00	6984	8042
munurse_F3_DCT2RS	-0.11	0.96	-1.68	1.39	1.00	9187	8881
mupalm_duration_logRS	3.62	1.77	0.86	6.51	1.00	7207	9030
mupalm_F1_DCT0RS	27.56	4.79	20.29	35.58	1.00	3759	5089
mupalm_F1_DCT1RS	-0.43	1.36	-2.70	1.68	1.00	8874	8383
mupalm_F1_DCT2RS	1.89	1.17	0.08	3.81	1.00	8524	8937
mupalm_F2_DCT0RS	-12.80	3.33	-18.32	-7.68	1.00	4690	6209

mupalm_F2_DCT1RS	10.85	2.65	6.62	15.07	1.00	3830	6010
mupalm_F2_DCT2RS	0.23	0.99	-1.34	1.83	1.00	8666	8258
mupalm_F3_DCT0RS	0.62	1.19	-1.24	2.53	1.00	6679	8841
mupalm_F3_DCT1RS	0.40	0.90	-1.02	1.84	1.00	5466	6759
mupalm_F3_DCT2RS	1.29	0.81	0.04	2.63	1.00	5983	7467
muprice_duration_logRS	-1.53	1.78	-4.48	1.14	1.00	8158	8697
muprice_F1_DCT0RS	34.26	5.22	26.45	42.95	1.00	3657	4661
muprice_F1_DCT1RS	4.49	1.60	1.96	7.09	1.00	7001	8854
muprice_F1_DCT2RS	0.37	1.11	-1.35	2.18	1.00	9120	8878
muprice_F2_DCT0RS	-1.95	2.68	-6.74	1.67	1.00	5714	6549
muprice_F2_DCT1RS	-1.90	2.26	-5.79	1.36	1.00	4852	6468
muprice_F2_DCT2RS	1.73	1.08	0.09	3.52	1.00	7540	7745
muprice_F3_DCT0RS	-1.66	1.29	-3.81	0.32	1.00	7719	8461
muprice_F3_DCT1RS	1.73	0.98	0.18	3.32	1.00	6142	8427
muprice_F3_DCT2RS	0.67	0.89	-0.73	2.13	1.00	6819	8586
mustrut_duration_logRS	-10.72	1.85	-13.70	-7.82	1.00	5528	7768
mustrut_F1_DCT0RS	28.57	4.51	21.73	36.16	1.00	3495	4355
mustrut_F1_DCT1RS	1.20	1.31	-0.84	3.30	1.00	7307	8325
mustrut_F1_DCT2RS	-3.12	1.06	-4.86	-1.45	1.00	7218	8641
mustrut_F2_DCT0RS	-3.31	2.77	-8.26	0.52	1.00	4297	5608
mustrut_F2_DCT1RS	13.32	2.65	9.09	17.54	1.00	3337	5476
mustrut_F2_DCT2RS	1.04	0.93	-0.42	2.55	1.00	7504	8083
mustrut_F3_DCT0RS	-0.74	1.10	-2.54	0.97	1.00	5721	7670
mustrut_F3_DCT1RS	-1.69	0.95	-3.24	-0.21	1.00	5567	6631
mustrut_F3_DCT2RS	0.51	0.80	-0.74	1.81	1.00	6117	7453
muthought_duration_logRS	4.68	2.27	1.22	8.40	1.00	6687	8774
muthought_F1_DCT0RS	-7.77	4.96	-16.15	-0.49	1.00	4158	7056
muthought_F1_DCT1RS	-3.70	2.40	-7.90	-0.33	1.00	8986	7853
muthought_F1_DCT2RS	2.11	1.68	-0.36	4.97	1.00	10193	9515
muthought_F2_DCT0RS	-21.57	4.35	-28.66	-14.83	1.00	4200	7051
muthought_F2_DCT1RS	8.77	2.86	4.32	13.47	1.00	3271	6518
muthought_F2_DCT2RS	0.67	1.31	-1.34	2.81	1.00	11479	8709
muthought_F3_DCT0RS	7.45	2.46	3.71	11.53	1.00	6002	6822
muthought_F3_DCT1RS	-3.56	2.74	-8.22	0.48	1.00	11566	9373
muthought_F3_DCT2RS	-2.21	2.76	-7.23	1.53	1.00	12527	6778
mutrap_duration_logRS	-10.33	1.91	-13.38	-7.28	1.00	5630	7524
mutrap_F1_DCT0RS	37.43	4.94	30.00	45.68	1.00	3521	4410
mutrap_F1_DCT1RS	-0.57	1.28	-2.64	1.41	1.00	7155	7956
mutrap_F1_DCT2RS	0.11	1.05	-1.55	1.80	1.00	8122	8991
mutrap_F2_DCT0RS	9.01	3.23	3.62	13.98	1.00	4750	6249
mutrap_F2_DCT1RS	16.59	2.74	12.24	21.01	1.00	3422	6020
mutrap_F2_DCT2RS	0.07	0.88	-1.32	1.49	1.00	7379	8251
mutrap_F3_DCT0RS	-5.95	1.21	-7.93	-4.09	1.00	5212	6870
mutrap_F3_DCT1RS	-1.88	0.92	-3.37	-0.46	1.00	4969	5959
mutrap_F3_DCT2RS	-0.72	0.79	-1.97	0.55	1.00	5862	6821

Draws were sampled using sampling(NUTS). For each parameter, Bulk_ESS and Tail_ESS are effective sample size measures, and Rhat is the potential scale reduction factor on split chains (at convergence, Rhat = 1).

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