

*logic of the theory*

*new ontology name*

1. Takes  $t_6$  represented in OWL

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logic CASL.FOL
ontology theory6_plus_antisym_and_WS =
theory6 with translation OWL2CASL
then
    3. add, a.o., antisymmetry ( $t_3$ ) to  $t_6$ 
forall x,y:Thing .  $P(x,y) \wedge P(y,x) \Rightarrow x=y$  %%( $t_3$ )
forall x,y:Thing .  $\text{not } P(y,x) \Rightarrow$ 
    exists z:Thing .  $P(z,y) \wedge \text{not } O(z,x)$  %%( $t_4$ )
  
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2. translate that into FOL