$$k = 1$$

$$A_{11}$$

$$A_{12}$$

$$p(\mathbf{x}_{n}|z_{n+1,1})$$

$$k = 2$$

$$A_{13}$$

$$p(\mathbf{x}_{n}|z_{n+1,2})$$

$$\beta(z_{n+1,2})$$

$$\beta(z_{n+1,3})$$

$$\beta(z_{n+1,3})$$

$$p(\mathbf{x}_{n}|z_{n+1,3})$$