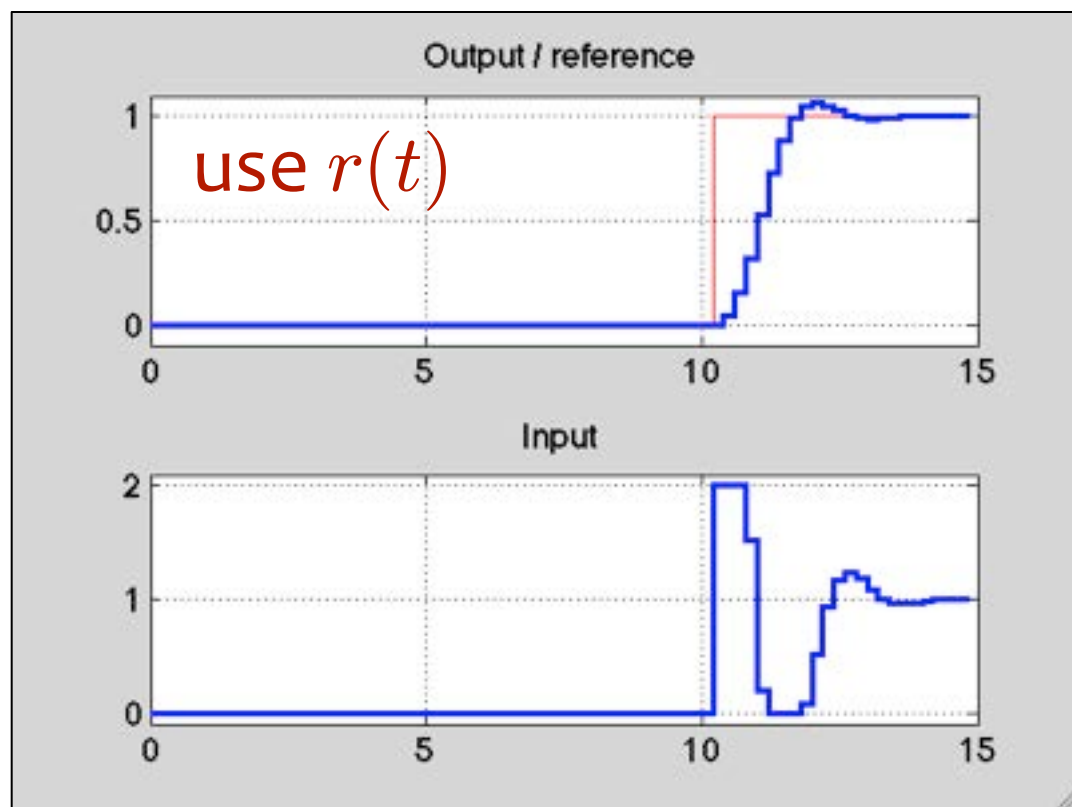


ANTICIPATIVE ACTION (A.K.A. “PREVIEW”)

$$\min_{\Delta U} \sum_{k=0}^{N-1} \|W^y(y_{k+1} - r_{k+1})\|^2 + \|W^{\Delta u} \Delta u(k)\|^2$$

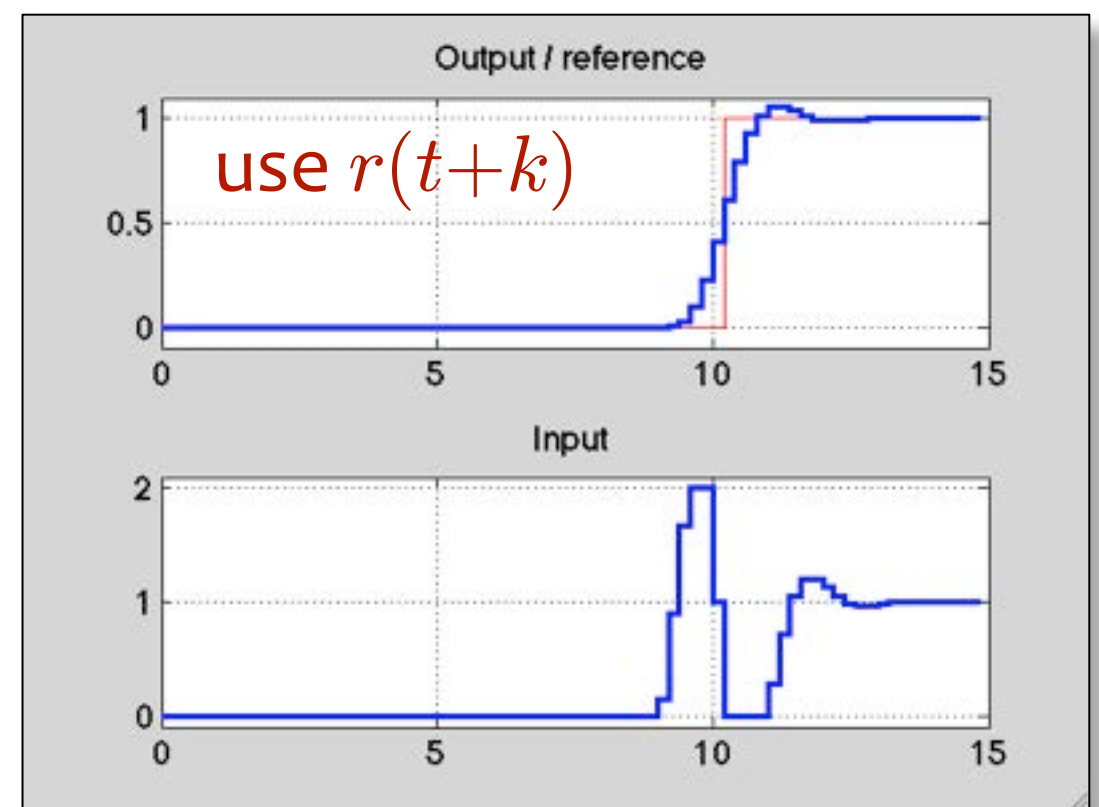
- Reference **not known** in advance (causal):

$$r_k \equiv r(t) \forall k = 0, \dots, N-1$$



- Future reference samples (partially) **known** in advance (anticipative action):

$$r_k \equiv r(t+k), \forall k = 0, \dots, N-1$$



Same idea also applies to reject **measured disturbances** entering the process

MPC Toolbox for MATLAB, `mpcpreview.m`