

Types of Strategy

Harry R. Lloyd, September 19, 2019

type of game	strategy
strategic games	pure strategy: a_i is an element of A_i mixed strategy: α_i is a distribution over A_i
Bayesian games	Bayesian strategy: $S_i : T_i \rightarrow A_i$ (or perhaps: \rightarrow distributions over A_i)
correlating devices	pure strategy in a game with a correlating device: $\sigma_i : \Omega \rightarrow A_i$ (or perhaps: \rightarrow distributions over A_i)
extensive-form games	σ_i is a function from each of the information sets at which i is next to play, to a distribution over i 's actions at that information set

Types of Belief

Harry R. Lloyd, September 19, 2019

type of game	belief
strategic games	μ_i over A_{-i} – note that this allows for <i>correlated beliefs</i>
Bayesian games	$p_i(\cdot t_i)$ over T_{-i}
correlating devices	π_i over Ω : player i 's <i>prior</i> ; we assume <i>common priors</i> ($\pi_i = \pi_j \quad \forall i, j$) $\pi(\cdot \mathcal{P}_i)$ over Ω : player i 's <i>posterior</i> belief, having received the signal \mathcal{P}_i – computed via Bayes' rule
extensive-form games	μ_i^S at a given information set S for i , μ_i^S is a distribution over <i>nodes</i> within S