Comment on Strategies

Basic Strategies

Sampling difficulties might give impetus to trying a new Bayesian model:

- Change prior
  (but check for substantive changes to posterior conclusions)
- Change sampling model
  (but make sure it fits the data – later)
- Reparameterize or transform
  (but may affect prior specification)

None is very appealing if you like the current model and parameters.

Advanced Strategies

As discussed in BDA3, Chapter 12:

- Adding auxiliary variables (*data augmentation*) – may help Gibbs sampling
- Expanding the parameter space (*parameter expansion*)
- Other methods (mostly useful for samplers other than Gibbs)

These often require some insight and expertise.

Thinning

If you choose to thin (to save space or increase speed), some `rjags` and `coda` functions support a `thin` parameter.

E.g., this saves every 10th iteration:

```
coda.samples(model, variable.names, n.iter = 2000, thin = 10)
```

Reproducibility

Recall: JAGS does not use R's random number generator seed.

To make sampling runs reproducible (in `rjags`), specify generator type and seed along with the initial parameters.

E.g., this separately initializes two chains:

```
initial.vals <- list(list(mu=0,sigmasq=0.001,
                          .RNG.name="base::Wichmann-Hill",.RNG.seed=123),
                     list(mu=0,sigmasq=100,
                          .RNG.name="base::Wichmann-Hill",.RNG.seed=456))
```

(Consult JAGS manual for details.)