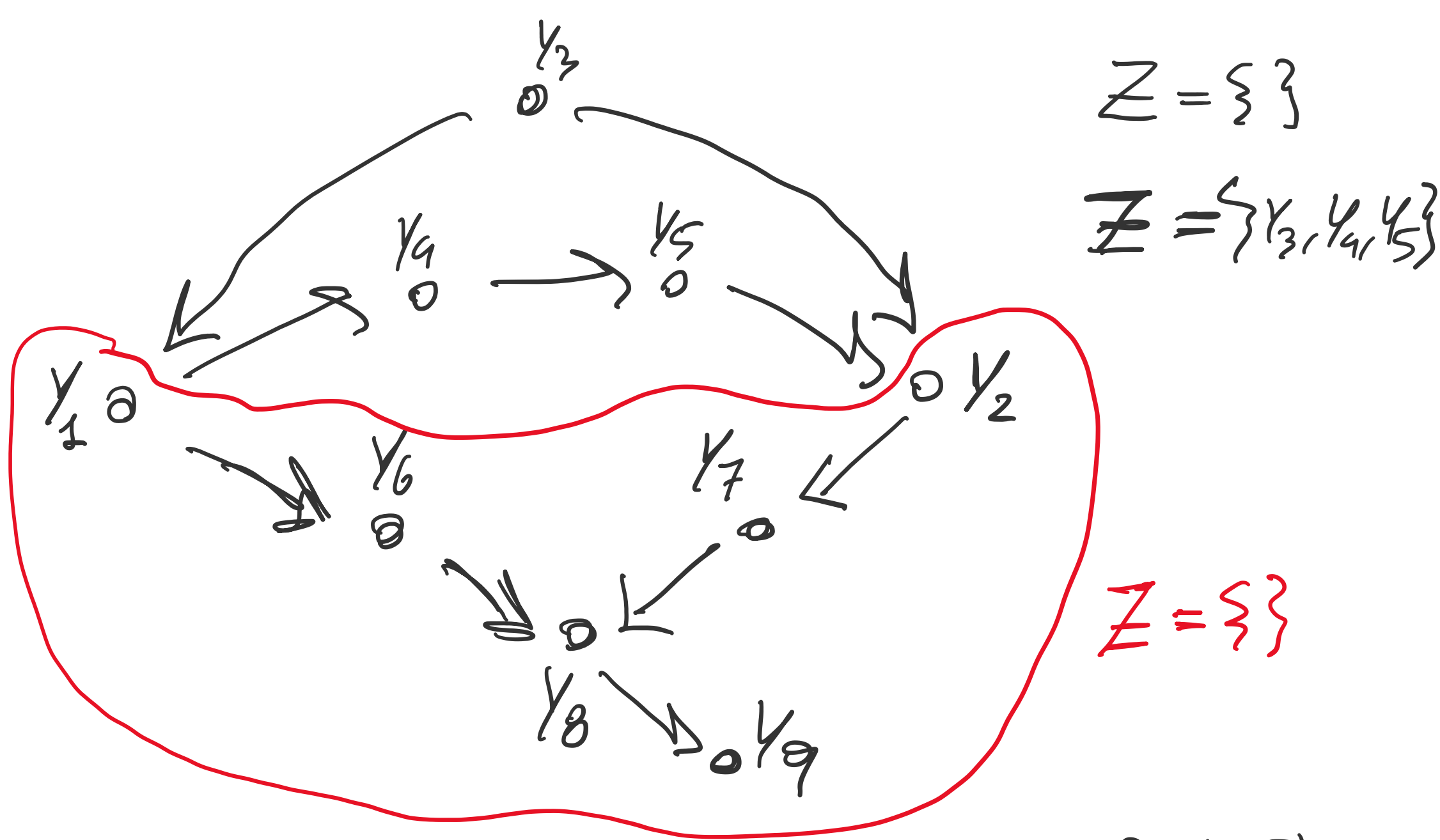
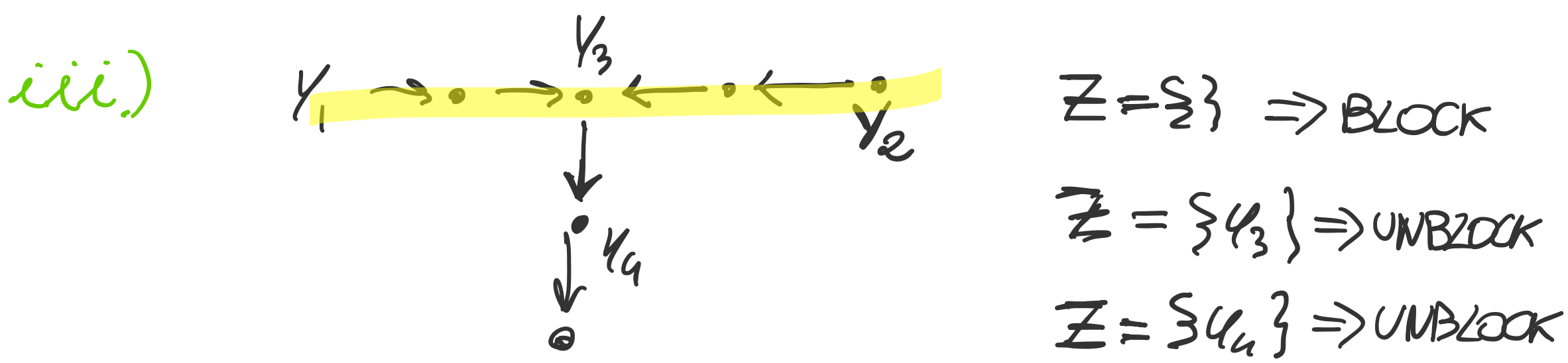
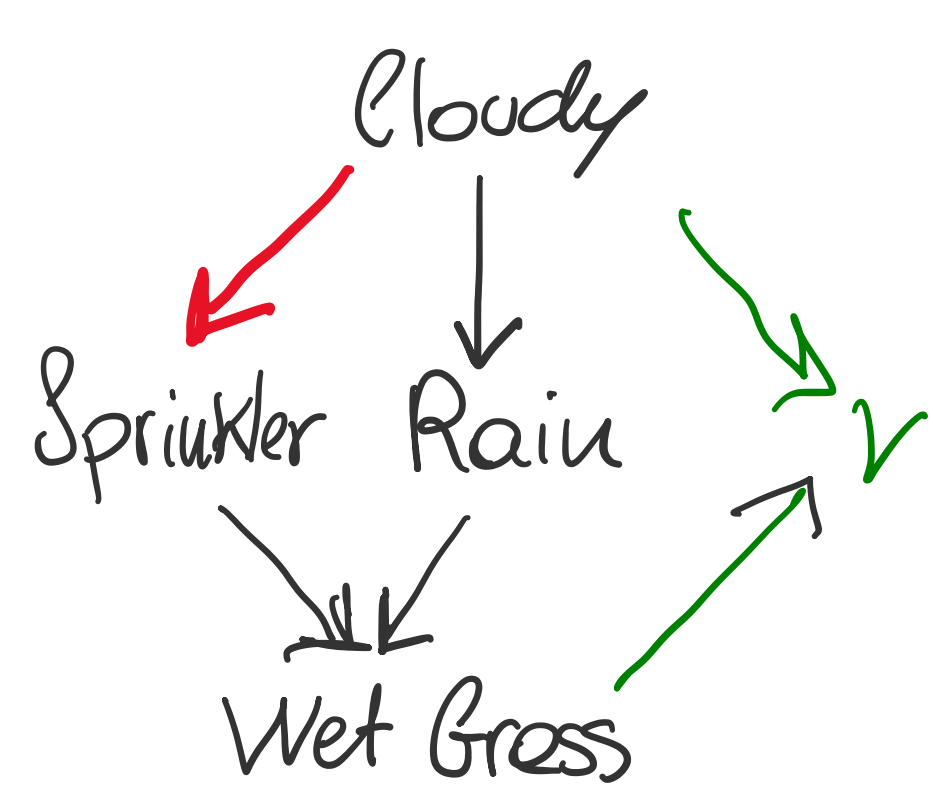


# Blocked Petus



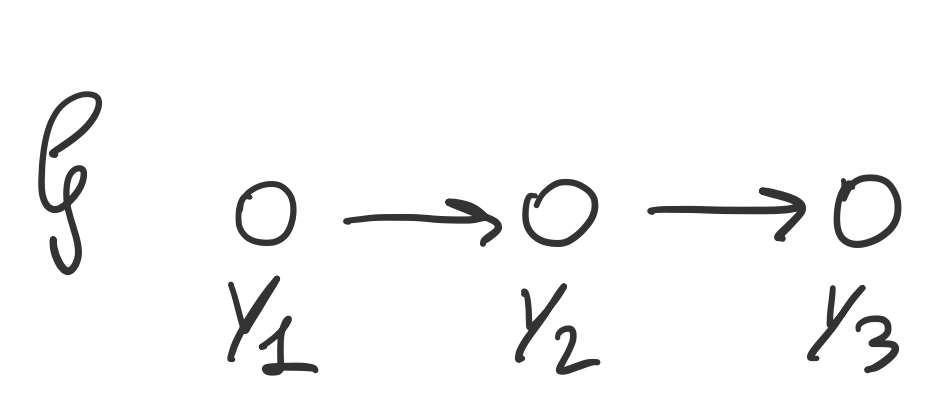
$P(R=T|C=T) = \alpha$   
 $P(R=T|C=F) = \beta$



$C \perp_g W | R \Rightarrow C \perp W | R$   
 $\underbrace{\quad}_g \quad ]?$

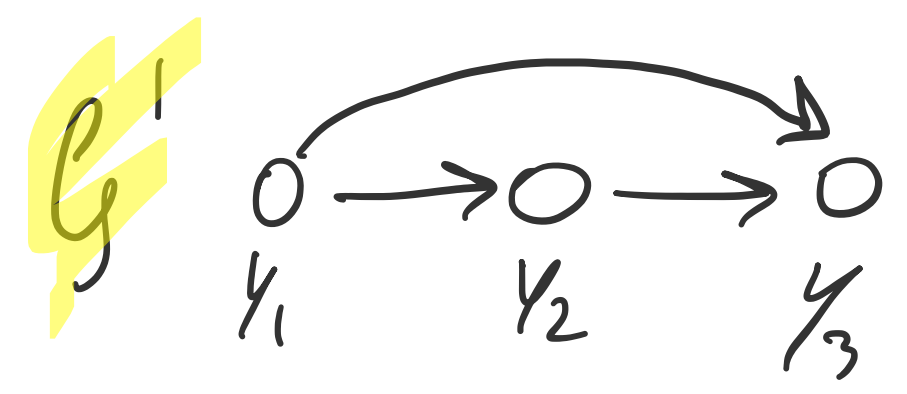
$\Rightarrow C \perp_g W | R, S \Rightarrow C \perp W | R, S$

$Mb(Y)$   
 $\Rightarrow \forall Z \in Mb(Y). Y \perp_g Z | Mb(Y)$   
 $\{ \text{Global Markov Property} \}$   
 $Y \perp Z | Mb(Y)$



$I(P) = \{Y_1, Y_3 | Y_2\}$   
 $I(g) = \{Y_1 \perp_g Y_3 | Y_2\}$

Markov  $\checkmark$   $\perp_g \Rightarrow \perp$   
 Faithfulness  $\checkmark$   $\perp \Rightarrow \perp_g$



$I(g') = \{ \}$

Markov  $\checkmark$   
 Faithfulness  $\times$