

Errata: Phase Spaces of the Strategy Evolution in the El Farol Bar Problem

Shane St. Luce and Hiroki Sayama

A slight error was found in reviewing the simulation code post publication of St. Luce and Sayama (2020) where the Last Incorrect strategy was performing incorrectly in three strategy sets, affecting the results in the Dynamic Analysis section for the Last Correct, Never, and Last Incorrect strategy set but unaffected the final conclusions. By fixing this bug, we see that when more than 60% of the population are using the Last Correct strategy, then Last Correct will enter a cycle of which it is always wrong while Last Incorrect strategy will always be right and the Never strategy is right about half the time. This shows a synthesis of the dynamic results seen in the two-strategy sets in the original publication. The original paper and figures suggest that the simulations eventually shift away from the Last Incorrect strategy when the Best Switching method is used. In actuality, the Never strategy is eventually dismissed. The results from utilizing the best switching mechanic now eliminates the Never strategy entirely from consideration. Note that this result now matches the results from the original Last Correct and Last Incorrect dynamic results.

References

St. Luce, S. and Sayama, H. (2020). Phase spaces of the strategy evolution in the el farol bar problem. *The 2020 Conference on Artificial Life*.