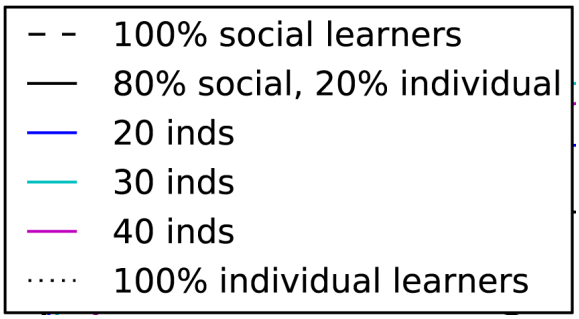
Supplementary materials, document 4.
Adding individuals to a social-learner population

($\lambda = 0.01$)
6 May, 2016



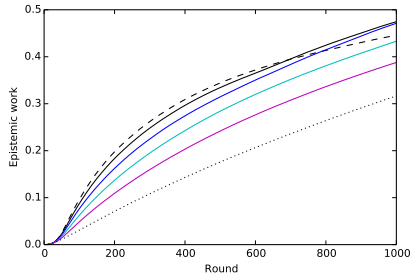


Figure 1: eWork, $\beta = 50$

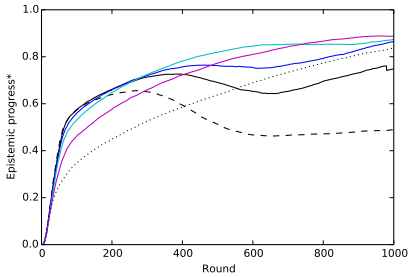


Figure 2: eProg*, $\beta = 50$

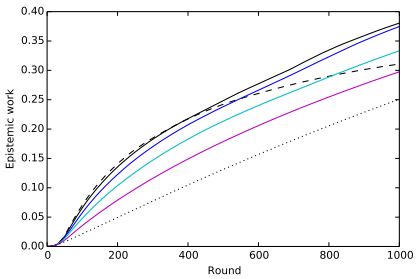


Figure 3: eWork, $\beta = 100$

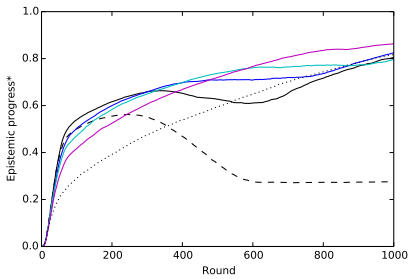


Figure 4: eProg*, $\beta = 100$*

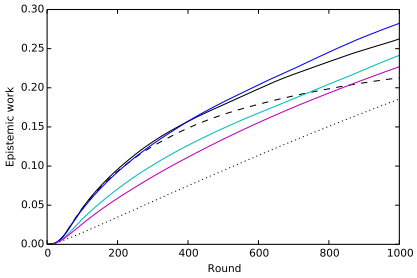


Figure 5: eWork, $\beta = 200$

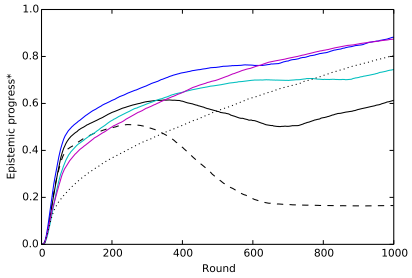


Figure 6: eProg*, $\beta = 200$

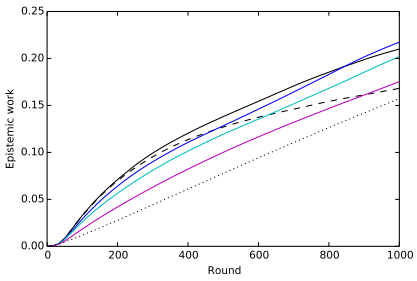


Figure 7: eWork, $\beta = 300$

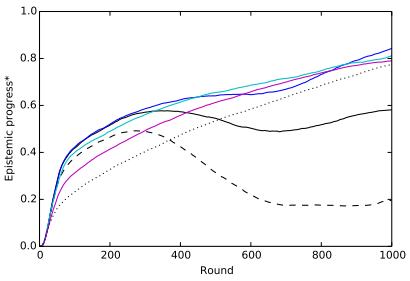


Figure 8: eProg*, $\beta = 300$

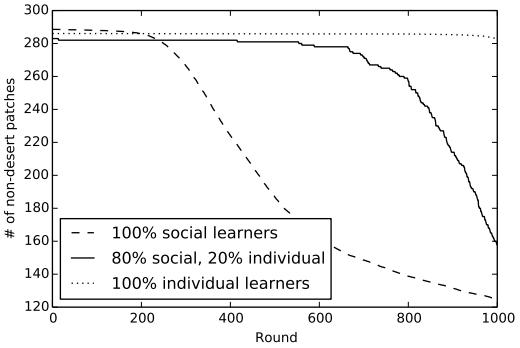


Figure 9: Number of significant (>100 units) patches

The figures on the right side reporting $eProg^*$ are included mainly for the sake of consistency. As figure 9 shows, populations of individual and social learners have very different search strategies. Social learners conduct a sequential search where they work on a smaller number of patches at one time, whereas individual learners always focus on the highest patch in a neighborhood, slowly decreasing the elevation of the whole neighborhood. Hence, for a population of pure social learners, the number of significant patches (>100 units) starts to decrease already after 200 rounds. In contrast, only at the end of the simulation does a small decrease occur for a population of individual learners. Now, because $eProg^*$ is defined as $\frac{\#\text{ visited significant patches}}{\#\text{ significant patches}}$, it is sensitive to a change in the number of significant patches. As is explained in the text in footnote 16, this makes $eProg^*$ an interesting measure of the exhaustiveness or pedanticness of the search conducted by a population of agents, but – under the assumptions constituting the BC model – it cannot be used as a general measure of epistemic success.