Version 3: 3 clusters

Simulate data

```
I <- 50
K <- 3
S <- 10

set.seed(123)

d <- matrix(NA, nrow=K, ncol=S)
c <- matrix(150, nrow=K, ncol=S)
for (s in 1:S) {
  d[, s] <- runif(K, 0.05, 1)
}

a <- d*(c-1)+1
b <- (1-d)*(c-2)+1

pi <- as.vector(rdirichlet(1, rep(1, K)))
z <- sample(1:K, size = I, replace = T, prob = pi)

w <- matrix(NA, nrow=I, ncol=S)
for (s in 1:S) {
  w[, s] <- rbeta(I, a[,s][z], b[,s][z])
}

tcn <- matrix(2, nrow=I, ncol=S)
m <- matrix(rep(sample(1:2, size = I, replace = T), S), nrow=I, ncol=S)

calcTheta <- function(m, tcn, w) {
  (m * w) / (tcn * w + 2*(1-w))
}
theta <- calcTheta(m, tcn, w)

n <- replicate(S, rpois(I, 100))
y <- matrix(NA, nrow=I, ncol=S)
for (i in 1:I) {
  for (s in 1:S) {
    y[i, s] <- rbinom(1, n[i, s], theta[i,s])
  }
}
```

JAGS

```
jags.file <- file.path(models.dir, "v3_noConstraints_mode.jags")

test.data <- list("I" = I, "S" = S, "K" = K,
                  "y" = y, "n" = n,
                  "m" = m, "tcn" = tcn)
```

```
jags.m <- jags.model(jags.file, test.data,
                     n.chains = 1,
                     inits = list(".RNG.name" = "base::Wichmann-Hill",
                                  ".RNG.seed" = 12))
```

```
## Compiling model graph
##    Resolving undeclared variables
##    Allocating nodes
## Graph information:
##    Observed stochastic nodes: 500
##    Unobserved stochastic nodes: 611
##    Total graph size: 8511
##
## Initializing model
```

```
params <- c("z", "w", "d", "c")
samps <- coda.samples(jags.m, params, n.iter=6000, thin=5)
s <- summary(samps)
effectiveSize(samps)
```

```
##     c[1,1]     c[2,1]     c[3,1]     c[1,2]     c[2,2]     c[3,2]
## 1038.57439 1070.24286  904.91394  974.74596  920.33897  720.72409
##     c[1,3]     c[2,3]     c[3,3]     c[1,4]     c[2,4]     c[3,4]
## 1224.50562  979.62298  998.51378 1056.46316  991.47035  866.58210
##     c[1,5]     c[2,5]     c[3,5]     c[1,6]     c[2,6]     c[3,6]
##  845.97526 1072.76692  879.91499  964.39917 1041.14976  813.80547
##     c[1,7]     c[2,7]     c[3,7]     c[1,8]     c[2,8]     c[3,8]
##  765.71554  820.63102  935.25693  130.50699 1025.49881  807.74308
##     c[1,9]     c[2,9]     c[3,9]    c[1,10]    c[2,10]    c[3,10]
##  872.13468 1050.98260  784.10374 1138.56893 1458.21907 1071.53502
##     d[1,1]     d[2,1]     d[3,1]     d[1,2]     d[2,2]     d[3,2]
## 1325.54327  865.95751 1124.76216  468.29675  726.70521  723.81648
##     d[1,3]     d[2,3]     d[3,3]     d[1,4]     d[2,4]     d[3,4]
## 1200.00000  794.75409 1087.87327 1061.65181  737.58478  761.52284
##     d[1,5]     d[2,5]     d[3,5]     d[1,6]     d[2,6]     d[3,6]
##  728.16272 1030.45616  954.74738  355.66414 1069.50831  672.81211
##     d[1,7]     d[2,7]     d[3,7]     d[1,8]     d[2,8]     d[3,8]
##  370.80864  767.22357  956.21994   25.02602 1021.41512  782.98112
##     d[1,9]     d[2,9]     d[3,9]    d[1,10]    d[2,10]    d[3,10]
## 1200.00000 1071.62865  857.14673 1011.93822 1007.56314  875.59332
##     w[1,1]     w[2,1]     w[3,1]     w[4,1]     w[5,1]     w[6,1]
## 1200.00000 1577.07550 1092.65131 1200.00000 1200.00000 1107.13555
##     w[7,1]     w[8,1]     w[9,1]    w[10,1]    w[11,1]    w[12,1]
## 1200.00000  924.02811 1200.00000 1200.00000 1200.00000 1349.39125
##    w[13,1]    w[14,1]    w[15,1]    w[16,1]    w[17,1]    w[18,1]
## 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[19,1]    w[20,1]    w[21,1]    w[22,1]    w[23,1]    w[24,1]
## 1200.00000 1072.25589 1200.00000 1132.26636 1200.00000 1200.00000
##    w[25,1]    w[26,1]    w[27,1]    w[28,1]    w[29,1]    w[30,1]
##  920.94960 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[31,1]    w[32,1]    w[33,1]    w[34,1]    w[35,1]    w[36,1]
## 1200.00000 1415.03389 1200.00000 1074.34389 1200.00000 1606.27843
##    w[37,1]    w[38,1]    w[39,1]    w[40,1]    w[41,1]    w[42,1]
## 1070.41908 1200.00000  962.70830 1200.00000 1200.00000 1200.00000
```

```
##    w[43,1]    w[44,1]    w[45,1]    w[46,1]    w[47,1]    w[48,1]
## 1200.00000 1200.00000 1260.54662 1200.00000 1200.00000 1200.00000
##    w[49,1]    w[50,1]     w[1,2]     w[2,2]     w[3,2]     w[4,2]
## 1200.00000 1200.00000  740.45792 1200.00000 1200.00000 1075.80174
##     w[5,2]     w[6,2]     w[7,2]     w[8,2]     w[9,2]    w[10,2]
## 1013.57829 1200.00000 1200.00000 1048.12661 1200.00000 1200.00000
##    w[11,2]    w[12,2]    w[13,2]    w[14,2]    w[15,2]    w[16,2]
## 1025.90684 1200.00000 1200.00000 1200.00000 1009.04361  996.45851
##    w[17,2]    w[18,2]    w[19,2]    w[20,2]    w[21,2]    w[22,2]
## 1020.31224 1199.31546 1200.00000 1200.00000 1200.00000 1209.98244
##    w[23,2]    w[24,2]    w[25,2]    w[26,2]    w[27,2]    w[28,2]
## 1023.95948 1200.00000 1010.07077 1084.27170 1200.00000 1328.11204
##    w[29,2]    w[30,2]    w[31,2]    w[32,2]    w[33,2]    w[34,2]
## 1200.00000 1033.84407 1200.00000 1092.36526 1073.67452 1200.00000
##    w[35,2]    w[36,2]    w[37,2]    w[38,2]    w[39,2]    w[40,2]
##  844.16729 1200.00000 1200.00000 1200.00000 1391.15535 1200.00000
##    w[41,2]    w[42,2]    w[43,2]    w[44,2]    w[45,2]    w[46,2]
##  964.20521 1200.00000 1013.16406 1200.00000 1025.89716 1200.00000
##    w[47,2]    w[48,2]    w[49,2]    w[50,2]     w[1,3]     w[2,3]
##  959.91023 1100.79834 1200.00000 1200.00000 1200.00000 1200.00000
##     w[3,3]     w[4,3]     w[5,3]     w[6,3]     w[7,3]     w[8,3]
## 1366.27706 1200.00000 1200.00000 1342.21806 1200.00000 1200.00000
##     w[9,3]    w[10,3]    w[11,3]    w[12,3]    w[13,3]    w[14,3]
## 1200.00000 1200.00000  946.84027 1200.00000 1200.00000 1345.54245
##    w[15,3]    w[16,3]    w[17,3]    w[18,3]    w[19,3]    w[20,3]
## 1367.19412 1200.00000 1053.37926 1006.28949 1077.40161 1200.00000
##    w[21,3]    w[22,3]    w[23,3]    w[24,3]    w[25,3]    w[26,3]
## 1200.00000 1200.00000 1200.00000 1083.33949 1050.39143 1200.00000
##    w[27,3]    w[28,3]    w[29,3]    w[30,3]    w[31,3]    w[32,3]
## 1200.00000  899.55833 1200.00000 1098.44913 1200.00000 1102.45506
##    w[33,3]    w[34,3]    w[35,3]    w[36,3]    w[37,3]    w[38,3]
## 1200.00000 1200.00000 1200.00000 1200.00000 1041.01619 1052.96341
##    w[39,3]    w[40,3]    w[41,3]    w[42,3]    w[43,3]    w[44,3]
## 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[45,3]    w[46,3]    w[47,3]    w[48,3]    w[49,3]    w[50,3]
## 1038.97341 1200.00000 1534.78310 1200.00000 1622.74212 1200.00000
##     w[1,4]     w[2,4]     w[3,4]     w[4,4]     w[5,4]     w[6,4]
## 1200.00000 1200.00000  663.26370 1200.00000 1200.00000 1200.00000
##     w[7,4]     w[8,4]     w[9,4]    w[10,4]    w[11,4]    w[12,4]
## 1032.30069 1200.00000 1200.00000 1434.16942 1200.00000 1200.00000
##    w[13,4]    w[14,4]    w[15,4]    w[16,4]    w[17,4]    w[18,4]
## 1200.00000 1200.00000 1200.00000 1191.85351 1105.58336 1200.00000
##    w[19,4]    w[20,4]    w[21,4]    w[22,4]    w[23,4]    w[24,4]
## 1200.00000 1315.11703 1200.00000  992.60836 1200.00000 1200.00000
##    w[25,4]    w[26,4]    w[27,4]    w[28,4]    w[29,4]    w[30,4]
## 1030.95606 1040.88384 1200.00000 1016.36964 1200.00000  934.37685
##    w[31,4]    w[32,4]    w[33,4]    w[34,4]    w[35,4]    w[36,4]
## 1200.00000 1077.08401 1200.00000 1200.00000 1200.00000 1200.00000
##    w[37,4]    w[38,4]    w[39,4]    w[40,4]    w[41,4]    w[42,4]
## 1091.06944 1042.37510 1200.00000 1200.00000 1200.00000 1379.90805
##    w[43,4]    w[44,4]    w[45,4]    w[46,4]    w[47,4]    w[48,4]
## 1018.15078 1200.00000 1063.41188 1200.00000 1200.00000 1200.00000
##    w[49,4]    w[50,4]     w[1,5]     w[2,5]     w[3,5]     w[4,5]
## 1200.00000 1071.68805 1200.00000 1200.00000 1200.00000  995.63561
```

```
##     w[5,5]     w[6,5]     w[7,5]     w[8,5]     w[9,5]    w[10,5]
## 1091.08595 1200.00000 1176.18331 1200.00000 1081.65478 1200.00000
##    w[11,5]    w[12,5]    w[13,5]    w[14,5]    w[15,5]    w[16,5]
## 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[17,5]    w[18,5]    w[19,5]    w[20,5]    w[21,5]    w[22,5]
## 1200.00000 1052.05375 1200.00000 1093.46578 1200.00000 1200.00000
##    w[23,5]    w[24,5]    w[25,5]    w[26,5]    w[27,5]    w[28,5]
## 1200.00000 1200.00000 1096.28879 1200.00000 1014.98430 1200.00000
##    w[29,5]    w[30,5]    w[31,5]    w[32,5]    w[33,5]    w[34,5]
## 1200.00000 1200.00000 1200.00000 1096.01648 1200.00000 1091.75678
##    w[35,5]    w[36,5]    w[37,5]    w[38,5]    w[39,5]    w[40,5]
## 1200.00000 1095.40552 1200.00000 1200.00000 1200.00000 1200.00000
##    w[41,5]    w[42,5]    w[43,5]    w[44,5]    w[45,5]    w[46,5]
## 1200.00000 1200.00000 1102.70155 1200.00000 1075.54504 1200.00000
##    w[47,5]    w[48,5]    w[49,5]    w[50,5]     w[1,6]     w[2,6]
## 1443.44612 1200.00000 1200.00000 1200.00000 1022.92595 1033.12779
##     w[3,6]     w[4,6]     w[5,6]     w[6,6]     w[7,6]     w[8,6]
## 1200.00000 1200.00000 1200.00000 1029.05511 1200.00000 1200.00000
##     w[9,6]    w[10,6]    w[11,6]    w[12,6]    w[13,6]    w[14,6]
## 1200.00000 1343.43594 1200.00000 1200.00000 1200.00000 1200.00000
##    w[15,6]    w[16,6]    w[17,6]    w[18,6]    w[19,6]    w[20,6]
## 1200.00000 1200.00000 1037.17498 1051.89056 1060.54003 1102.98577
##    w[21,6]    w[22,6]    w[23,6]    w[24,6]    w[25,6]    w[26,6]
## 1049.94824 1200.00000 1341.21469 1467.86014 1200.00000 1200.00000
##    w[27,6]    w[28,6]    w[29,6]    w[30,6]    w[31,6]    w[32,6]
## 1200.00000 1200.00000 1393.10450 1200.00000 1200.00000 1200.00000
##    w[33,6]    w[34,6]    w[35,6]    w[36,6]    w[37,6]    w[38,6]
## 1200.00000 1200.00000 1200.00000 1200.00000 1407.10128 1078.74392
##    w[39,6]    w[40,6]    w[41,6]    w[42,6]    w[43,6]    w[44,6]
## 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[45,6]    w[46,6]    w[47,6]    w[48,6]    w[49,6]    w[50,6]
## 1200.00000 1200.00000 1016.79491 1206.67672 1200.00000 1200.00000
##     w[1,7]     w[2,7]     w[3,7]     w[4,7]     w[5,7]     w[6,7]
## 1200.00000 1003.06941 1050.54487 1200.00000 1200.00000 1200.00000
##     w[7,7]     w[8,7]     w[9,7]    w[10,7]    w[11,7]    w[12,7]
##  955.38052 1040.17202 1200.00000 1200.00000 1228.22753 1200.00000
##    w[13,7]    w[14,7]    w[15,7]    w[16,7]    w[17,7]    w[18,7]
## 1200.00000 1200.00000 1200.00000 1039.41240 1200.00000 1200.00000
##    w[19,7]    w[20,7]    w[21,7]    w[22,7]    w[23,7]    w[24,7]
## 1200.00000 1029.50947 1200.00000 1023.66052 1200.00000 1046.04136
##    w[25,7]    w[26,7]    w[27,7]    w[28,7]    w[29,7]    w[30,7]
##  979.88836 1200.00000 1351.66439 1021.55923 1200.00000  893.59118
##    w[31,7]    w[32,7]    w[33,7]    w[34,7]    w[35,7]    w[36,7]
## 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[37,7]    w[38,7]    w[39,7]    w[40,7]    w[41,7]    w[42,7]
## 1200.00000 1077.12873 1200.00000 1200.00000 1200.00000 1216.35301
##    w[43,7]    w[44,7]    w[45,7]    w[46,7]    w[47,7]    w[48,7]
## 1200.00000 1200.00000 1096.77946 1200.00000 1432.77977 1200.00000
##    w[49,7]    w[50,7]     w[1,8]     w[2,8]     w[3,8]     w[4,8]
## 1200.00000 1193.92503 1005.03724 1200.00000  901.71348 1151.24623
##     w[5,8]     w[6,8]     w[7,8]     w[8,8]     w[9,8]    w[10,8]
## 1200.00000 1123.89977 1134.69527 1200.00000 1069.72484 1200.00000
##    w[11,8]    w[12,8]    w[13,8]    w[14,8]    w[15,8]    w[16,8]
## 1200.00000 1200.00000 1007.26129 1200.00000 1200.00000 1200.00000
```

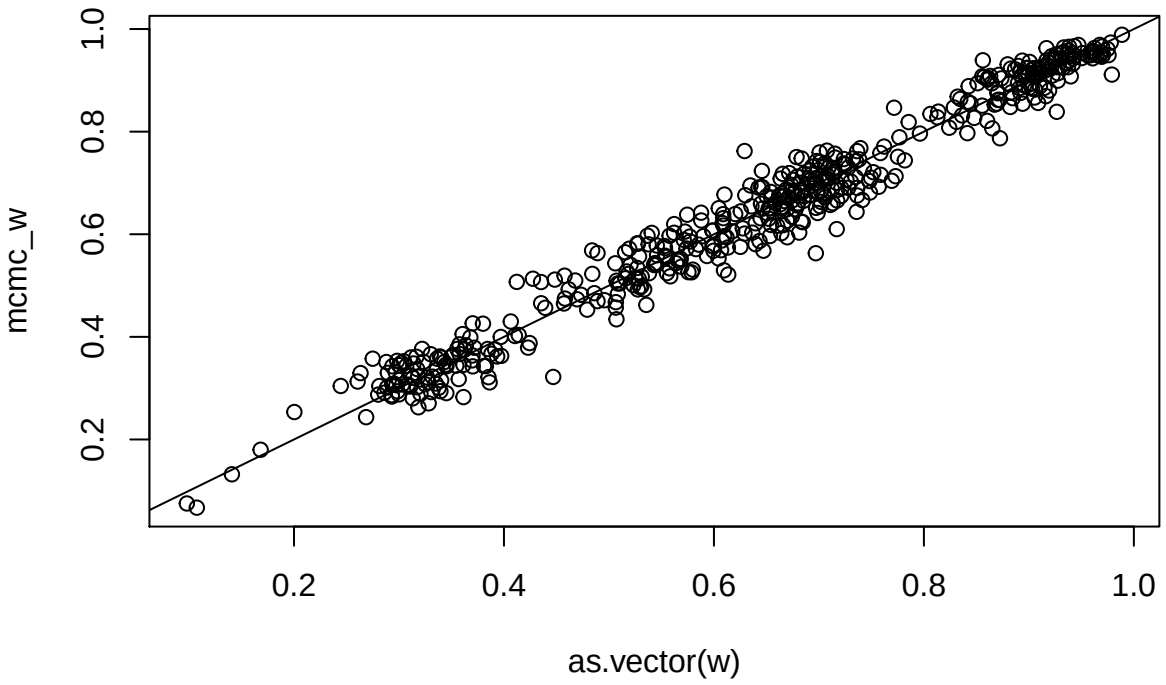
```
##    w[17,8]    w[18,8]    w[19,8]    w[20,8]    w[21,8]    w[22,8]
## 1200.00000 1200.00000 1200.00000 1072.65126  998.44288 1200.00000
##    w[23,8]    w[24,8]    w[25,8]    w[26,8]    w[27,8]    w[28,8]
## 1200.00000 1391.03203 1200.00000  978.96024 1200.00000 1200.00000
##    w[29,8]    w[30,8]    w[31,8]    w[32,8]    w[33,8]    w[34,8]
## 1200.00000 1303.52084 1333.51453 1200.00000 1200.00000 1200.00000
##    w[35,8]    w[36,8]    w[37,8]    w[38,8]    w[39,8]    w[40,8]
## 1200.00000 1200.00000 1200.00000 1200.00000 1082.40570 1080.84971
##    w[41,8]    w[42,8]    w[43,8]    w[44,8]    w[45,8]    w[46,8]
## 1093.81605 1200.00000 1005.53544  555.66366 1200.00000 1200.00000
##    w[47,8]    w[48,8]    w[49,8]    w[50,8]     w[1,9]     w[2,9]
## 1085.96374 1114.90339 1200.00000 1200.00000 1726.98874 1200.00000
##     w[3,9]     w[4,9]     w[5,9]     w[6,9]     w[7,9]     w[8,9]
## 1251.07462 1200.00000 1341.65817 1200.00000 1264.26361 1103.15745
##     w[9,9]    w[10,9]    w[11,9]    w[12,9]    w[13,9]    w[14,9]
## 1200.00000 1200.00000 1460.97943 1200.00000  956.76805 1200.00000
##    w[15,9]    w[16,9]    w[17,9]    w[18,9]    w[19,9]    w[20,9]
## 1473.27365 1200.00000 1200.00000 1200.00000 1200.00000 1200.00000
##    w[21,9]    w[22,9]    w[23,9]    w[24,9]    w[25,9]    w[26,9]
## 1200.00000 1278.52651 1200.00000 2315.34476 1162.68442 1200.00000
##    w[27,9]    w[28,9]    w[29,9]    w[30,9]    w[31,9]    w[32,9]
## 1083.94337 1200.00000 1091.91372 1200.00000  912.60379 1200.00000
##    w[33,9]    w[34,9]    w[35,9]    w[36,9]    w[37,9]    w[38,9]
## 1092.90197 1200.00000 1200.00000 1200.00000 1200.00000 1031.77439
##    w[39,9]    w[40,9]    w[41,9]    w[42,9]    w[43,9]    w[44,9]
## 1242.37922 1200.00000 1200.00000 1103.78365 1200.00000 1200.00000
##    w[45,9]    w[46,9]    w[47,9]    w[48,9]    w[49,9]    w[50,9]
## 1200.00000 1200.00000 1200.00000 1096.43348 1200.00000 1200.00000
##    w[1,10]    w[2,10]    w[3,10]    w[4,10]    w[5,10]    w[6,10]
## 1352.75119 1200.00000 1200.00000 1200.00000 1200.00000 1229.04209
##    w[7,10]    w[8,10]    w[9,10]   w[10,10]   w[11,10]   w[12,10]
## 1200.00000 1200.00000 1200.00000 1041.16898  995.65107 1200.00000
##   w[13,10]   w[14,10]   w[15,10]   w[16,10]   w[17,10]   w[18,10]
## 1073.34221 1200.00000 1200.00000 1470.89847 1200.00000 1200.00000
##   w[19,10]   w[20,10]   w[21,10]   w[22,10]   w[23,10]   w[24,10]
## 1200.00000 1096.88128 1085.29892 1200.00000 1041.69551 1200.00000
##   w[25,10]   w[26,10]   w[27,10]   w[28,10]   w[29,10]   w[30,10]
## 1200.00000 1200.00000 1025.70812 1200.00000 1200.00000 1142.45649
##   w[31,10]   w[32,10]   w[33,10]   w[34,10]   w[35,10]   w[36,10]
## 1200.00000 1200.00000 1200.00000 1200.00000 1104.29837 1200.00000
##   w[37,10]   w[38,10]   w[39,10]   w[40,10]   w[41,10]   w[42,10]
## 1200.00000 1186.26087 1200.00000 1145.59222 1097.41677 1200.00000
##   w[43,10]   w[44,10]   w[45,10]   w[46,10]   w[47,10]   w[48,10]
## 1200.00000 1200.00000 1200.00000 1351.71657 1200.00000 1090.61599
##   w[49,10]   w[50,10]       z[1]       z[2]       z[3]       z[4]
## 1138.22282 1200.00000    0.00000    0.00000    0.00000    0.00000
##       z[5]       z[6]       z[7]       z[8]       z[9]      z[10]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[11]      z[12]      z[13]      z[14]      z[15]      z[16]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[17]      z[18]      z[19]      z[20]      z[21]      z[22]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[23]      z[24]      z[25]      z[26]      z[27]      z[28]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
```

```
##      z[29]      z[30]      z[31]      z[32]      z[33]      z[34]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[35]      z[36]      z[37]      z[38]      z[39]      z[40]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[41]      z[42]      z[43]      z[44]      z[45]      z[46]
##    0.00000    0.00000    0.00000    0.00000    0.00000    0.00000
##      z[47]      z[48]      z[49]      z[50]
##    0.00000    0.00000    0.00000    0.00000
```

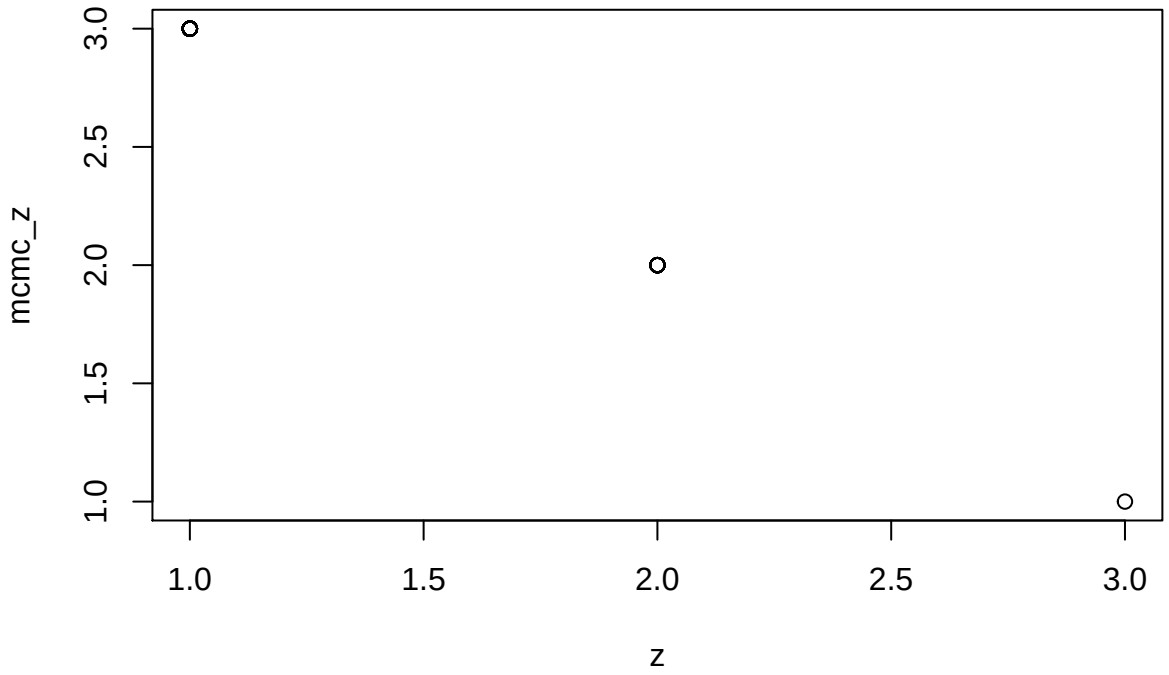
```
pdf(file.path(trace.dir, paste0(runName, "_trace.pdf")))
plot(samps)
dev.off()
```

```
## pdf
##   2
```

```
mcmc_cals <- s$statistics
mcmc_w <- mcmc_cals[substr(rownames(mcmc_cals), 1, 1) == "w", "Mean"]
plot(as.vector(w), mcmc_w, type = "p")
abline(a=0, b=1)
```

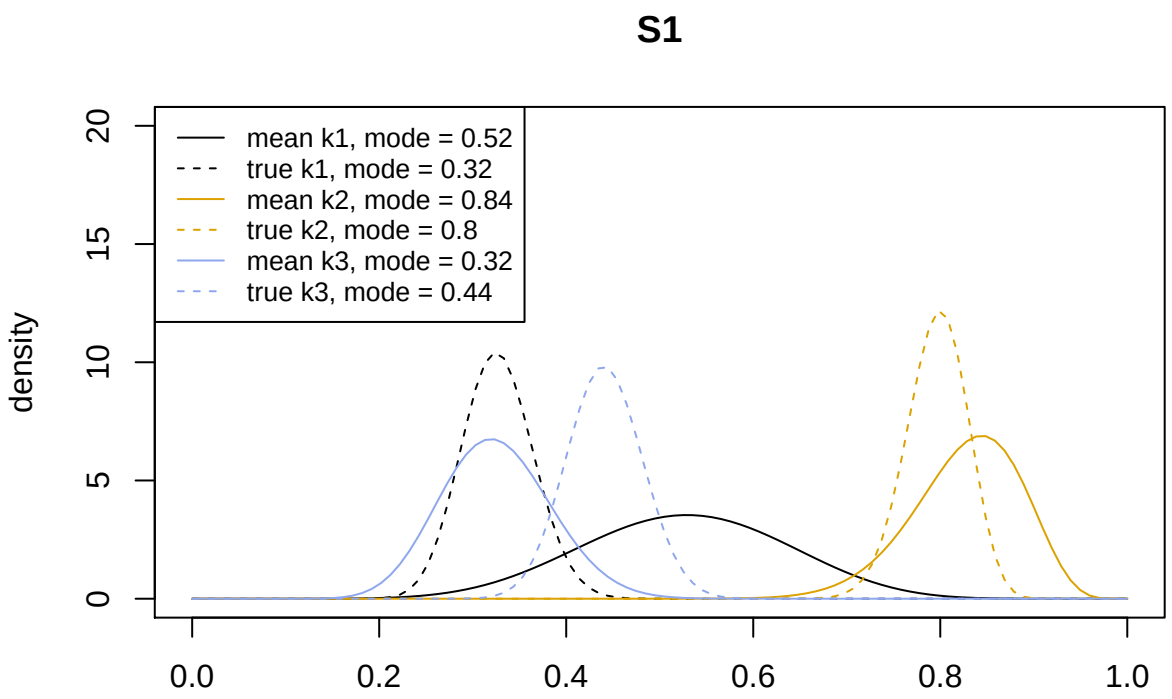


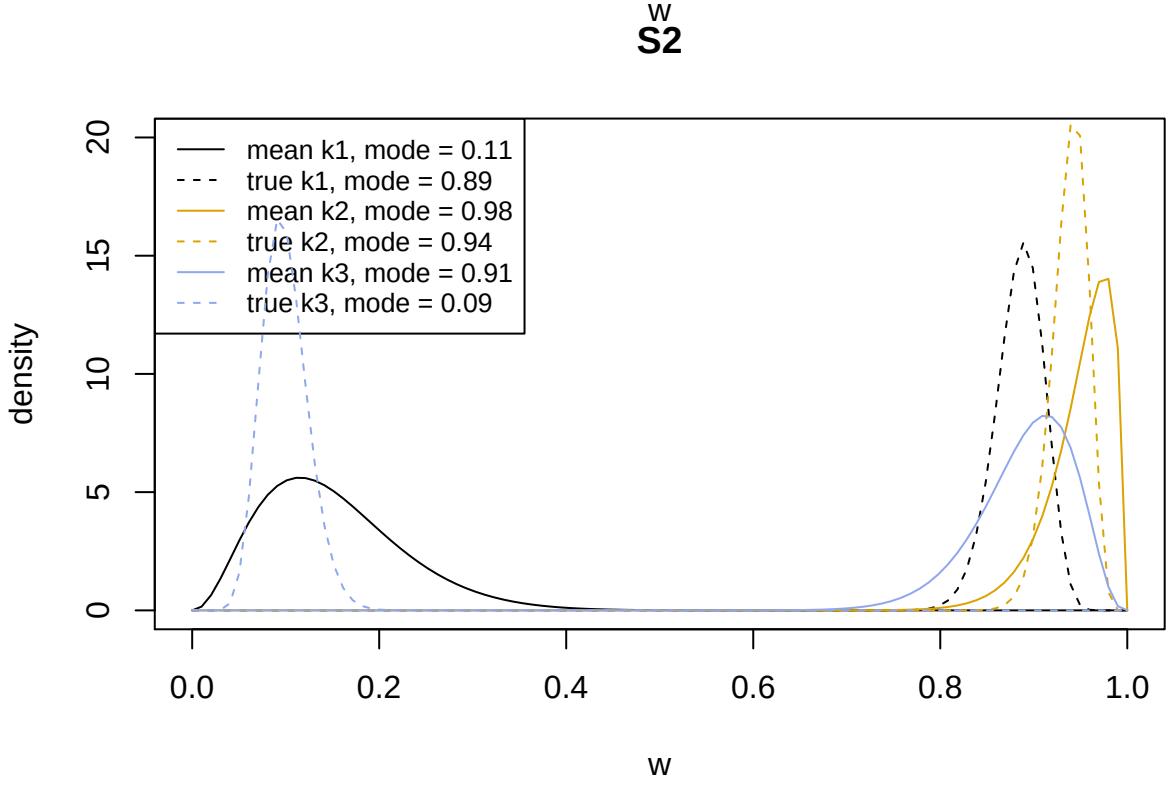

```
mcmc_z <- as.vector(mcmc_cals[substr(rownames(mcmc_cals), 1, 1) == "z", "Mean"])
#mcmc_z <- round(mcmc_z, 0)
plot(z, mcmc_z, type = "p")
```

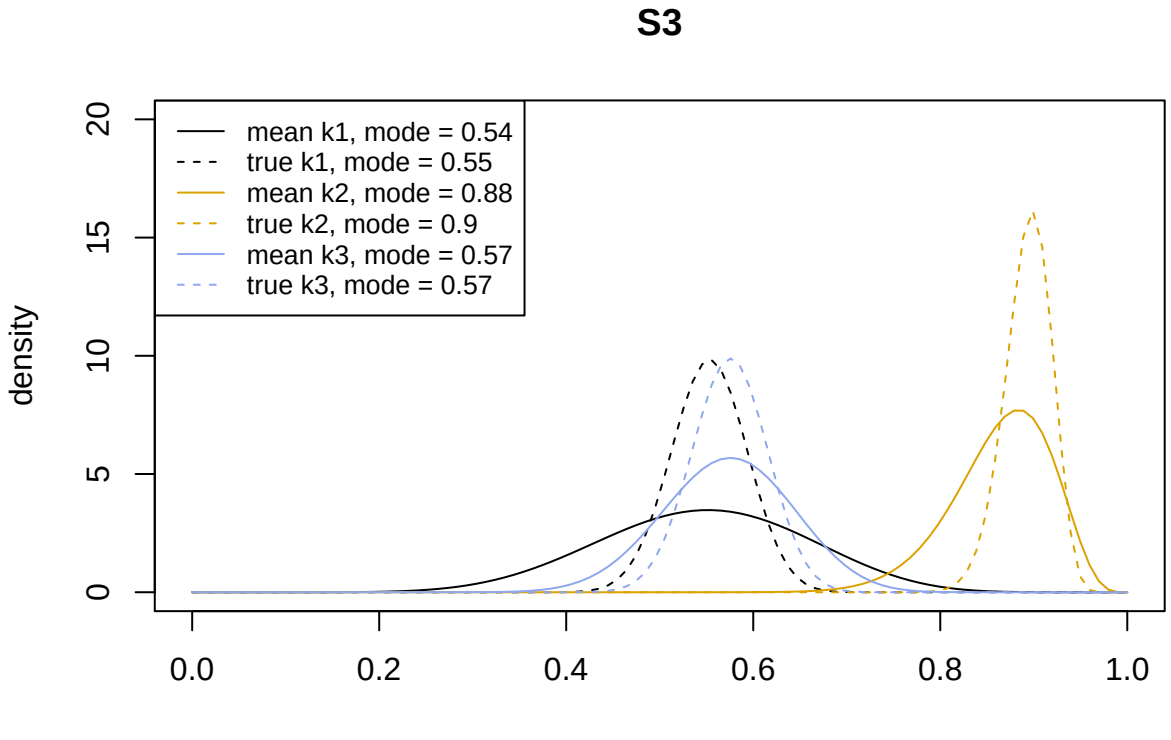


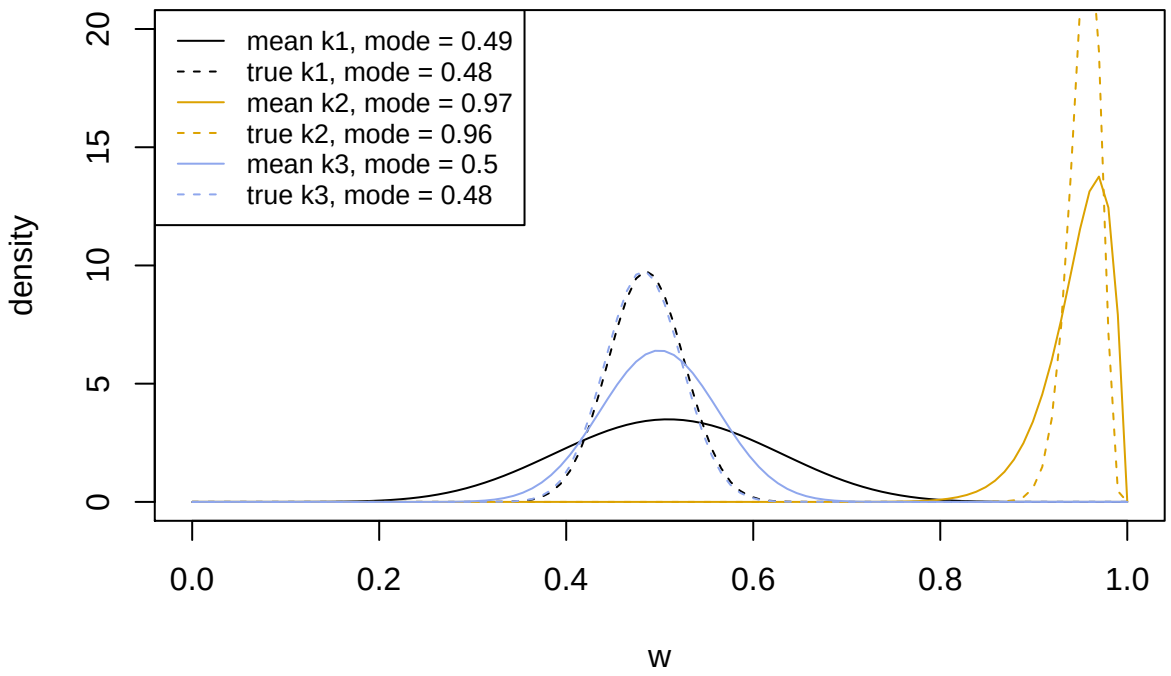

```
mcmc_d<- mcmc_cals[substr(rownames(mcmc_cals), 1, 1) == "d", "Mean"]
mcmc_d <- matrix(mcmc_d, nrow=K)
mcmc_c <- mcmc_cals[substr(rownames(mcmc_cals), 1, 1) == "c", "Mean"]
mcmc_c <- matrix(mcmc_c, nrow=K)

mcmc_a <- mcmc_d*(mcmc_c-1)+1
mcmc_b <- (1-mcmc_d)*(mcmc_c-2)+1

p <- seq(0, 1, length = 100)
colors <- c("#000000", "#DCA200", "#8FA7ED", "#9D847A", "#A47901")
for (s in 1:S) {
  for (k in 1:K) {
    if (k == 1) {
      # plot mcmc
      plot(p, dbeta(p, mcmc_a[k,s], mcmc_b[k,s]),
           main = paste0("S", s),
           ylab = "density", xlab = "w", type = "l", col = colors[k],
           ylim = c(0, 20))
      # plot truth
      lines(p, dbeta(p, a[k,s], b[k,s]), type = "l", col = colors[k], lty=2)
      # add legend
      allU <- round(as.vector(rbind(mcmc_d[,s], d[,s])), digits = 2)
      legend(x = "topleft",
             legend = paste0(c("mean k", "true k"), rep(1:K, each=2), ", mode = ", allU),
             col = colors[rep(1:K, each=2)],
             lty = rep(1:2, K),
             cex=0.8)
    } else {
      # plot mcmc
      lines(p, dbeta(p, mcmc_a[k,s], mcmc_b[k,s]),
            type = "l", col = colors[k])
      # plot truth
```

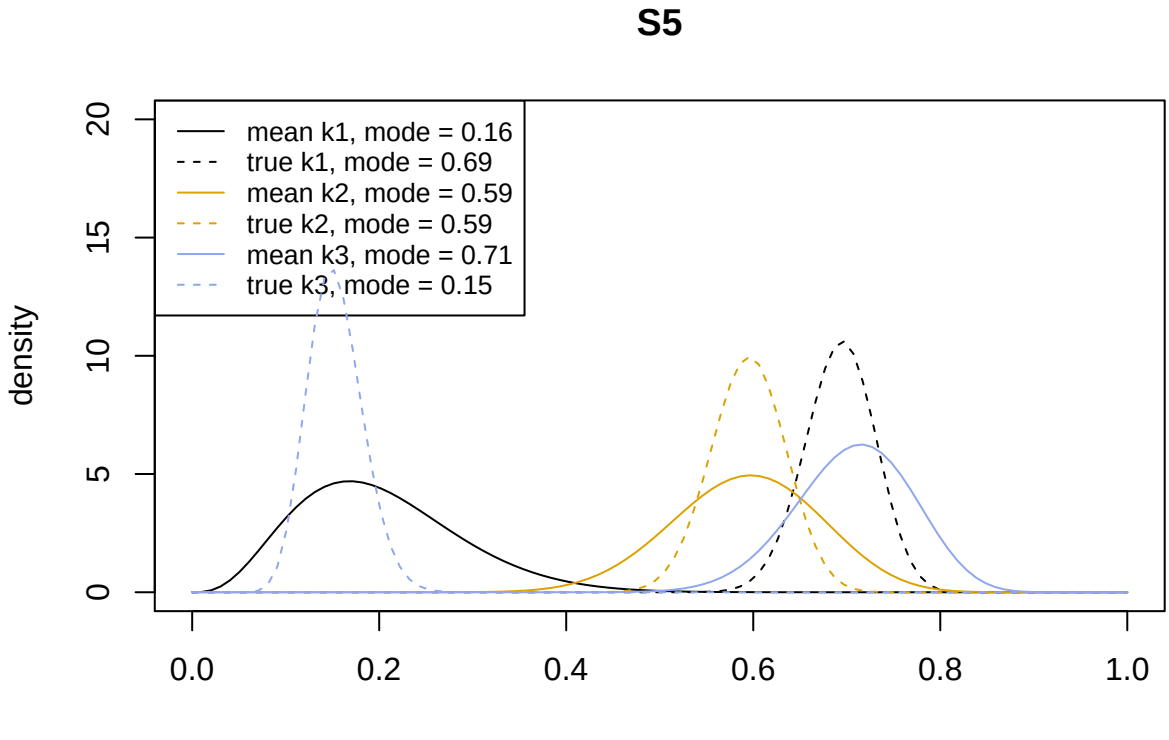
```
      lines(p, dbeta(p, a[k,s], b[k,s]), type = "l", col = colors[k], lty=2)
    }
  }
}
```

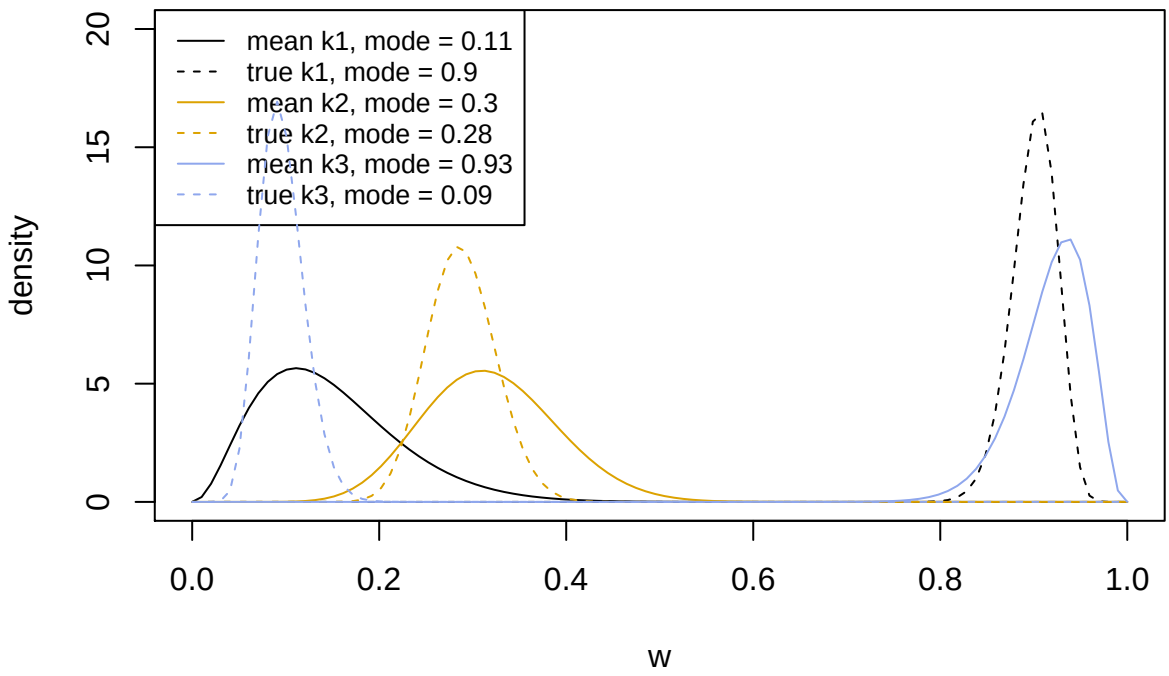


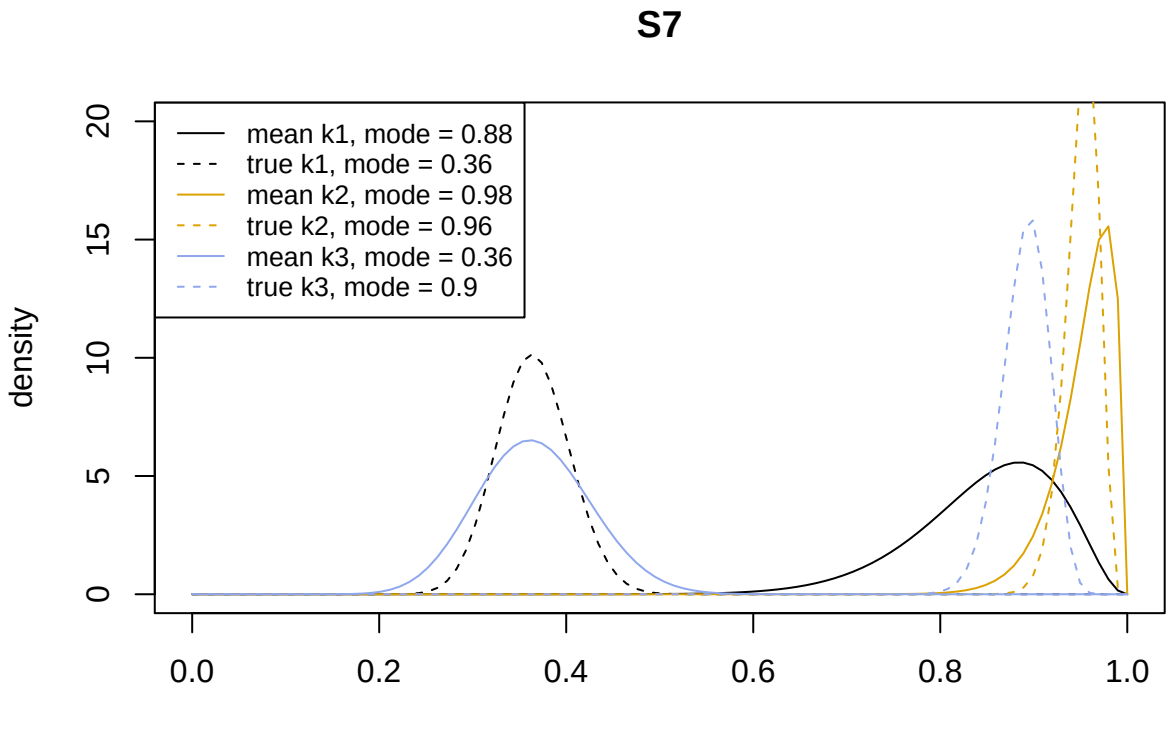


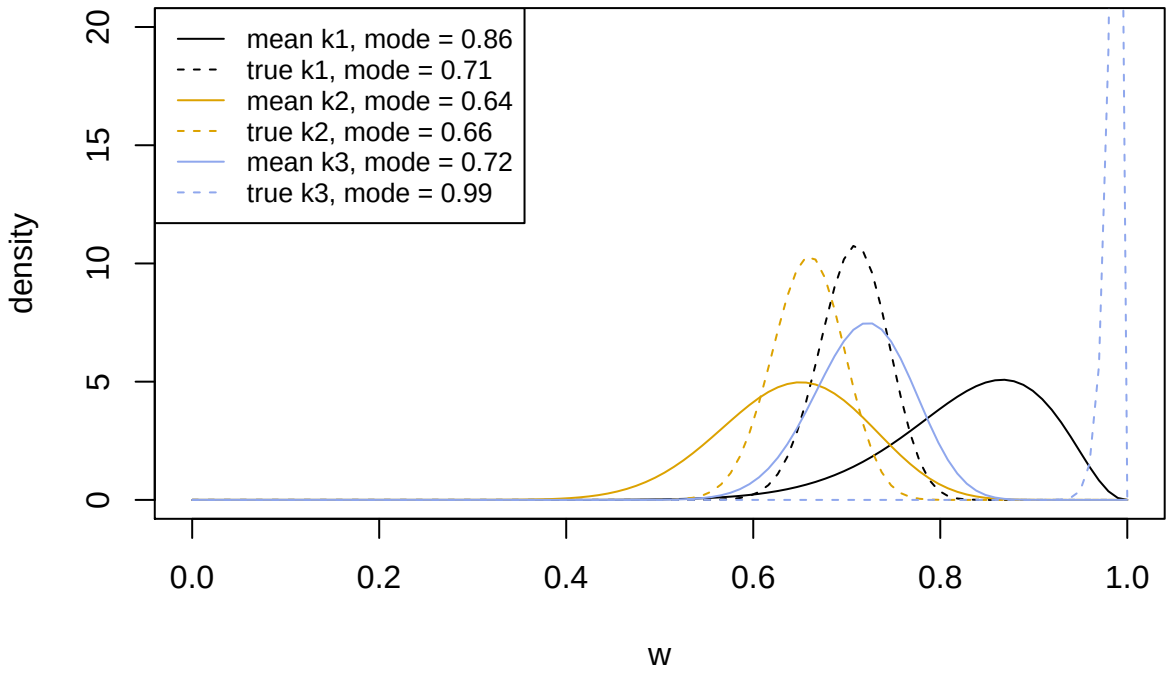

S3
mean k1, mode = 0.54
true k1, mode = 0.55
mean k2, mode = 0.88
true k2, mode = 0.9
mean k3, mode = 0.57
true k3, mode = 0.57
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w

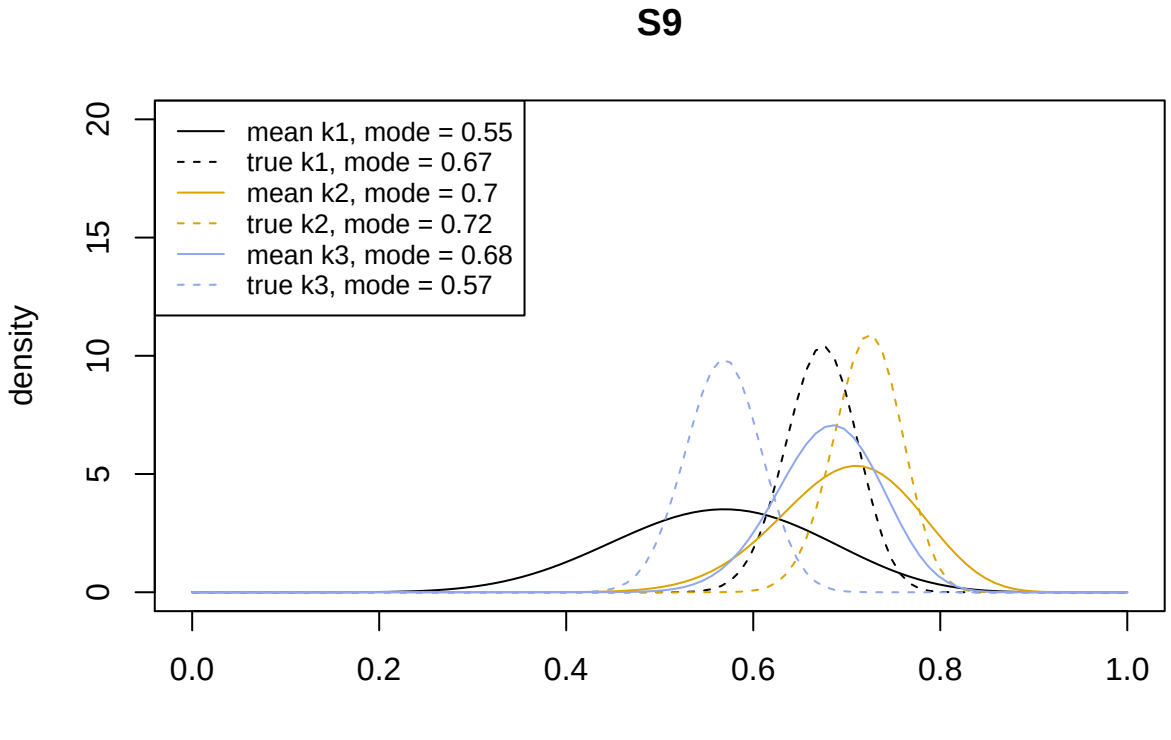

S4
mean k1, mode = 0.49
true k1, mode = 0.48
mean k2, mode = 0.97
true k2, mode = 0.96
mean k3, mode = 0.5
true k3, mode = 0.48
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w

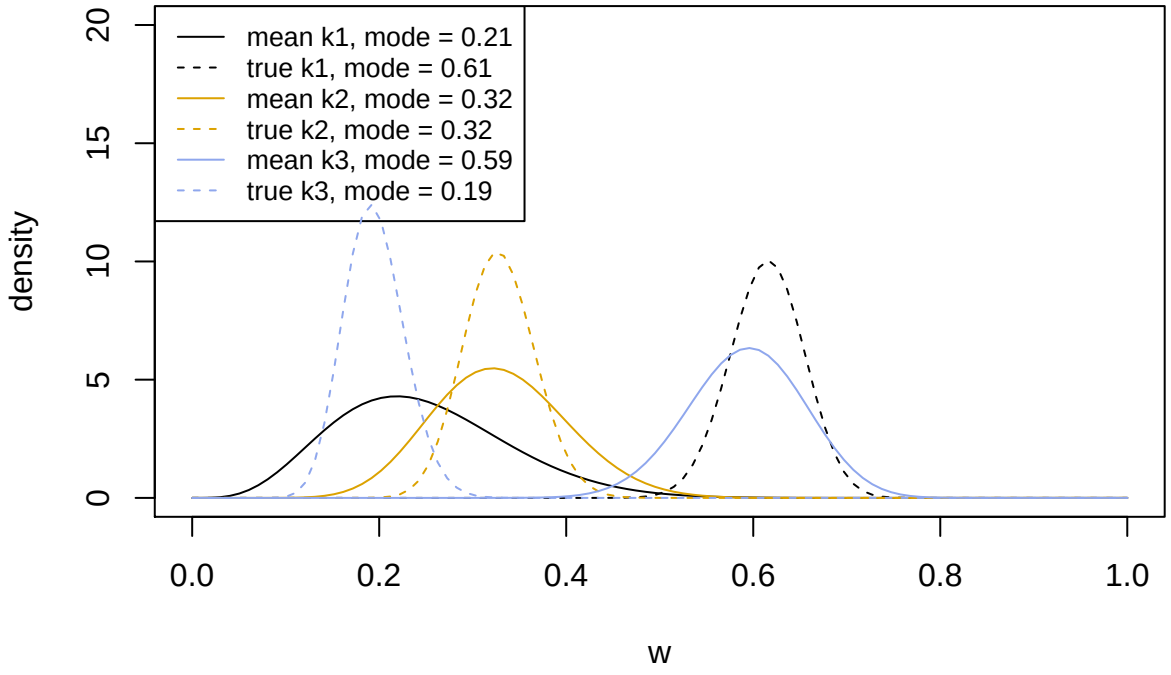

S5
mean k1, mode = 0.16
true k1, mode = 0.69
mean k2, mode = 0.59
true k2, mode = 0.59
mean k3, mode = 0.71
true k3, mode = 0.15
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w


S6
mean k1, mode = 0.11
true k1, mode = 0.9
mean k2, mode = 0.3
true k2, mode = 0.28
mean k3, mode = 0.93
true k3, mode = 0.09
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w


S7
mean k1, mode = 0.88
true k1, mode = 0.36
mean k2, mode = 0.98
true k2, mode = 0.96
mean k3, mode = 0.36
true k3, mode = 0.9
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w


S8
mean k1, mode = 0.86
true k1, mode = 0.71
mean k2, mode = 0.64
true k2, mode = 0.66
mean k3, mode = 0.72
true k3, mode = 0.99
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w


S9
mean k1, mode = 0.55
true k1, mode = 0.67
mean k2, mode = 0.7
true k2, mode = 0.72
mean k3, mode = 0.68
true k3, mode = 0.57
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w


S10
mean k1, mode = 0.21
true k1, mode = 0.61
mean k2, mode = 0.32
true k2, mode = 0.32
mean k3, mode = 0.59
true k3, mode = 0.19
density
0
5
10
15
20
0.0
0.2
0.4
0.6
0.8
1.0
w