Tables

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January 30, 2015

Comment on simulations Simulations were conducted using Lynn's priors, with unspecified priors (i.e. those not in the prior table, not in either of the US or Canada datasets) being set to 0.5. Only 45 simulations of each of the 9 models were run due to time constraints. Additional code was used to "patch" a possible bug in the `bic.glm.data.frame` function within the `BMA` package, although I haven't confirmed that this is true bug.

```
[1] "(Intercept)" "ae"          "ap"          "aa"          "be"
 [6] "bp"          "ba"          "oe"          "op"          "oa"
[11] "ae.be"       "ae.bp"       "ae.ba"       "ae.oe"       "ae.op"
[16] "ae.oa"       "ap.be"       "ap.bp"       "ap.ba"       "ap.oe"
[21] "ap.op"       "ap.oa"       "aa.be"       "aa.bp"       "aa.ba"
[26] "aa.oe"       "aa.op"       "aa.oa"       "be.oe"       "be.op"
[31] "be.oa"       "bp.oe"       "bp.op"       "bp.oa"       "ba.oe"
[36] "ba.op"       "ba.oa"       "ae.be.oe"    "ae.be.op"    "ae.be.oa"
[41] "ae.bp.oe"    "ae.bp.op"    "ae.bp.oa"    "ae.ba.oe"    "ae.ba.op"
[46] "ae.ba.oa"    "ap.be.oe"    "ap.be.op"    "ap.be.oa"    "ap.bp.oe"
[51] "ap.bp.op"    "ap.bp.oa"    "ap.ba.oe"    "ap.ba.op"    "ap.ba.oa"
[56] "aa.be.oe"    "aa.be.op"    "aa.be.oa"    "aa.bp.oe"    "aa.bp.op"
[61] "aa.bp.oa"    "aa.ba.oe"    "aa.ba.op"    "aa.ba.oa"
```

Table 1: Average Sensitivity, 45 simulations

	Stepwise	ANOVA	BMA	BMS	BMA w/ prior	BMS w/ prior
Ae	0.68	0.27	0.46	0.33	0.57	0.63
Be	0.52	0.15	0.28	0.18	0.37	0.43
Oe	0.51	0.16	0.26	0.16	0.37	0.45
Ap	0.49	0.18	0.28	0.17	0.30	0.30
Bp	0.52	0.13	0.28	0.21	0.34	0.39
Op	0.60	0.23	0.35	0.23	0.42	0.50
Aa	0.56	0.29	0.29	0.20	0.32	0.32
Ba	0.45	0.20	0.18	0.12	0.22	0.23
Oa	0.46	0.21	0.22	0.13	0.28	0.31
Average over models	0.53	0.20	0.29	0.19	0.36	0.40

Figure 1: Coefficients in True Models Used in Simulation

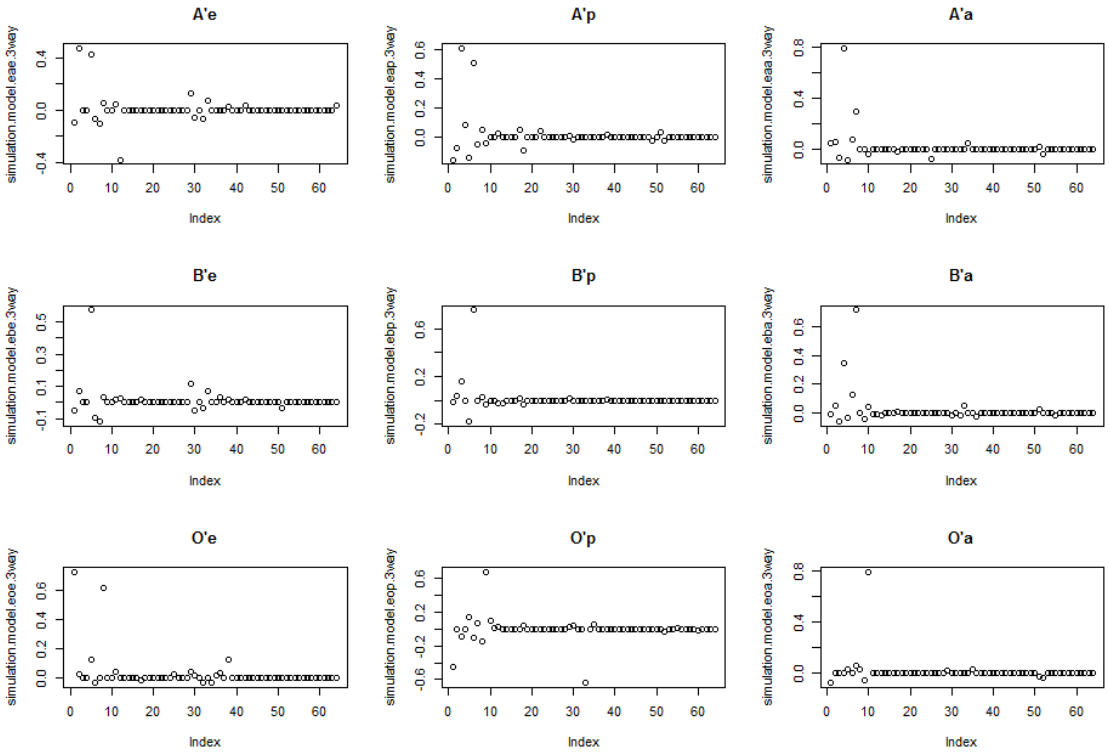

Figure 2: The x-axis consists of Intercept, 9 main effects, 27 second order interactions, and 27 third order interaction terms, in that order. Coefficients which are nonzero are in the true model. Observe that evaluation models look "more complicated" than the activity models.

Table 2: Average Identification Error, 45 simulations

	Stepwise	ANOVA	BMA	BMS	BMA w/ prior	BMS w/ prior
Ae	0.60	0.15	0.24	0.07	0.29	0.33
Be	0.64	0.27	0.25	0.08	0.29	0.22
Oe	0.67	0.26	0.26	0.04	0.29	0.24
Ap	0.60	0.17	0.25	0.03	0.29	0.18
Bp	0.73	0.17	0.32	0.03	0.36	0.22
Op	0.60	0.13	0.22	0.05	0.24	0.12
Aa	0.71	0.09	0.32	0.03	0.35	0.24
Ba	0.64	0.10	0.28	0.04	0.30	0.23
Oa	0.76	0.30	0.44	0.06	0.44	0.28
Average over models	0.66	0.18	0.29	0.05	0.32	0.23

Table 3: Average Bias, 45 simulations

	Stepwise	ANOVA	BMA	BMS	BMA w/ prior	BMS w/ prior
Ae	2.7E-03	2.2E-03	8.9E-04	8.0E-04	9.4E-04	7.6E-04
Be	2.7E-03	1.0E-03	8.9E-04	7.8E-04	9.1E-04	6.8E-04
Oe	2.2E-03	5.3E-04	4.3E-04	3.9E-04	4.8E-04	3.4E-04
Ap	2.8E-03	2.6E-03	1.1E-03	1.4E-03	1.2E-03	9.0E-04
Bp	3.0E-03	1.7E-03	8.5E-04	7.8E-04	8.4E-04	6.0E-04
Op	3.5E-03	6.1E-03	1.2E-03	1.0E-03	1.3E-03	8.2E-04
Aa	2.9E-03	9.4E-04	7.6E-04	6.4E-04	8.0E-04	6.3E-04
Ba	2.7E-03	7.5E-04	7.6E-04	7.1E-04	8.5E-04	6.7E-04
Oa	2.0E-03	3.5E-04	4.8E-04	3.2E-04	5.2E-04	3.9E-04
Average over models	2.7E-03	1.8E-03	8.2E-04	7.7E-04	8.7E-04	6.4E-04

Table 4: Average Variance, 45 simulations

	Stepwise	ANOVA	BMA	BMS	BMA w/ prior	BMS w/ prior
Ae	2.7E-03	1.0E-03	6.4E-04	3.2E-04	7.5E-04	5.3E-04
Be	2.6E-03	2.9E-04	6.5E-04	3.0E-04	7.5E-04	4.9E-04
Oe	2.2E-03	1.1E-04	3.0E-04	9.7E-05	4.2E-04	2.9E-04
Ap	2.8E-03	8.8E-04	8.4E-04	6.1E-04	9.6E-04	6.6E-04
Bp	3.0E-03	4.3E-04	6.5E-04	5.0E-04	6.7E-04	5.1E-04
Op	3.5E-03	4.2E-03	9.0E-04	4.4E-04	1.1E-03	7.0E-04
Aa	2.8E-03	4.7E-04	5.0E-04	2.1E-04	5.7E-04	4.2E-04
Ba	2.7E-03	5.3E-04	4.8E-04	2.0E-04	6.3E-04	4.8E-04
Oa	2.0E-03	2.0E-04	3.7E-04	1.3E-04	4.3E-04	3.0E-04
Average over models	2.7E-03	9.1E-04	5.9E-04	3.1E-04	7.0E-04	4.9E-04