

LIMITING DISTRIBUTIONS ARE STATIMARY DISTRIBUTIONS

$$r = \lim_{n \rightarrow \infty} (r_0 P^n) = \lim_{n \rightarrow \infty} (r_0 P^{n-1} P) = \left(\lim_{n \rightarrow \infty} r_0 P^{n-1} \right) P$$

$$= \left(\lim_{n \rightarrow \infty} r_0 P^n \right) P = r P$$