

A

Baseline Sequence

Repeated Sequence

D

D

C

Reactive-3

D

D

C

C

C

D

D

D

C

D

D

C

C

B

Partner Conditions

$$p_{DD} \leq 1 - \frac{c}{b}$$
$$p_{CD} + p_{DC} \leq 2 - \frac{c}{b} \text{ (*)}$$

$$p_{DDD} \leq 1 - \frac{c}{b}$$
$$p_{CDC} + p_{DCD} \leq 2 - \frac{c}{b}$$
$$p_{CCD} + p_{CDC} + p_{DCC} \leq 3 - \frac{c}{b}$$
$$p_{CDD} + p_{DCD} + p_{DDC} \leq 3 - 2 \cdot \frac{c}{b} \text{ (†)}$$
$$p_{CCD} + p_{CDD} + p_{DCC} + p_{DDC} \leq 4 - 2 \cdot \frac{c}{b}$$

C

Example of deriving condition

Sequence

Sequence Round Payoff:

D

C

D

C

bp_{DC}

$bp_{CD} - c$

Total Payoff:

$b(p_{CD} + p_{DC}) - c$

Partner condition:

$b(p_{CD} + p_{DC}) - c \leq 2(b - c)$

Equivalent condition:

$p_{CD} + p_{DC} \leq 2 - \frac{c}{b} \text{ (*)}$

Sequence

Sequence Round Payoff:

D

D

C

D

D

C

bp_{DDC}

bp_{DCD}

$bp_{CDD} - c$

Total Payoff:

$b(p_{DDC} + p_{DCD} + p_{CDD}) - c$

Partner condition:

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

Equivalent condition:

$p_{CDD} + p_{DCD} + p_{DDC} \leq 3 - 2 \cdot \frac{c}{b} \text{ (†)}$