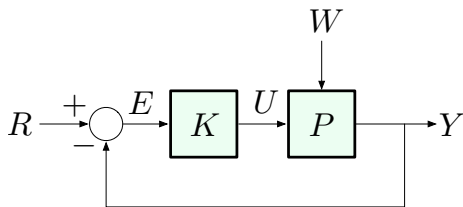# Feedback Control

- more difficult/expensive to implement (requires a sensor and an information path from controller to actuator)
- may destabilize the system:

$$\frac{Y}{R} = \frac{KP}{1 + KP}$$

  has new poles, which may be unstable
- but: feedback control is the *only way* to stabilize an unstable plant (this was the Wright brothers' key insight)