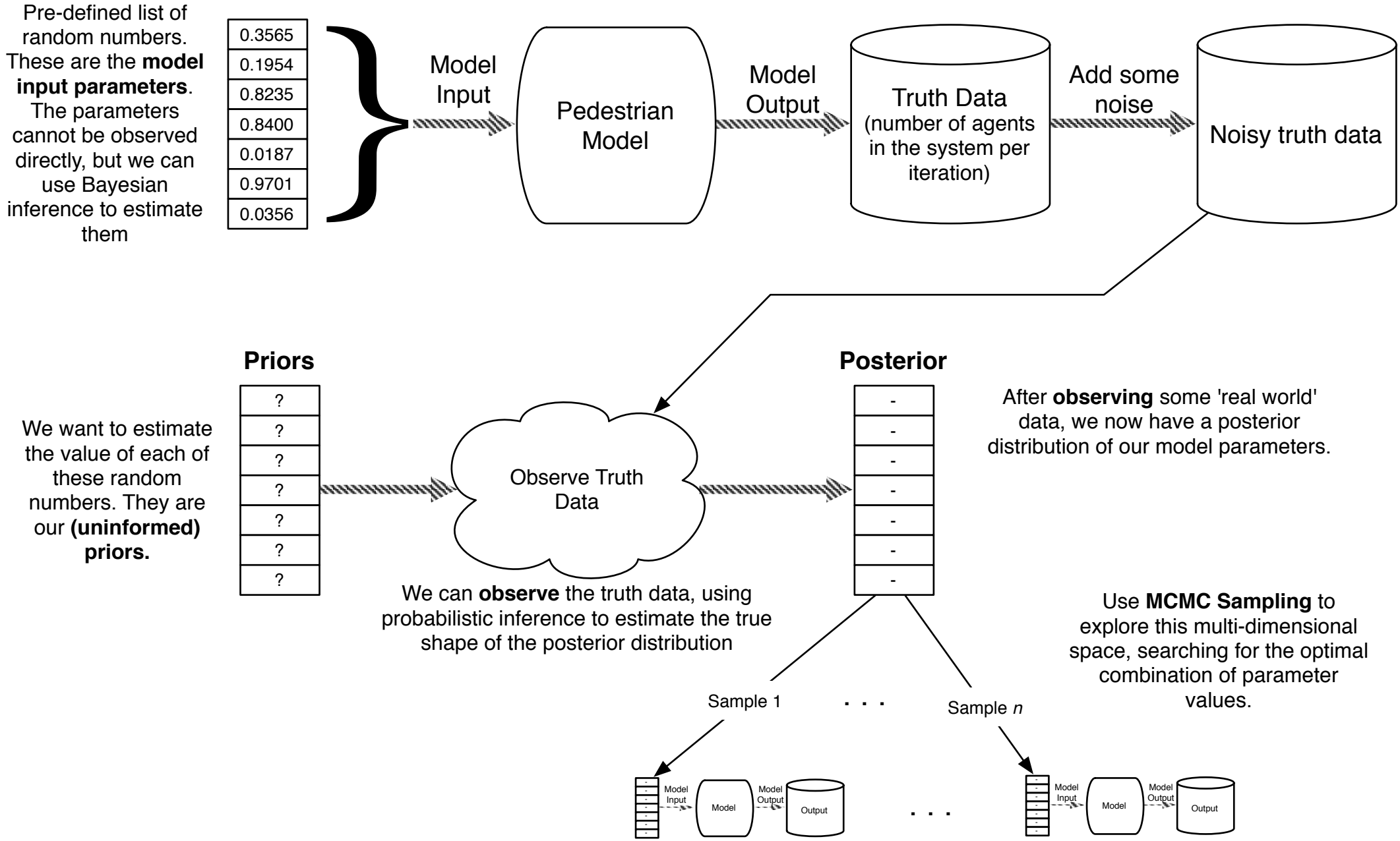
Pre-defined list of random numbers. These are the **model input parameters**. The parameters cannot be observed directly, but we can use Bayesian inference to estimate them
0.3565
0.1954
0.8235
0.8400
0.0187
0.9701
0.0356
Model Input
Pedestrian Model
Model Output
Truth Data (number of agents in the system per iteration)
Add some noise
Noisy truth data
Priors
?
?
?
?
?
?
?
We want to estimate the value of each of these random numbers. They are our **(uninformed) priors.**
Observe Truth Data
We can **observe** the truth data, using probabilistic inference to estimate the true shape of the posterior distribution
Posterior
-
-
-
-
-
-
-
After **observing** some 'real world' data, we now have a posterior distribution of our model parameters.
Use **MCMC Sampling** to explore this multi-dimensional space, searching for the optimal combination of parameter values.
Sample 1
Sample *n*
Model Input
Model
Model Output
Output