

Accepted Manuscript

Sex With No Regrets: How Sexual Reproduction Uses a No Regret Learning Algorithm for Evolutionary Advantage

Omer Edhan, Ziv Hellman, Dana Sherill-Rofe

PII: S0022-5193(17)30226-6
DOI: [10.1016/j.jtbi.2017.05.018](https://doi.org/10.1016/j.jtbi.2017.05.018)
Reference: YJTBI 9075



To appear in: *Journal of Theoretical Biology*

Received date: 25 May 2016
Revised date: 14 February 2017
Accepted date: 13 May 2017

Please cite this article as: Omer Edhan, Ziv Hellman, Dana Sherill-Rofe, Sex With No Regrets: How Sexual Reproduction Uses a No Regret Learning Algorithm for Evolutionary Advantage, *Journal of Theoretical Biology* (2017), doi: [10.1016/j.jtbi.2017.05.018](https://doi.org/10.1016/j.jtbi.2017.05.018)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

HIGHLIGHTS

- Sex implements a machine learning algorithm that more often than not grants it an evolutionary advantage over asexual reproduction.
- The algorithm reliably works even though each generation is a tiny sample of the full space of all possible genotypes.
- The sparseness of each generation's genotypes in the space of all genotypes is crucial for sex to gain an advantage.
- Computer simulations indicate that this is sufficient to give sex an evolutionary edge, even in stable and unchanging environments.
- Asexual populations rapidly reach a fitness plateau, but is eventually surpassed, with high probability, by the fitness levels of sexual populations.

ACCEPTED MANUSCRIPT

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات