

## SL.78 : Higher-order examples

Properties of Properties: transitive ( $p$ )

DWL: TransitiveProperty ( $p$ )

Relationships between properties

RDFS/DWL subPropertyOf (hasFather, hasParent)

transl. to FOL:  $\forall x, y: \text{hasFather}(x, y) \rightarrow \text{hasParent}(x, y)$

Relationships between classes

subClassOf (River, Water)

$\forall x: \text{River}(x) \rightarrow \text{Water}(x)$

$\Rightarrow$  predicates over predicates  $\rightarrow$  "second order predicates"

Metadata about Properties:

hasDomain (worksFor, Employee)

hasRange (worksFor, Department)

$\forall x, y (\text{worksFor}(x, y) \rightarrow \text{Employee}(x) \wedge \text{Dept}(y))$

$\Rightarrow$  only special 2nd-order predicates