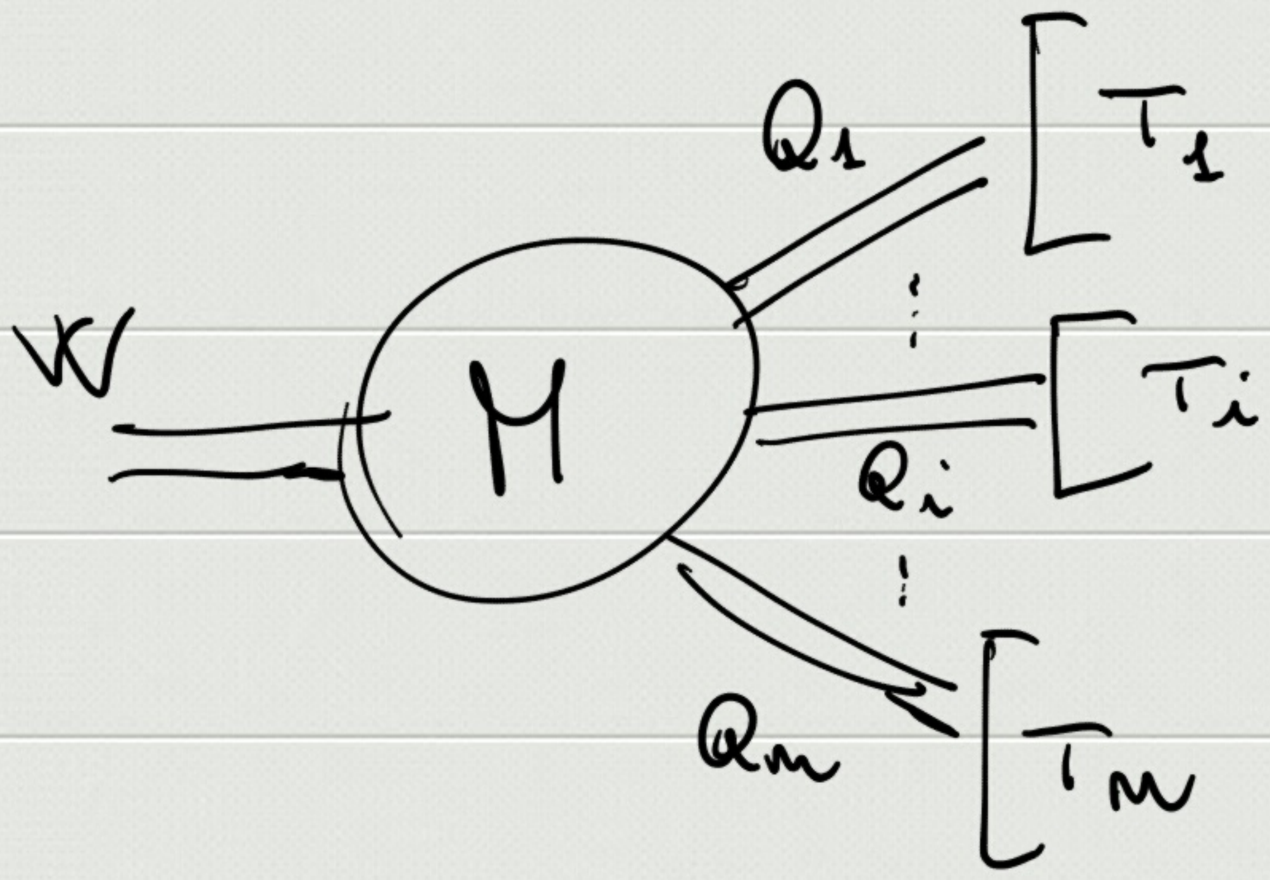
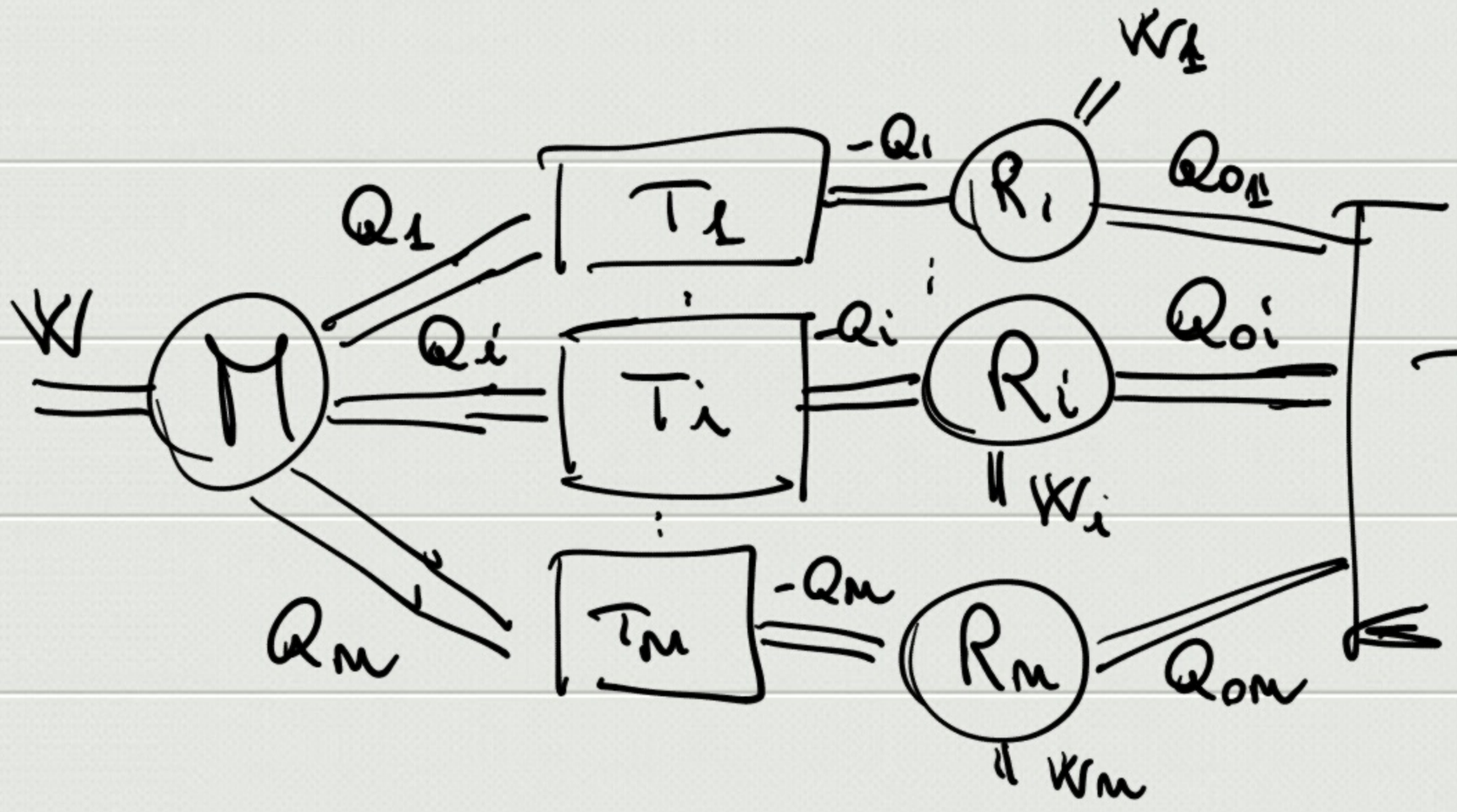
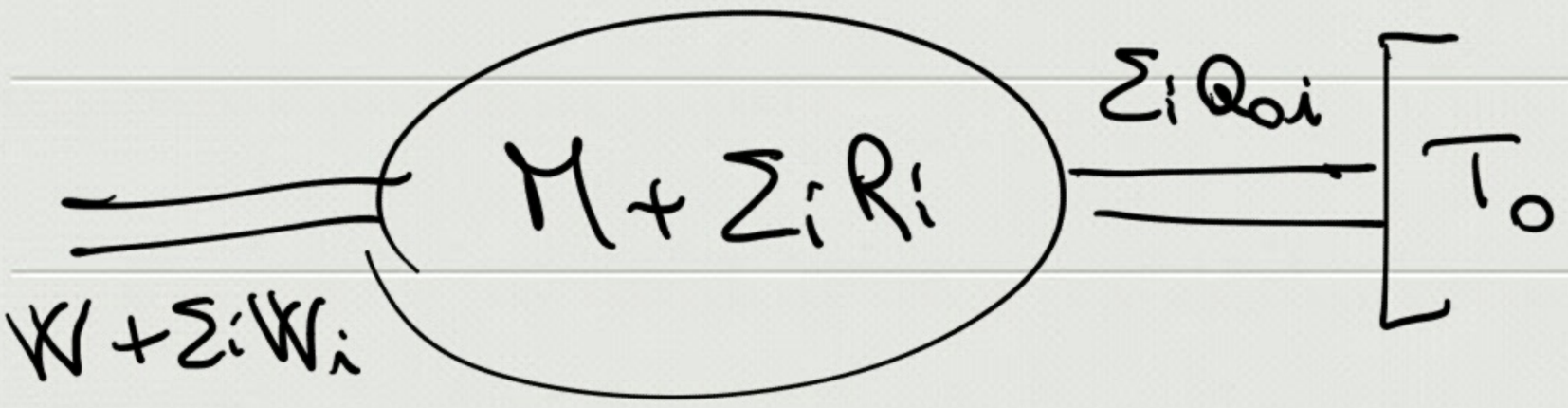


$$\sum_i \frac{Q_i}{T_i} \leq 0$$

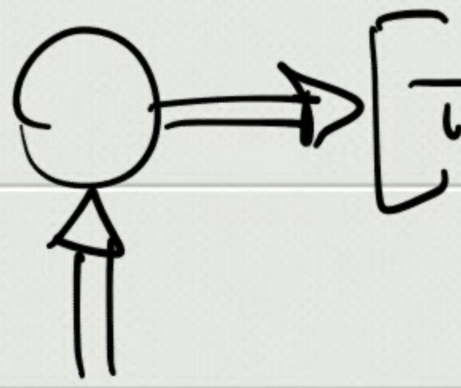


$$\frac{Q_1}{T_1} + \frac{Q_2}{T_2} \leq 0 \begin{cases} = 0 & \text{rev.} \\ < 0 & \text{irrev.} \end{cases} \Rightarrow \frac{-Q_i}{T_i} + \frac{Q_{oi}}{T_O} = 0$$

$$\Rightarrow \frac{Q_{oi}}{T_O} = \frac{Q_i}{T_i} \Rightarrow \frac{1}{T_O} \sum_i Q_{oi} = \sum_i \frac{Q_i}{T_i}$$



2° p. TD ⇒



⇒ $\boxed{\Sigma_i Q_{oi} \leq 0}$

$$\frac{1}{T_0}\Sigma_i Q_{oi} = \sum_i \frac{Q_i}{T_i} \leq 0$$

⇒ $\boxed{\sum_i \frac{Q_i}{T_i} \leq 0}$

M è rev. ⇒ $\sum_i \frac{Q_i}{T_i} \geq 0$ ⇒ $\boxed{\sum_i \frac{Q_i}{T_i} = 0}$

M è irrev. ⇒ $\boxed{\sum_i \frac{Q_i}{T_i} < 0}$

Numero infinito di serbatoi ⇒

$$\boxed{\oint \frac{\delta Q}{T} \leq 0} \Rightarrow \begin{cases} \text{rev.} & \oint \frac{\delta Q}{T} = 0 \\ \text{irrev.} & \oint \frac{\delta Q}{T} < 0 \end{cases}$$