



**Definition**

Suppose we have a *finite* set of outcomes  $\Omega$ . A *categorical outcome variable* (or *categorical random variable*, *categorical variable*, *qualitative variable*) is an outcome variable  $x : \Omega \rightarrow V$  where  $V$  is a finite set.

We call  $x$  a *binary outcome variable* (or *binary random variable*,  *dichotomous random variable*) if  $|V| = 2$ .

**Examples**

For example, suppose  $V = \{0, 1\}$ . Such an outcome variable is called a *Bernoulli random variable*.



