

Abstract Submitted
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Using light gradients to investigate symmetry breaking in fish schools JAMES PUCKETT, JULIA GIANNINI, Gettysburg College — Theoretical models of social animals successfully reproduce many structures found in nature (e.g. swarms, flocks, mills) using simple interaction rules. However, the interactions between individuals is complex and undoubtedly depends on the environment. Using schools of fish, we use visual perturbations to investigate how individuals negotiate both social and environmental information to reach a consensus. Starting with an unpolarized school of fish, we examine how the symmetry is broken and find that not all fish contribute equally to this decision.

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