MICROECONOMICS II.I – REPEATED GAMES

New York University, a.y. 2012-2013

In the following, I compute the SPE value set V of a bunch of games. In the first two figures, the underlying stage game is a Cournot Duopoly with $P = 6 - Q$ and $c = .6$. In Figure 1, $\delta = .3$, that is the discount factor is pretty low. As a result, agents are impatient and cooperation is difficult. Indeed, the set of SPE values that can be achieved is relatively small, if compared with Figure 2, where $\delta = .7$. In Figure 3, you can see the set V of the infinite repetition of the Prisoner Dilemma with payoffs reported in Figure 4. Finally, in Figure 5, you can see the set V of the infinite repetition of the game discussed in class, reported in Figure 6. All SPE value sets are computed with the Matlab routine in Abreu and Sannikov (2013).

Cournot Duopoly

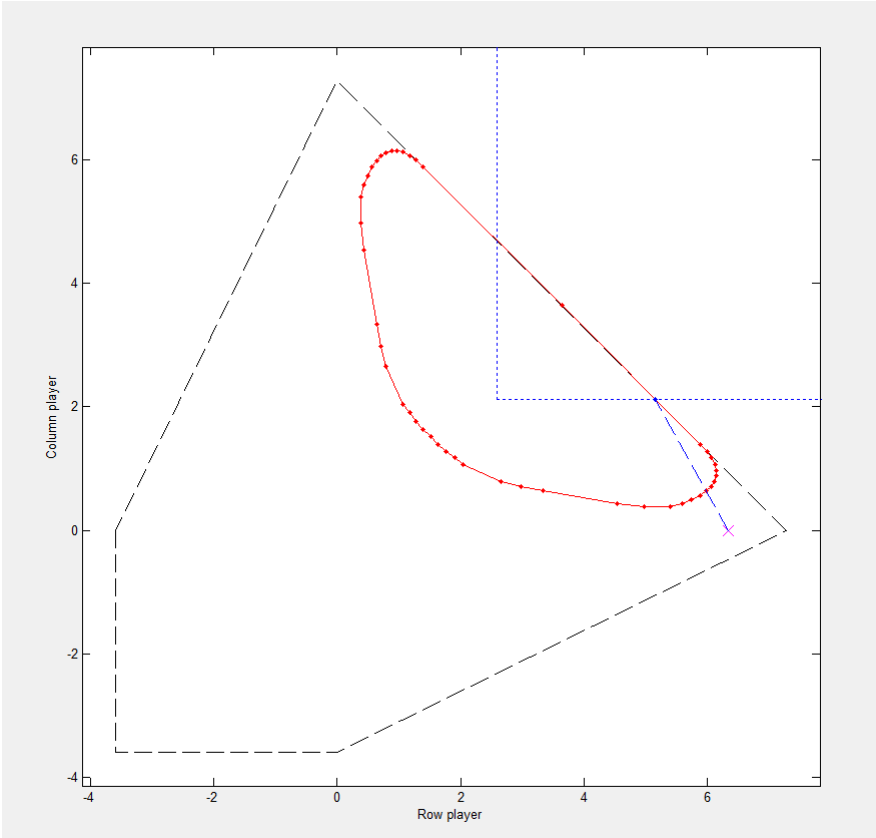

Figure 1.— SPE value set of the infinite repetition of Cournot Duopoloy with $\delta = .3$.

March 12, 2013. jacopo.perego@nyu.edu.

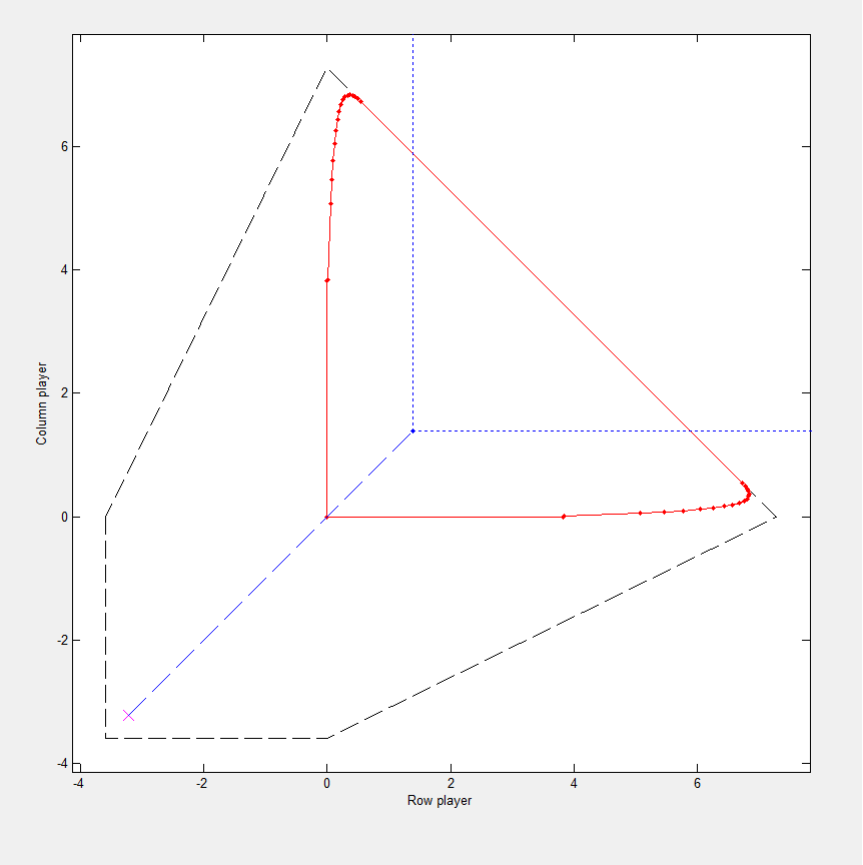

FIGURE 2.— SPE value set of the infinite repetition of Cournot Duopoloy with $\delta = .7$.

Prisoner Dilemma

		$P2$	
		A	B
$P1$	A	$4,4$	$0,5$
	B	$5,0$	$1,1$

FIGURE 3.— Prisoner Dilemma.

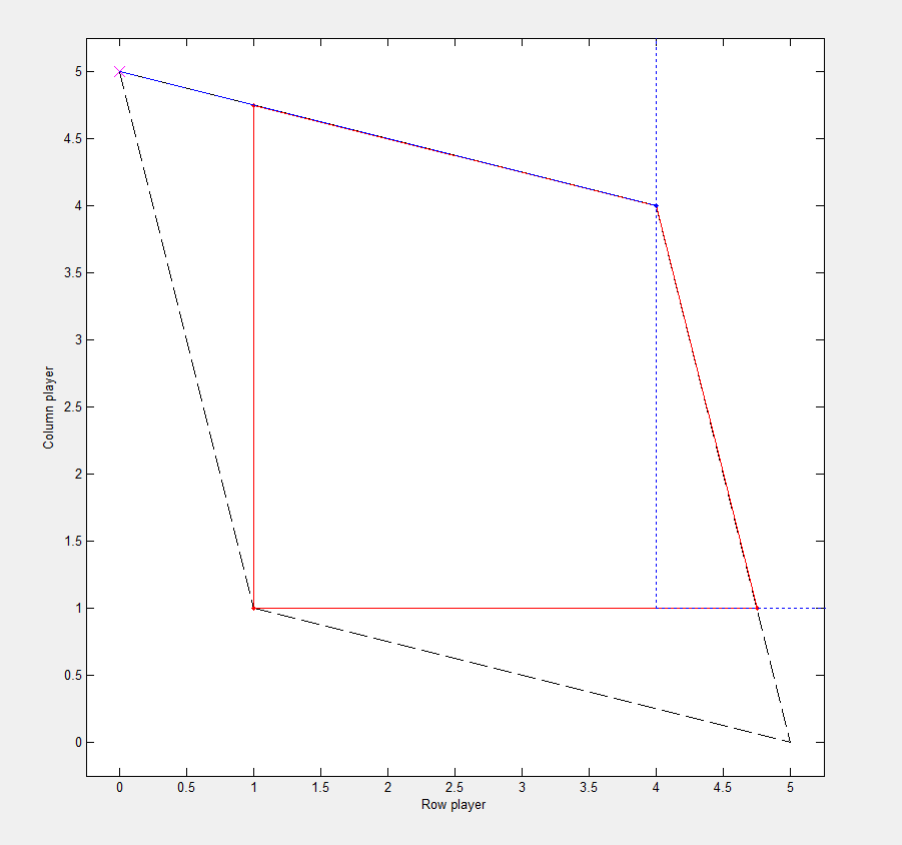

FIGURE 4.— SPE value set of the infinitely repeated Prisoner Dilemma with $\delta \geq \frac{1}{4}$.

Game seen in Lab

		$P2$		
		A	B	C
$P1$	A	$6,6$	$0,8$	$0,0$
	B	$8,0$	$3,3$	$0,0$
	C	$0,0$	$0,0$	$2,2$

FIGURE 5.— G: Stage Game with 2 NE and a Pareto efficient non-Nash strategy profile.

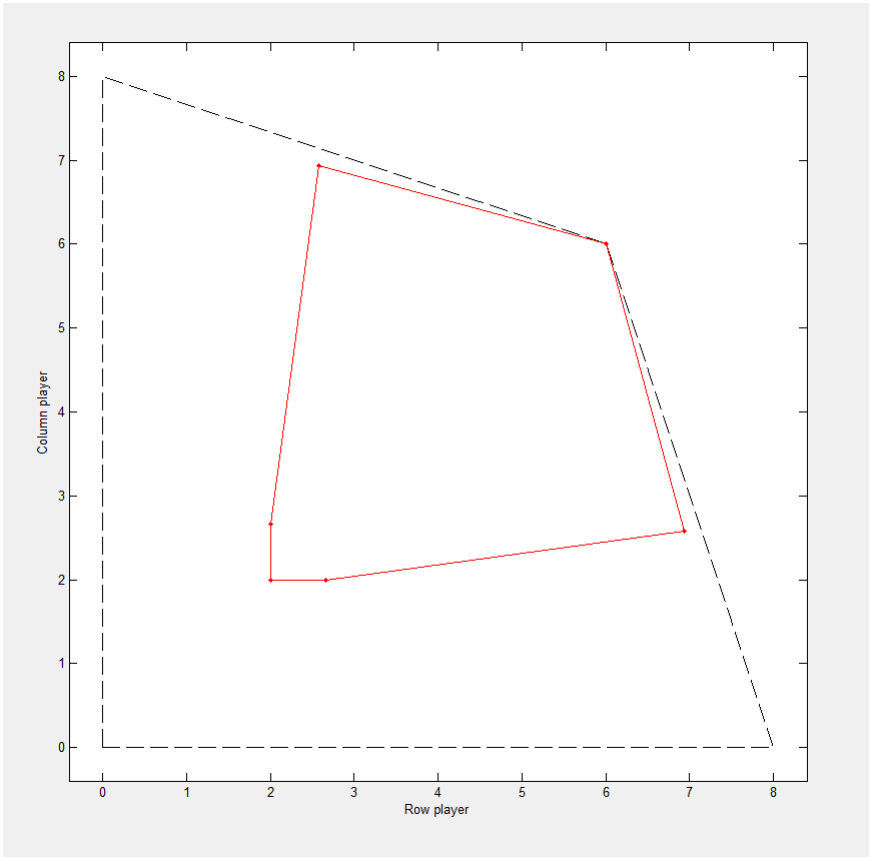

FIGURE 6.— SPE value set of the game $\Gamma^{\infty}(G(0.42))$.