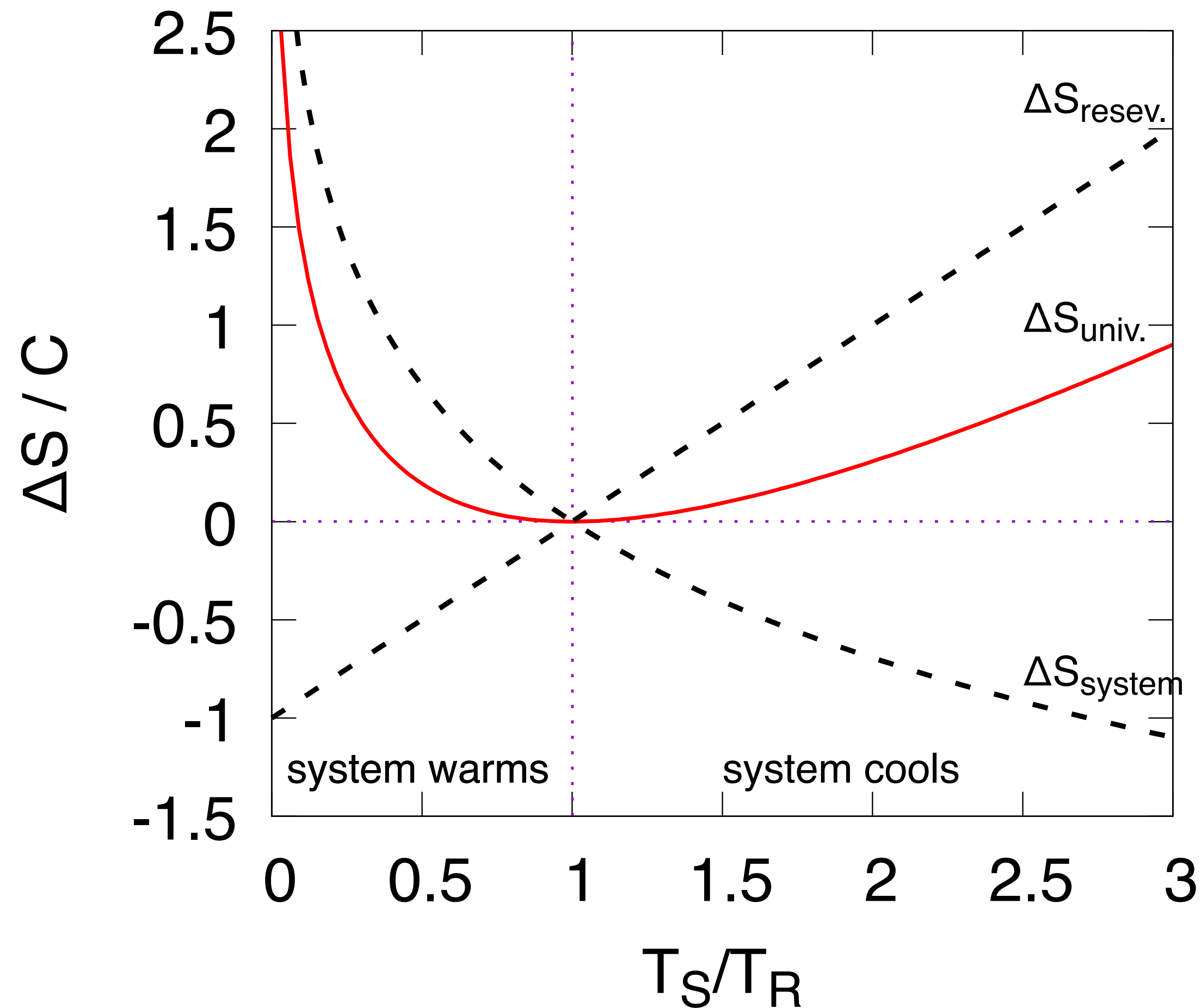


# Change in Entropy Ball in Lake: Blundell Example 14.1

---



System = Ball

The ball has (initial) temperature  $T_S$

Reservoir = Lake

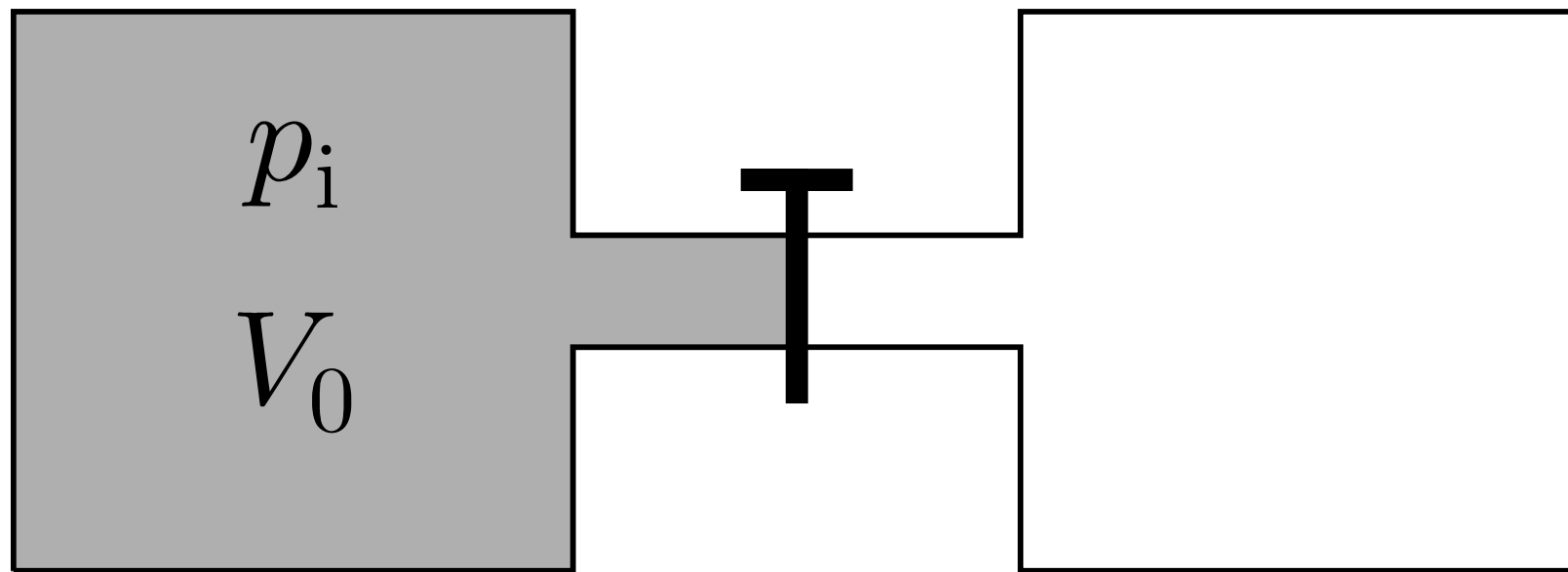
The reservoir has constant temperature  $T_R$

Universe is the ball and lake

# Joule Expansion

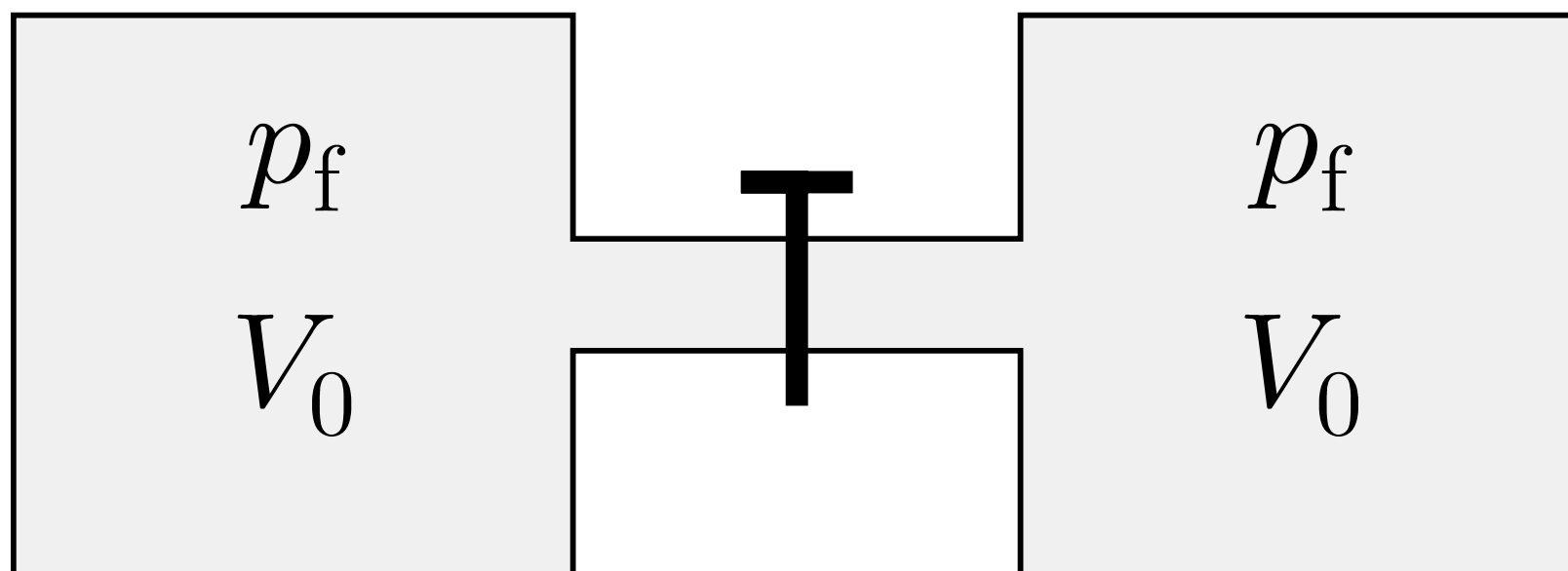
---

(a)



The expansion is a highly non-equilibrium process.

(b)



During the expansion no heat enters the system. Thus the energy initial equals the final energy