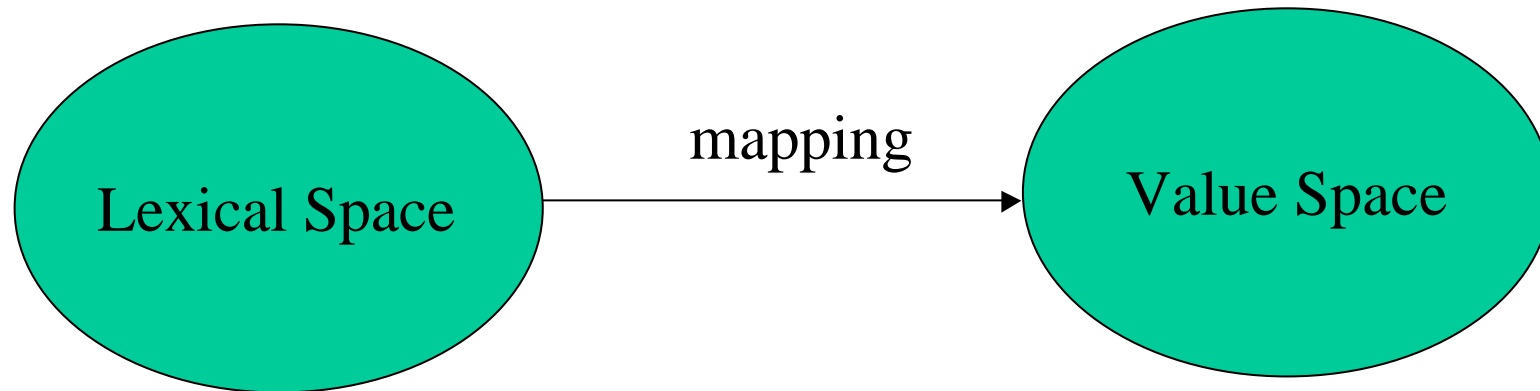


RDF DataTyping Query

A DataType



The problem

```
<rdf:Description rdf:about="Jenny">  
  <foo:age>10</foo:age>  
</rdf:Description>  
<rdf:Description rdf:about="John">  
  <foo:age>10</foo:age>  
</rdf:Description>
```

Do Jenny and John have the same age?

```
<Jenny> foo:age _:v .  
<John>   foo:age _:v .
```

Keep In Mind also...

```
<rdf:Description rdf:about="Jenny">
  <foo:age>10</foo:age>
</rdf:Description>
<rdf:Description rdf:about="film">
  <foo:title>10</foo:title>
</rdf:Description>
```

Is Jenny's age the same as the title of the film

```
<Jenny> foo:age _:v .
<film> foo:title _:v .
```

Does the tidy entailment hold?

```
<a> <b> "lit" .  
<c> <d> "lit" .
```

Entail:

```
<a> <b> _:1 .  
<c> <d> _:1 .
```

Considerations

- Existing implementations/data – backward compatible upgrade
- Implementation cost - \$ and time
- Existing specifications/data – can we interpret to make them better
- user acceptability – specify the range of a property once in one place
- RDFCore is out of time – what is the simplest acceptable solution
- What do RDF users need

Option A

```
<rdf:Description rdf:about="Jenny" >  
  <foo:age>10</foo:age>  
</rdf:Description>
```

The object of the age property denotes:

A String

Option B

```
<rdf:Description rdf:about="Jenny" >
  <foo:age>10</foo:age>
</rdf:Description>
<rdf:Description rdf:about="&foo;age" >
  <rdfs:format rdf:resource="&xsd;integer/" >
</rdf:Description>
```

The object of the age property denotes:

A String

restricted to the lexical space of xsd:integer

Option C

```
<rdf:Description rdf:about="Jenny">  
  <foo:age  
    rdf:datatype="&xsd;integer">10</foo:age>  
</rdf:Description>
```

<Jenny> foo:age xsd:integer"10" .

The object of the age property denotes:

An Integer

A member of the value space of xsd:integer

Option D

```
<rdf:Datatype rdf:property="&foo;age"  
              rdf:datatype="&xsd;integer" />  
<rdf:Description rdf:about="Jenny">  
  <foo:age>10</foo:age>  
</rdf:Description>  
<rdf:Description rdf:about="Johnny">  
  <foo:age>10</foo:age>  
</rdf:Description>
```

An Integer

A member of the value space of xsd:integer

Option E

```
<rdf:Description rdf:about="Jenny">  
  <foo:age xsd:integer="10"/>  
</rdf:Description>
```

```
<Jenny> foo:age      _:v .  
_:v      xsd:integer "10" .
```

The object of the age property denotes:

An Integer

A member of the value space of xsd:integer

Option F

```
<rdf:Description rdf:about="Jenny" >
  <foo:age>10</foo:age>
</rdf:Description>
<rdf:Description rdf:about="&foo;age" >
  <rdfs:range rdf:resource="&xsd;integer/" >
</rdf:Description>
```

The object of the age property denotes:

An Integer

A member of the value space of xsd:integer