Dall & Wright Supplementary Information: Payoff Tables

Table 1: payoffs to mutants playing row strategies against populations of n column strategists with a 'dominance advantage'; i.e. for $n < i = i_{crit}$

	SR	SD	FR	FD
SR	$\dfrac{\left(1+\left(-1+2^{\frac{n}{i}}\right)n\right)\left(1-(1-\lambda)^{1+n}\right)}{1+n}$	λ	$\dfrac{1}{(1+n)\,\gamma}\Bigg(\lambda\Bigg(\dfrac{1-(1-\gamma)^{1+n}}{1+n}+\dfrac{1}{1+n}\Big(\left(-1+2^{\frac{n}{i}}\right)n\,(1+n+n^2-(1-\gamma)^n(1+n+n^2-\gamma))\Big)+n\left(\gamma+\left(-1+(1-\gamma)^n\right)\lambda\right)\Bigg)\Bigg)$	$\dfrac{\left(n+\dfrac{\left(-1+2^{\frac{n}{i}}\right)\left(1-(1-\gamma)^{1+n}\right)}{\gamma}\right)\lambda}{1+n}$
SD	λ	λ	$\dfrac{\left(n+\dfrac{1-(1-\gamma)^{1+n}}{\gamma}\right)\lambda}{1+n}$	$\dfrac{\left(n+\dfrac{\left(1+\left(-1+2^{\frac{n}{i}}\right)n\right)\left(1-(1-\gamma)^{1+n}\right)}{\gamma}\right)\lambda}{1+n}$
FR	$\dfrac{1}{1+n}\Bigg(\dfrac{1-(1-\lambda)^{1+n}}{1+n}-\dfrac{1}{2}n(-2+\gamma)\lambda+\left(-1+2^{\frac{n}{i}}\right)n\left(1+\dfrac{1-(1-\lambda)^{1+n}}{1+n}-(1-\lambda)^{-1+n}+\lambda-\dfrac{\gamma\lambda}{2}\right)\Bigg)$	$\dfrac{1}{1+n}\Bigg(\left(1-\left(-1+2^{\frac{n}{i}}\right)n(-2+\gamma)\right)\lambda\Bigg)$	$\dfrac{\left(1+\left(-1+2^{\frac{n}{i}}\right)n\right)\left(1-(1-\gamma)^{1+n}\right)\lambda}{(1+n)\,\gamma}$	$\dfrac{\left(-1+2^{\frac{n}{i}}\right)\left(1-(1-\gamma)^{1+n}\right)\lambda}{\gamma}$
FD	$\dfrac{1}{(1+n)^2}\Bigg(1-(1-\lambda)^n+(1-\lambda)^n\left(\left(-1+2^{\frac{n}{i}}\right)n(-1+\lambda)+\lambda\right)+n\left(-1+2^{\frac{n}{i}}-(1+n)(-2+\gamma)\lambda\right)\Bigg)$	$\dfrac{\left(2-2^{\frac{n}{i}}n(-2+\gamma)\right)\lambda}{2(1+n)}$	$\dfrac{\left(1-(1-\gamma)^{1+n}\right)\lambda}{\gamma}$	$\dfrac{\left(1+\left(-1+2^{\frac{n}{i}}\right)n\right)\left(1-(1-\gamma)^{1+n}\right)\lambda}{(1+n)\,\gamma}$

Table 2: payoffs to mutants playing row strategies against populations of n column strategists without a 'dominance advantage'; i.e. for $n \geq i = i_{crit}$

	SR	SD	FR	FD
SR	$1 - (1-\lambda)^{1+n}$	λ	$\left(\lambda\left(1 + n^2 + n\gamma - n\lambda + (1-\gamma)^n (-1 + \gamma + n(-n+\lambda))\right)\right) / ((1+n)\,\gamma)$	$\dfrac{\left(n + \frac{1-(1-\gamma)^{1+n}}{\gamma}\right)\lambda}{1+n}$
SD	λ	λ	$\dfrac{\left(n + \frac{1-(1-\gamma)^{1+n}}{\gamma}\right)\lambda}{1+n}$	$\dfrac{n\lambda}{1+n} + \dfrac{\lambda - (1-\gamma)^{1+n}\lambda}{\gamma}$
FR	$\left((n + (-1+\lambda)^2)(1-\lambda)^n - (-1+\lambda)(-1 + n(-1 + (-2+\gamma)\lambda))\right) / ((1+n)(-1+\lambda))$	$\dfrac{(1 - n(-2+\gamma))\lambda}{1+n}$	$\dfrac{(1 - (1-\gamma)^{1+n})\lambda}{\gamma}$	$\dfrac{(1 - (1-\gamma)^{1+n})\lambda}{\gamma}$
FD	$-\dfrac{-1 + (1-\lambda)^{1+n} + n(-2+\gamma)\lambda}{1+n}$	$\dfrac{(1 - n(-2+\gamma))\lambda}{1+n}$	$\dfrac{(1 - (1-\gamma)^{1+n})\lambda}{\gamma}$	$\dfrac{(1 - (1-\gamma)^{1+n})\lambda}{\gamma}$