

Outcome distribution

<i>C C</i> 15.3%	<i>C D</i> 10.6%
<i>D C</i> 42.5%	<i>D D</i> 31.7%

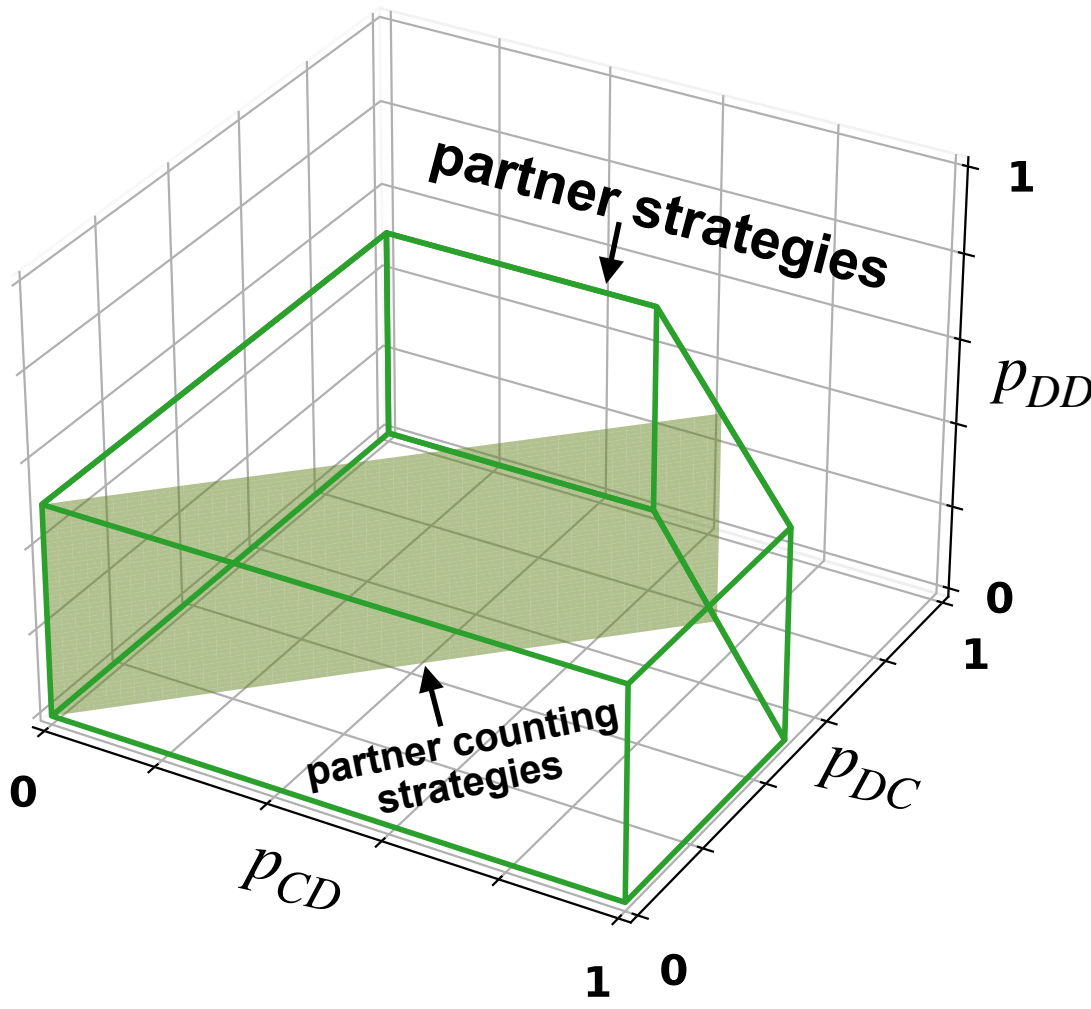
Outcome distribution

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C

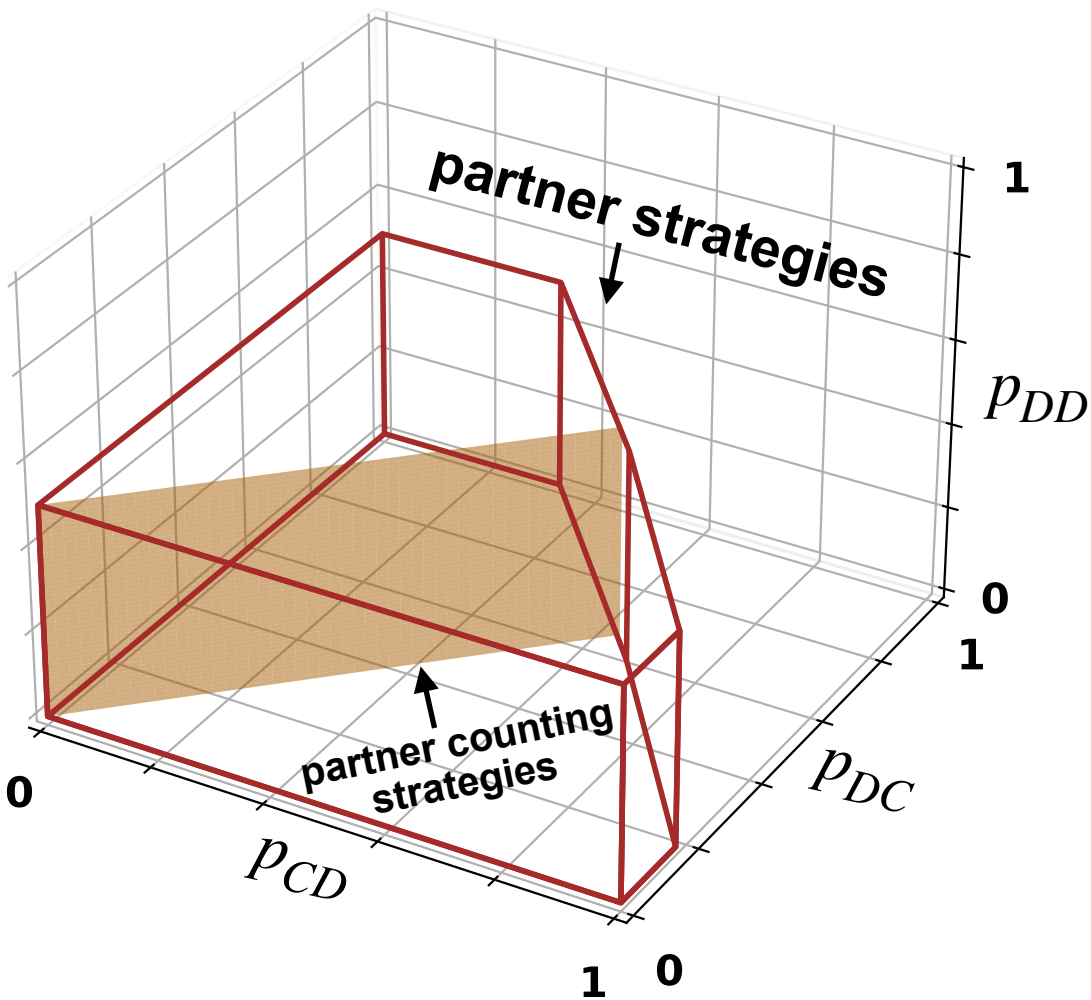
Partners among the reactive-2 strategies

Donation Game ($b/c = 2$)

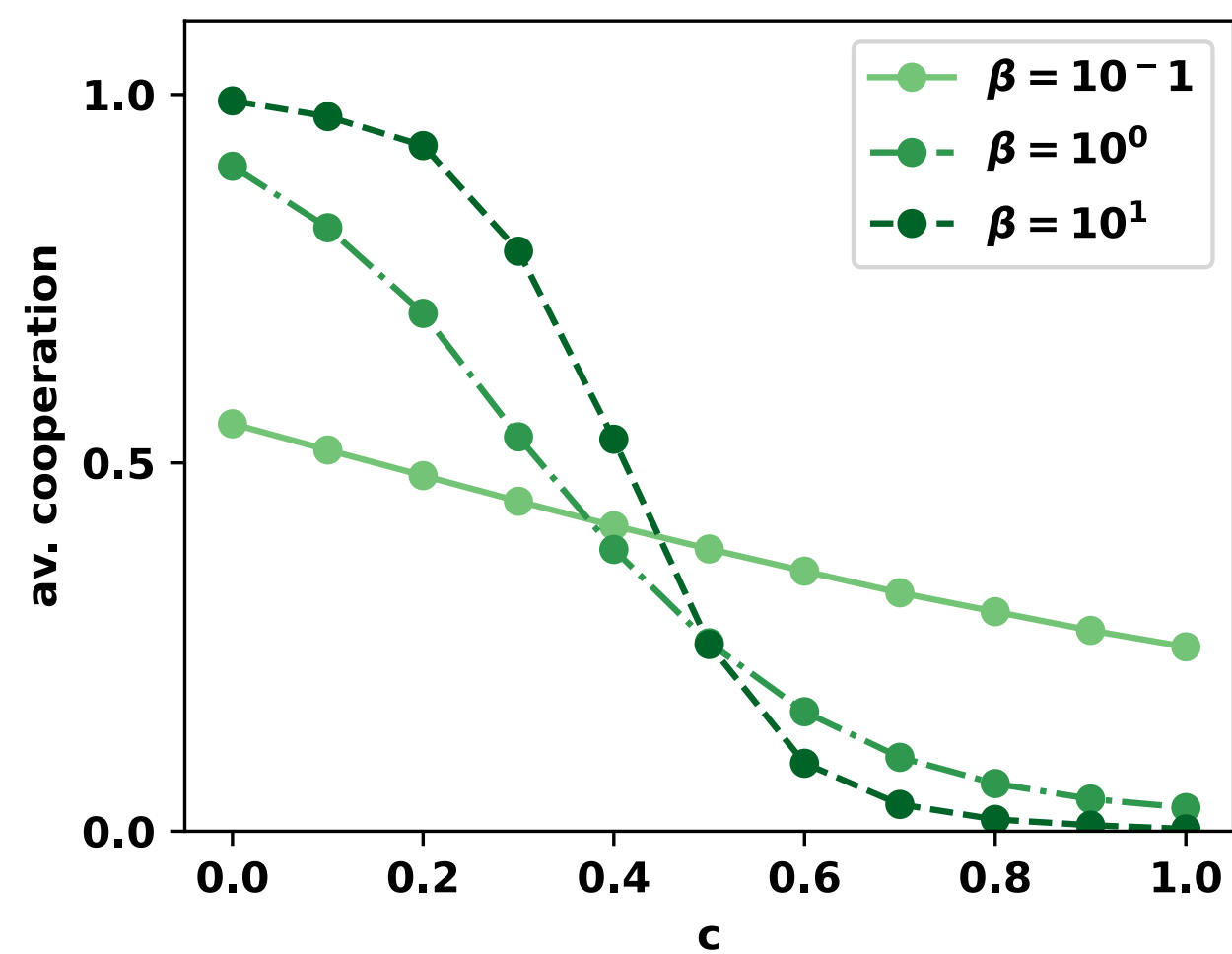
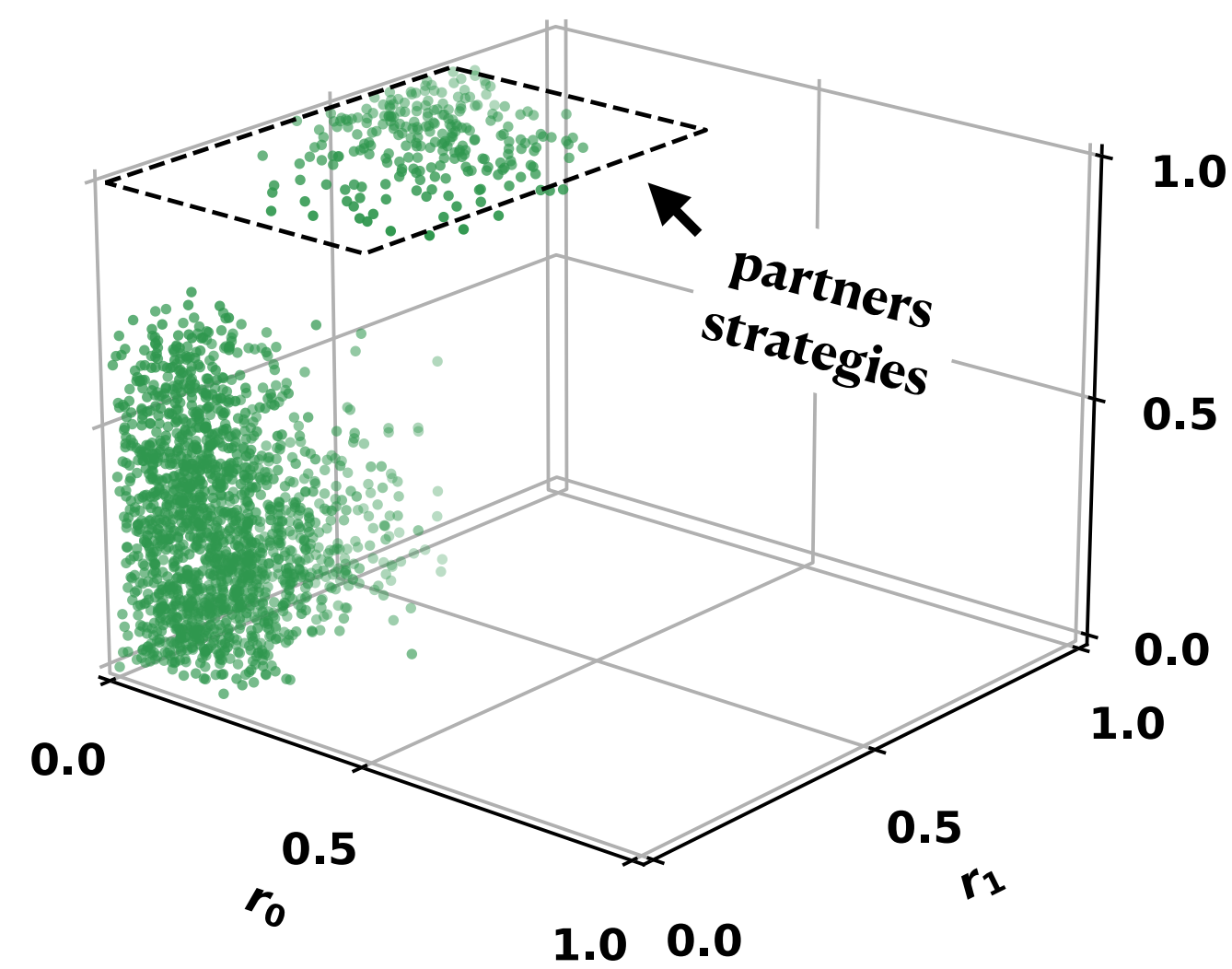


D

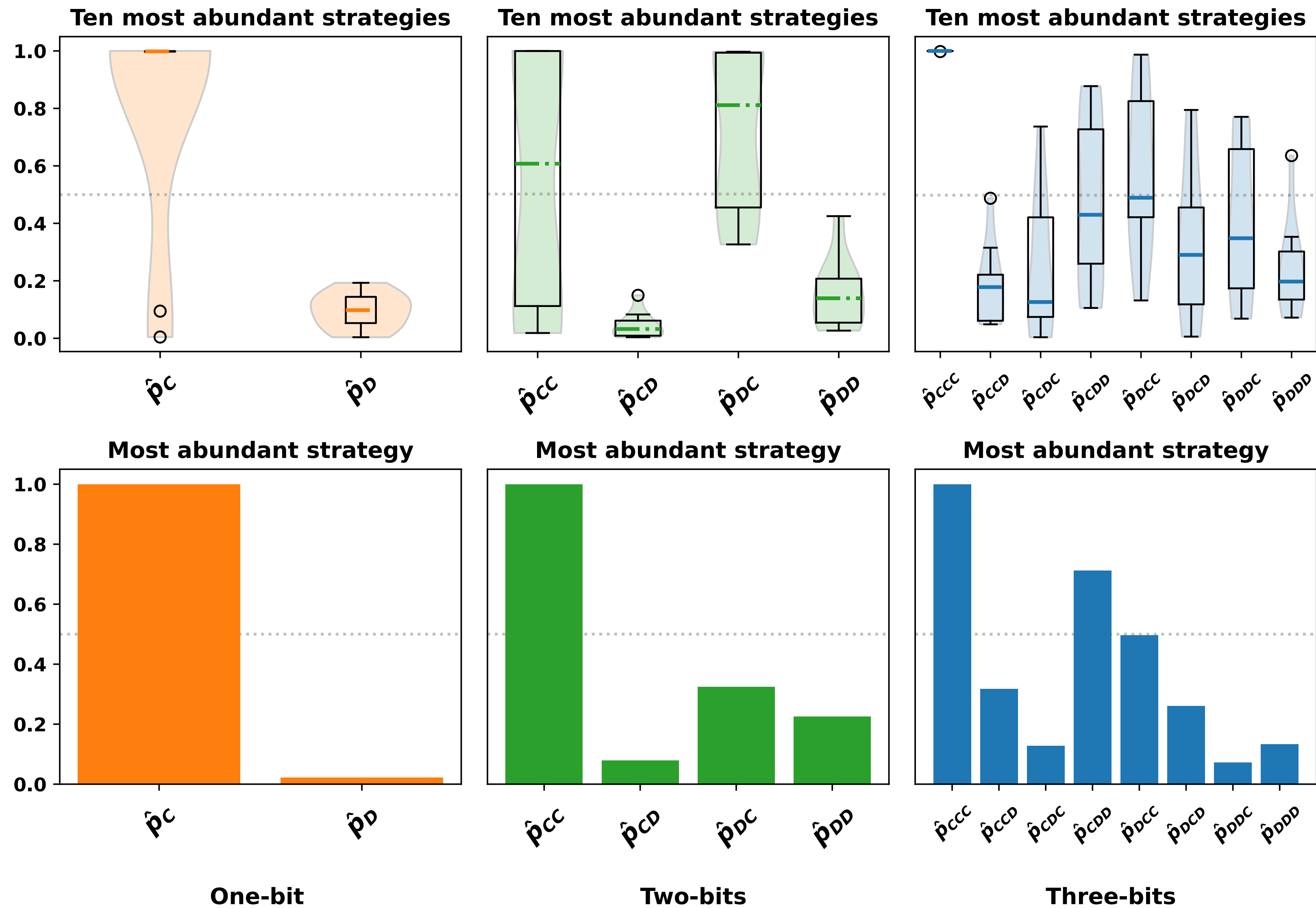
Axelrod's Prisoner's Dilemma

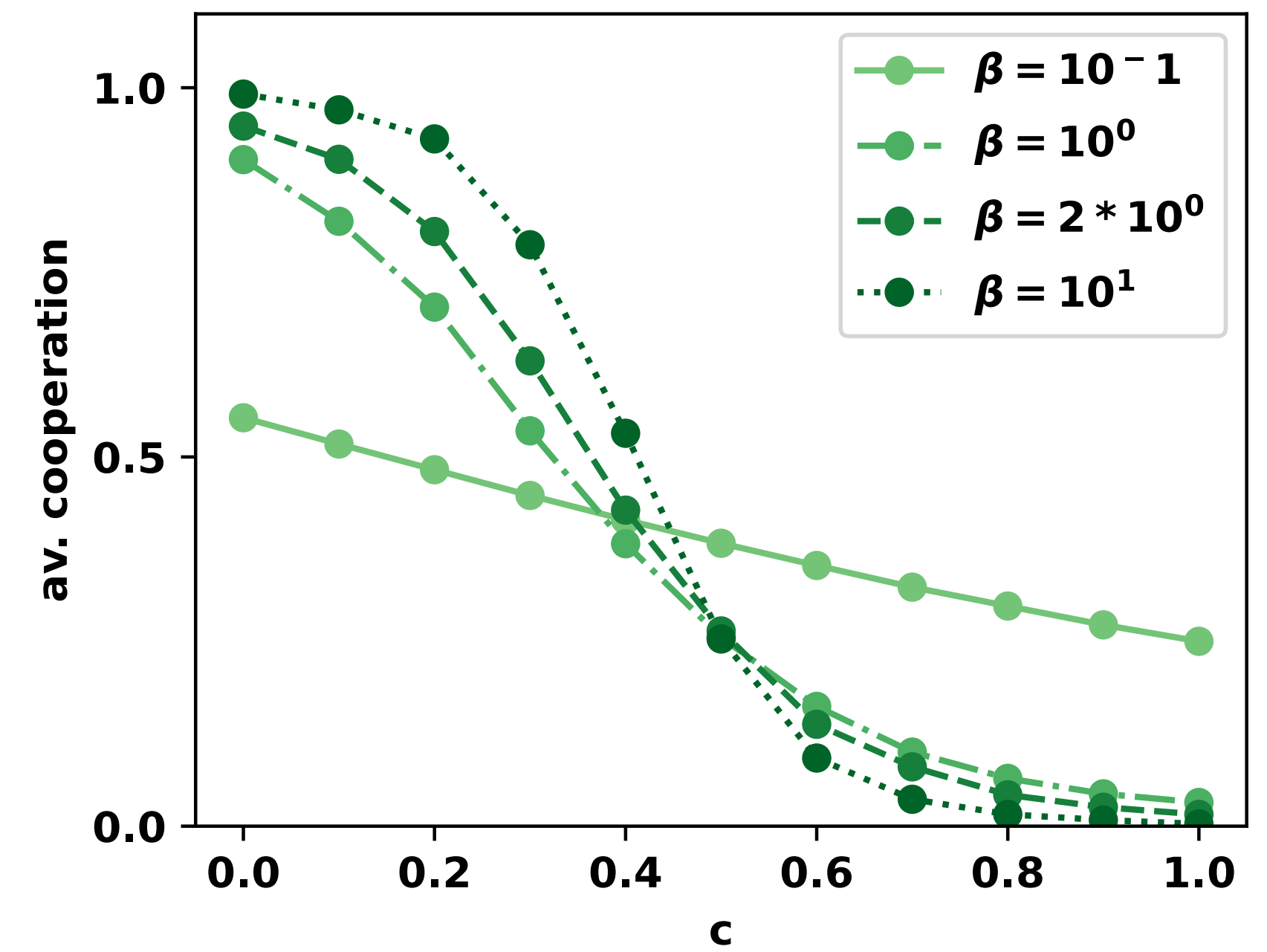
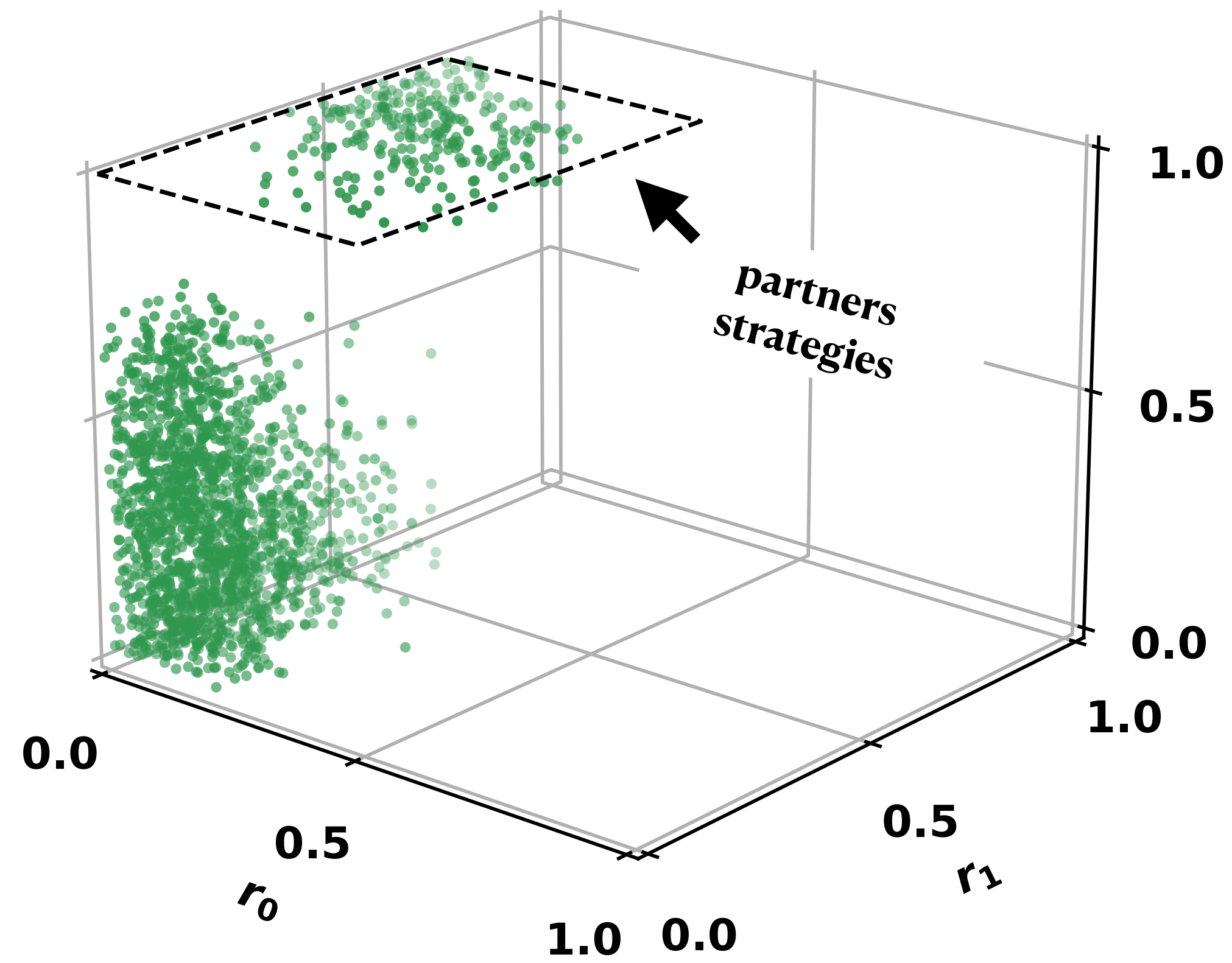


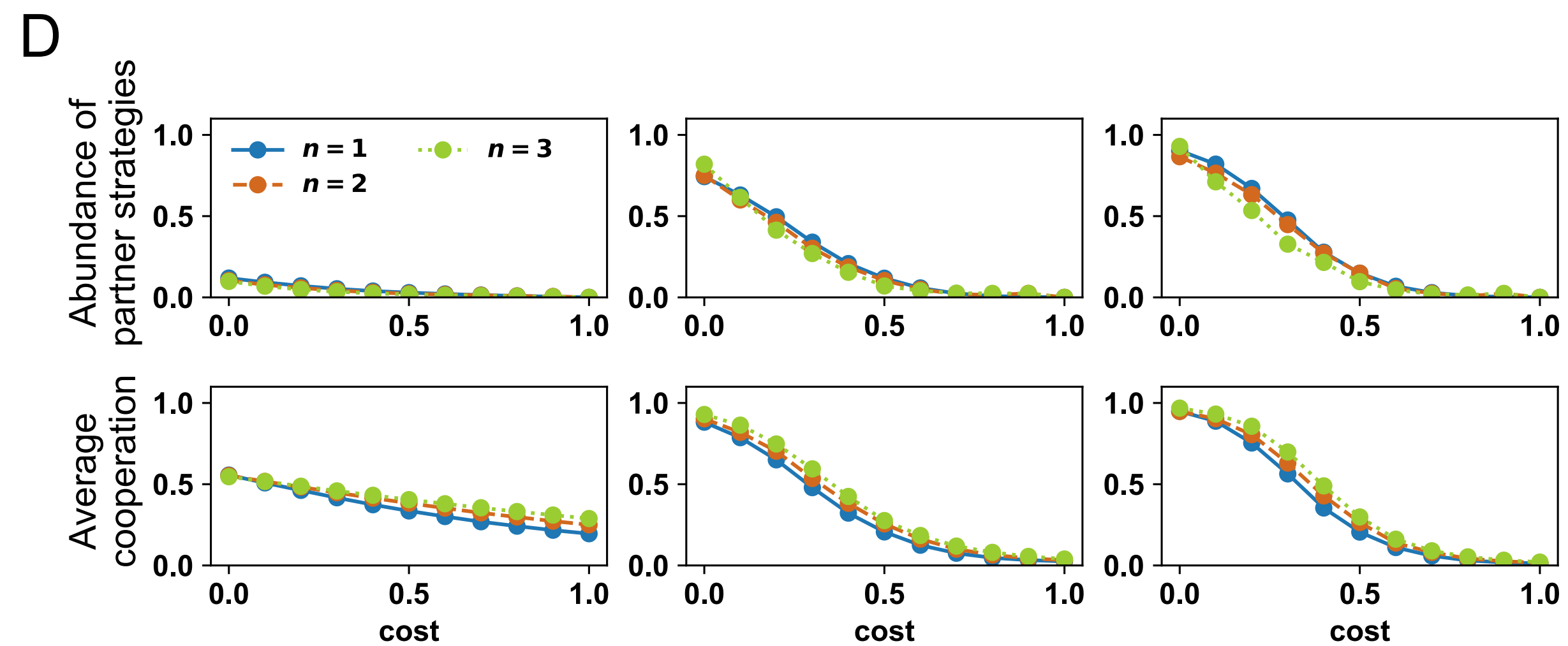
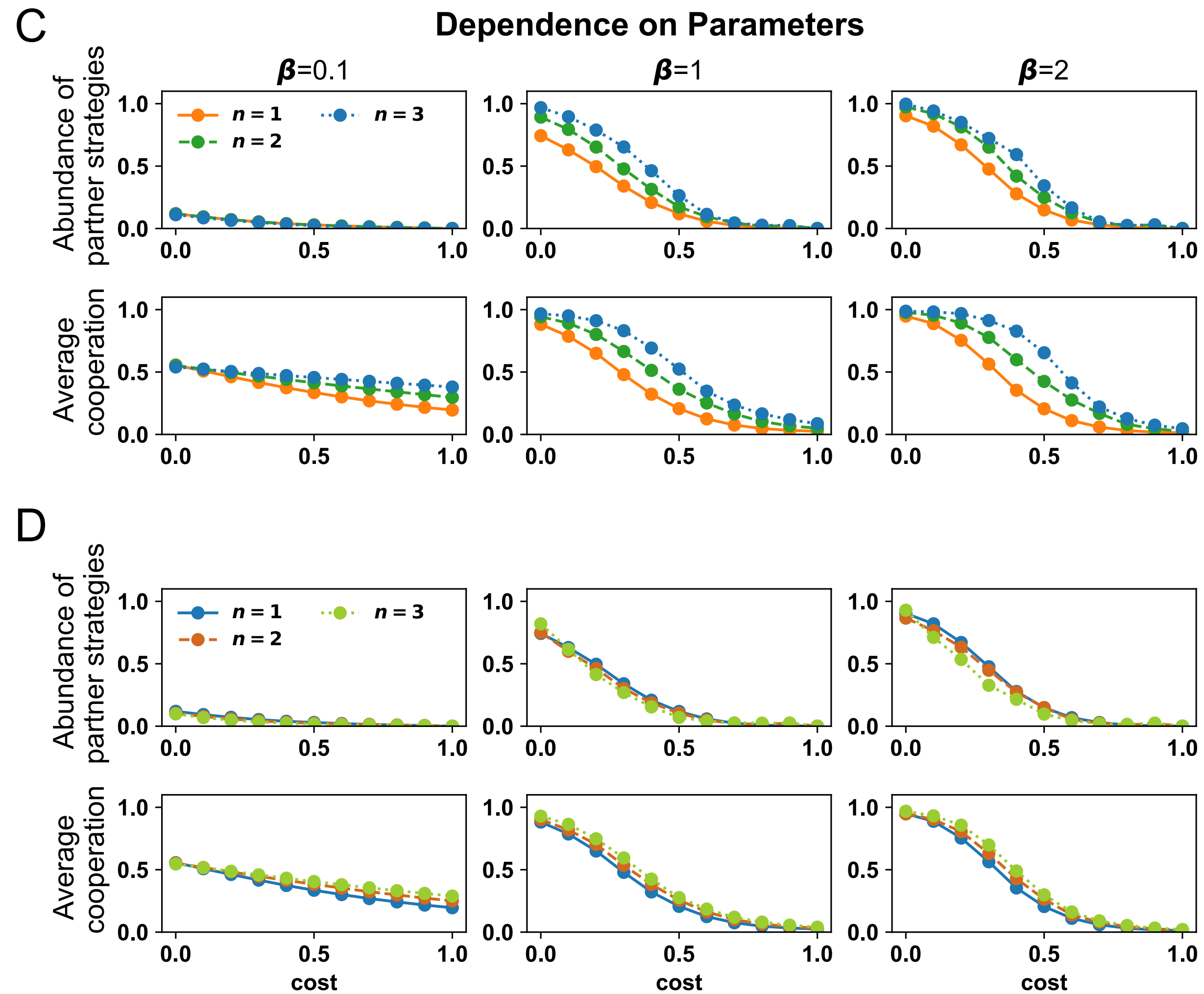
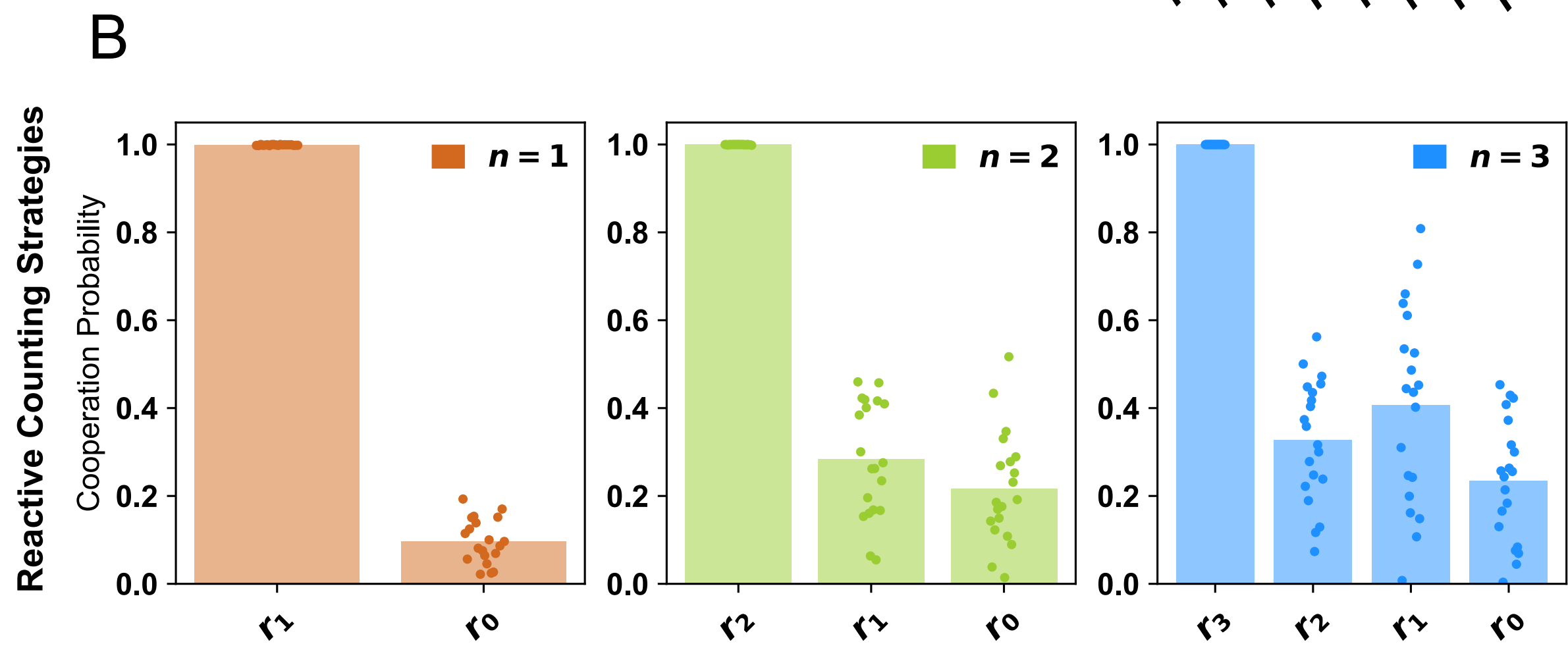
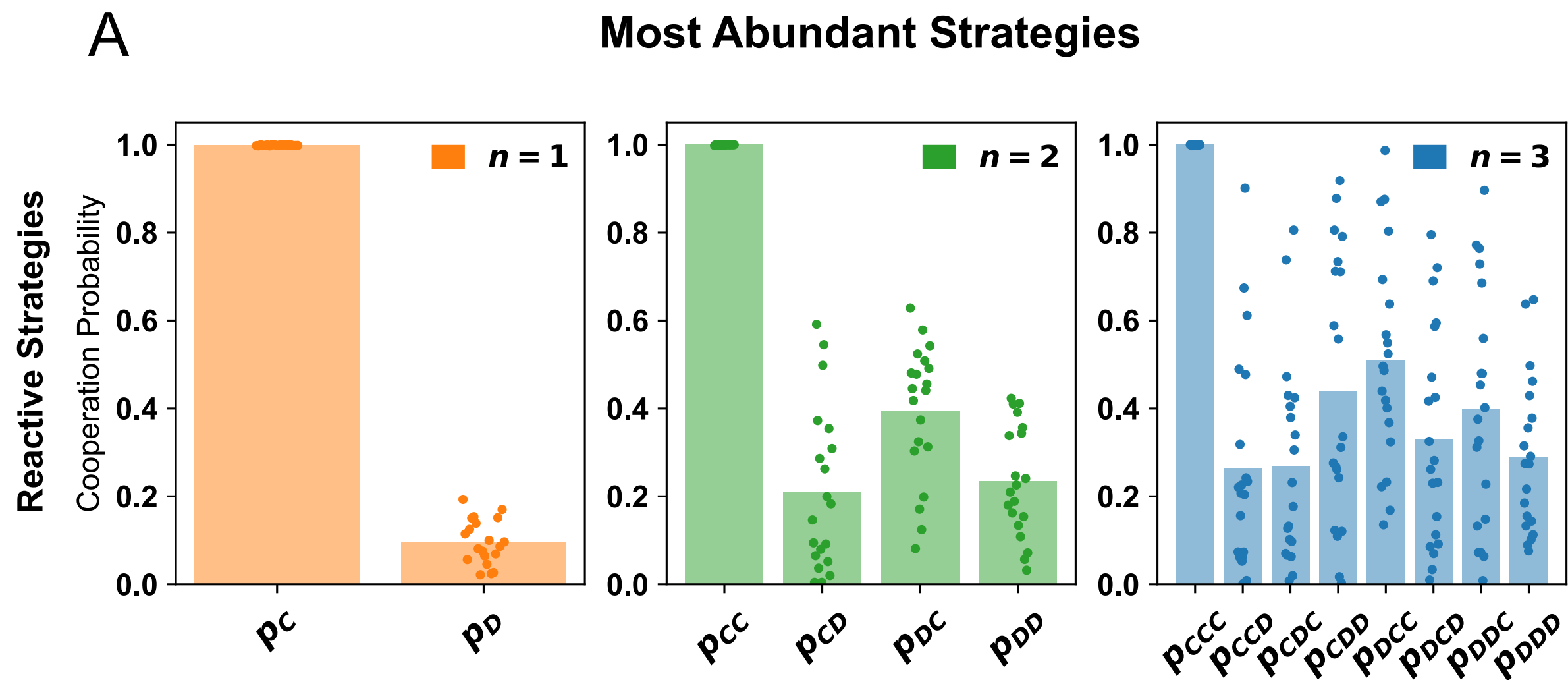
A



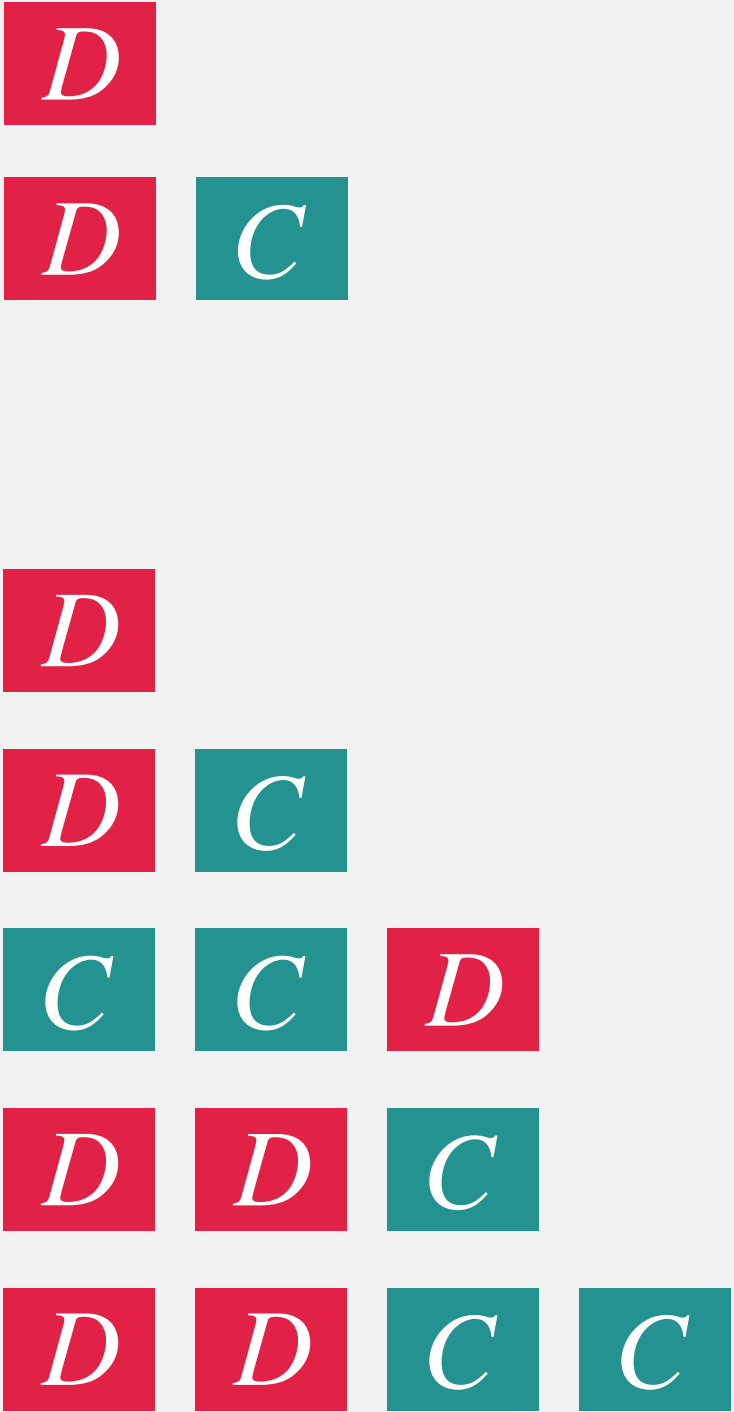
B







A Baseline Sequence





B Repeated Sequence







C Partner Conditions

$$p_{DD} \leq 1 - \frac{c}{b}$$
$$p_{CD} + p_{DC} \leq 2 - \frac{c^*}{b}$$
$$p_{DDD} \leq 1 - \frac{c}{b}$$
$$p_{CDC} + p_{DCD} \leq 2 - \frac{c}{b}$$
$$p_{CCD} + p_{CDC} + p_{DCC} \leq 3 - \frac{c^\dagger}{b}$$
$$p_{CDD} + p_{DCD} + p_{DDC} \leq 3 - 2 \cdot \frac{c}{b}$$
$$p_{CCD} + p_{CDD} + p_{DCC} + p_{DDC} \leq 4 - 2 \cdot \frac{c}{b}$$

D Example of deriving condition




Sequence  







Sequence Round Payoff:     $p_{DC} \cdot b$ $p_{CD} \cdot b - c$

Total Payoff: $(p_{CD} + p_{DC}) \cdot b - c$

Partner condition: $(p_{CD} + p_{DC}) \cdot b - c \leq 2 \cdot (b - c)$

Equivalent condition: $p_{CD} + p_{DC} \leq 2 - \frac{c^*}{b}$

Sequence   

Sequence Round Payoff:       $p_{DDC} \cdot b$ $p_{DCD} \cdot b$ $p_{CDD} \cdot b - c$

Total Payoff: $(p_{DDC} + p_{DCD} + p_{CDD}) \cdot b - c$

Partner condition: $(p_{DDC} + p_{DCD} + p_{CDD}) \cdot b - c \leq 3 \cdot (b - c)$

Equivalent condition: $p_{CCD} + p_{CDC} + p_{DCC} \leq 3 - \frac{c^\dagger}{b}$

