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Marriage patterns and hearing signers affect the likelihood that a shared sign language will persist

The role of marriage patterns on the persistence of shared sign languages

Background Aoki & Feldman (1991)

- Condition for the persistence of a SL:
- m = % assortative mating for deafness,
- q = % of recessive alleles
- lc = % of deaf children acquiring SL
- from one parent signing

Method Agent-based modeling

- population with recessive hereditary deafness
- number of of agents = 2000 (n)
- % deaf = 2.2 (d)
- % hearing carrier = 17.2 (hc)
- % hearing acquisition (H)
- assortative mating (m)
- generations = 50 (g)

Results

The number of signers over generations, with different proportions of hearing signers (H) acquiring the sign language, when assortative mating is 0.0 (A), 0.5 (B) and 1.0 (C)



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another based on a feature $2lc \times [(1 - m)q + m] > 1$

tendency for an individual to marry

assortative mating refers to the

