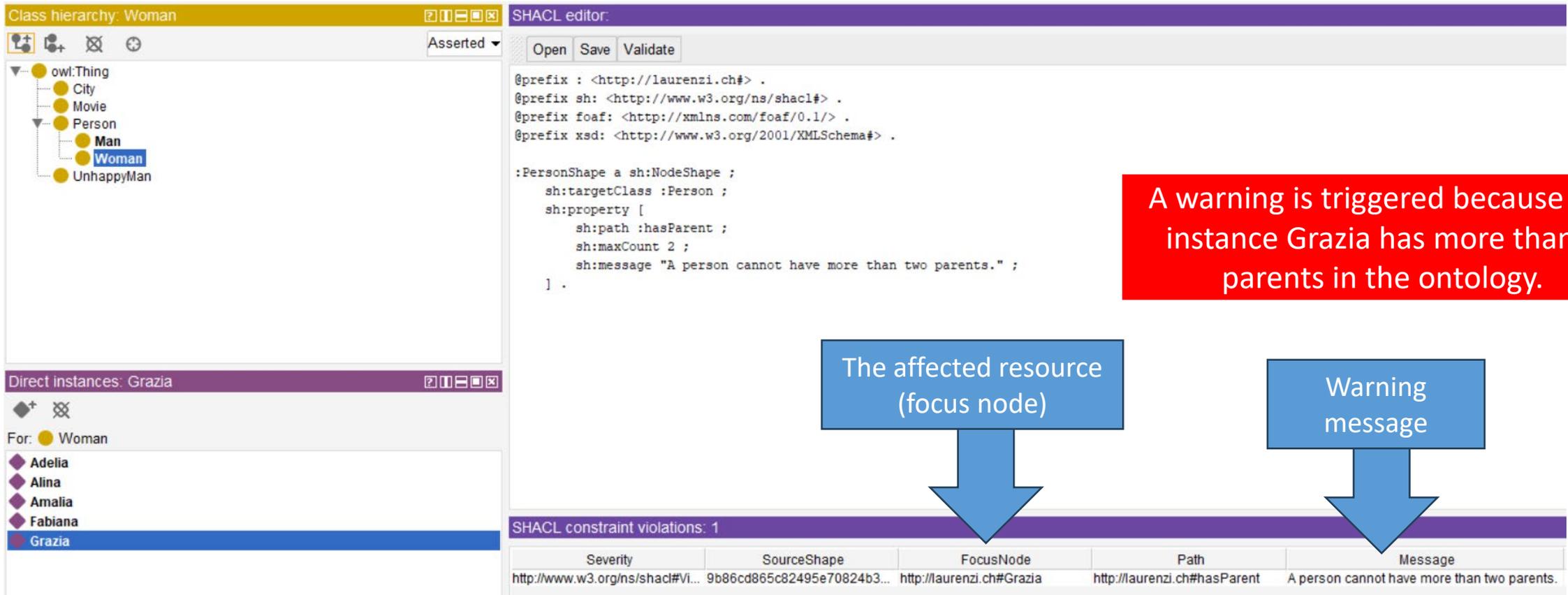# Exercise

– Create a SWRL to infer values for the new relation "hasParent". Next, we use this property to check whether a person has more than 2 (biological) parents. If that is the case, the below SHACL Shape triggers a warning message.

@prefix : <http://laurenzi.ch#> .

@prefix sh: <http://www.w3.org/ns/shacl#> .

:PersonShape a sh:NodeShape ;

   sh:targetClass :Person ;

   sh:property [

      sh:path :hasParent ;

      sh:maxCount 2 ;

      sh:message "A person cannot have more than two parents." ;

  ]

SHACL Shape executed in the SHACL Editor of Protégé

Class hierarchy: Woman

Asserted ▼

- owl:Thing
  - City
  - Movie
  - Person
    - **Man**
    - Woman
  - UnhappyMan

Direct instances: Grazia

For: Woman

- Adelia
- Alina
- Amalia
- Fabiana
- Grazia

SHACL editor:

Open | Save | Validate

```
@prefix : <http://laurenzi.ch#> .
@prefix sh: <http://www.w3.org/ns/shacl#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

:PersonShape a sh:NodeShape ;
    sh:targetClass :Person ;
    sh:property [
        sh:path :hasParent ;
        sh:maxCount 2 ;
        sh:message "A person cannot have more than two parents." ;
    ] .
```

A warning is triggered because the instance Grazia has more than 2 parents in the ontology.

The affected resource (focus node)

Warning message

SHACL constraint violations: 1

Severity	SourceShape	FocusNode	Path	Message
http://www.w3.org/ns/shacl#Vi...	9b6cd865c82495e70824b3...	http://laurenzi.ch#Grazia	http://laurenzi.ch#hasParent	A person cannot have more than two parents.