

Forum AppliBugs

Multinomiale et Jags

26/11/10

$$(y, \dots, y_m) \sim \mathcal{MN}((p_1, \dots, p_m), N)$$

$$\text{Pour } i = 1, \dots, m, \quad (z_i) \sim P(y_i)$$

```
model {  
  p[1] <- 0.2;  
  p[2] <- 0.8;  
  y ~ dmulti(p,5);  
  for (i in 1:2)  
  {  
    z[i] ~ dpois(y[i]);  
  }  
}
```

```
model {  
  p[1] <- 0.2;  
  p[2] <- 0.8;  
  y ~ dmulti(p,5);  
  for (i in 1:2)  
  {  
    z[i] ~ dpois(y[i]);  
  }  
}
```

L'erreur suivante apparaît : "Unable to find appropriate sampler".

```
model {  
  p[1] <- 0.2;  
  p[2] <- 0.8;  
  total<-5  
  total ~ dsum(y[1],y[2]);  
  for (i in 1:2)  
  {  
    y[i] ~ dpois(p[i]);  
    z[i] ~ dpois(y[i]);  
  }  
}
```

Résultats avec Jags 2.1.0

1. Empirical mean and standard deviation for each variable, plus standard error of the mean:

	Mean	SD	Naive SE	Time-series SE
y[1]	1.224	0.4558	0.008321	0.01299
y[2]	3.776	0.4558	0.008321	0.01299

2. Quantiles for each variable:

	2.5%	25%	50%	75%	97.5%
y[1]	1	1	1	1	2
y[2]	3	4	4	4	4

La donnée total peut ne pas être mentionnée

```
model {  
  #  
  p1 <- 0.2;  
  p2 <- 0.7;  
  p3 <- 0.1;  
  total ~ dsum(y1,y2,y3);  
  #  
  for (i in 1:3)  
  {  
    y[i] ~ dpois(p[i]);  
    z[i] ~ dpois(y[i]);  
  }  
}
```

Résultats avec Jags 2.1.0

1. Empirical mean and standard deviation for each variable, plus standard error of the mean:

	Mean	SD	Naive SE	Time-series SE
y1	1.0893	0.3088	0.005639	0.01022
y2	0.6883	0.8319	0.015189	0.01282
y3	1.7027	0.5840	0.010662	0.01211
total	3.4803	1.0577	0.019310	0.02209

2. Quantiles for each variable:

	2.5%	25%	50%	75%	97.5%
y1	1	1	1	1	2
y2	0	0	0	1	3
y3	1	1	2	2	3
total	2	3	3	4	6