Pedro Dal Bo:

"Cooperation under the Shadow of the Future: experimental evidence from infinitely repeated games"

http://www.econ.brown.edu/fac/Pedro_Dal_Bo/theshadow.pdf

Table 2: Stage game payoffs in points

PD1					PD2	
		Blue Player			Blue Player	
		C	D		C	D
Red Player	C	65 , 65	10 , 100		75 , 75	10 , 100
	D	100 , 10	35 , 35		100 , 10	45 , 45

All payoffs in the game were in points. At the end of each session, the points earned by each subject were converted into dollars at the exchange rate 200 points=$1 and paid privately in cash. In addition, subjects were paid a 5 dollar show up fee

Rotating matching

Repetition

Infinite horizon

$\delta = 0, 1/2, 3/4$ expected length $1, 2, 4$

Finite horizon

$H = 1, 2, 4$

subjects played all infinite or all finite

done in both orders – increasing length and decreasing length

Theory

δ	PD1	PD2
0	DD	DD
½	DD, DC, CD	DD, CC
¾	All	All

Results on Cooperation

Table 5: Percentage of cooperation by match and treatment*

		Match									
		1	2	3	4	5	6	7	8	9	10
	$\delta = 0$	26.26	18.18	10.61	11.62	12.63	12.63	5.56	5.26	5.26	5
Dice	$\delta = \frac{1}{2}$	28.36	27.12	34.58	35.53	21.60	19.08	29.84	35.96	28.16	50
	$\delta = \frac{3}{4}$	40.44	28.57	27.78	32.92	46.51	33.09	44.05	53.51	42.26	45.83
	$H = 1$	26.56	18.23	16.67	17.19	11.98	8.02	6.79	10.49	6.14	6.67
Finite	$H = 2$	19.79	15.89	14.84	9.64	11.46	10.80	12.04	10.19	6.58	6.67
	$H = 4$	31.64	30.34	30.47	25.52	25.13	23.77	16.36	19.75	14.91	20.83

*All rounds.

4

Focus on matches 4-10

Table 6: Percentage of cooperation by round and treatment*

							Round						
		1	2	3	4	5	6	7	8	9	10	11	12
	$\delta = 0$	9.17											
Dice	$\delta = \frac{1}{2}$	30.93	26.10	19.87	12.50	12.96							
	$\delta = \frac{3}{4}$	46.20	40.76	38.76	34.58	33.04	27.27	24.75	26.28	29.17	26.04	32.29	31.25
	$H = 1$	10.34											
Finite	$H = 2$	13.31	6.90										
	$H = 4$	34.58	21.55	18.97	10.63								

*Matches four through ten.

5

Joint Outcomes

Table 7: Distribution of outcomes by stage game and treatment*

	$\delta = 0$		$\delta = \frac{1}{2}$		$\delta = \frac{3}{4}$	
	PD1	PD2	PD1	PD2	PD1	PD2
CC	2.98	0.27	**3.17**	**18.83**	20.68	25.64
CD & DC	20.83	13.98	**28.57**	**25.50**	30.34	26.03
DD	76.19	85.75	68.25	55.67	48.98	48.33

*Matches four through ten, and all rounds.

Reciprocal Altruism

❑ one shot game or final period of the two period games with a definite ending

❑ experienced players: after six or more matches

❑ probability of cooperation in the final period

    in one shot game: 6.4%

    if you cheat in the first period of two shot: 3.2%

    if you cooperate in the first period of one shot: 21%