

## **Can ecological models predict the diversity and distribution of languages?**

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Two fundamental questions about human language demand answers: why are so many languages spoken today, and why is their geographical distribution so uneven? Although hypotheses have been proposed for centuries, processes determining linguistic and cultural diversity patterns remain poorly understood. Previous studies, which relied on correlative, curve-fitting approaches, have produced contradictory results. Here I present the first application of process-based simulation modeling, derived from macroecology, to examine the distribution of human groups and their languages in Australia and New Guinea. The models do remarkably well in Australia and fail spectacularly in New Guinea. Possible reasons for this difference will be discussed.