

The heat bath is
significantly large

$$U^B, V^B, N^B$$

$$(T^B = T_0)$$

diathermal wall

The diagram illustrates a thermodynamic system. A large outer rectangle represents the heat bath, with its interior shaded with diagonal lines. Inside this are two smaller rectangles representing subsystems: one on the left labeled $U^\alpha, V^\alpha, N^\alpha$ and one on the right labeled $U^\beta, V^\beta, N^\beta$. A horizontal line connects the top of the left subsystem to the top of the right subsystem. A diagonal line, representing a diathermal wall, extends from the top-right corner of the left subsystem towards the top-left corner of the right subsystem.

$$U^\alpha, V^\alpha, N^\alpha$$

$$U^\beta, V^\beta, N^\beta$$