

Transform elements from the real line ( $\xi_1, \xi_2, \xi_3$ ) to an ordered probability space ( $\theta_1 < \theta_2 < \theta_3$ )

0 is the lower bound of the smallest element

With 3 elements in the stick, the smallest one cannot be larger than  $\frac{1}{3}$

Stick of length 1

Step 1:  
 $\theta_1 = \left(\frac{1}{3} - 0\right) \Phi(\xi_1) + 0$

$\theta_1$  is the lower bound for the second element

The upper bound is the length of the remaining stick ( $1 - \theta_1$ ) divided by the number of remaining elements

Step 2:  
 $\theta_2 = \left(\frac{(1 - \theta_1)}{2} - \theta_1\right) \Phi(\xi_1) + \theta_1$

Step 3:  
The value of the last element is the remainder of the stick

