Music & Science

Using agent-based models to understand the role of individuals in the song evolution of humpback whales (*Megaptera novaeangliae*).

Supplementary Material

Linear model results

Response data are SR dissimilarities:

SR_Diff = (between population SR dissimilarity) – (within population SR dissimilarity)

so higher values of SR_Diff mean greater population divergence

```
lm(formula = SR_Diff ~ Model_Mode * FGS, data = song.data)

Coefficients:
```

	Estimate	**Std. Error**
(Intercept)	-0.0021148	0.1205214
Model_ModeNovelty	2.2090058	0.1704430
Model_ModeW_Distance	0.0181268	0.1391661
Model_ModeW_Novelty	1.7530557	0.1391661
FGS100	0.0000753	0.1704430
FGS500	1.4652814	0.1704430
Model_ModeNovelty:FGS100	1.8724516	0.2410428
Model_ModeW_Distance:FGS100	0.0957708	0.1968106
Model_ModeW_Novelty:FGS100	1.3240028	0.1968106
Model_ModeNovelty:FGS500	2.6246300	0.2410428
Model_ModeW_Distance:FGS500	0.7414891	0.1968106
Model_ModeW_Novelty:FGS500	0.9591118	0.1968106

```
Residual standard error: 0.8522 on 1188 degrees of freedom

Multiple R-squared:  0.8059, Adjusted R-squared:  0.8041
```