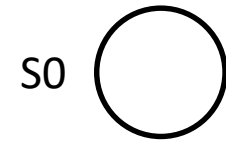
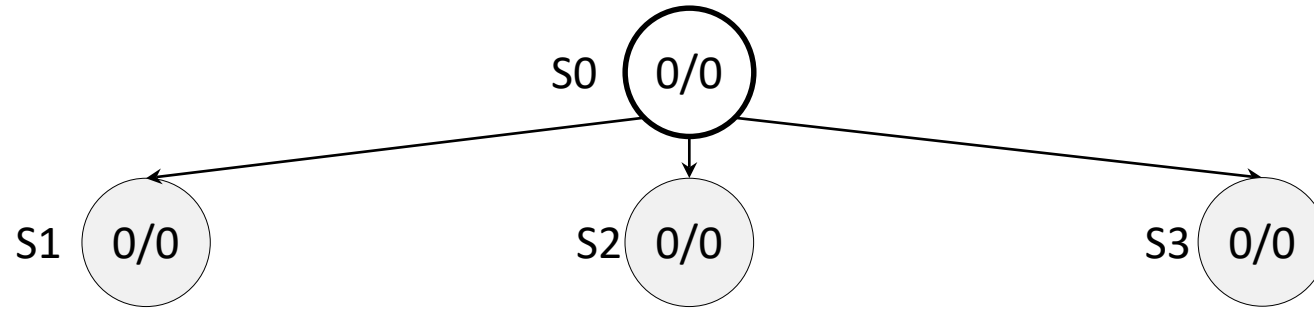


Initialisation (1)

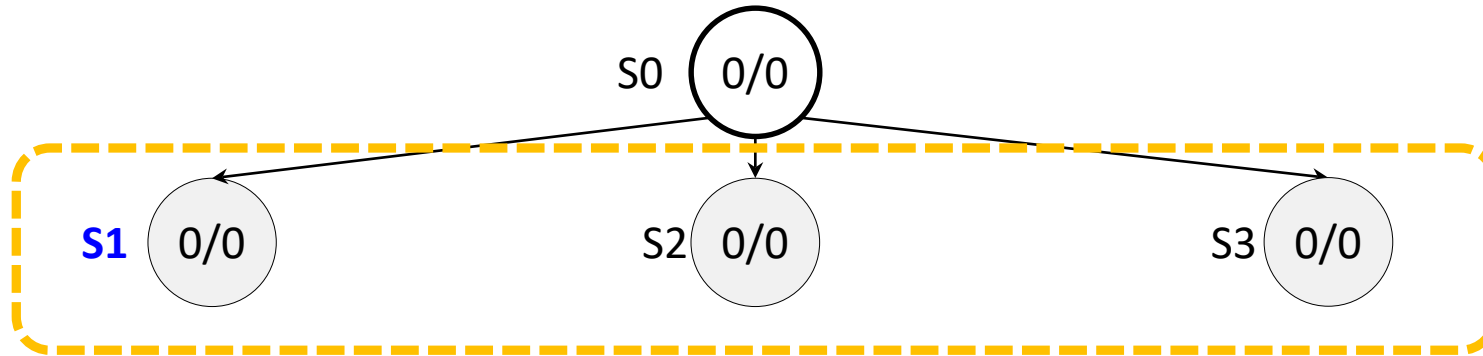


## Déroulement de MCTS sur 1 exemple

Initialisation (2)



Sélection



$$UCB1(s_1) = \infty$$

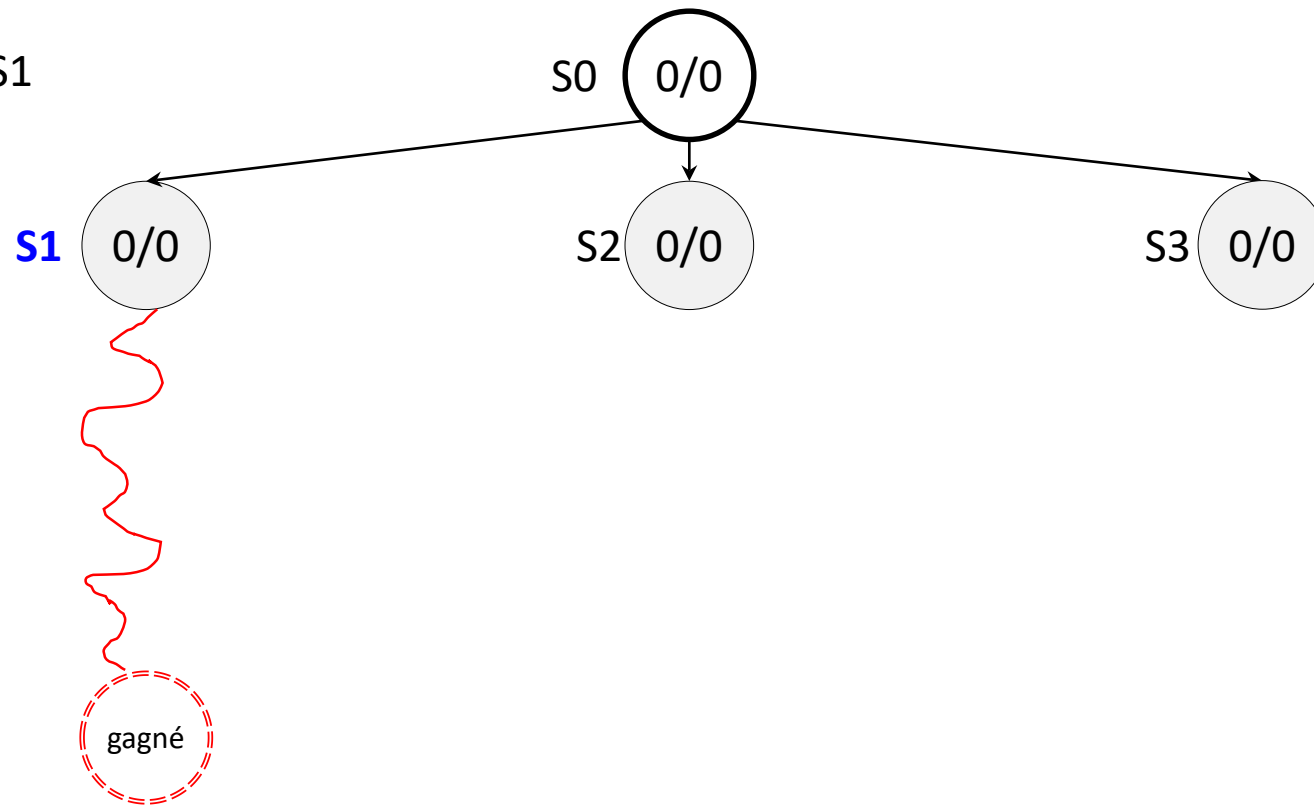
$$UCB1(s_2) = \infty$$

$$UCB1(s_3) = \infty$$

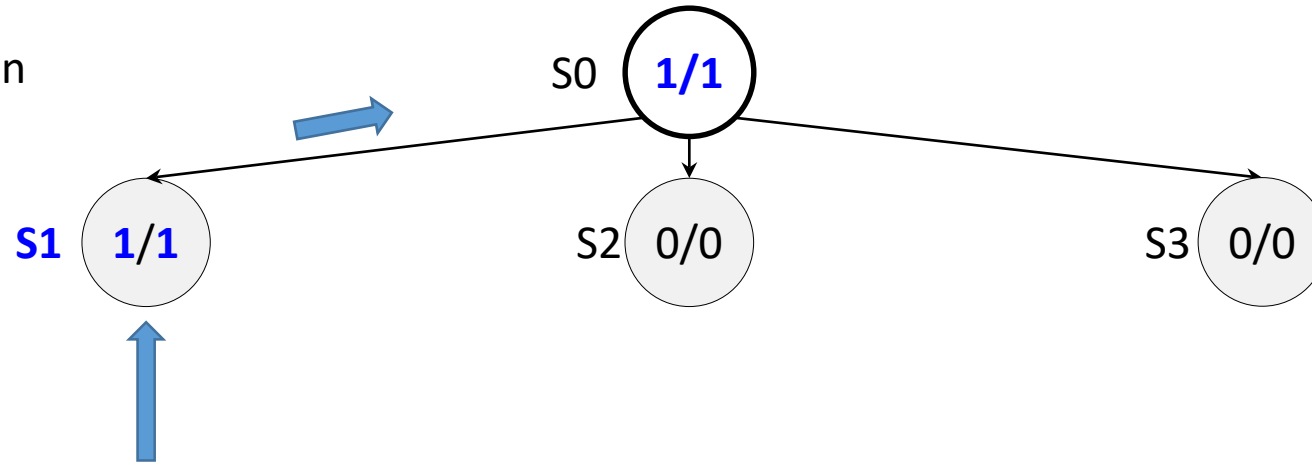
---

→ Choix dans l'ordre lexico-gr :  $s_1$

Simulation sous S1

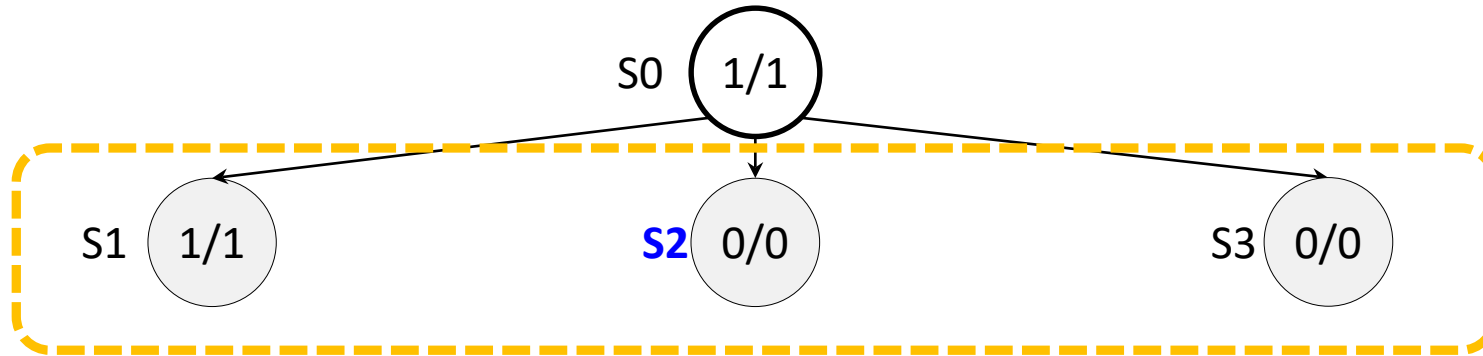


Rétro-propagation



gagné

Sélection



$$UCB1(S_1)=3,82$$

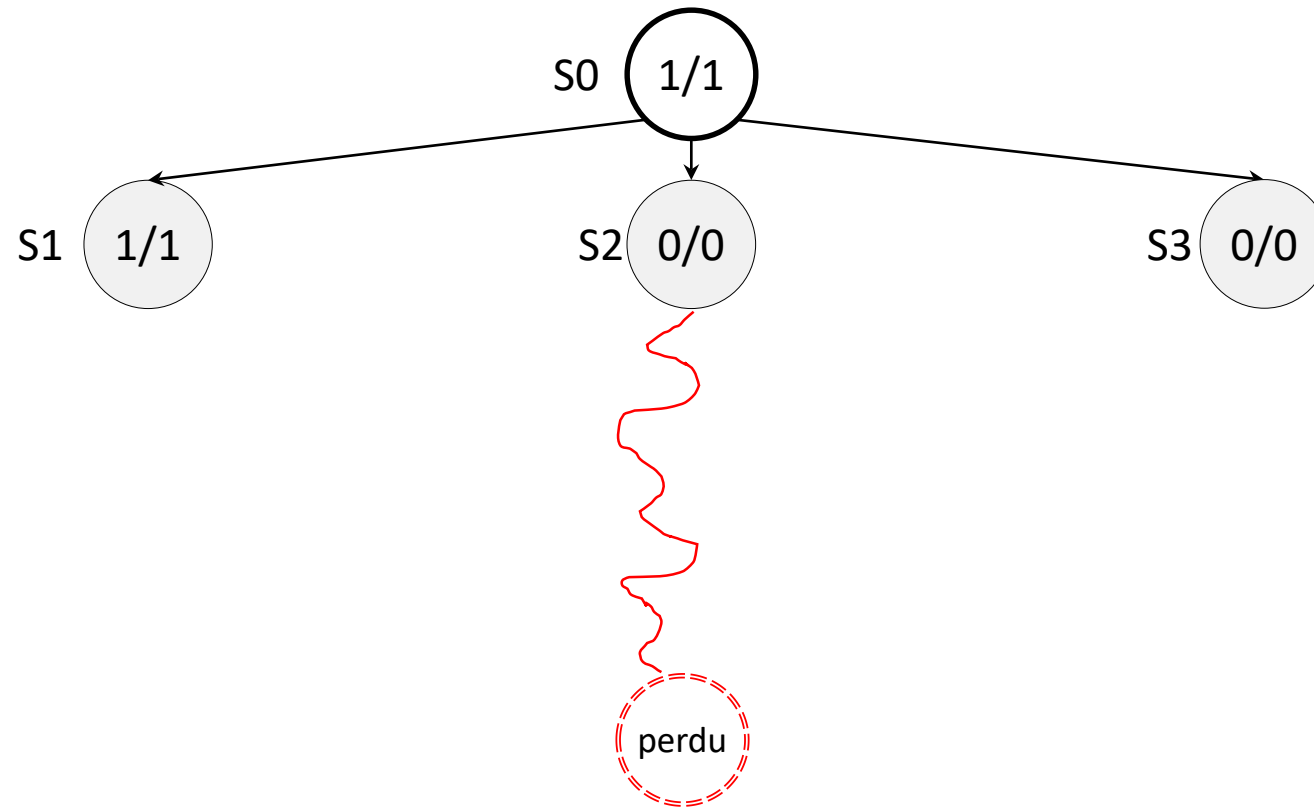
$$UCB1(S_2)=\infty$$

$$UCB1(S_3)=\infty$$

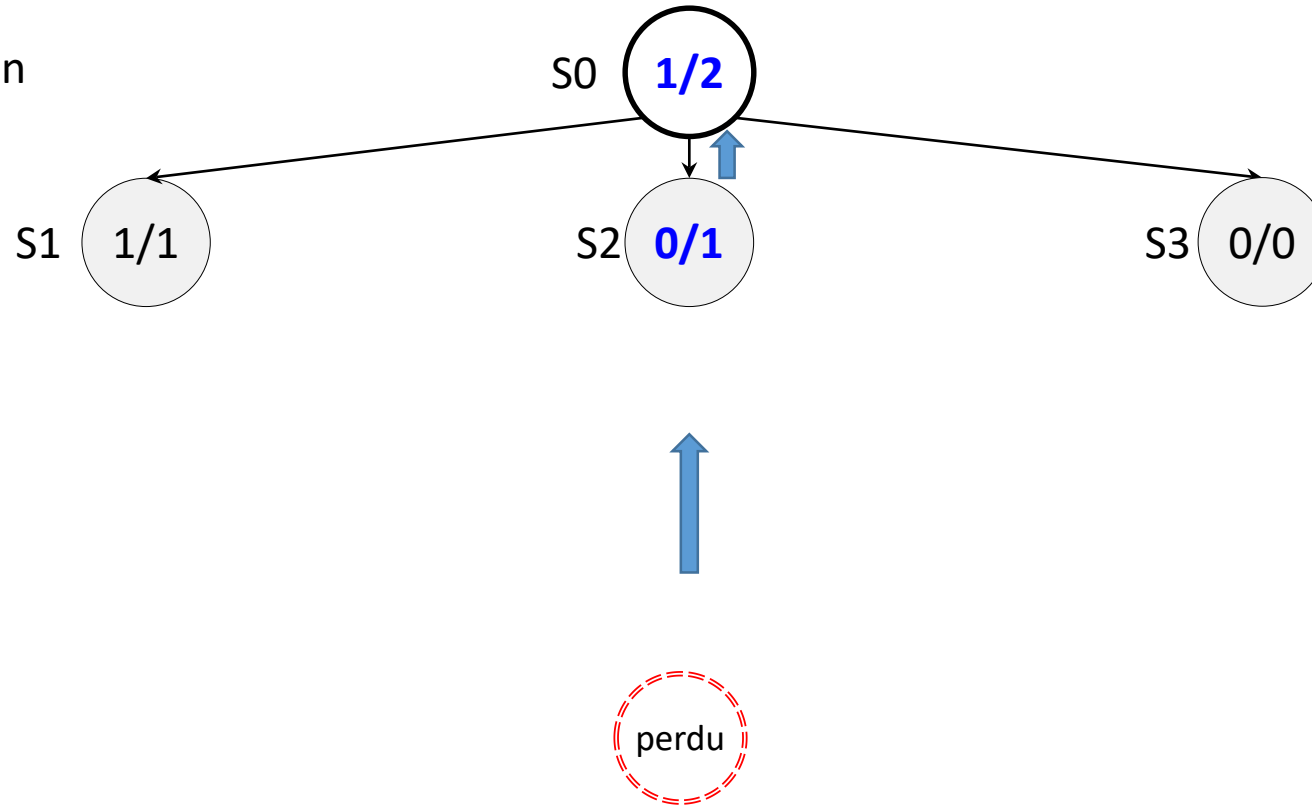
---

→ Choix dans l'ordre lexico-gr :  $S_2$

Simulation

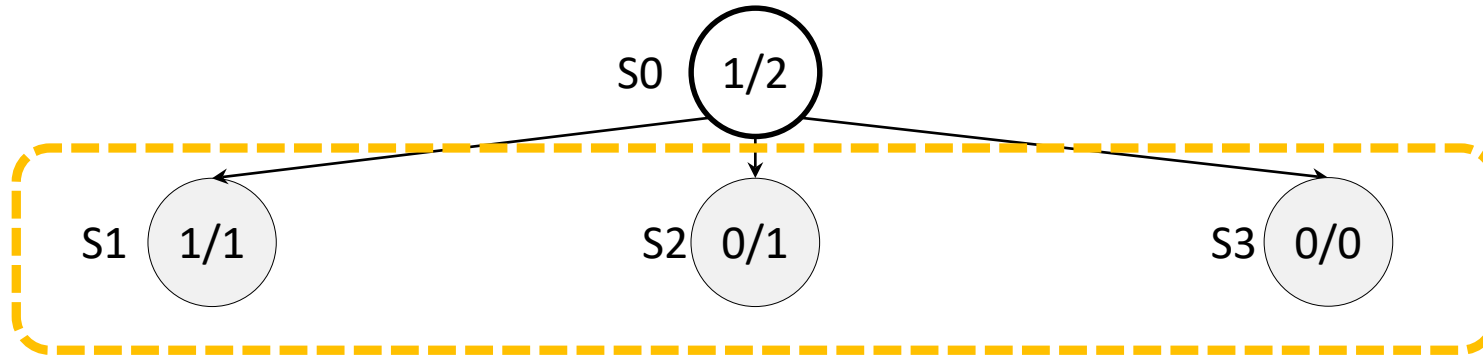


Rétro-propagation





Sélection

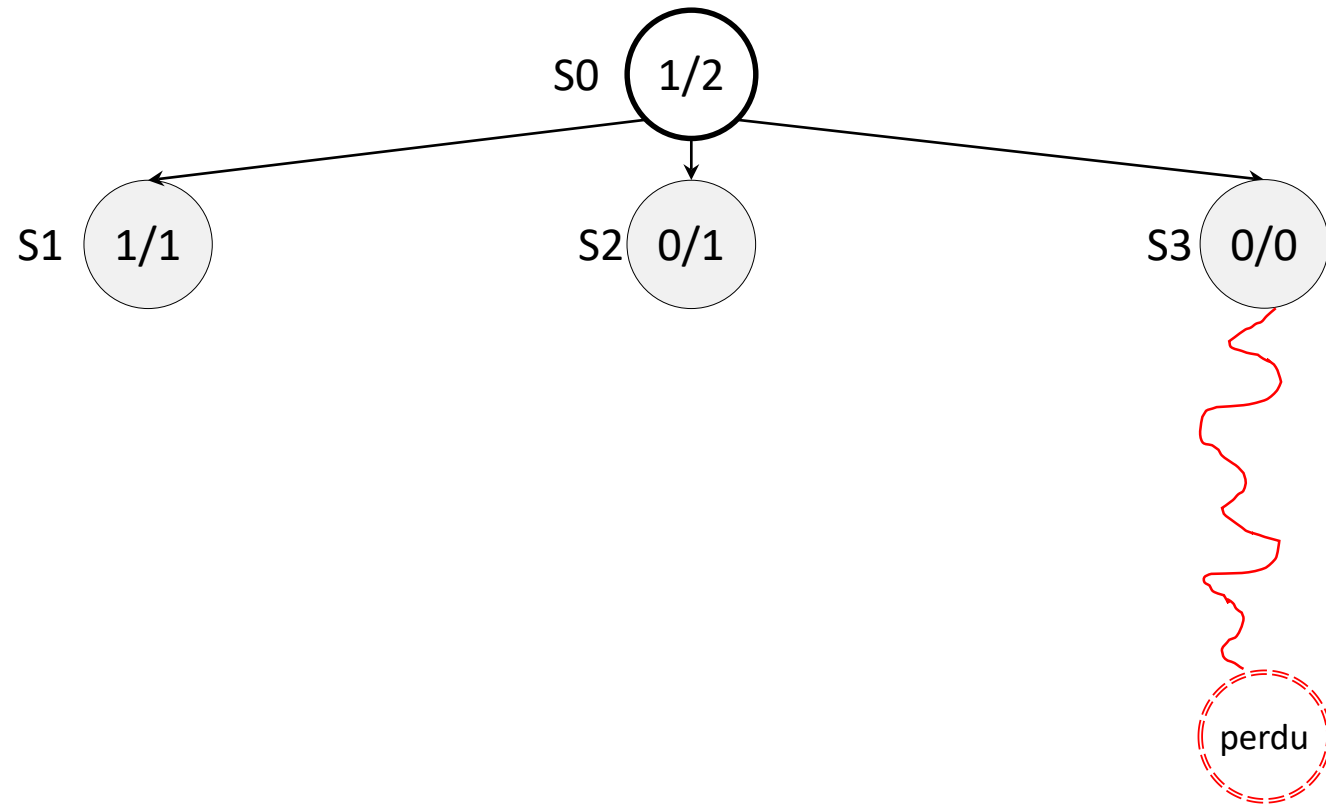


$$UCB1(S_1)=3$$

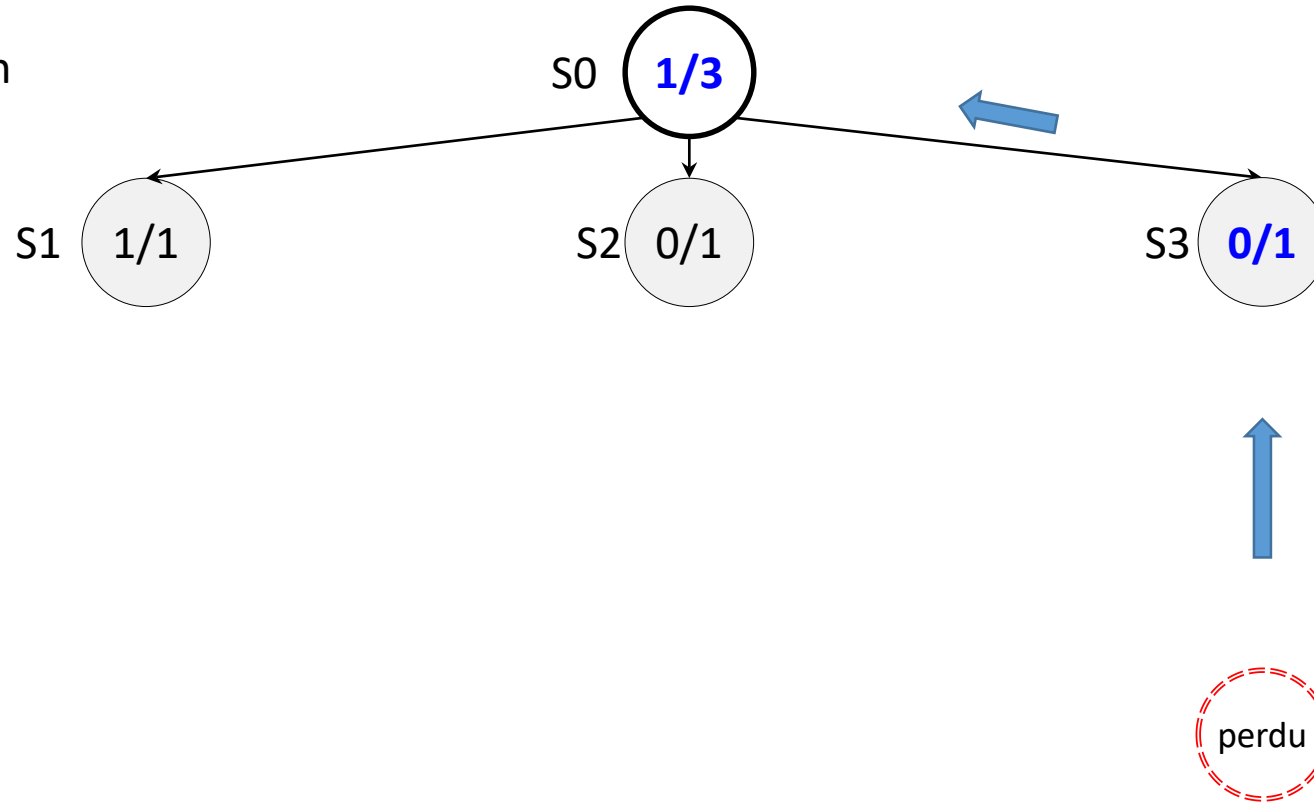
$$UCB1(S_2)=2$$

$$\rightarrow UCB1(S_3)=\infty$$

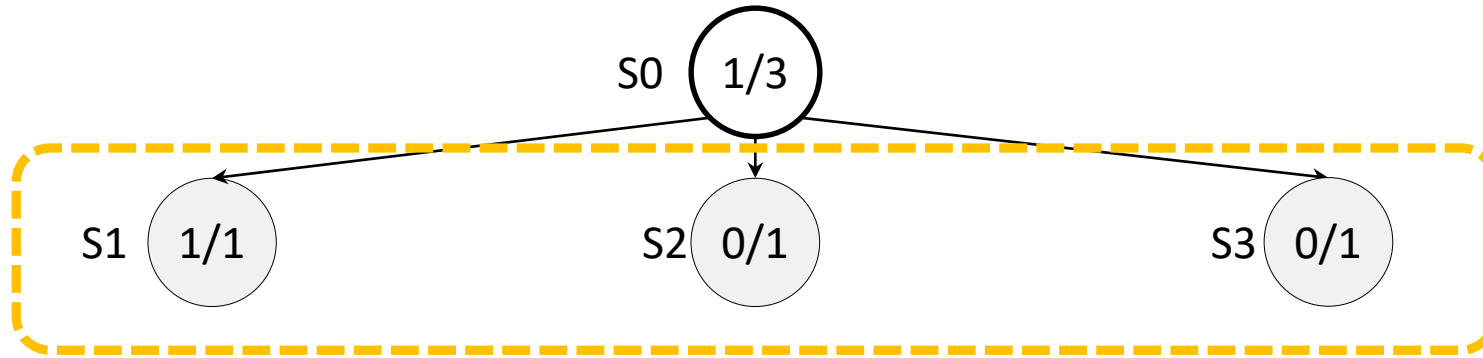
Simulation



# Rétropropagation



Sélection

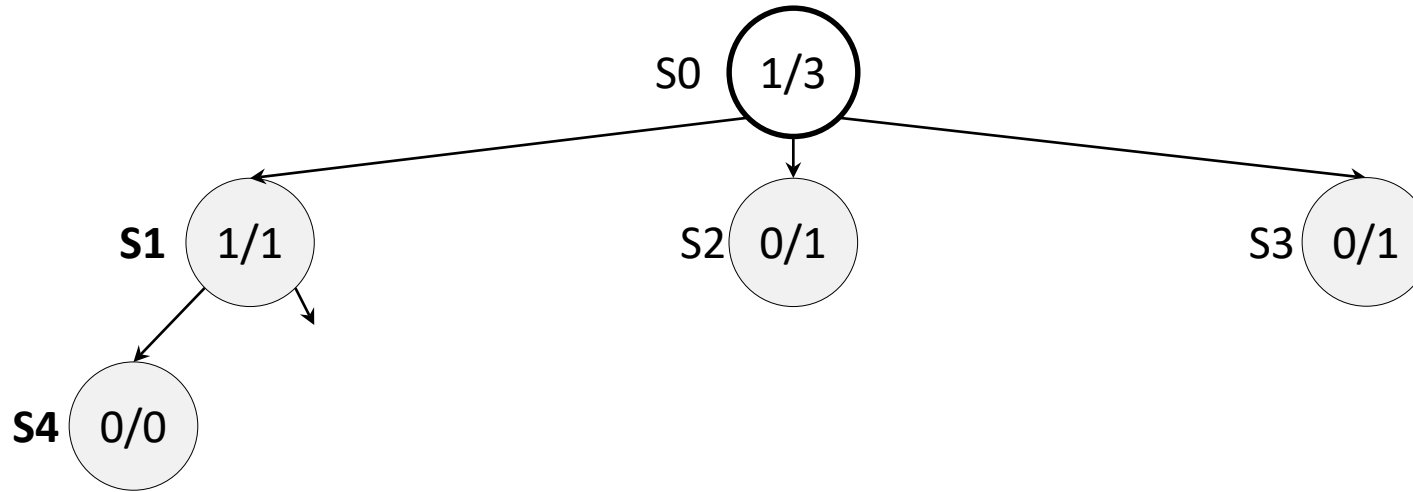


$$\rightarrow \text{UCB1}(S_1)=3,449$$

$$\text{UCB1}(S_2)=2,449$$

$$\text{UCB1}(S_3)=2,449$$

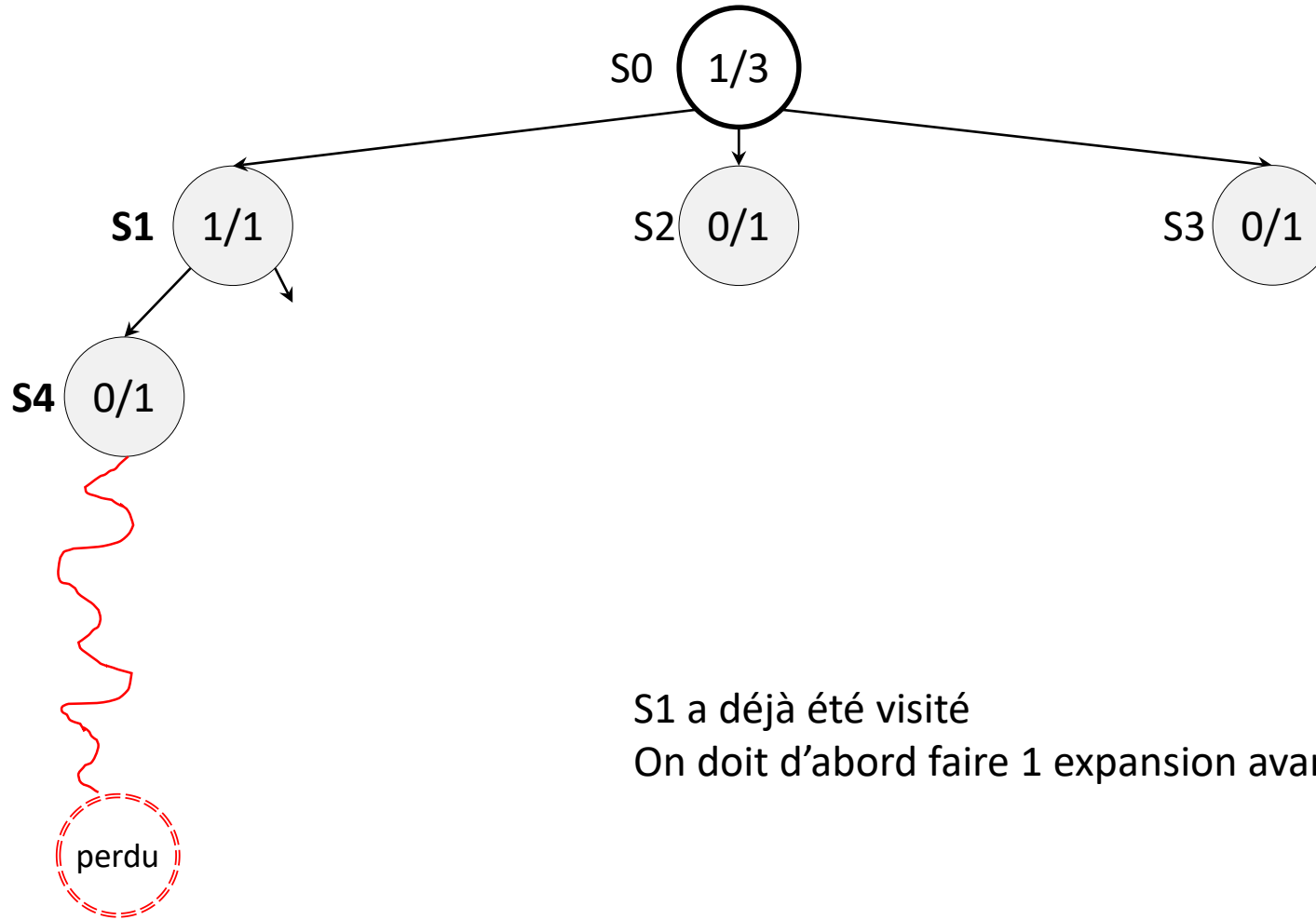
Expansion



S1 a déjà été visité

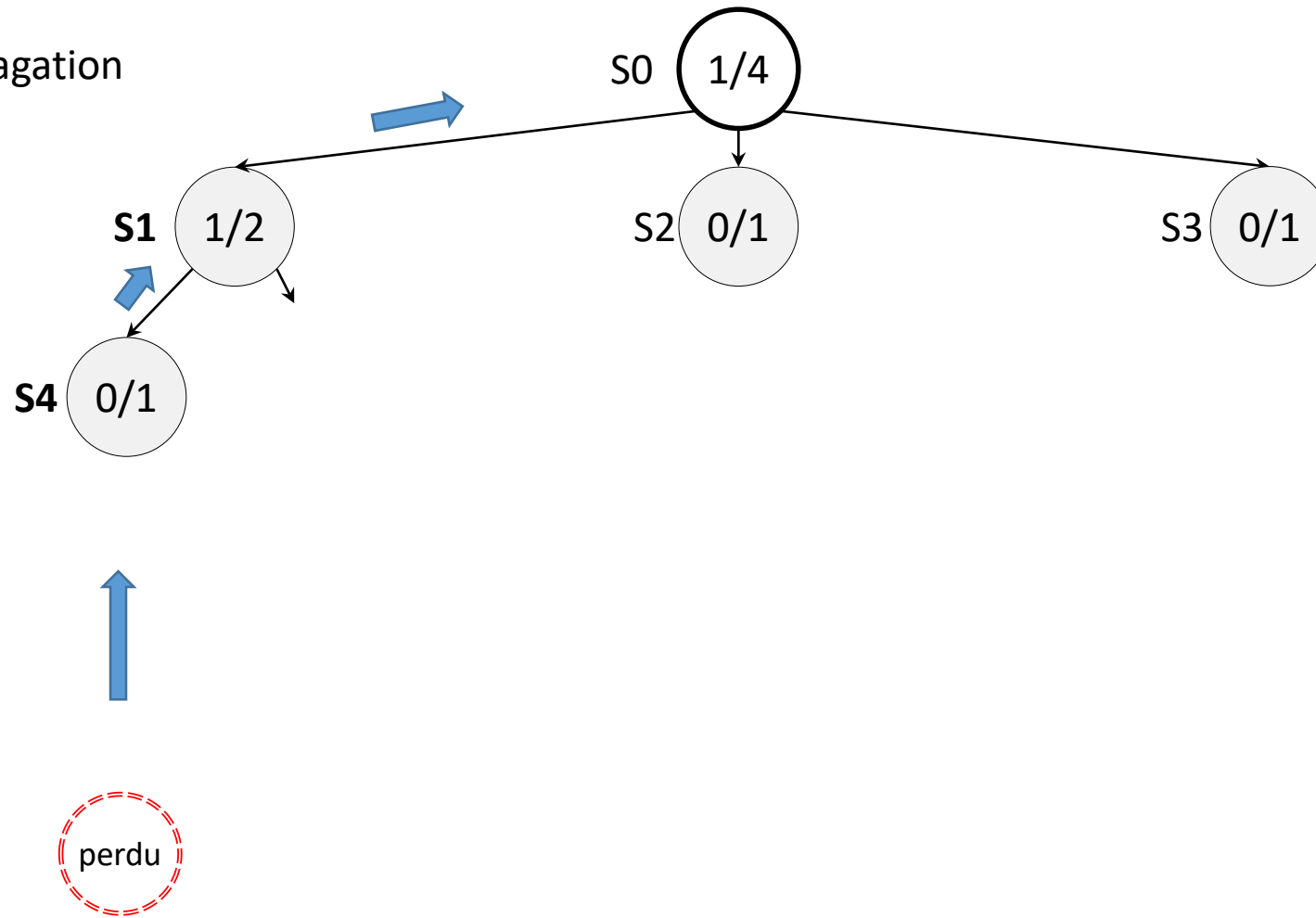
On doit d'abord faire 1 expansion avant de simuler

Simulation

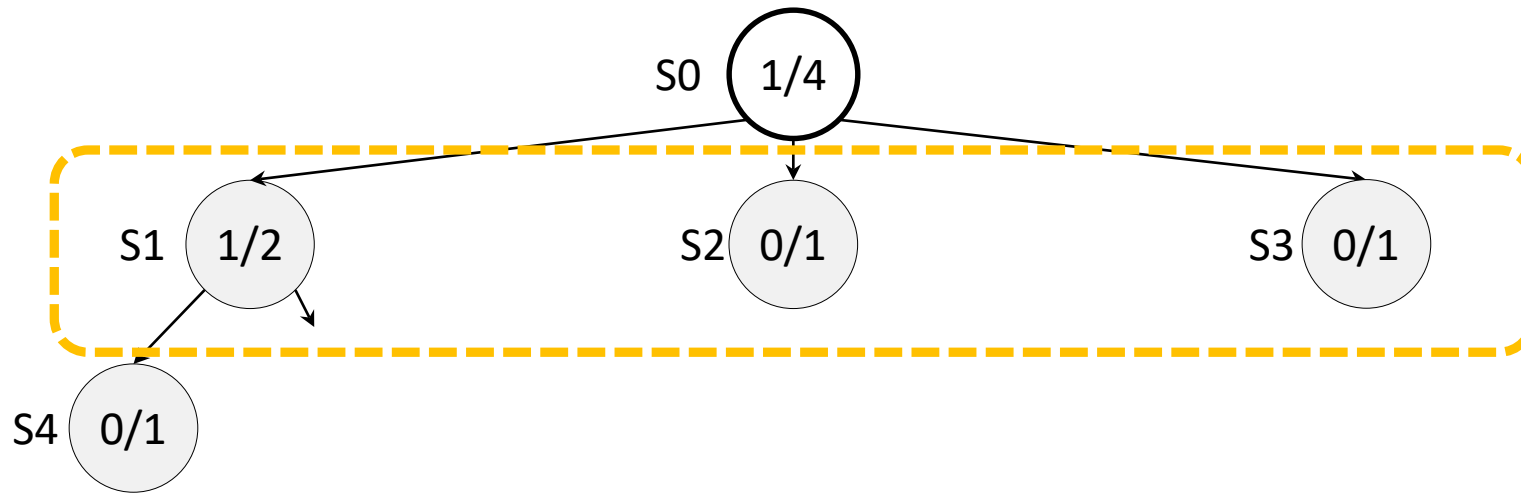


S1 a déjà été visité  
On doit d'abord faire 1 expansion avant de simuler

Rétro-propagation



Sélection



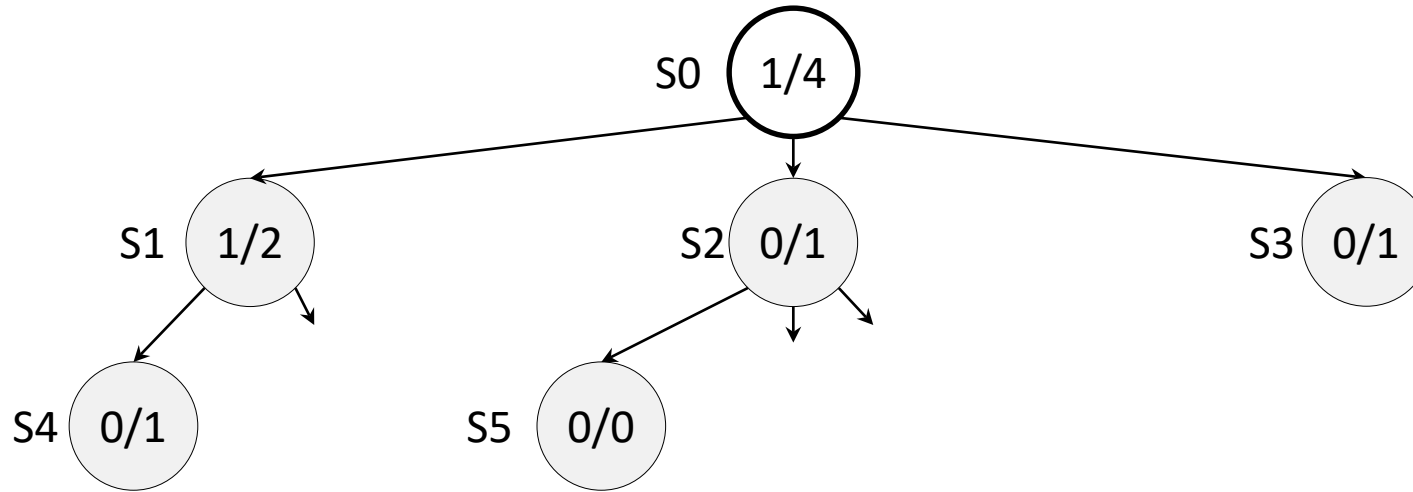
$$UCB1(S1)=2,5$$

$$\rightarrow UCB1(S2)=2,82$$

$$UCB1(S3)=2,82$$



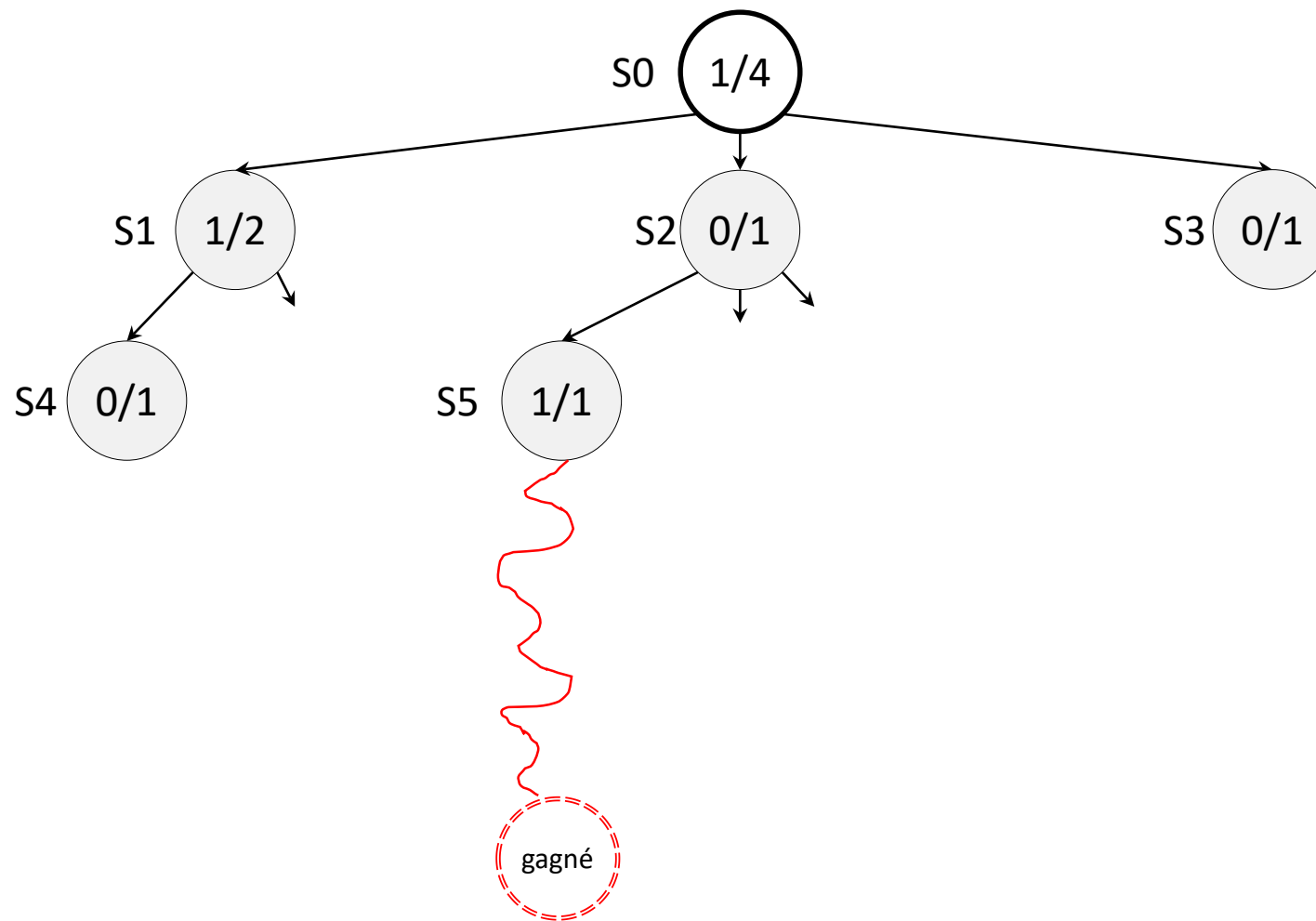
Expansion



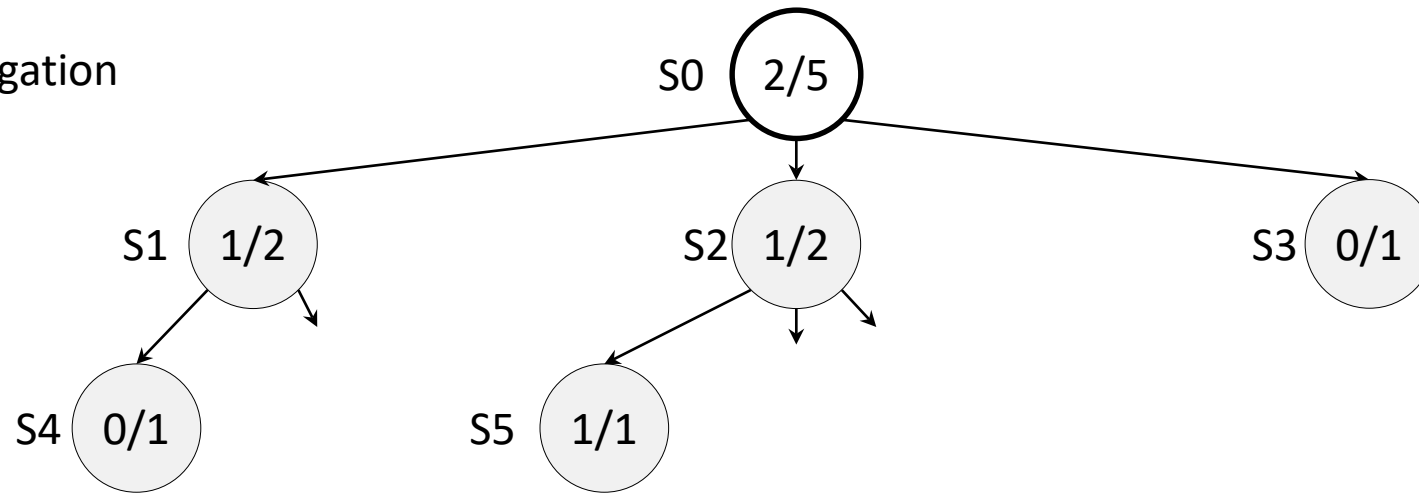
S2a déjà été visité

On doit d'abord faire 1 expansion avant de simuler

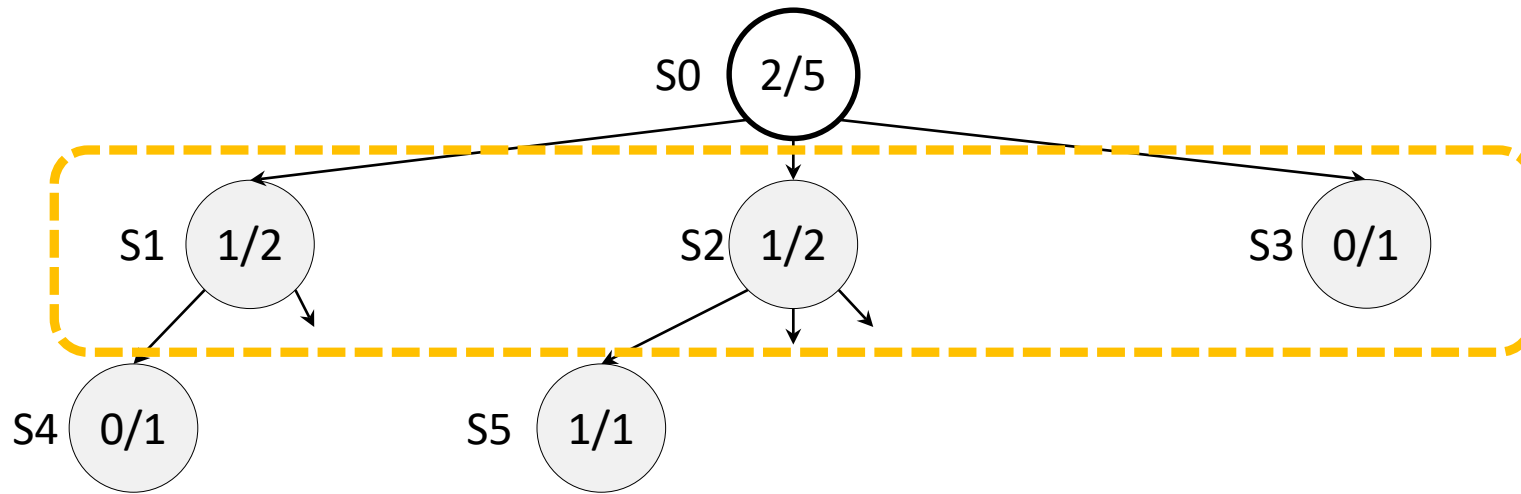
Simulation



# Rétropropagation



Sélection

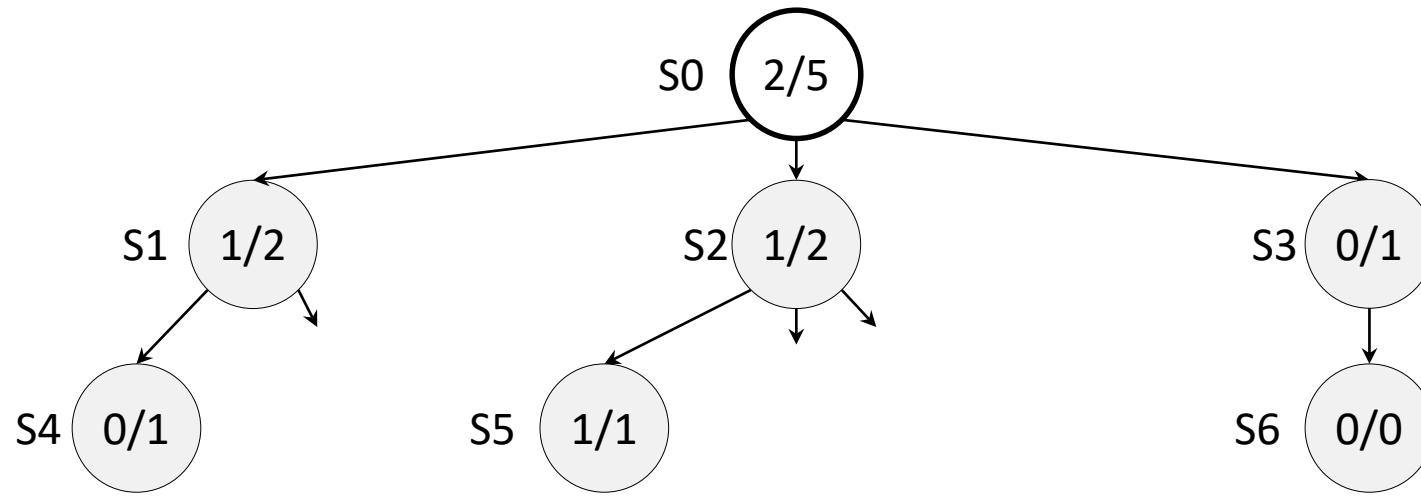


$$UCB1(S1)=2,73$$

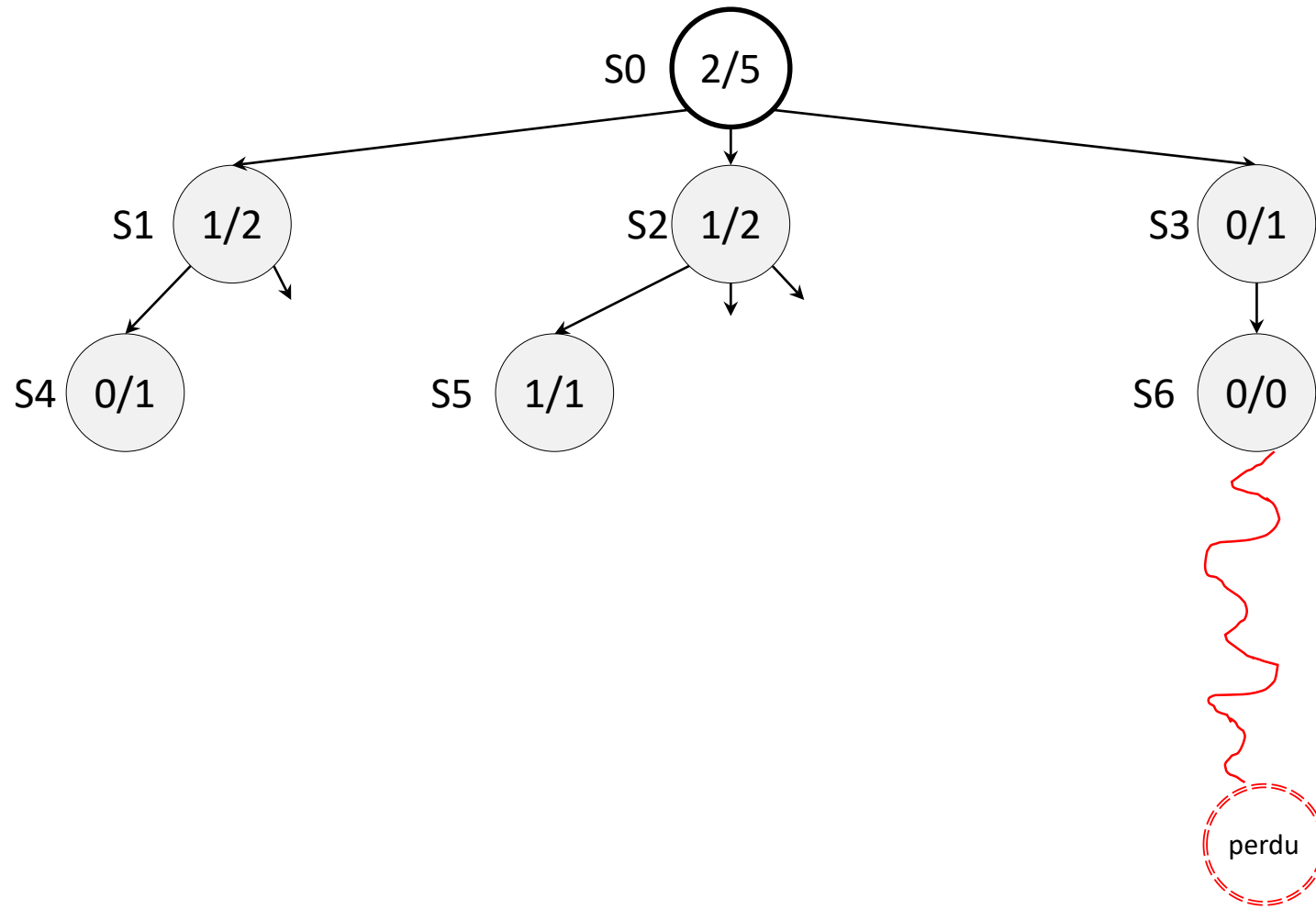
$$UCB1(S2)=2,73$$

$$\rightarrow UCB1(S3)=3,16$$

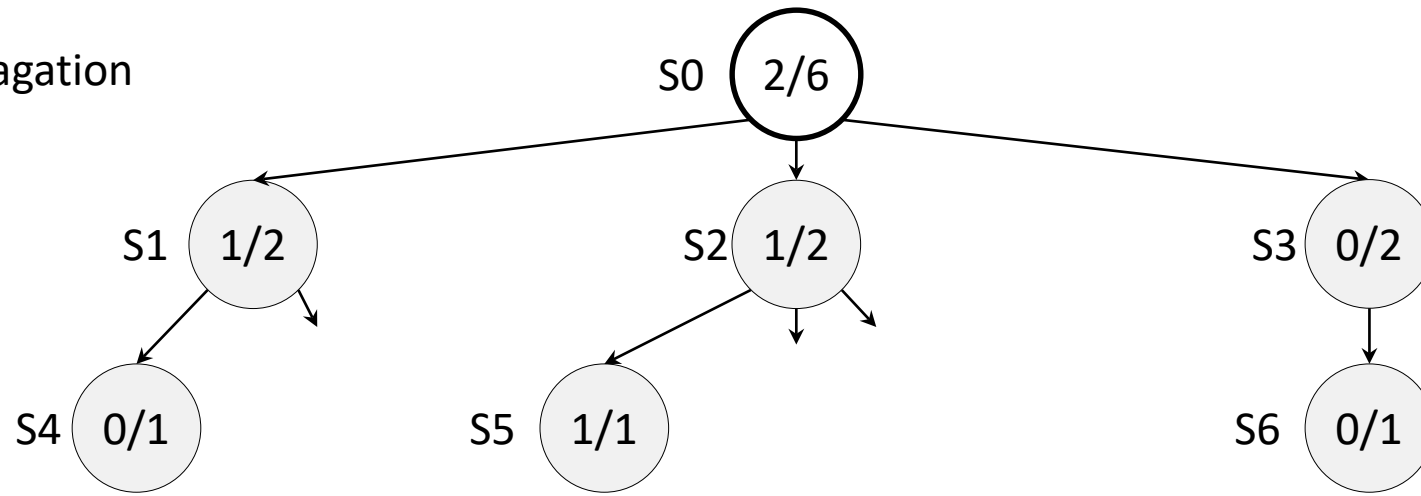
Expansion



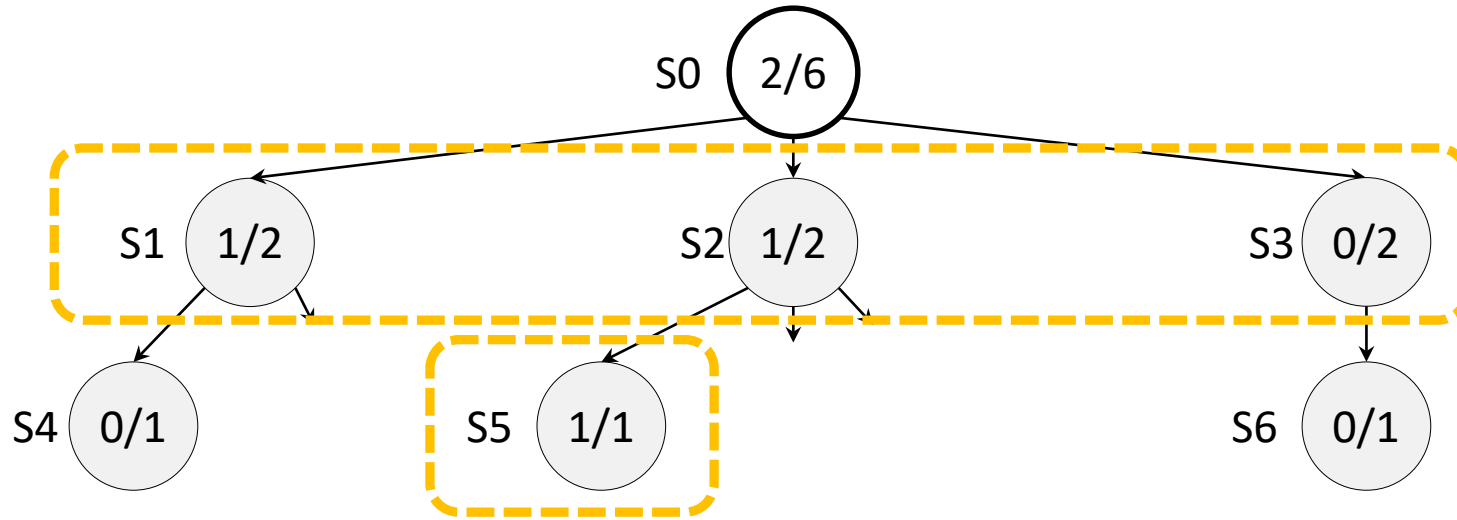
Simulation



# Rétro-propagation



# Sélection



$$UCB1(S1)=2,94$$

$$UCB1(S2)=2,94$$

$$UCB1(S3)=2,49$$

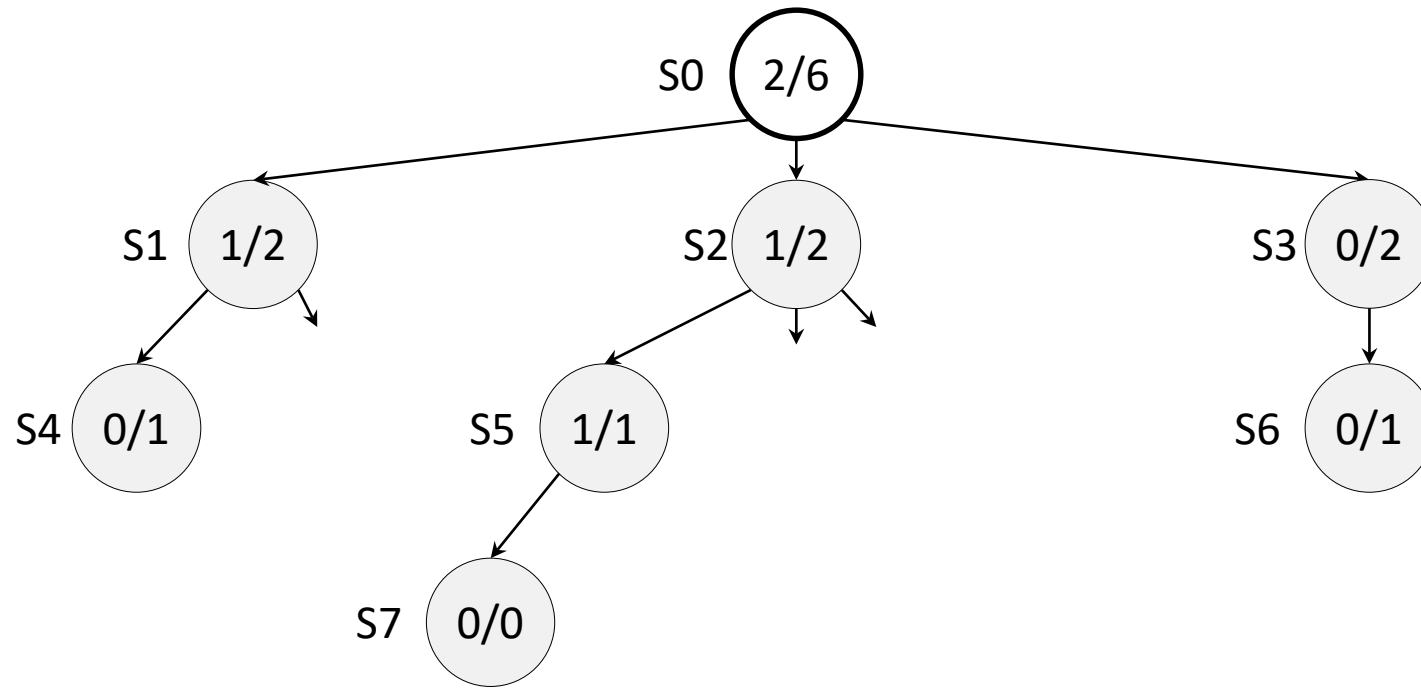
$$UCB1(S4)=2$$

$$\rightarrow UCB1(S5)=3$$

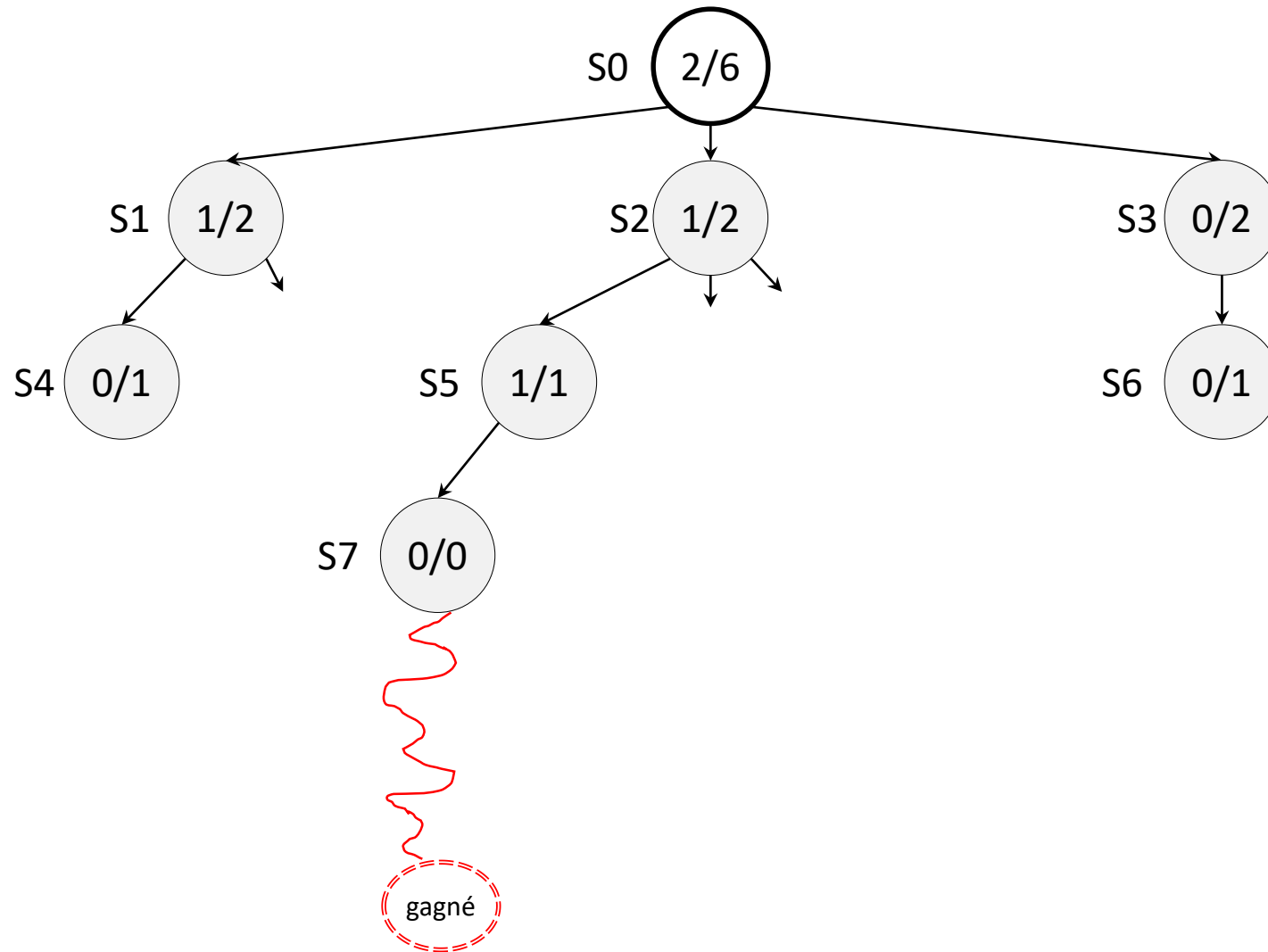
$$UCB1(S6)=2$$



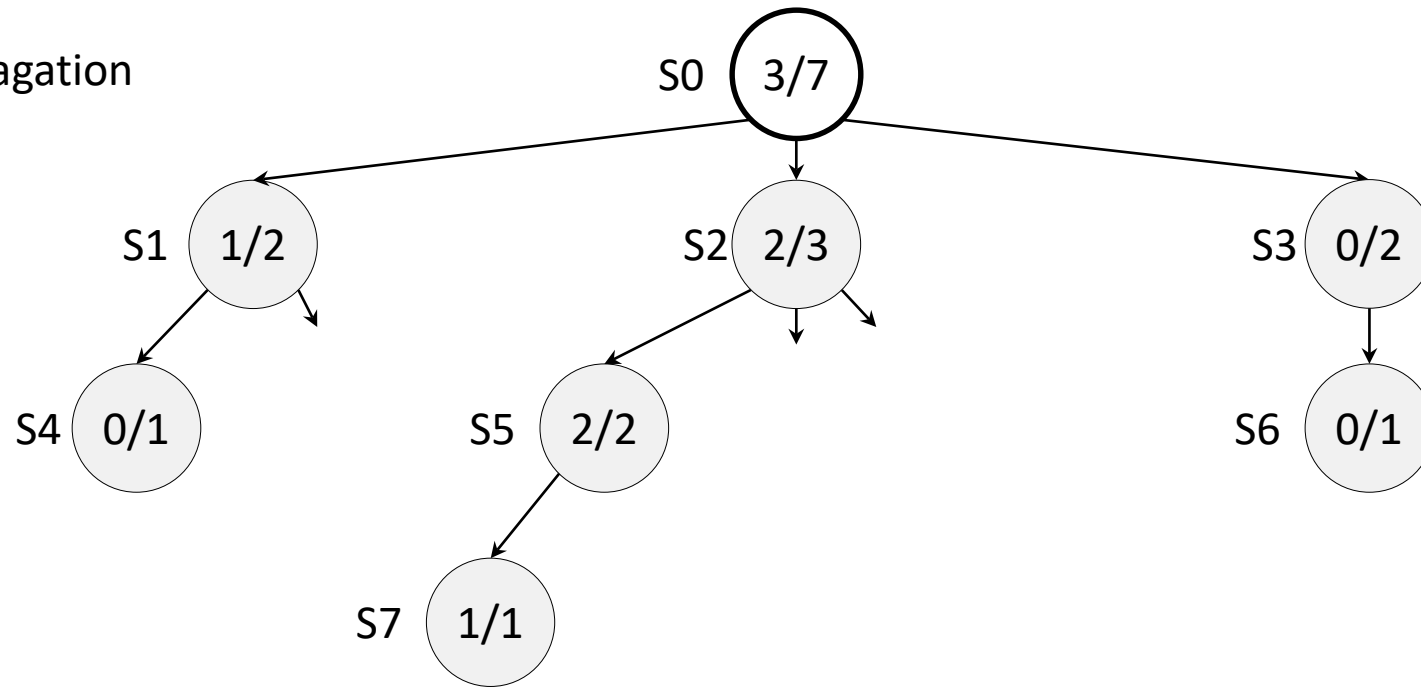
Expansion



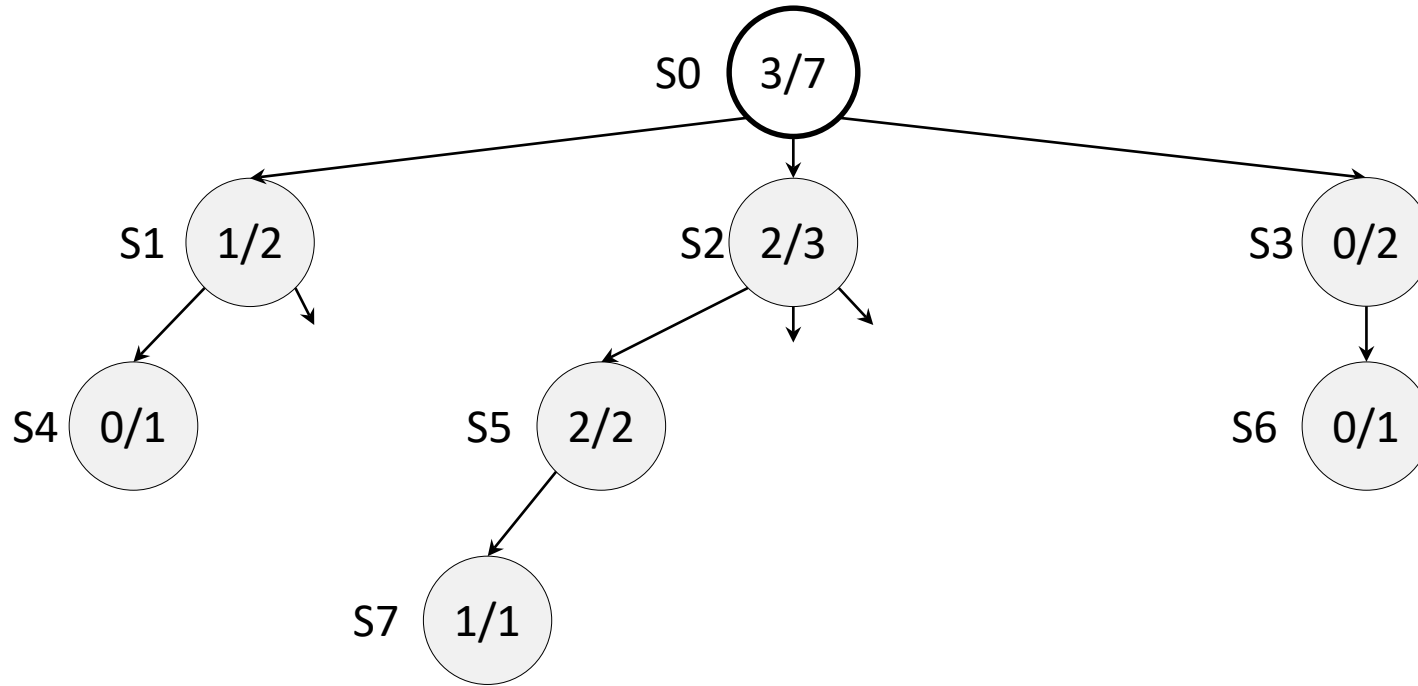
Simulation



# Rétro-propagation



Sélection



	w	n	w/n	N	$(2N/n)^{1/2}$	UCB1
	2	5	0,400	5	1,414	1,814
S1	1	2	0,500	7	2,646	3,146
S2	1	2	0,500	7	2,646	3,146
S3	0	2	0,000	7	2,646	2,646
S4	0	1	0,000	2	2,000	2,000
S5	2	2	1,000	3	1,732	2,732
S6	0	1	0,000	2	2,000	2,000
S7	1	1	1,000	2	2,000	3,000



etc