Supplement S4. MCMC summary statistics and WAIC for model (1).

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> #### MCMC summary statistics and WAIC
>
> calculateWAIC(CmyMCMC)
Compiling
  [Note] This may take a minute.
  [Note] Use 'showCompilerOutput = TRUE' to see C++ compilation details.
Calculating WAIC.
nimbleList object of type waicList
Field "WAIC":
[1] 2471.879
Field "lppd":
[1] -1050.147
Field "pWAIC":
[1] 185.7924
> MCMCsummary(mcmcb,params=c('a','MV','Env','covV','sig2R','covE',
+    'covEV','sig2','HMRPVG','Sup','rhoV',
+    'rhoE','rhoEV'),
+     n.eff=FALSE)
                   mean          sd         2.5%         50%       97.5% Rhat
a[1]          28.2639786  4.05290079  20.20528735  28.2655514  36.3001608 1.00
a[2]          50.3300015  3.81844583  42.75663913  50.3313620  57.8481200 1.00
MV[1, 1]      25.1478389  4.11756383  17.01545568  25.1440983  33.2957807 1.00
MV[2, 1]      28.2969686  4.06374456  20.22101066  28.2783635  36.3356792 1.00
MV[3, 1]      28.8931852  4.04029652  20.89414860  28.8892371  36.8760346 1.00
MV[4, 1]      28.3436435  4.03893858  20.32728810  28.3340164  36.3369160 1.00
MV[5, 1]      29.1476001  4.04775899  21.16084024  29.1352577  37.1868195 1.00
MV[6, 1]      28.0177214  4.06070628  19.98510344  28.0134568  36.0935718 1.00
MV[7, 1]      30.3019845  4.07153000  22.23162730  30.2778462  38.3774691 1.00
MV[1, 2]      49.2928372  3.94329363  41.53311853  49.2988962  57.1090802 1.00
MV[2, 2]      54.5721347  4.03647979  46.62251221  54.5723208  62.5389532 1.00
MV[3, 2]      49.8939127  3.84869851  42.25920787  49.9021510  57.5053864 1.00
MV[4, 2]      50.3330890  3.83598684  42.74655487  50.3415952  57.9375556 1.00
MV[5, 2]      50.6874275  3.84165329  43.11220560  50.6775172  58.3244110 1.00
MV[6, 2]      46.1221313  4.02362998  38.23205157  46.1165150  54.0632725 1.00
MV[7, 2]      51.3718398  3.88259364  43.70934818  51.3678301  59.0788671 1.00
Env[1, 1]     10.0273152  1.87422073   6.33803201  10.0362620  13.7031691 1.01
Env[2, 1]     10.2045425  1.84195270   6.58268073  10.1974483  13.8832012 1.01
Env[3, 1]     41.4913861  1.87235184  37.77395325  41.4985341  45.1233984 1.00
Env[4, 1]     44.5285270  2.54688934  39.50215711  44.5382094  49.4916170 1.00
Env[5, 1]     19.3893439  1.87228100  15.69483511  19.3834590  23.0772318 1.00
Env[6, 1]     32.2781918  1.90706911  28.50451033  32.2865836  36.0268847 1.00
Env[7, 1]     52.7168298  1.95440626  48.83960396  52.7218294  56.5544705 1.00
Env[8, 1]     22.8831353  1.89751824  19.15800180  22.8899274  26.5936303 1.00
Env[9, 1]     21.6558237  1.84199802  18.00734599  21.6543803  25.2677851 1.00
Env[10, 1]    28.3692874  1.88113555  24.69582984  28.3693935  32.0904725 1.00
Env[11, 1]    38.9665237  1.98826638  35.04069033  38.9676443  42.8599987 1.00
Env[12, 1]    16.5747450  1.88844225  12.86681713  16.5775684  20.3080197 1.00
Env[1, 2]     38.2786326  3.08914301  32.19127952  38.2922795  44.3590127 1.00
Env[2, 2]     33.0600271  3.06259597  26.98687908  33.0624845  39.0939420 1.00
Env[3, 2]     56.2213712  3.04843305  50.18402467  56.2356731  62.1627341 1.00
Env[4, 2]     59.6789964  3.11106381  53.57461359  59.6878122  65.7371676 1.00
Env[5, 2]     36.8639958  3.10863694  30.74270164  36.8447746  42.9978239 1.00
Env[6, 2]     53.4129389  3.11937238  47.20929257  53.4117770  59.5139896 1.00
Env[7, 2]     63.7461002  3.18104284  57.44016873  63.7498431  69.9924393 1.00
Env[8, 2]     64.0736947  3.41493331  57.30684294  64.0938882  70.7512149 1.00
Env[9, 2]     42.5186589  3.02019415  36.57986723  42.5108611  48.4594690 1.00
Env[10, 2]    37.4743614  3.08664296  31.36038327  37.4901879  43.4600384 1.00
Env[11, 2]    53.6746803  3.12108746  47.56169818  53.6708290  59.8227273 1.00
Env[12, 2]    64.9399903  3.20635963  58.58359048  64.9791858  71.1686779 1.00
covV[1, 1]     6.3073873  6.62340809   0.61310895   4.4942261  22.9267967 1.00
covV[2, 1]     1.9094892  5.26227617  -5.89708118   1.1086709  14.0001535 1.00
covV[1, 2]     1.9094892  5.26227617  -5.89708118   1.1086709  14.0001535 1.00
covV[2, 2]    15.0962554 15.24335621   0.99571283  10.9823674  54.1601897 1.00
sig2R[1]       1.8953440  0.81874273   0.78404843   1.7410009   3.9155929 1.00
sig2R[2]       2.3062554  1.03610649   0.89986381   2.1060994   4.8796111 1.00
covE[1, 1]   187.4053907 85.74410210  84.42959284 168.1770537 405.7229400 1.00
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covE[2, 1]    90.2024035 60.25823435   8.76295901  78.8273570 237.7895699 1.00
covE[1, 2]    90.2024035 60.25823435   8.76295901  78.8273570 237.7895699 1.00
covE[2, 2]   145.2343335 68.74162706  62.53080153 129.7251090 319.8868105 1.00
covEV[1, 1]   13.6000071  3.15577620   8.40514025  13.2628003  20.7437331 1.00
covEV[2, 1]   12.6790608  3.93921490   5.98928060  12.3166056  21.4472362 1.00
covEV[1, 2]   12.6790608  3.93921490   5.98928060  12.3166056  21.4472362 1.00
covEV[2, 2]   46.8666896  9.43040845  31.63071841  45.7842172  68.3817197 1.00
sig2[1]        0.2803390  0.12391323   0.12925510   0.2524716   0.5957609 1.00
sig2[2]        0.4692412  0.20377755   0.21796131   0.4242422   0.9936264 1.00
sig2[3]        2.2402740  0.99762478   1.02857184   2.0171608   4.7681641 1.00
sig2[4]       68.1900734 26.61281127  32.55088008  63.0045391 133.4139845 1.00
sig2[5]        2.3776792  1.00467705   1.11942719   2.1604243   4.9173830 1.00
sig2[6]        4.9985120  2.13492100   2.34148125   4.5349029  10.4063409 1.00
sig2[7]        7.9562458  3.54166262   3.57943853   7.1673624  17.0001882 1.00
sig2[8]        3.0870082  1.33433005   1.44148562   2.7924611   6.4617324 1.00
sig2[9]        0.9153039  0.41224679   0.42024351   0.8221302   1.9621737 1.00
sig2[10]       3.1049288  1.42052545   1.40933109   2.7781141   6.7242637 1.00
sig2[11]      12.4603291  7.65241202   4.57433315  10.3833523  32.9806015 1.00
sig2[12]       3.4311182  1.62698365   1.51038326   3.0551381   7.5936691 1.00
sig2[13]       3.2901986  1.44001753   1.52149204   2.9659565   6.9494340 1.00
sig2[14]       2.7618122  1.19512835   1.28138946   2.4957512   5.7821121 1.00
sig2[15]       2.6517696  1.23134886   1.19328871   2.3712739   5.7851032 1.00
sig2[16]      13.6732494  5.65893467   6.49665772  12.4650588  27.8861946 1.00
sig2[17]       7.7053827  3.22075850   3.63589250   7.0095832  15.7852855 1.00
sig2[18]      14.4338398  6.38438980   6.72208025  13.0194069  30.4012293 1.00
sig2[19]      17.5420794  7.75736419   8.04414705  15.7809951  37.1487599 1.00
sig2[20]      46.4522409 17.88257164  23.09382683  42.7716189  91.0799477 1.00
sig2[21]       3.6511271  1.61655862   1.67500346   3.2874596   7.7915505 1.00
sig2[22]       3.6761621  1.58082409   1.72017287   3.3238807   7.7139197 1.00
sig2[23]      10.2209701  4.20792105   4.90042071   9.3301775  20.7924601 1.00
sig2[24]      13.1199336  6.78493851   5.50817160  11.4669512  30.3345579 1.00
HMRPVG[1, 1]   0.8374388  0.04260920   0.75612592   0.8358959   0.9289231 1.00
HMRPVG[2, 1]   1.0237488  0.05041533   0.92990237   1.0210749   1.1351705 1.00
HMRPVG[3, 1]   1.0100384  0.05252734   0.91334799   1.0070618   1.1272575 1.00
HMRPVG[4, 1]   0.9519297  0.05087359   0.85796452   0.9489804   1.0652941 1.00
HMRPVG[5, 1]   1.0447895  0.05271722   0.94750501   1.0417555   1.1619150 1.00
HMRPVG[6, 1]   0.9844164  0.04827405   0.89411996   0.9820598   1.0909634 1.00
HMRPVG[7, 1]   1.0537867  0.05613469   0.95120481   1.0501645   1.1795501 1.00
HMRPVG[1, 2]   0.9539186  0.03499349   0.88701896   0.9525837   1.0288090 1.00
HMRPVG[2, 2]   1.1148869  0.04068739   1.03903277   1.1129479   1.2037113 1.00
HMRPVG[3, 2]   0.9750260  0.03616984   0.90668734   0.9735309   1.0532111 1.00
HMRPVG[4, 2]   0.9878196  0.03645884   0.91893168   0.9863606   1.0666103 1.00
HMRPVG[5, 2]   0.9732376  0.03666623   0.90402326   0.9715926   1.0527133 1.00
HMRPVG[6, 2]   0.8653860  0.03206647   0.80376348   0.8645253   0.9334028 1.00
HMRPVG[7, 2]   1.0245795  0.03774210   0.95347300   1.0229075   1.1068254 1.00
Sup[1, 1]     53.6500629  8.04437005  38.42913818  53.4588739  70.0881101 1.00
Sup[2, 1]     19.7784590  4.88536116  10.13085183  19.8399321  29.2211026 1.00
Sup[3, 1]     11.8230709  3.12561950   6.50953278  11.5714410  18.6824236 1.00
Sup[4, 1]     17.2747260  2.76664020  12.27072738  17.1223101  23.1342382 1.00
Sup[5, 1]     11.7380720  3.14383848   6.42700008  11.4482338  18.7141729 1.00
Sup[6, 1]     32.5693381  6.99276033  18.09588482  32.8917242  45.5370824 1.00
Sup[7, 1]      4.6772818  1.22149734   3.01168347   4.4411950   7.7918596 1.00
Sup[1, 2]     93.1523803 11.20544210  72.37663254  92.7350774 116.3972695 1.00
Sup[2, 2]     18.5387231  4.39539836  10.78530503  18.2425027  27.9858504 1.00
Sup[3, 2]     72.9222686 10.17579187  54.34089973  72.4420357  94.1775290 1.00
Sup[4, 2]     65.8645168  8.49855270  50.12355742  65.5564539  83.4153355 1.00
Sup[5, 2]     54.7359333  5.99791440  43.97287522  54.3907339  67.4905198 1.00
Sup[6, 2]    182.3594517 17.54844475 148.48697197 182.1204322 217.3172405 1.00
Sup[7, 2]     47.8724799  7.73264762  33.63171999  47.5111677  63.9983421 1.00
rhoV           0.1763870  0.39008895  -0.63730402   0.2107437   0.8150544 1.00
rhoE           0.5338213  0.19889679   0.06860629   0.5640236   0.8346671 1.00
rhoEV          0.5014494  0.10517902   0.27459384   0.5090310   0.6856157 1.00
>
> ###### Diagnostic plots
> gelman.diag(mcmcb,multivariate=FALSE)
Potential scale reduction factors:

             Point est. Upper C.I.
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Env[1, 1]	1.01	1.03
Env[2, 1]	1.01	1.02
Env[3, 1]	1.00	1.00
Env[4, 1]	1.00	1.00
Env[5, 1]	1.00	1.00
Env[6, 1]	1.00	1.00
Env[7, 1]	1.00	1.00
Env[8, 1]	1.00	1.00
Env[9, 1]	1.00	1.00
Env[10, 1]	1.00	1.01
Env[11, 1]	1.00	1.00
Env[12, 1]	1.00	1.00
Env[1, 2]	1.00	1.00
Env[2, 2]	1.00	1.01
Env[3, 2]	1.00	1.01
Env[4, 2]	1.00	1.00
Env[5, 2]	1.00	1.00
Env[6, 2]	1.00	1.00
Env[7, 2]	1.00	1.00
Env[8, 2]	1.00	1.00
Env[9, 2]	1.00	1.00
Env[10, 2]	1.00	1.00
Env[11, 2]	1.00	1.00
Env[12, 2]	1.00	1.00
HMRPVG[1, 1]	1.00	1.01
HMRPVG[2, 1]	1.00	1.01
HMRPVG[3, 1]	1.00	1.02
HMRPVG[4, 1]	1.00	1.01
HMRPVG[5, 1]	1.00	1.02
HMRPVG[6, 1]	1.00	1.01
HMRPVG[7, 1]	1.00	1.02
HMRPVG[1, 2]	1.00	1.00
HMRPVG[2, 2]	1.00	1.00
HMRPVG[3, 2]	1.00	1.00
HMRPVG[4, 2]	1.00	1.00
HMRPVG[5, 2]	1.00	1.00
HMRPVG[6, 2]	1.00	1.00
HMRPVG[7, 2]	1.00	1.00
MV[1, 1]	1.00	1.00
MV[2, 1]	1.00	1.00
MV[3, 1]	1.00	1.00
MV[4, 1]	1.00	1.00
MV[5, 1]	1.00	1.00
MV[6, 1]	1.00	1.00
MV[7, 1]	1.00	1.00
MV[1, 2]	1.00	1.00
MV[2, 2]	1.00	1.00
MV[3, 2]	1.00	1.00
MV[4, 2]	1.00	1.00
MV[5, 2]	1.00	1.00
MV[6, 2]	1.00	1.00
MV[7, 2]	1.00	1.00
Sup[1, 1]	1.00	1.00
Sup[2, 1]	1.00	1.00
Sup[3, 1]	1.00	1.00
Sup[4, 1]	1.00	1.00
Sup[5, 1]	1.00	1.00
Sup[6, 1]	1.00	1.00
Sup[7, 1]	1.00	1.00
Sup[1, 2]	1.00	1.00
Sup[2, 2]	1.00	1.00
Sup[3, 2]	1.00	1.00
Sup[4, 2]	1.00	1.00
Sup[5, 2]	1.00	1.00
Sup[6, 2]	1.00	1.00
Sup[7, 2]	1.00	1.00
a[1]	1.00	1.00
a[2]	1.00	1.00

b[1, 1, 1]	1.00	1.00
b[2, 1, 1]	1.00	1.00
b[3, 1, 1]	1.00	1.00
b[1, 2, 1]	1.00	1.00
b[2, 2, 1]	1.00	1.00
b[3, 2, 1]	1.00	1.00
b[1, 3, 1]	1.00	1.00
b[2, 3, 1]	1.00	1.00
b[3, 3, 1]	1.00	1.00
b[1, 4, 1]	1.00	1.00
b[2, 4, 1]	1.00	1.00
b[3, 4, 1]	1.00	1.00
b[1, 5, 1]	1.00	1.00
b[2, 5, 1]	1.00	1.00
b[3, 5, 1]	1.00	1.00
b[1, 6, 1]	1.00	1.00
b[2, 6, 1]	1.00	1.00
b[3, 6, 1]	1.00	1.00
b[1, 7, 1]	1.00	1.00
b[2, 7, 1]	1.00	1.00
b[3, 7, 1]	1.00	1.00
b[1, 8, 1]	1.00	1.00
b[2, 8, 1]	1.00	1.00
b[3, 8, 1]	1.00	1.00
b[1, 9, 1]	1.00	1.00
b[2, 9, 1]	1.00	1.00
b[3, 9, 1]	1.00	1.00
b[1, 10, 1]	1.00	1.00
b[2, 10, 1]	1.00	1.00
b[3, 10, 1]	1.00	1.00
b[1, 11, 1]	1.00	1.00
b[2, 11, 1]	1.00	1.00
b[3, 11, 1]	1.00	1.00
b[1, 12, 1]	1.00	1.00
b[2, 12, 1]	1.00	1.00
b[3, 12, 1]	1.00	1.00
b[1, 1, 2]	1.00	1.00
b[2, 1, 2]	1.00	1.00
b[3, 1, 2]	1.00	1.00
b[1, 2, 2]	1.00	1.00
b[2, 2, 2]	1.00	1.00
b[3, 2, 2]	1.00	1.00
b[1, 3, 2]	1.00	1.00
b[2, 3, 2]	1.00	1.00
b[3, 3, 2]	1.00	1.00
b[1, 4, 2]	1.00	1.00
b[2, 4, 2]	1.00	1.00
b[3, 4, 2]	1.00	1.00
b[1, 5, 2]	1.00	1.00
b[2, 5, 2]	1.00	1.00
b[3, 5, 2]	1.00	1.00
b[1, 6, 2]	1.00	1.00
b[2, 6, 2]	1.00	1.00
b[3, 6, 2]	1.00	1.00
b[1, 7, 2]	1.00	1.00
b[2, 7, 2]	1.00	1.00
b[3, 7, 2]	1.00	1.00
b[1, 8, 2]	1.00	1.00
b[2, 8, 2]	1.00	1.00
b[3, 8, 2]	1.00	1.00
b[1, 9, 2]	1.00	1.00
b[2, 9, 2]	1.00	1.00
b[3, 9, 2]	1.00	1.00
b[1, 10, 2]	1.00	1.00
b[2, 10, 2]	1.00	1.00
b[3, 10, 2]	1.00	1.00
b[1, 11, 2]	1.00	1.00
b[2, 11, 2]	1.00	1.00

b[3, 11, 2]	1.00	1.00
b[1, 12, 2]	1.00	1.00
b[2, 12, 2]	1.00	1.00
b[3, 12, 2]	1.00	1.00
covE[1, 1]	1.00	1.00
covE[2, 1]	1.00	1.00
covE[1, 2]	1.00	1.00
covE[2, 2]	1.00	1.00
covEV[1, 1]	1.00	1.00
covEV[2, 1]	1.00	1.00
covEV[1, 2]	1.00	1.00
covEV[2, 2]	1.00	1.00
covV[1, 1]	1.00	1.00
covV[2, 1]	1.00	1.00
covV[1, 2]	1.00	1.00
covV[2, 2]	1.00	1.00
ge[1, 1, 1]	1.00	1.01
ge[2, 1, 1]	1.00	1.00
ge[3, 1, 1]	1.00	1.01
ge[4, 1, 1]	1.00	1.00
ge[5, 1, 1]	1.00	1.00
ge[6, 1, 1]	1.00	1.00
ge[7, 1, 1]	1.00	1.00
ge[8, 1, 1]	1.00	1.00
ge[9, 1, 1]	1.00	1.00
ge[10, 1, 1]	1.00	1.00
ge[11, 1, 1]	1.00	1.00
ge[12, 1, 1]	1.00	1.00
ge[1, 2, 1]	1.00	1.01
ge[2, 2, 1]	1.01	1.02
ge[3, 2, 1]	1.00	1.00
ge[4, 2, 1]	1.00	1.00
ge[5, 2, 1]	1.00	1.00
ge[6, 2, 1]	1.00	1.00
ge[7, 2, 1]	1.00	1.00
ge[8, 2, 1]	1.00	1.00
ge[9, 2, 1]	1.00	1.00
ge[10, 2, 1]	1.00	1.00
ge[11, 2, 1]	1.00	1.00
ge[12, 2, 1]	1.00	1.00
ge[1, 3, 1]	1.00	1.02
ge[2, 3, 1]	1.01	1.02
ge[3, 3, 1]	1.00	1.00
ge[4, 3, 1]	1.00	1.00
ge[5, 3, 1]	1.00	1.00
ge[6, 3, 1]	1.00	1.00
ge[7, 3, 1]	1.00	1.00
ge[8, 3, 1]	1.00	1.00
ge[9, 3, 1]	1.00	1.00
ge[10, 3, 1]	1.00	1.00
ge[11, 3, 1]	1.00	1.00
ge[12, 3, 1]	1.00	1.00
ge[1, 4, 1]	1.00	1.02
ge[2, 4, 1]	1.00	1.01
ge[3, 4, 1]	1.00	1.01
ge[4, 4, 1]	1.00	1.00
ge[5, 4, 1]	1.00	1.00
ge[6, 4, 1]	1.00	1.00
ge[7, 4, 1]	1.00	1.00
ge[8, 4, 1]	1.00	1.00
ge[9, 4, 1]	1.00	1.00
ge[10, 4, 1]	1.00	1.00
ge[11, 4, 1]	1.00	1.00
ge[12, 4, 1]	1.00	1.00
ge[1, 5, 1]	1.00	1.01
ge[2, 5, 1]	1.00	1.01
ge[3, 5, 1]	1.00	1.00
ge[4, 5, 1]	1.00	1.00

ge[5, 5, 1]	1.00	1.00
ge[6, 5, 1]	1.00	1.00
ge[7, 5, 1]	1.00	1.00
ge[8, 5, 1]	1.00	1.00
ge[9, 5, 1]	1.00	1.00
ge[10, 5, 1]	1.00	1.00
ge[11, 5, 1]	1.00	1.00
ge[12, 5, 1]	1.00	1.00
ge[1, 6, 1]	1.00	1.01
ge[2, 6, 1]	1.00	1.00
ge[3, 6, 1]	1.00	1.01
ge[4, 6, 1]	1.00	1.00
ge[5, 6, 1]	1.00	1.00
ge[6, 6, 1]	1.00	1.00
ge[7, 6, 1]	1.00	1.00
ge[8, 6, 1]	1.00	1.00
ge[9, 6, 1]	1.00	1.00
ge[10, 6, 1]	1.00	1.00
ge[11, 6, 1]	1.00	1.00
ge[12, 6, 1]	1.00	1.00
ge[1, 7, 1]	1.00	1.02
ge[2, 7, 1]	1.00	1.01
ge[3, 7, 1]	1.00	1.00
ge[4, 7, 1]	1.00	1.00
ge[5, 7, 1]	1.00	1.00
ge[6, 7, 1]	1.00	1.00
ge[7, 7, 1]	1.00	1.00
ge[8, 7, 1]	1.00	1.00
ge[9, 7, 1]	1.00	1.00
ge[10, 7, 1]	1.00	1.00
ge[11, 7, 1]	1.00	1.00
ge[12, 7, 1]	1.00	1.00
ge[1, 1, 2]	1.00	1.00
ge[2, 1, 2]	1.00	1.00
ge[3, 1, 2]	1.00	1.02
ge[4, 1, 2]	1.00	1.00
ge[5, 1, 2]	1.00	1.00
ge[6, 1, 2]	1.00	1.00
ge[7, 1, 2]	1.00	1.00
ge[8, 1, 2]	1.00	1.00
ge[9, 1, 2]	1.00	1.01
ge[10, 1, 2]	1.00	1.00
ge[11, 1, 2]	1.00	1.00
ge[12, 1, 2]	1.00	1.00
ge[1, 2, 2]	1.00	1.00
ge[2, 2, 2]	1.00	1.01
ge[3, 2, 2]	1.00	1.01
ge[4, 2, 2]	1.00	1.00
ge[5, 2, 2]	1.00	1.00
ge[6, 2, 2]	1.00	1.00
ge[7, 2, 2]	1.00	1.00
ge[8, 2, 2]	1.00	1.00
ge[9, 2, 2]	1.00	1.00
ge[10, 2, 2]	1.00	1.00
ge[11, 2, 2]	1.00	1.00
ge[12, 2, 2]	1.00	1.00
ge[1, 3, 2]	1.00	1.01
ge[2, 3, 2]	1.00	1.01
ge[3, 3, 2]	1.00	1.01
ge[4, 3, 2]	1.00	1.00
ge[5, 3, 2]	1.00	1.00
ge[6, 3, 2]	1.00	1.00
ge[7, 3, 2]	1.00	1.00
ge[8, 3, 2]	1.00	1.00
ge[9, 3, 2]	1.00	1.00
ge[10, 3, 2]	1.00	1.00
ge[11, 3, 2]	1.00	1.00
ge[12, 3, 2]	1.00	1.00

ge[1, 4, 2]	1.00	1.01
ge[2, 4, 2]	1.00	1.01
ge[3, 4, 2]	1.00	1.01
ge[4, 4, 2]	1.00	1.00
ge[5, 4, 2]	1.00	1.00
ge[6, 4, 2]	1.00	1.00
ge[7, 4, 2]	1.00	1.00
ge[8, 4, 2]	1.00	1.00
ge[9, 4, 2]	1.00	1.01
ge[10, 4, 2]	1.00	1.00
ge[11, 4, 2]	1.00	1.00
ge[12, 4, 2]	1.00	1.00
ge[1, 5, 2]	1.00	1.01
ge[2, 5, 2]	1.00	1.01
ge[3, 5, 2]	1.00	1.01
ge[4, 5, 2]	1.00	1.00
ge[5, 5, 2]	1.00	1.00
ge[6, 5, 2]	1.00	1.00
ge[7, 5, 2]	1.00	1.00
ge[8, 5, 2]	1.00	1.00
ge[9, 5, 2]	1.00	1.01
ge[10, 5, 2]	1.00	1.00
ge[11, 5, 2]	1.00	1.00
ge[12, 5, 2]	1.00	1.00
ge[1, 6, 2]	1.00	1.00
ge[2, 6, 2]	1.00	1.00
ge[3, 6, 2]	1.00	1.02
ge[4, 6, 2]	1.00	1.00
ge[5, 6, 2]	1.00	1.00
ge[6, 6, 2]	1.00	1.00
ge[7, 6, 2]	1.00	1.00
ge[8, 6, 2]	1.00	1.00
ge[9, 6, 2]	1.00	1.01
ge[10, 6, 2]	1.00	1.00
ge[11, 6, 2]	1.00	1.00
ge[12, 6, 2]	1.00	1.00
ge[1, 7, 2]	1.00	1.01
ge[2, 7, 2]	1.00	1.01
ge[3, 7, 2]	1.00	1.01
ge[4, 7, 2]	1.00	1.00
ge[5, 7, 2]	1.00	1.00
ge[6, 7, 2]	1.00	1.00
ge[7, 7, 2]	1.00	1.00
ge[8, 7, 2]	1.00	1.00
ge[9, 7, 2]	1.00	1.00
ge[10, 7, 2]	1.00	1.00
ge[11, 7, 2]	1.00	1.00
ge[12, 7, 2]	1.00	1.00
ksige[1]	1.00	1.00
ksige[2]	1.00	1.00
ksiv[1]	1.00	1.00
ksiv[2]	1.00	1.00
rhoE	1.00	1.00
rhoEV	1.00	1.00
rhoV	1.00	1.00
sig2[1]	1.00	1.00
sig2[2]	1.00	1.00
sig2[3]	1.00	1.00
sig2[4]	1.00	1.00
sig2[5]	1.00	1.00
sig2[6]	1.00	1.00
sig2[7]	1.00	1.00
sig2[8]	1.00	1.00
sig2[9]	1.00	1.00
sig2[10]	1.00	1.00
sig2[11]	1.00	1.00
sig2[12]	1.00	1.00
sig2[13]	1.00	1.00

```
sig2[14]           1.00       1.00
sig2[15]           1.00       1.00
sig2[16]           1.00       1.00
sig2[17]           1.00       1.00
sig2[18]           1.00       1.00
sig2[19]           1.00       1.00
sig2[20]           1.00       1.00
sig2[21]           1.00       1.00
sig2[22]           1.00       1.00
sig2[23]           1.00       1.00
sig2[24]           1.00       1.00
sig2R[1]           1.00       1.00
sig2R[2]           1.00       1.00
sigR[1]            1.00       1.00
sigR[2]            1.00       1.00
tau[1]             1.00       1.00
tau[2]             1.00       1.00
tau[3]             1.00       1.00
tau[4]             1.00       1.00
tau[5]             1.00       1.00
tau[6]             1.00       1.00
tau[7]             1.00       1.00
tau[8]             1.00       1.00
tau[9]             1.00       1.00
tau[10]            1.00       1.00
tau[11]            1.00       1.00
tau[12]            1.00       1.00
tau[13]            1.00       1.00
tau[14]            1.00       1.00
tau[15]            1.00       1.00
tau[16]            1.00       1.00
tau[17]            1.00       1.00
tau[18]            1.00       1.00
tau[19]            1.00       1.00
tau[20]            1.00       1.00
tau[21]            1.00       1.00
tau[22]            1.00       1.00
tau[23]            1.00       1.00
tau[24]            1.00       1.00
va[1, 1]           1.00       1.01
va[2, 1]           1.00       1.01
va[3, 1]           1.00       1.00
va[4, 1]           1.00       1.00
va[5, 1]           1.00       1.01
va[6, 1]           1.00       1.01
va[7, 1]           1.00       1.00
va[1, 2]           1.00       1.00
va[2, 2]           1.00       1.00
va[3, 2]           1.00       1.00
va[4, 2]           1.00       1.00
va[5, 2]           1.00       1.00
va[6, 2]           1.00       1.00
va[7, 2]           1.00       1.00

> gelman.plot(mcmcb,ask=TRUE)
> plot(mcmcb,ask=TRUE)
> MCMCplot(mcmcb,params=c('covV'),horiz=FALSE,HPD=TRUE)
> MCMCplot(mcmcb,params=c('covE'),horiz=FALSE,HPD=TRUE)
> MCMCplot(mcmcb,params=c('covEV'),horiz=FALSE,HPD=TRUE)
>
>
> ###### Generated quantities
>
> means<-MCMCchains(mcmcb,params='MV')
> mew1<-MCMCchains(mcmcb,params=c('MV[1, 1]','MV[5, 1]'),ISB=FALSE,exact=TRUE)
> mean1<-rowMeans(mew1)
> mew2<-MCMCchains(mcmcb,params=c('MV[1, 1]','MV[2, 1]','MV[3, 1]',
+     'MV[4, 1]','MV[5, 1]','MV[6, 1]','MV[7, 1]'),
```

```
+     ISB=FALSE,exact=TRUE)
> mean2<-rowMeans(mew2)
> mew3<-MCMCchains(mcmcb,params=c('MV[1, 2]','MV[2, 2]','MV[3, 2]',
+     'MV[4, 2]','MV[5, 2]','MV[6, 2]','MV[7, 2]'),
+     ISB=FALSE,exact=TRUE)
> mean3<-rowMeans(mew3)
> ind1<-matrix(nrow=length(means[,1]),ncol=7)
> ind2<-matrix(nrow=length(means[,1]),ncol=7)
> ind3<-matrix(nrow=length(means[,1]),ncol=7)
> for(i in 1:length(means[,1])){
+  for(j in 1:7){
+    ind1[i,j]<-ifelse(means[i,j]>mean1[i],1,0)
+    ind2[i,j]<-ifelse(means[i,j]>mean2[i],1,0)
+    ind3[i,j]<-ifelse(means[i,j+7]>mean3[i],1,0)
+  }
+ }
> colMeans(ind1)
[1] 0.006069333 0.821525333 0.927360000 0.846613333 0.993930667 0.762805333
0.990624000
> colMeans(ind2)
[1] 0.0031040 0.4944000 0.7492587 0.5149653 0.8296747 0.3826453 0.9812480
> colMeans(ind3)
[1] 0.27709867 0.98770133 0.38906667 0.50069333 0.59143467 0.01208533 0.73988267
>
```