Figure 2. Convergence in the grid games: all algorithms are converging. The CE-Q algorithm shown is uCE-Q.

Grid Games	GG1		GG2		GG3	
Algorithm	Score	Games	Score	Games	Score	Games
Q	100,100	2500	49,100	3333	100,125	3333
Foe-Q	0,0	0	67,68	3003	120,120	3333
Friend-Q	$-10^4, -10^4$	0	$-10^4, -10^4$	0	$-10^4, -10^4$	0
uCE-Q	100,100	2500	50,100	3333	116,116	3333
eCE-Q	100,100	2500	51,100	3333	117,117	3333
rCE-Q	100,100	2500	100,49	3333	125,100	3333
lCE-Q	100,100	2500	100,51	3333	$-10^4, -10^4$	0

Table 2. Grid Games played repeatedly, allowing 10^4 moves. Average scores are shown. The number of games played varied with the agents' policies: some move directly to the goal, while others digress.