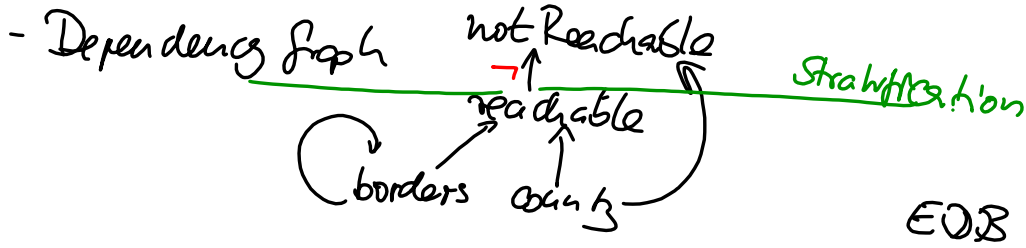


SL.605



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Exercise 2.6

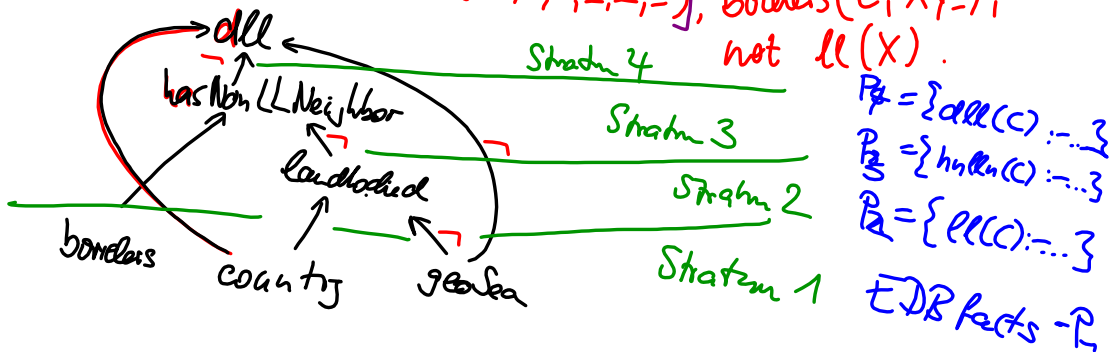
$ll(C) :- country(N, C, -, -, A, P), not geo\_Sea(-, C, -)$

$dll(C) :- country(N, C, -, -, A, P), not geo\_Sea(-, C, -),$

$\forall x: borders(C, X, -) \rightarrow ll(x).$

$[\neg \exists x: borders(C, X, -) \wedge \neg ll(x).]$  not hasNonLLNeighbor(C)

$\rightarrow hasNonLLNeighbor(C) :- [country(-, C, -, -, -), borders(C, X, -), not ll(X).]$



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Exercise 2.3:  $\mathcal{J}$  (Slide 535) vs  $\mathcal{J}$  (Exercise 2.3.2)

~ "handlocked" Example:

$\mathcal{P}_2 \vdash \{ll(CH), ll(A), ll(AND), ll(FL), ll(L), \dots\}$   
 $\equiv \mathcal{J}_2$

$\mathcal{P}_3: \mathcal{J}_3 = \mathcal{J}_2 \cup T_{\mathcal{P}_3 \cup \mathcal{J}_2}^{\omega}(\emptyset)$

$T_{\mathcal{P}_3 \cup \mathcal{J}_2}^{\omega}(\emptyset) = \{hull(\emptyset), hull(E), hull(AND), ll(CH), ll(A), ll(FL), ll(AND), \dots\}$

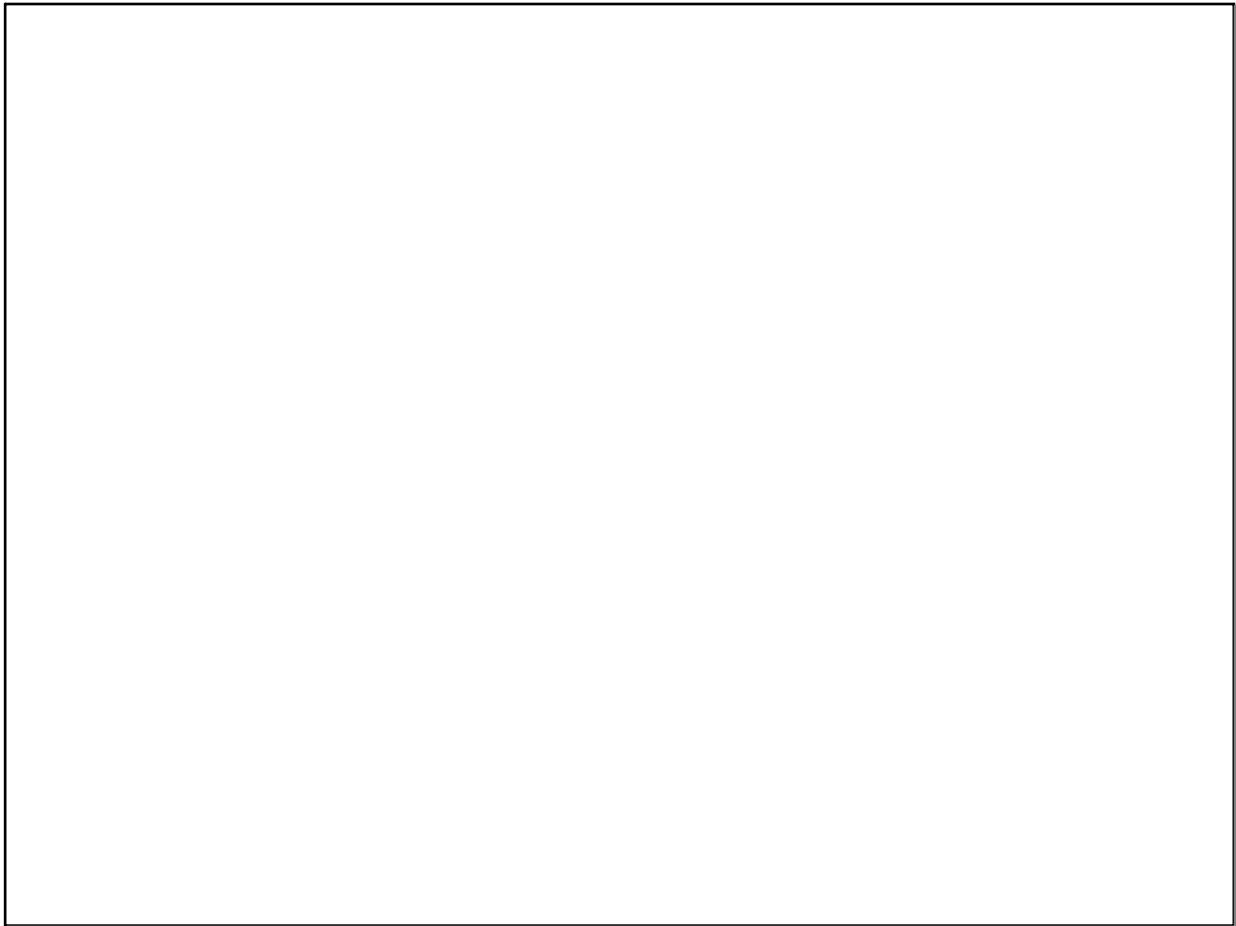
$\mathcal{P}_3: \mathcal{J}_3 = \mathcal{J}_2 \cup T_{\mathcal{P}_3}^{\omega}(\mathcal{J}_2)$

$T_{\mathcal{P}_3}^{\omega}(\mathcal{J}_2) = \{hull(\emptyset), hull(E), hull(AND)\}$   
 there is nothing in  $\mathcal{P}_3$  that has  $ll(\dots)$  in its head  
 apply  $T_{\mathcal{P}_3}^{\omega}$  again to  $\mathcal{J}_2$  → no change is local lock  
 all  $ll(C)$  is from previous state

$\Rightarrow \mathcal{J}$ -characterization "forgets" all mediators filled in previous states and draws wrong conclusions

$\rightarrow \mathcal{J}_2 \cup T_{\mathcal{P}_3}^{\omega}(\mathcal{J}_2) = \{ll(CH), ll(A), ll(FL), \dots, hull(FL), \dots\}$

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