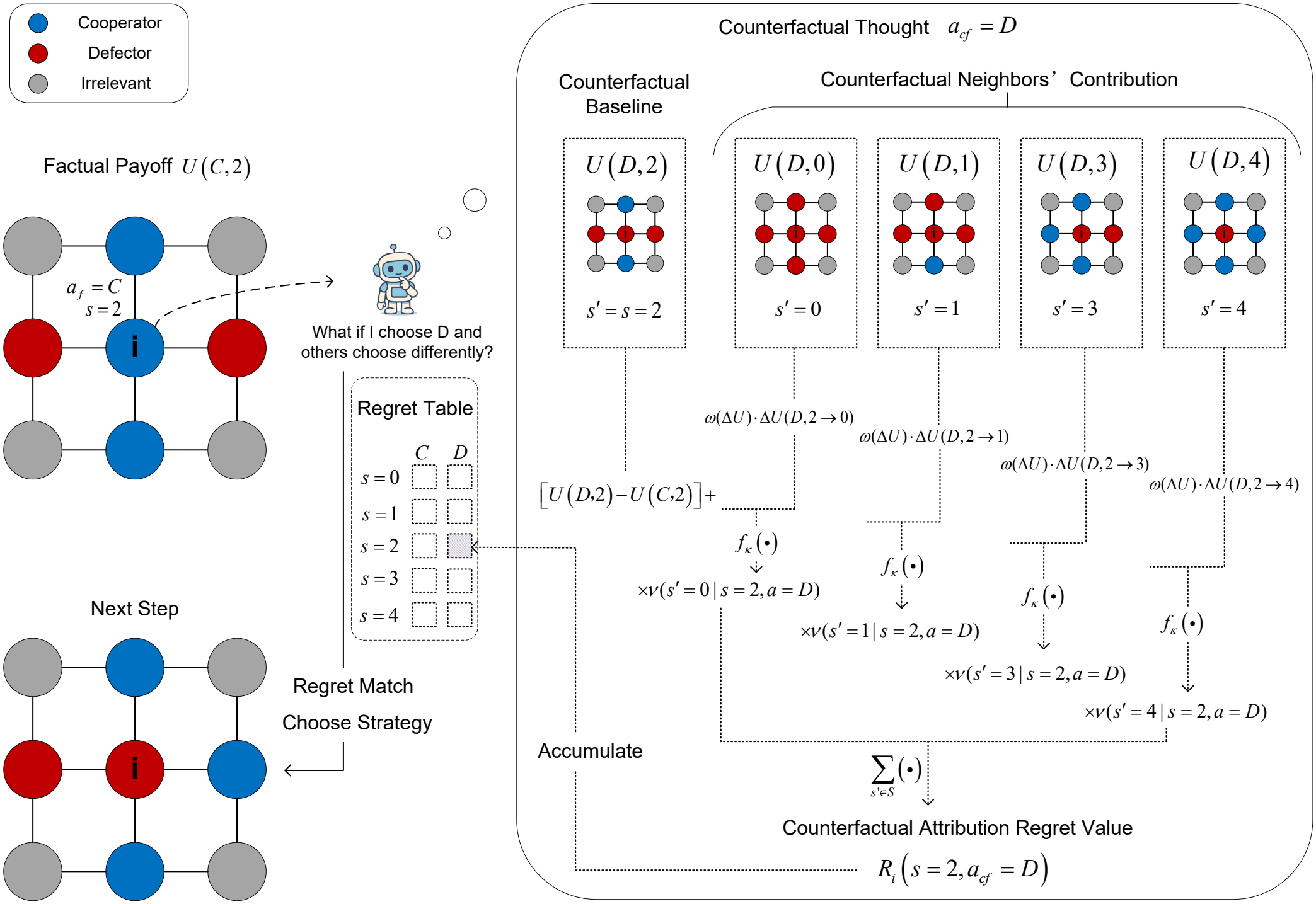
Cooperator
Defector
Irrelevant
Factual Payoff $U(C,2)$
$a_f = C$
$s = 2$
i
What if I choose D and others choose differently?
Regret Table
C D
$s=0$
$s=1$
$s=2$
$s=3$
$s=4$
Regret Match
Choose Strategy
Next Step
i
Counterfactual Thought $a_{cf} = D$
Counterfactual Baseline
Counterfactual Neighbors' Contribution
$U(D,2)$
$U(D,0)$
$U(D,1)$
$U(D,3)$
$U(D,4)$
$s' = s = 2$
$s' = 0$
$s' = 1$
$s' = 3$
$s' = 4$
$\omega(\Delta U)\cdot\Delta U(D,2\to 0)$
$\omega(\Delta U)\cdot\Delta U(D,2\to 1)$
$\omega(\Delta U)\cdot\Delta U(D,2\to 3)$
$\omega(\Delta U)\cdot\Delta U(D,2\to 4)$
$[U(D,2)-U(C,2)]+$
$f_\kappa(\cdot)$
$\times\nu(s'=0\,|\,s=2,a=D)$
$\times\nu(s'=1\,|\,s=2,a=D)$
$\times\nu(s'=3\,|\,s=2,a=D)$
$\times\nu(s'=4\,|\,s=2,a=D)$
Accumulate
$\sum_{s'\in S}(\cdot)$
Counterfactual Attribution Regret Value
$R_i(s=2,a_{cf}=D)$