

<i>WAB-R Score</i>	<i>Omnibus Test</i>	<i>Laterality</i>	<i>Parameter Estimates</i>			<i>95% Wald Confidence Interval</i>		<i>Hypothesis Test</i>	
			Parameter	β	Std. Error	Lower	Upper	Wald χ^2	<i>p</i>
<i>Aphasia Quotient</i>	$\chi^2(3, N = 48) = 27.87, p < .0001$ AIC = 250 BIC = 257	R	(Intercept)	99.55	3.78	92.14	106.96	693.54	.000
			Lesion Volume	-.14	.03	-.19	-.09	26.66	.000
			AOS Severity	-5.34	1.51	-8.31	-2.38	12.45	.000
			rpMTG-rIFG	-22.64	8.42	-39.15	-6.13	7.22	.007
			(Scale)	175.42	45.29	105.75	29.97		
<i>Spontaneous Speech</i>	$\chi^2(2, N = 48) = 24.38, p < .0001$ AIC = 162 BIC=168		(Intercept)	18.98	.97	17.87	2.87	385.17	.000
			Lesion Volume	-.03	.01	-.04	-.02	22.73	.000
			AOS Severity	-1.32	.32	-1.95	-.69	16.88	.000
			(Scale)	1.04	2.59	6.05	16.65		
<i>Content</i>	$\chi^2(4, N = 48) = 28.79, p < .0001$ AIC = 128 BIC = 136	B	(Intercept)	3.90	2.31	-.64	8.43	2.83	.092
			Lesion Volume	-.02	.00	-.03	-.01	2.62	.000
			AOS Severity	-.56	.18	-.92	-.20	9.32	.002
			Age	.09	.04	.03	.16	7.11	.008
			IFusi-riITG	3.96	1.28	1.44	6.47	9.48	.002
<i>Fluency</i>	$\chi^2(3, N = 48) = 2.91, p < .0001$ AIC = 128 BIC = 135		(Intercept)	8.78	.59	7.60	9.92	221.11	.000
			Lesion Volume	-.01	.00	-.02	-.01	14.97	.000
			AOS Severity	-.72	.15	-1.02	-.42	22.17	.000
			(Scale)	3.05	.79	1.84	5.07		
<i>Auditory Comprehension</i>	$\chi^2(2, N = 48) = 19.49, p < .0001$ AIC=106	B	(Intercept)	6.51	.53	5.46	7.55	149.09	.000
			lAG-rAG	2.11	.77	.60	3.62	7.49	.006

	BIC = 111	L	IAG-lsITG (Scale)	2.75 1.53	.75 .39	1.28 .92	4.22 2.54	13.37	.000
<i>Repetition</i>	$\chi^2(2, N = 48) = 16.45, p < .0001$		(Intercept)	9.64	.63	8.41	1.86	236.38	.000
	AIC = 143		Lesion Volume	-.01	.01	-.02	.00	1.88	.171
	BIC = 149		AOS Severity (Scale)	-.96 5.29	.24 1.36	-1.43 3.19	-.49 8.77	16.02	.000
<i>Naming and Word Finding</i>	$\chi^2(4, N = 48) = 33.956, p < .0001$		(Intercept)	11.35	.58	1.21	12.50	379.23	.000
	AIC = 121		Lesion Volume	-.02	.00	-.02	-.01	27.55	.000
	BIC = 130		AOS Severity	-.45	.15	-.73	-.16	9.05	.003
		R	rpMTG-rIFG	-3.66	1.22	-6.04	-1.27	9.02	.003
		L	lIFG-lMFG (Scale)	-4.28 2.23	.87 .58	-5.98 1.35	-2.57 3.70	24.20	.000

* $p < .05$ (FDR corrected)

Supplemental Material S5. Generalized linear model results for the best fit models. Significant predictors are in **bold**. Model fit statistics (Akaike's Information Criterion [AIC] and Bayesian Information Criterion [BIC]) are provided for each model. The normal distribution produced the best fit model for all analyses.

Laterality: B = bilateral, R = right, L = left. AOS: apraxia of speech, l: left, r: right, sITG: superior inferior temporal gyrus, iITG: inferior inferior temporal gyrus, Fusi: fusiform gyrus, AG: angular gyrus, PP: planum polare, SMG: supramarginal gyrus, pMTG: posterior middle temporal gyrus, PM: premotor cortex, IFG: inferior frontal gyrus, MFG: middle frontal gyrus.