What's the most likely path?
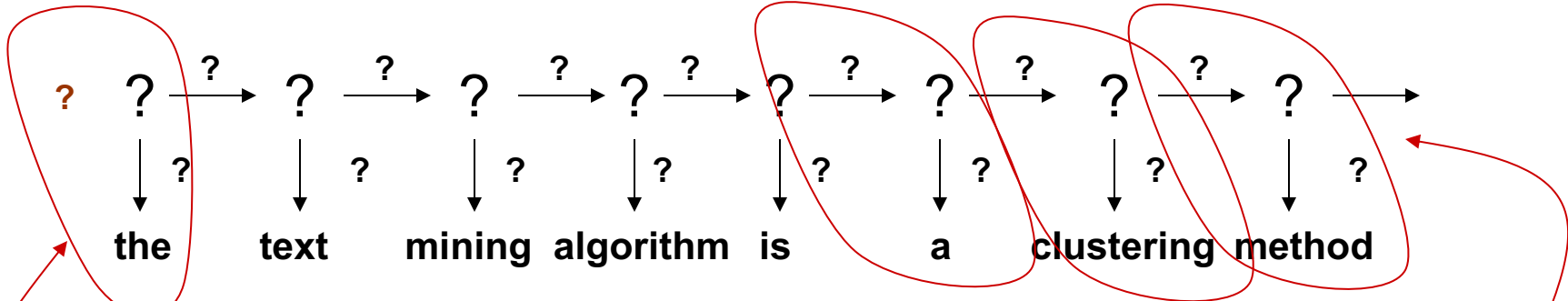
P(w|B)

the 0.2
a 0.1
we 0.01
is 0.02
…
method 0.0001
mining 0.00005

…

0.8

0.2

0.5

B   T

0.5

P(B)=0.5   P(T)=0.5
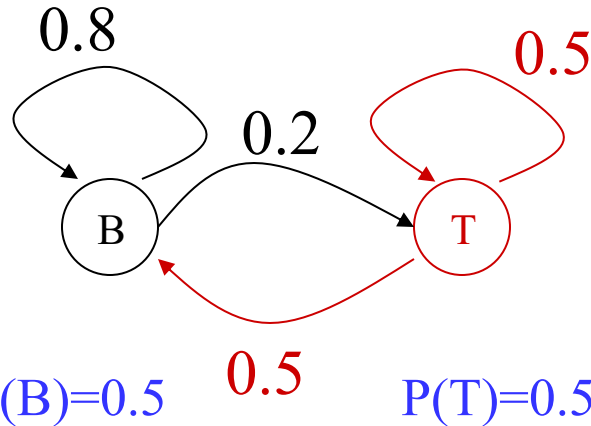
P(w|T)

…
text =0.125
mining = 0.1
algorithm =0.1
clustering = 0.05

…

? → ? → ? → ? → ? → ? → ? → ? → ? →

?   ?   ?   ?   ?   ?   ?   ?   ?

the   text   mining algorithm is   a   clustering method

$$S_1^* S_2^* ... S_T^* = \arg\max_{S_1 S_2 ... S_T} p(S_1 S_2 ... S_T, O) = \arg\max_{S_1 S_2 ... S_T} \pi(S_1) b_{S_1}(v_{o_1}) \prod_{i=2}^{T} a_{S_{i-1} S_i} b_{S_i}(v_{o_i})$$

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