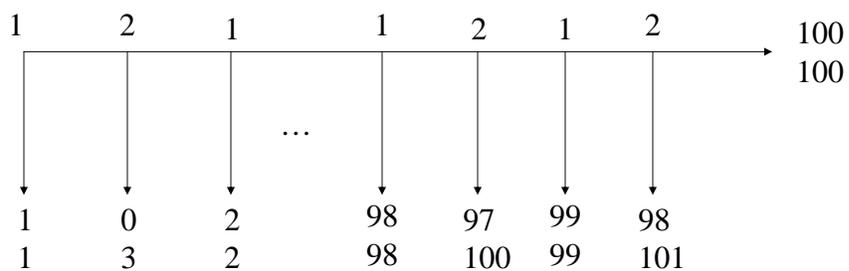


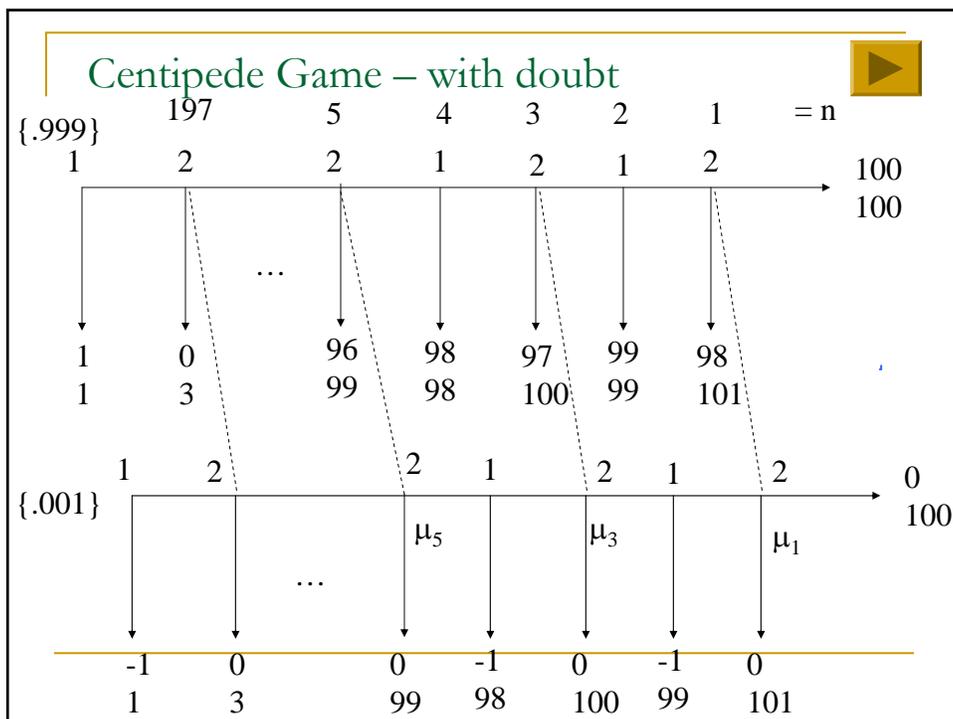
# Lecture 9

## Reputation Formation

14.123 Microeconomic Theory III  
Muhamet Yildiz

### Centipede Game





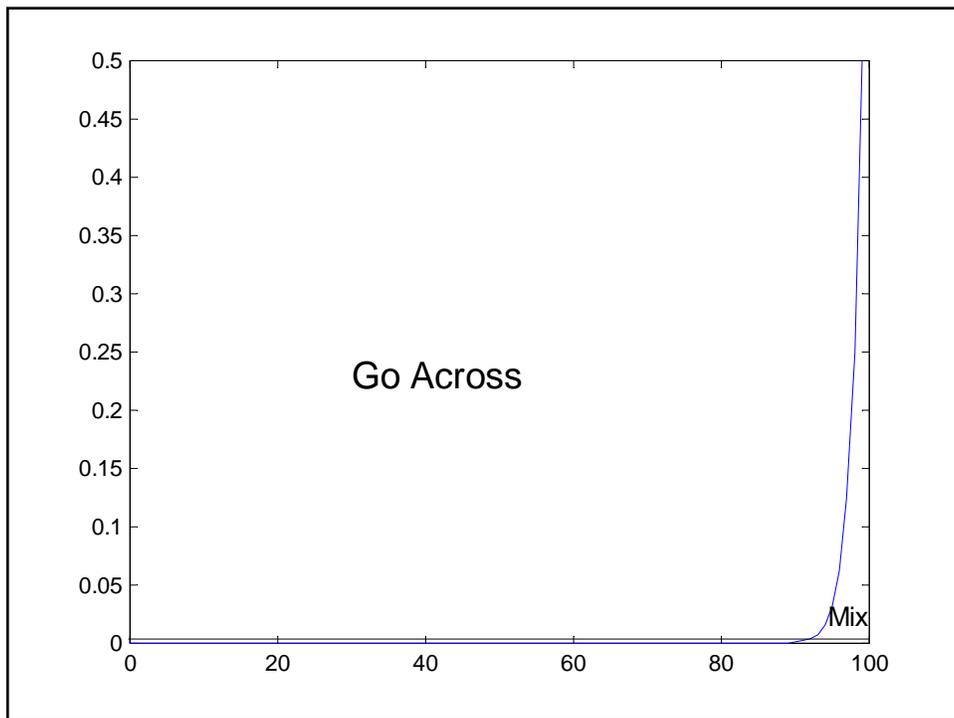
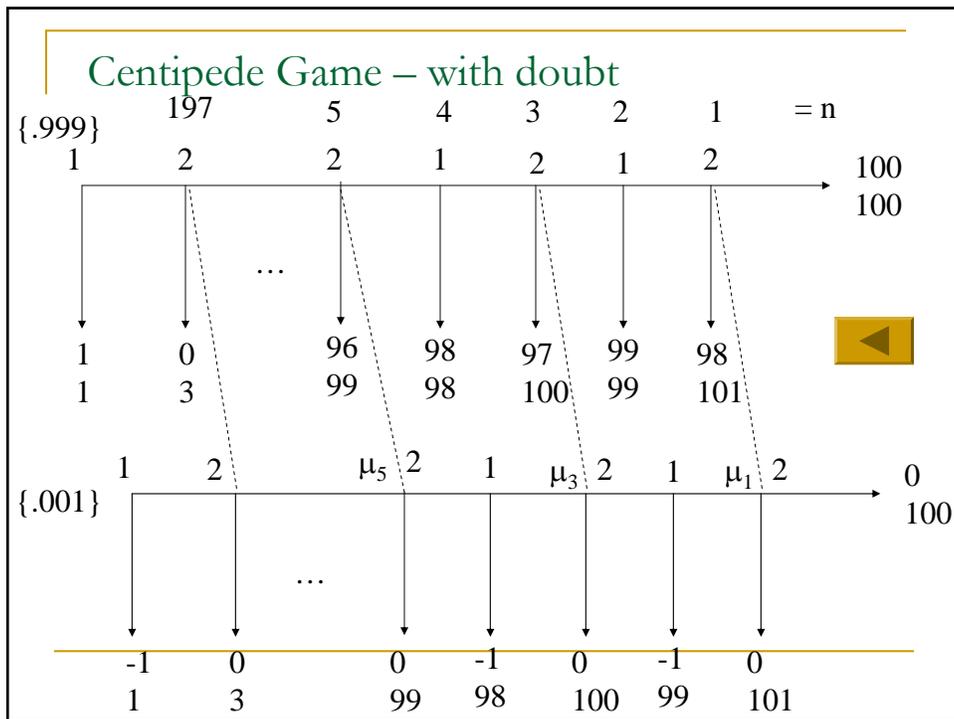
## Facts about SE in Centipede

- 2 always goes across with positive probability.
- Every information set of 2 is reached
- If 2 strictly prefers to go across at  $n$ , then
  - she must strictly prefer to go across at  $n+2$ ,
  - her posterior at  $n$  is her prior.
- For any  $n > 2$ , 1 goes across with positive probability. If 1 goes across w/p 1 at  $n$ , then 2's posterior at  $n-1$  is her prior.
- If 2 is mixing at  $n$ , then

$$(1 - \mu_n) p_{n-1} = 1/2$$

$$\mu_n = \mu_{n-2}/2$$

- $\mu_n \geq \mu_{n-2}/2$



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