



# From DC-TAP to data validation

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DC Tabular Application Profile open Zoom call

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祝大家牛年快乐！



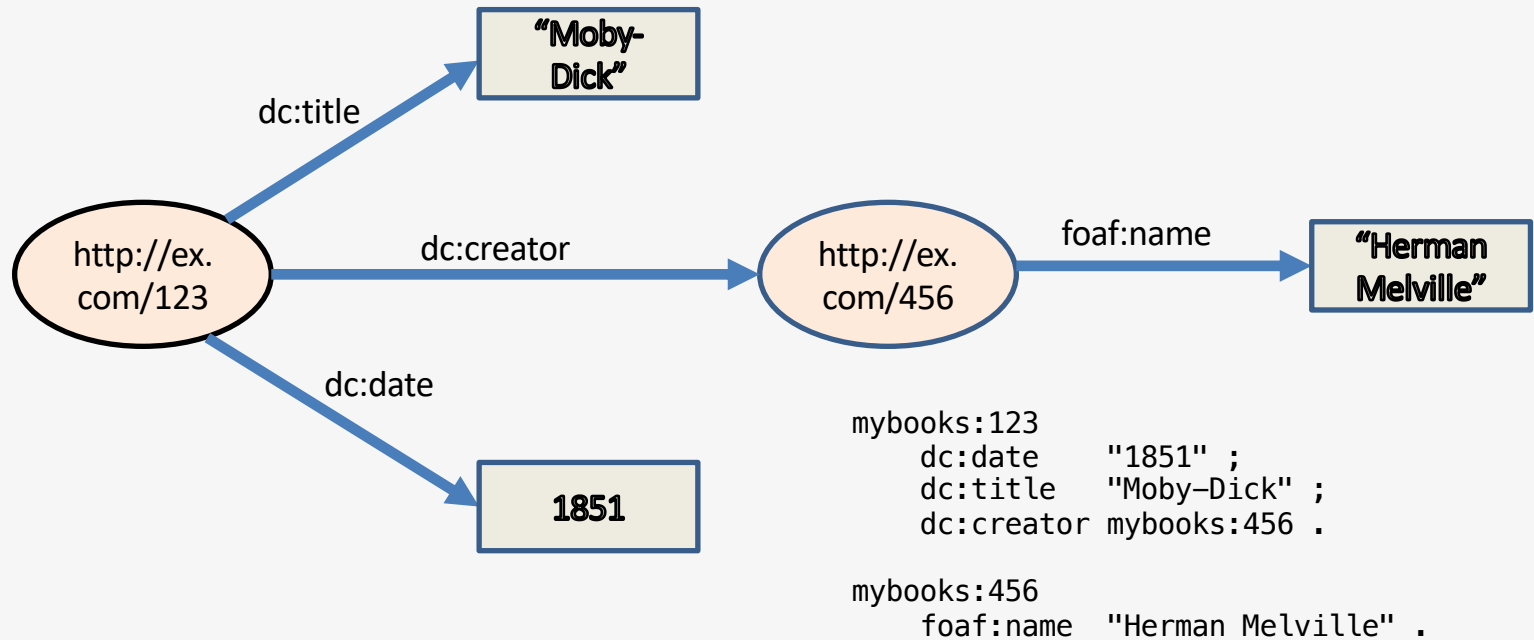
## Data

```
mybooks:123
  dc:date      "1851" ;
  dc:title     "Moby-Dick" ;
  dc:creator   mybooks:456 .

mybooks:456
  foaf:name    "Herman Melville" .
```



## Data





## Data

Data describes  
**Entities**

A Book



A Person



**mybooks:123**

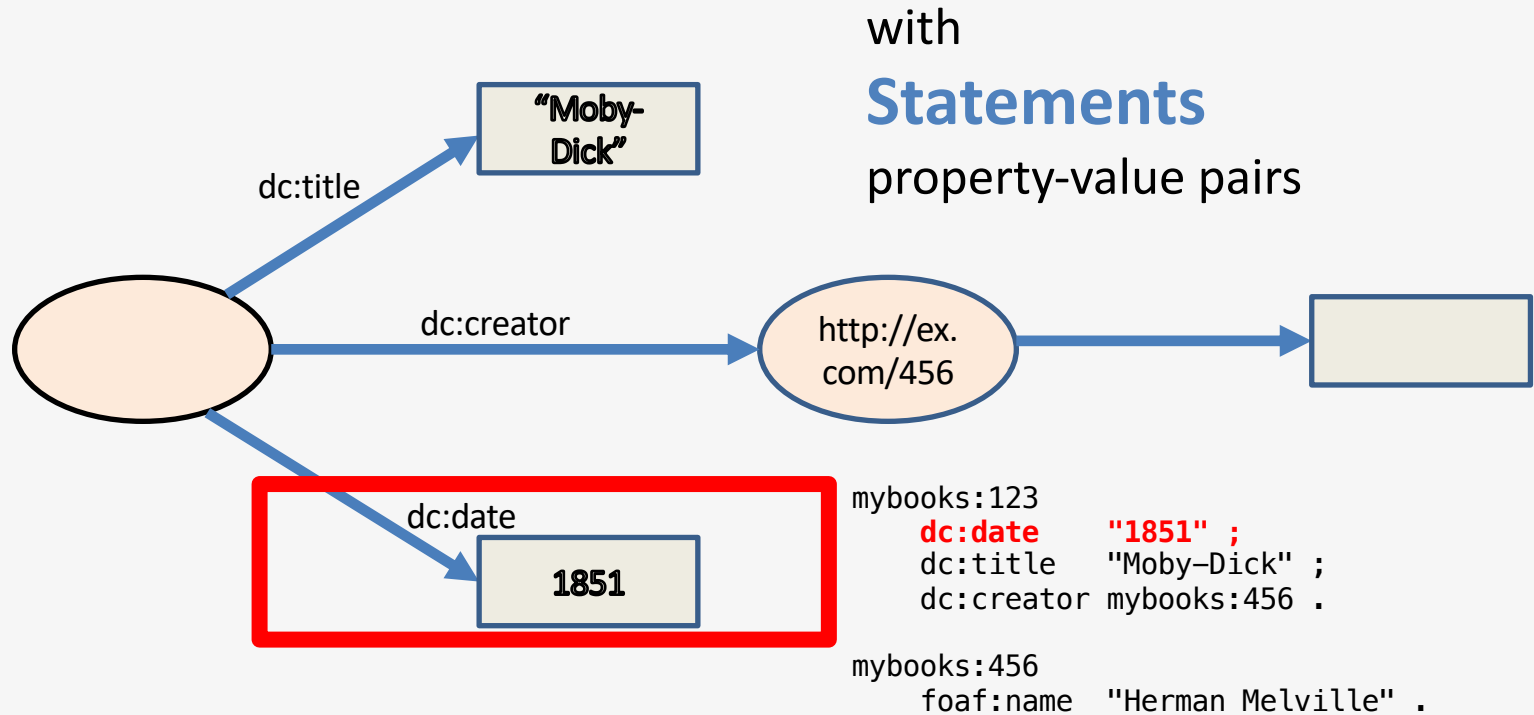
dc:date "1851" ;  
dc:title "Moby-Dick" ;  
dc:creator **mybooks:456** .

**mybooks:456**

foaf:name "Herman Melville" .

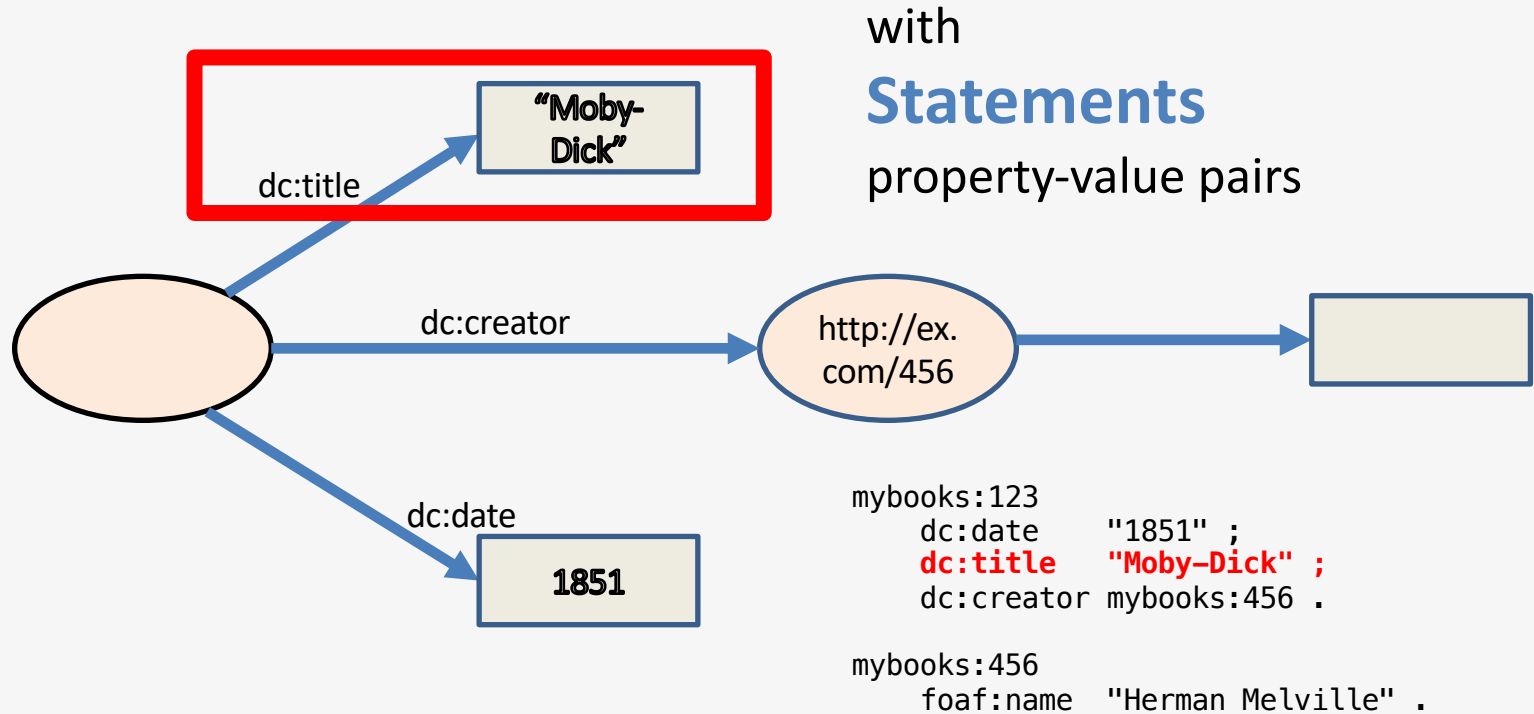


## Data



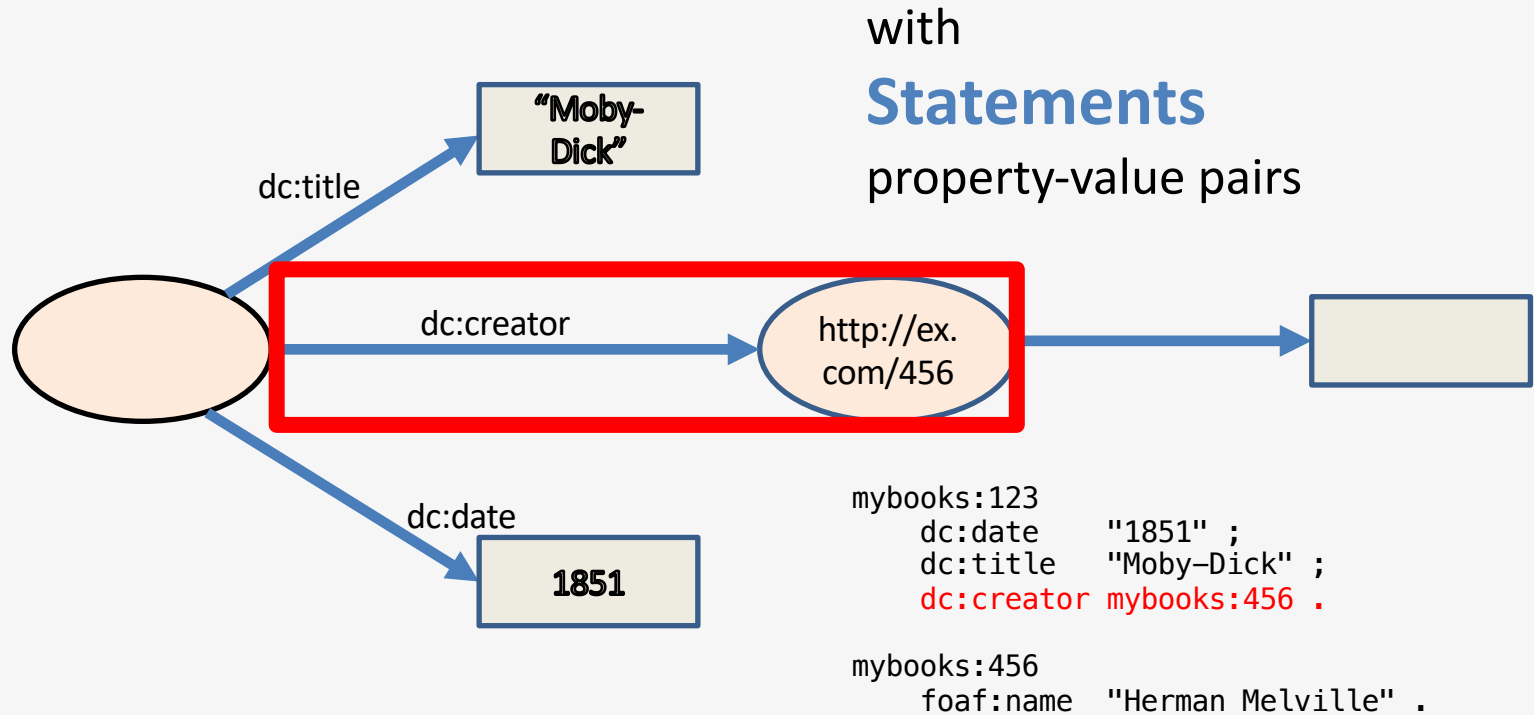


## Data





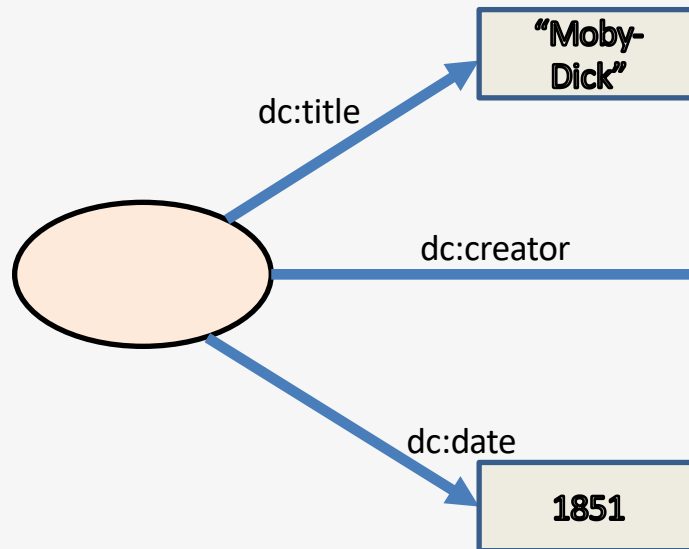
## Data



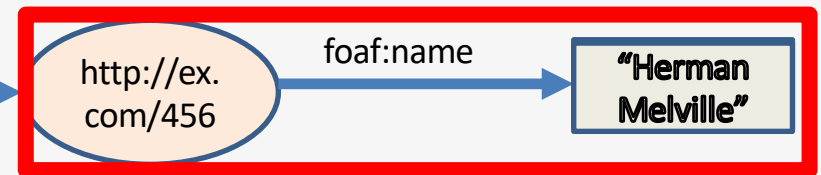




## Data



with  
**Statements**  
property-value pairs

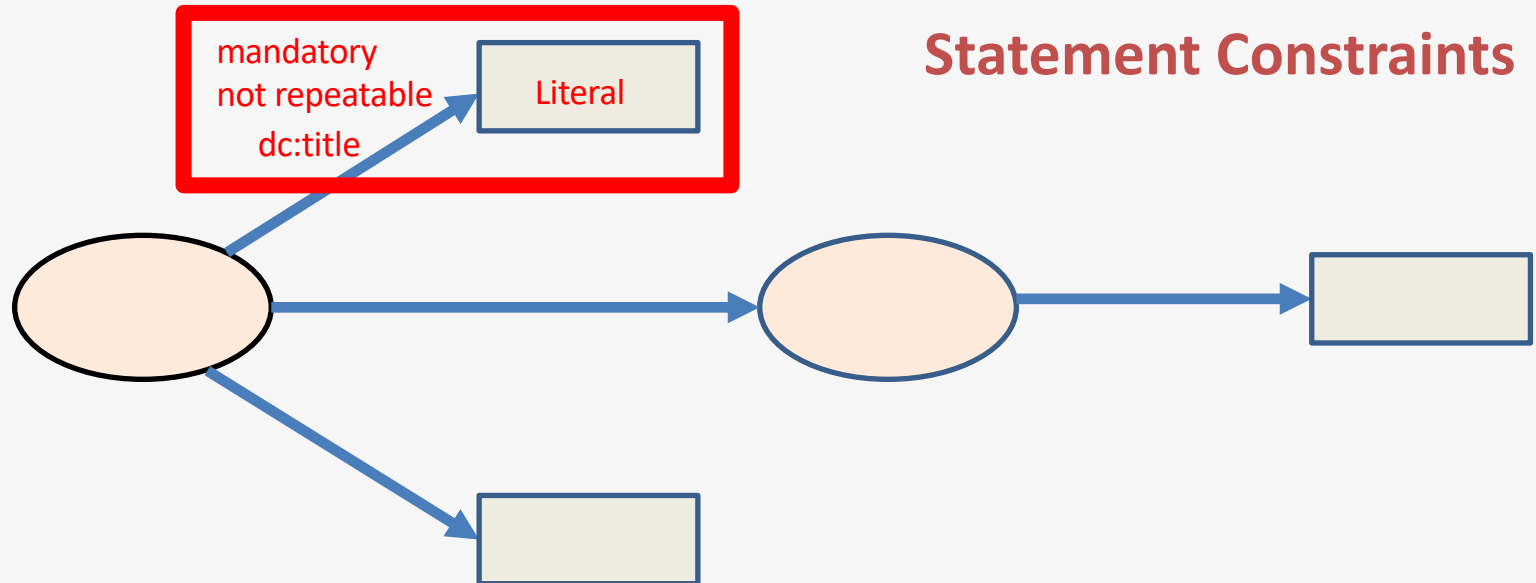


```
mybooks:123
  dc:date    "1851" ;
  dc:title   "Moby-Dick" ;
  dc:creator mybooks:456 .
```

```
mybooks:456
  foaf:name  "Herman Melville" .
```



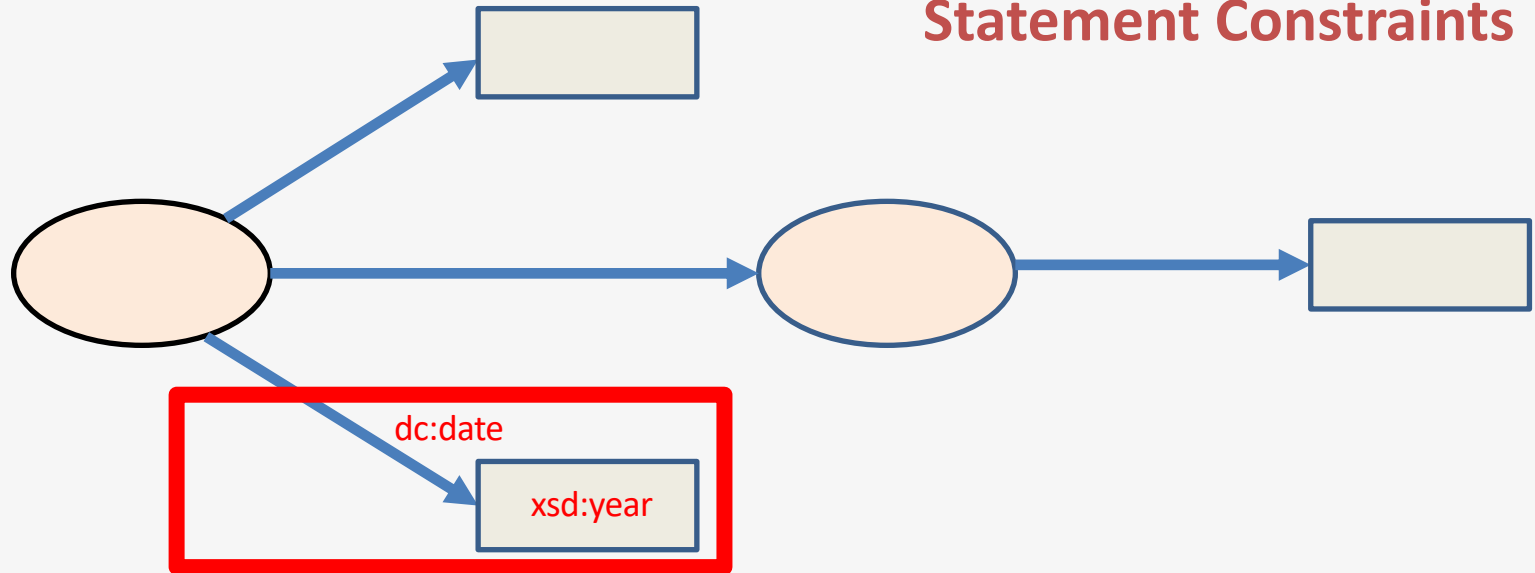
## Application Profile





## Application Profile

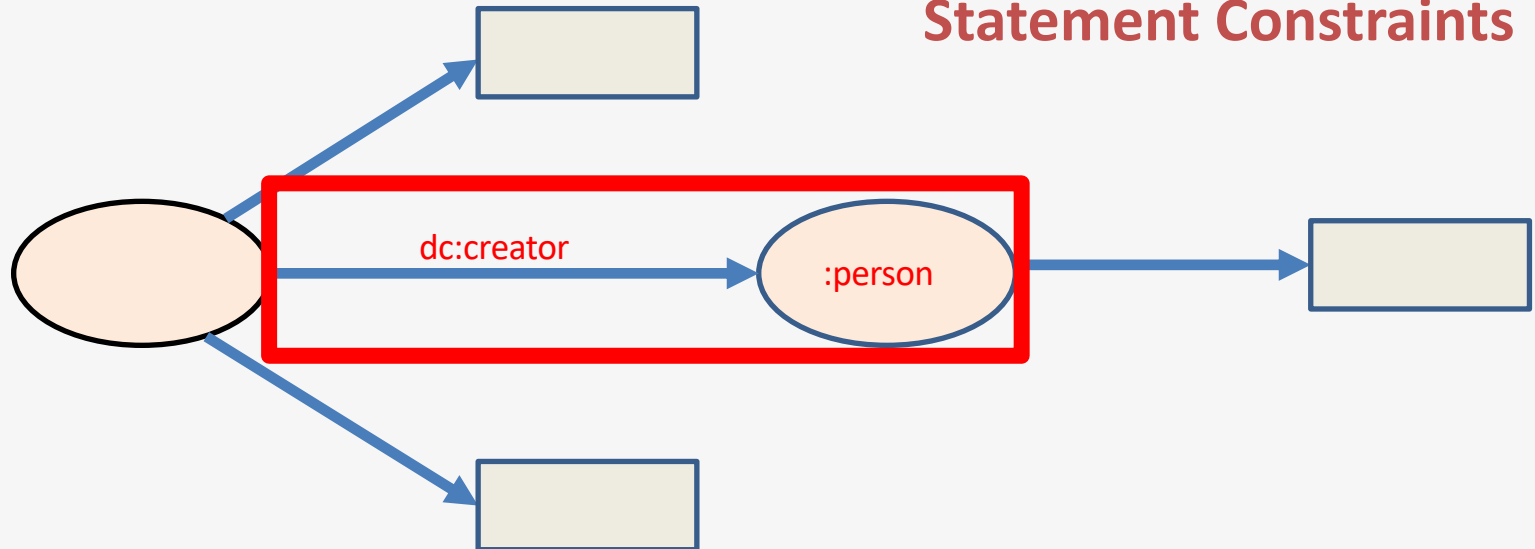
defines  
Statement Constraints





## Application Profile

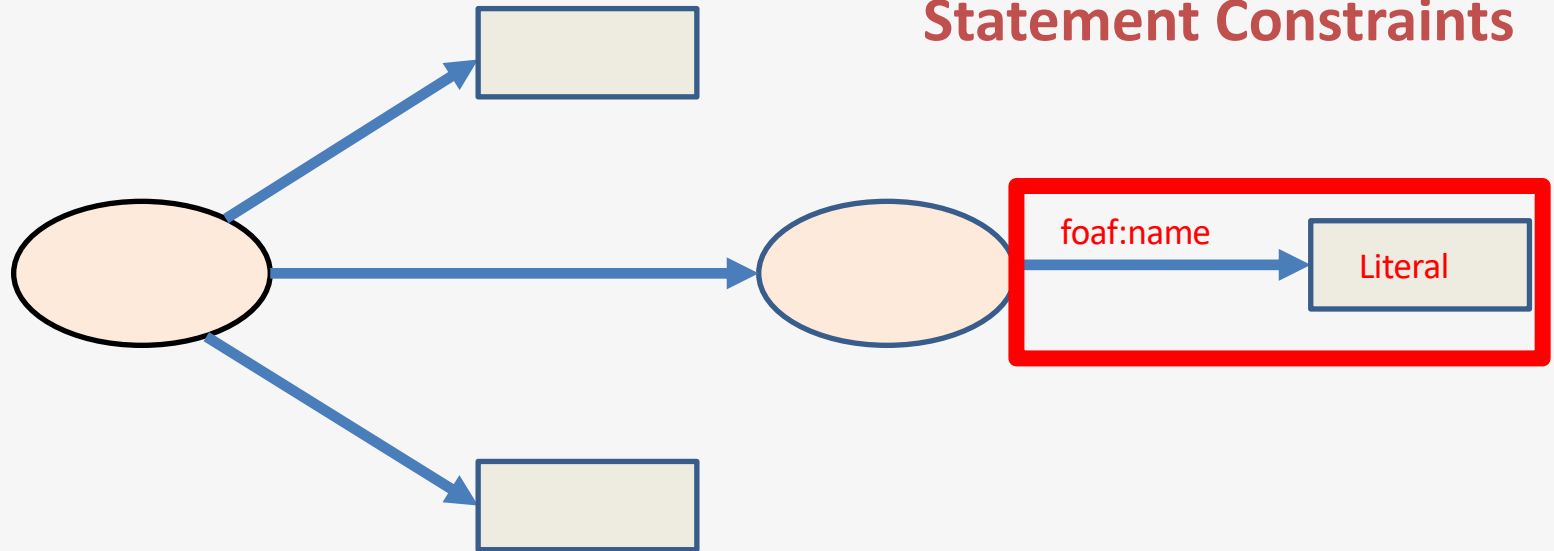
defines  
Statement Constraints





## Application Profile

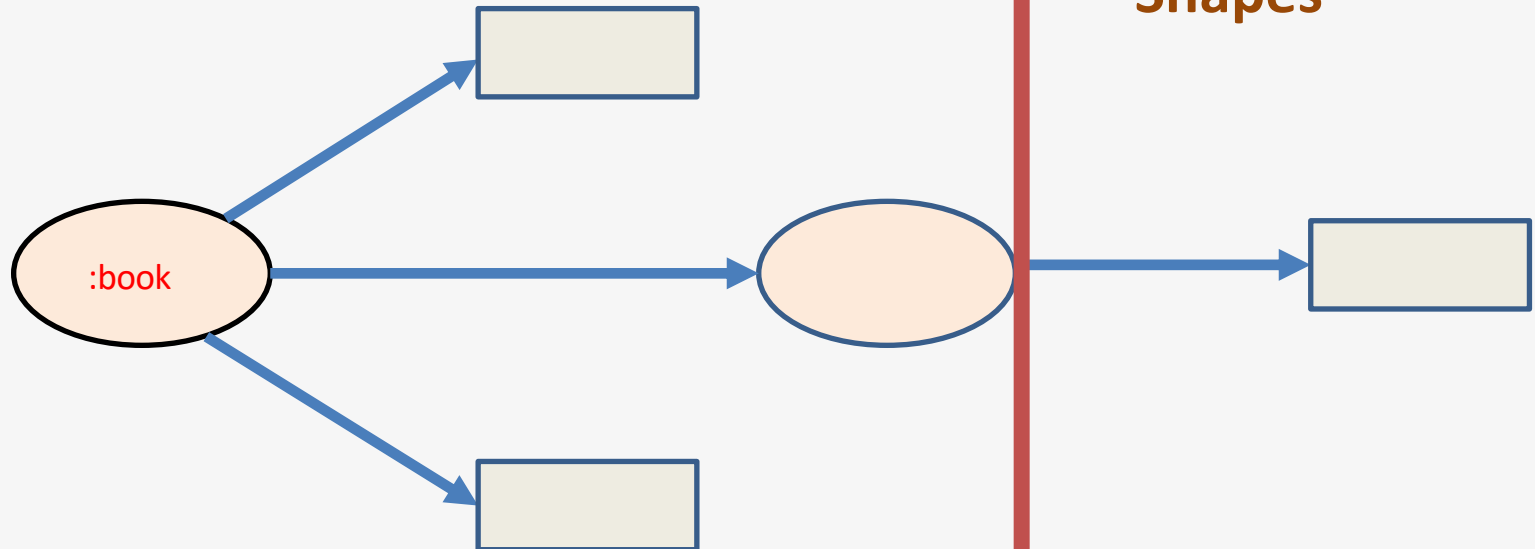
defines  
Statement Constraints





## Application Profile

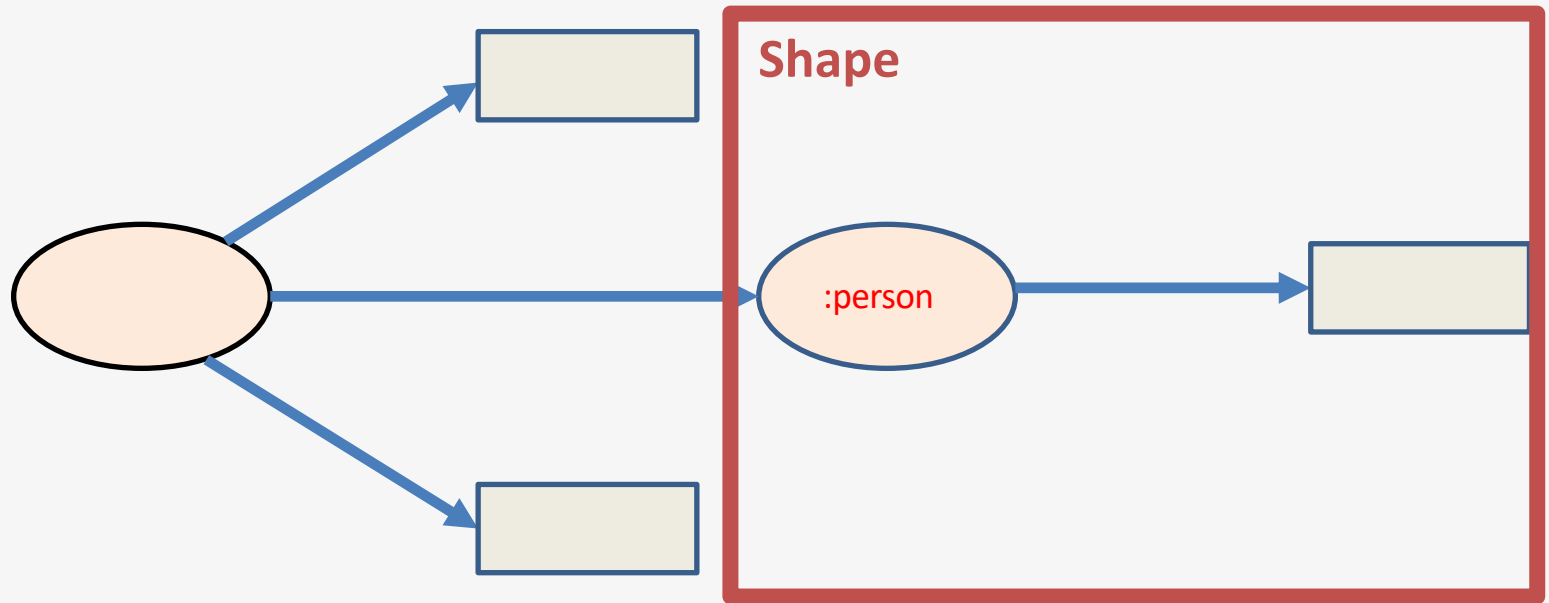
### Shape



in the context of  
**Shapes**

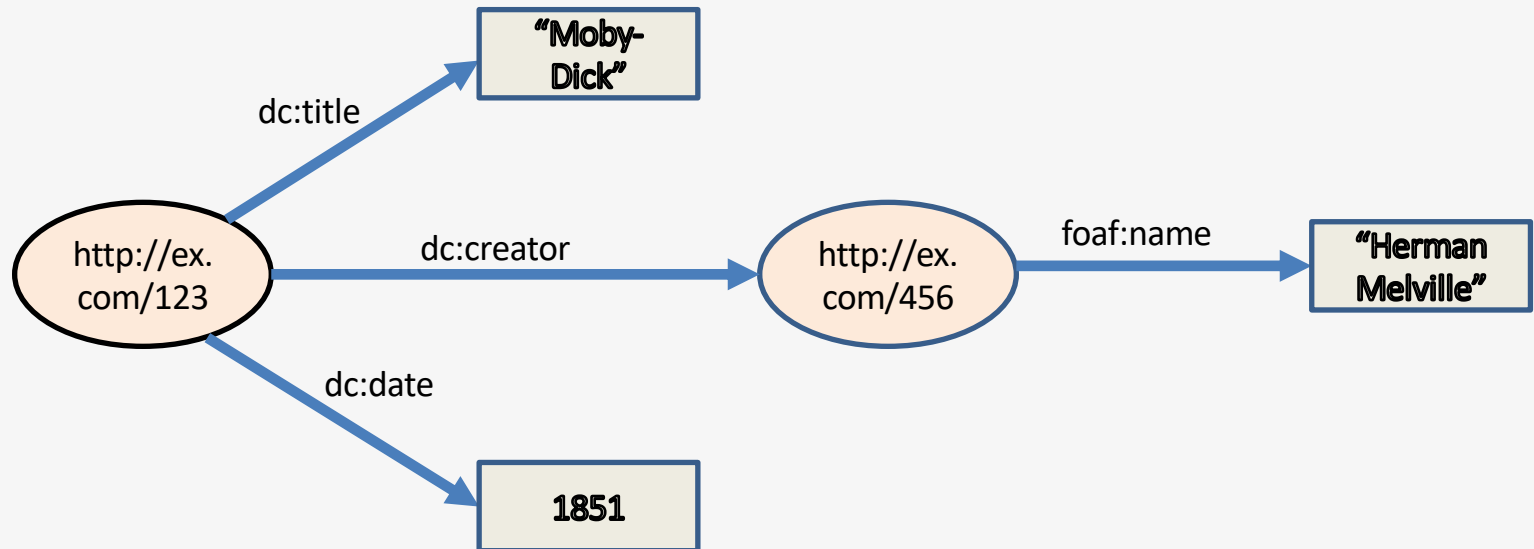


## Application Profile





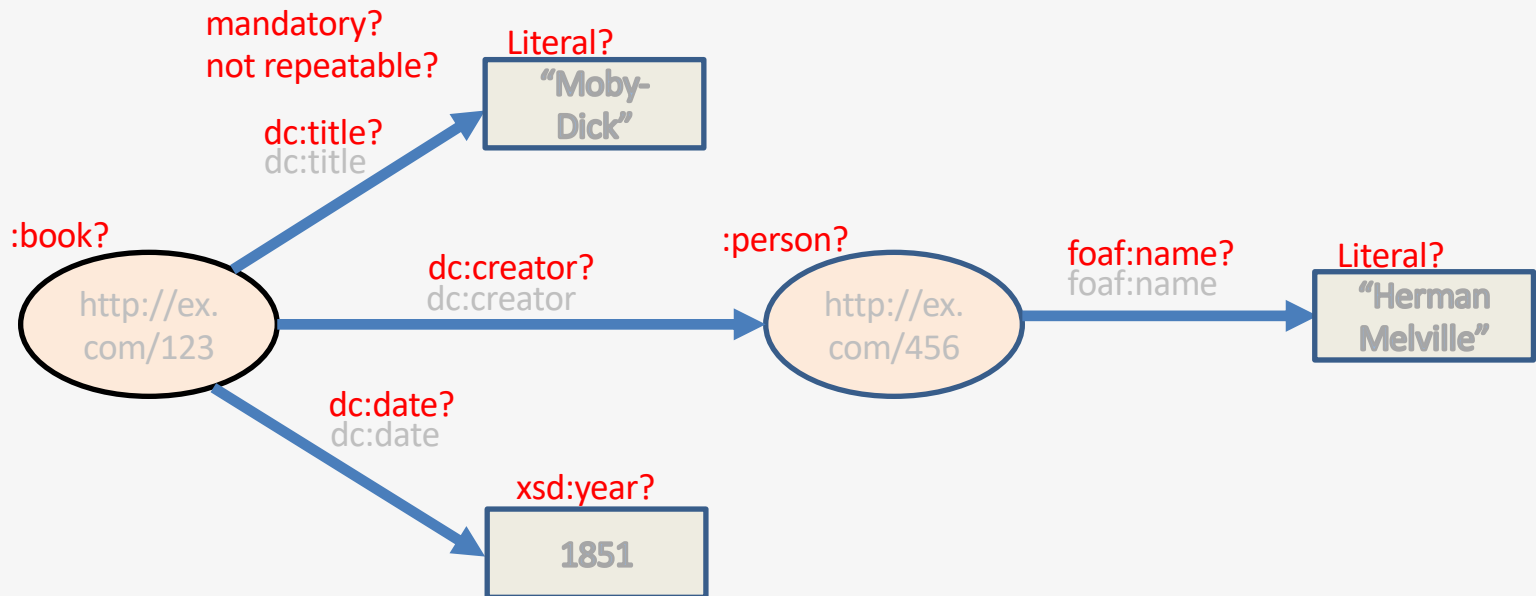
## Data





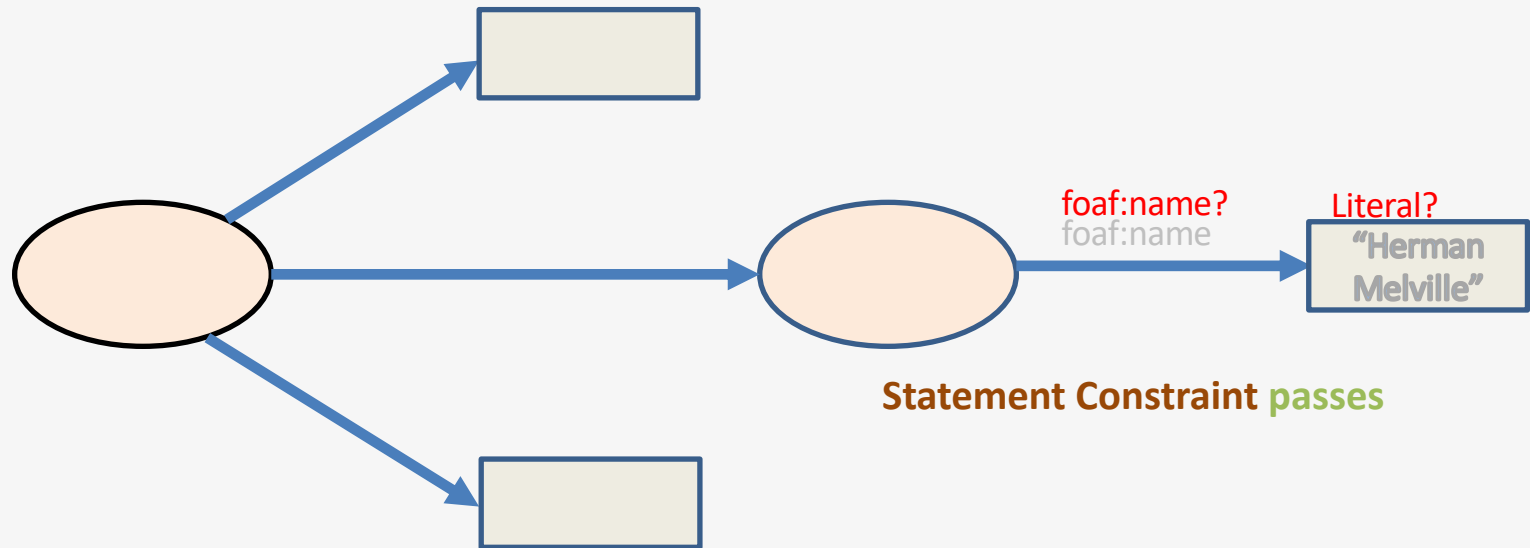


## Data validated against the **Application Profile**



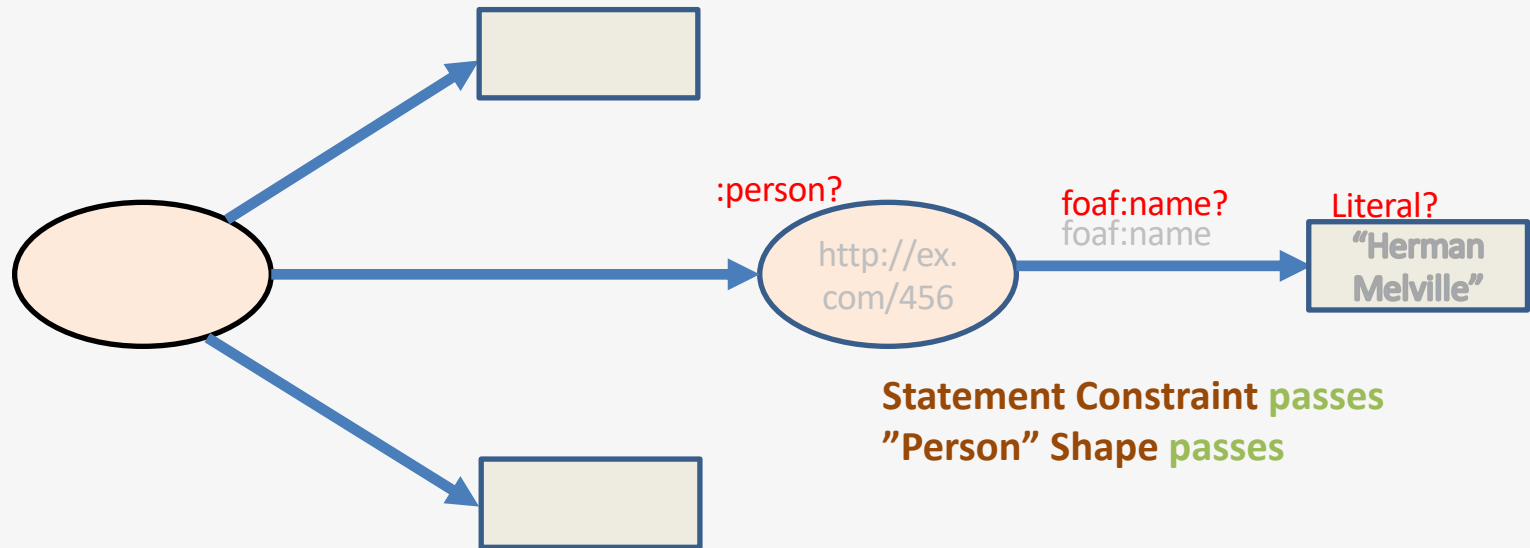


Data validated against the **Application Profile**



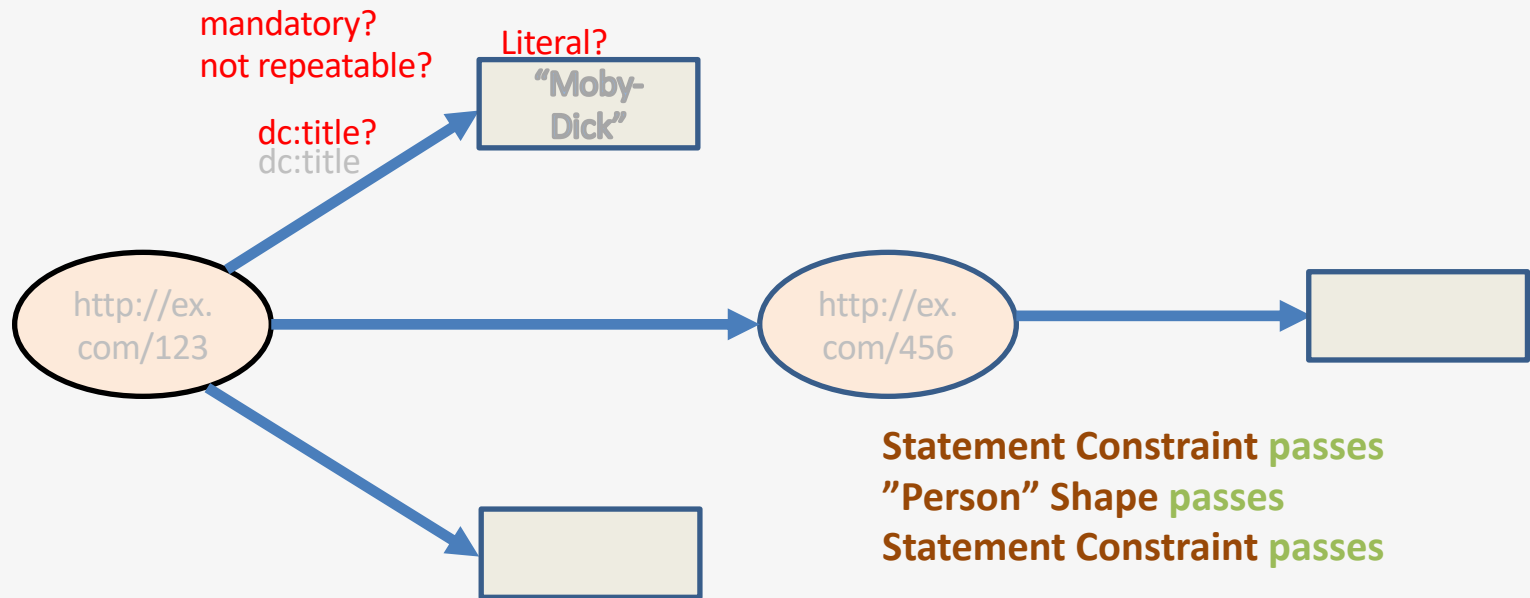


Data validated against the **Application Profile**



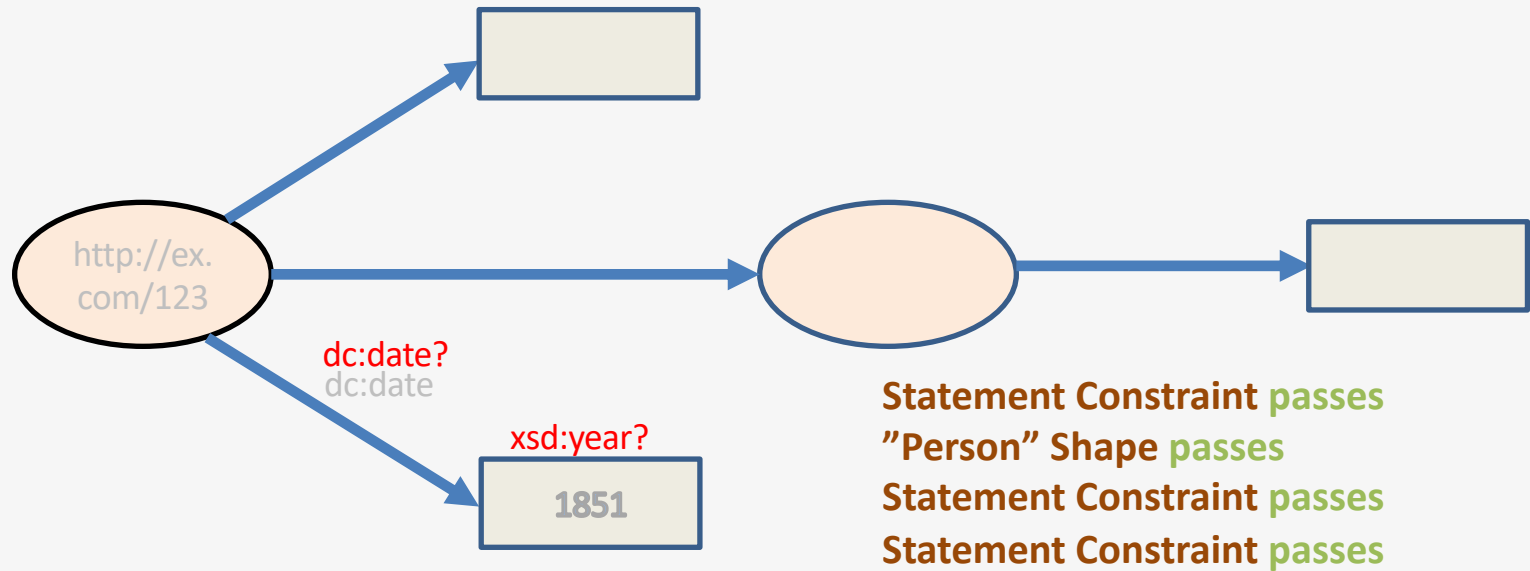


## Data validated against the **Application Profile**



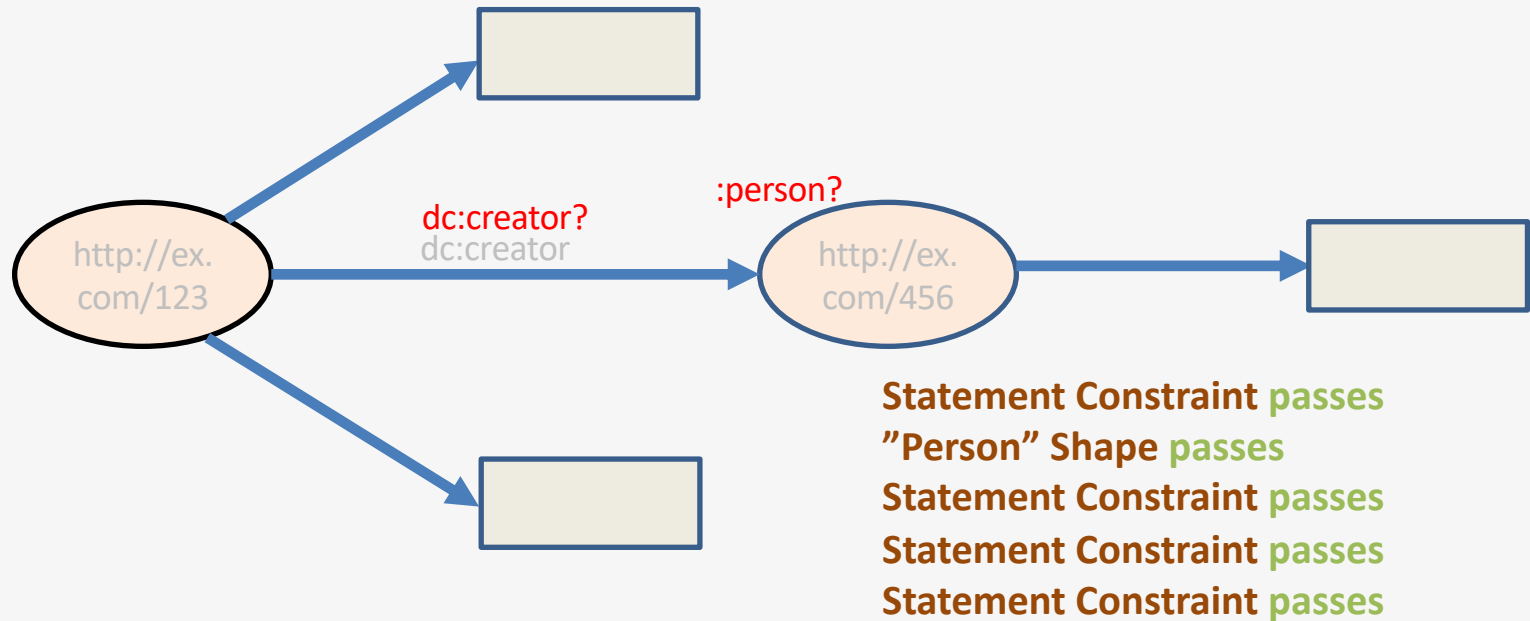


## Data validated against the **Application Profile**



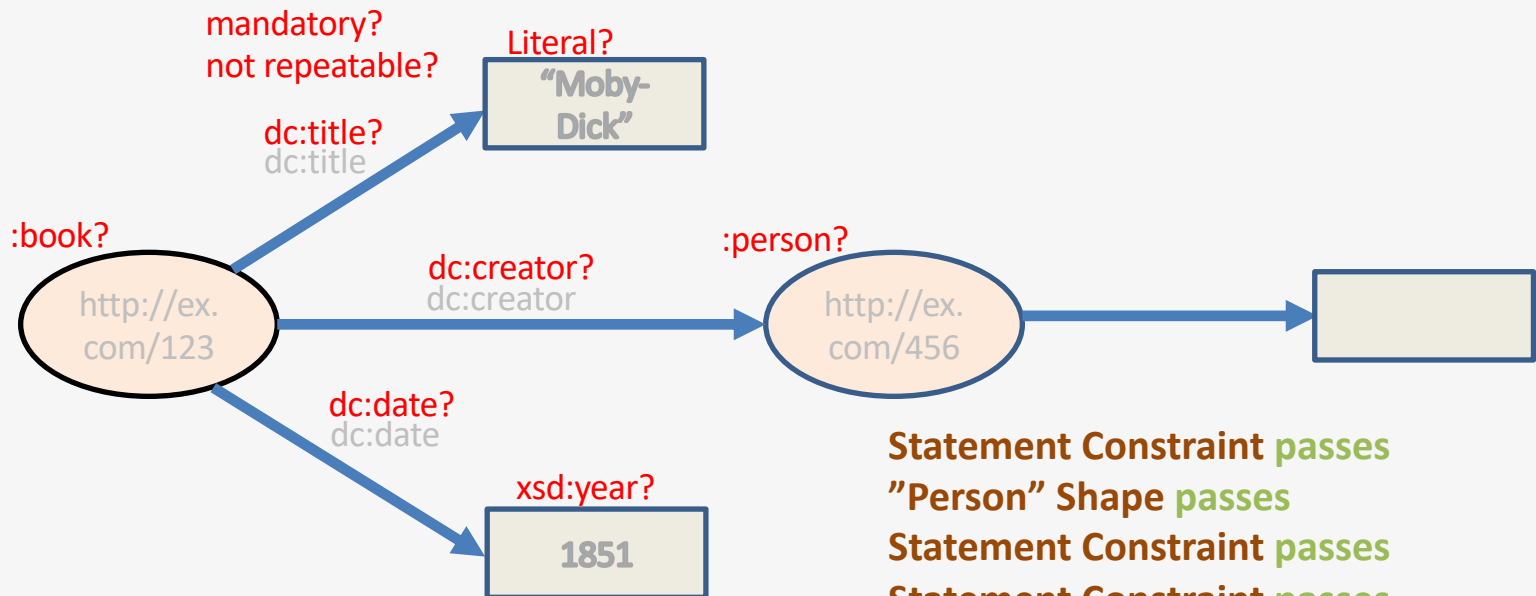


## Data validated against the **Application Profile**





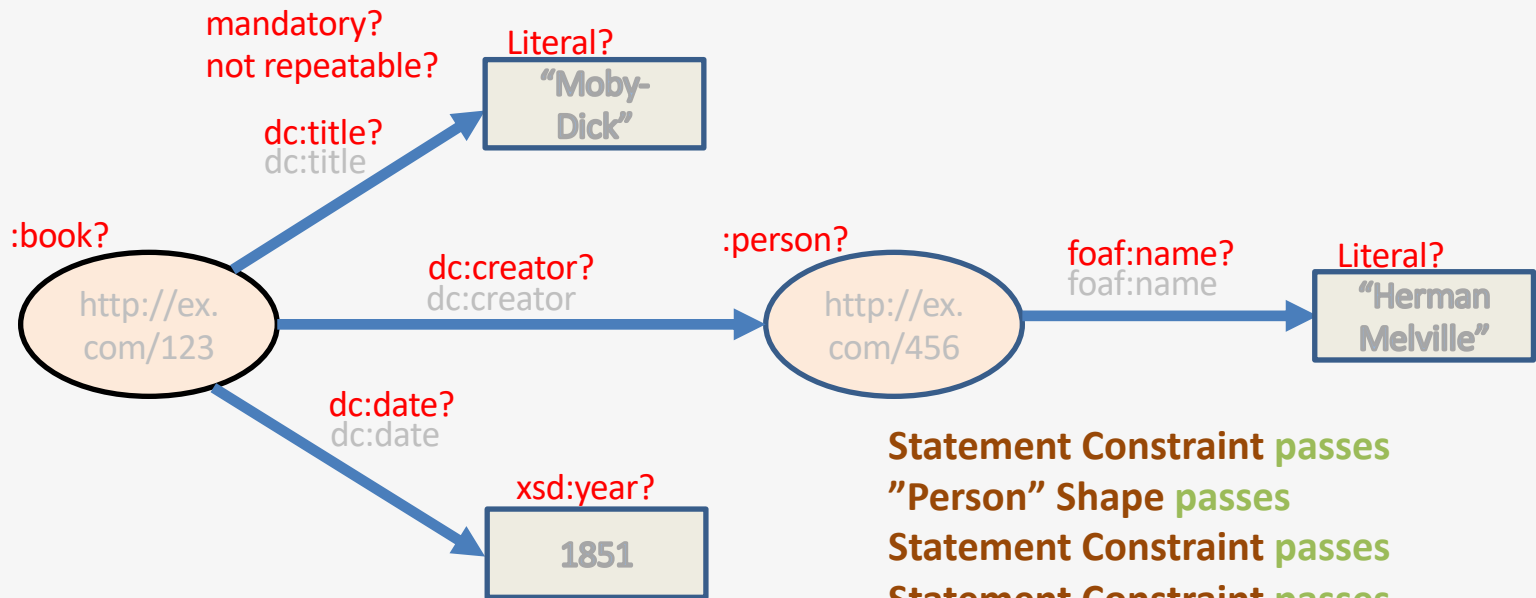
## Data validated against the **Application Profile**



Statement Constraint **passes**  
"Person" Shape **passes**  
Statement Constraint **passes**  
Statement Constraint **passes**  
"Book" Shape **passes**



## Data validated against the **Application Profile**



Statement Constraint **passes**  
"Person" Shape **passes**  
Statement Constraint **passes**  
Statement Constraint **passes**  
Statement Constraint **passes**  
"Book" Shape **passes**





shapeID	propertyID	mandatory	repeatable	valueNodeType	valueDataType	valueShape
<b>:book</b>	dct:creator					:person
	dct:date	Y	N		xsd:year	
	dct:title					
<b>:person</b>	foaf:name			literal		

```
$ cat two_shapes.csv
shapeID,shapeLabel,propertyID,propertyLabel,mandatory,repeatable,valueNodeType,valueDataType,valueShape
:book,,dct:creator,,,,,:person
,,dct:date,,Y,N,,xsd:year,
,,dct:title,,,,,
:person,,foaf:name,,,,literal,,
```



```
$ csv2shex inspect example.csv
```

```
DC Tabular Application Profile
  Shape
    shapeID: :book
    start: True
    Statement Constraint
      propertyID: dct:creator
      valueShape: :person
    Statement Constraint
      propertyID: dct:date
      mandatory: Y
      repeatable: N
      valueDataType: xsd:year
    Statement Constraint
      propertyID: dct:title
  Shape
    shapeID: :person
    Statement Constraint
      propertyID: foaf:name
      valueNodeType: literal
```



## Careful distinctions for reducing confusion

Instance Data	Application Profile -- about Instance Data
<b>Entities</b> - things described in <b>Instance Data</b>	<b>Shapes</b> - match <b>Data</b> describing a given <b>Entity</b>
<b>Statements</b> - <b>Property-Value</b> pair describing <b>Entities</b>	<b>Statement Constraints</b> - match kinds of <b>Statement</b>
<b>Properties</b> - attributes of <b>Entities</b>	<b>Property Constraints</b> - match specific <b>Properties</b> in <b>Data</b>
<b>Values</b> - contents of the attributes of <b>Entities</b>	<b>Value Constraints</b> - match characteristics of <b>Values</b>