

**S5 Table. Estimates of phylogenetic signal (lambda) for each of the ecological and cultural predictors, averaged across 100 replicates from the posterior distribution of language trees.**

<b>Ecological Variables</b>	<b>Log likelihood</b>	<b>Log likelihood</b>	<b>Lambda</b>	<b>p value</b>
	<b>without Lambda</b>	<b>with lambda</b>		
Abs. Latitude	-261.841	-209.945	0.998	0.000
Age	-52.433	-46.658	0.706	0.000
Dust	-490.270	-414.329	1.000	0.000
Log(Area)	-120.525	-112.034	0.776	0.000
Log(Elevation)	-51.120	-46.372	0.676	0.001
Log(Isolation)	-74.410	-74.206	0.119	0.509
Log(Rainfall)	-14.187	-4.741	0.407	0.000
Makatea	38.328	42.399	0.584	0.002
Tephra = 2	6.104	62.962	1.000	0.000
Tephra = 3	-53.437	29.206	1.000	0.000

  

<b>Cultural Variables</b>	<b>Log likelihood</b>	<b>Log likelihood</b>	<b>Lambda</b>	<b>p value</b>
	<b>without Lambda</b>	<b>with lambda</b>		
Wet	-54.737	-42.479	0.871	0.000
Tree	-42.835	-0.319	1.000	0.000
Dry	-53.848	-43.248	0.835	0.000
Elite	-49.617	3.031	1.000	0.000
Individual	-45.505	-4.985	1.000	0.000