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【801】 Simulations of artificial populations with competing skills

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We present a model for the spread, transmission, and competition of skills in a population of individuals with finite life span and asexual reproduction. Emphasis is placed on the role of spatial mobility of individuals. In the initialization, individuals may have no skill or either skill A or B. Later on, individuals are born unskilled and may acquire skills by being taught from a skilled individual. Skill A results in a small reproductive advantage but is easy to transmit, whereas skill B is harder to teach but results in a higher benefit. The model exhibits a rich behavior including phase transitions at critical migration rates.

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