

Slide 614, 637

"stable": $T^w(0) = w$

$w = (T, F)$

3-valued interpretation

reduct of P wrt. w (3-valued)

3-valued $h(a) := b_1(a), b_2(a), \dots$

$w_h(a) := \text{lose}(a, b), \overset{u}{\text{win}(b)}$

$\downarrow \text{val}(w_h(a)) = u$

Jun 22-14:05

3-valued stable model (Sl. 638) [h, m drawn]

1. model : lose(m) win(h) (lose'(m)) (win'(h))

2. model : (win'(m)) win(m) lose(h) (lose'(h))

3. model : win'(m), lose'(m), win'(h), lose'(h)

$=: M_3$

$p' =$ (at least) undefined

$\Rightarrow \text{val}_{M_3}(w_h(m)) = u \dots$

Jun 22-15:27

Q 640 :

$$p(a) :- \text{not } p(a).$$

Stable Model(s)

$\{p(a)\}$? not stable

$\{\neg p(a)\}$? not stable

... no total stable model

~~$\{p(a)\}, \{\neg p(a)\}$~~ *inconsistent!
p(a) true and
¬p(a) false*

$$\omega := (\emptyset, \emptyset)$$

$P_{\omega} \{p(a) := \text{true}\}$

$p(a)$ neither true nor false
→ stable

$$T_{\omega}^1(\emptyset) = \dots \text{val}(p(a)) = \text{true} \dots$$

$$T_{\omega}^2(\emptyset) = \dots \Rightarrow T_{\omega}^{\omega}(\emptyset) = (\emptyset, \emptyset)$$