

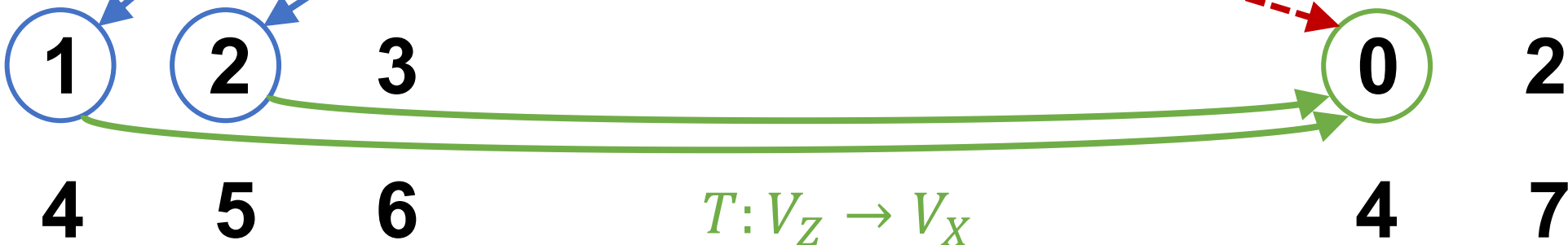
$\Omega$ : Sample space



$Z: \Omega \rightarrow V_Z$

$X = T \circ Z: \Omega \rightarrow V_X$

$$E_x = \{\omega \in \Omega: T(Z(\omega)) = x\}$$



$T: V_Z \rightarrow V_X$

$V_X$ : space of  $X$  values

$V_Z$ : space of  $Z$  values

$$P_X(X \in \{0\}) = P_Z(Z \in \{1, 2\}) = \mathbb{P}(\omega \in \{chicken, elephant\})$$