

SEMAINE 07 : vers plus d'intégration de données

1. VoID pour les bases RDF
2. DCAT pour les jeux de données
3. PROVenance et traçabilité
4. RDF dans les pages HTML
- 5. Liens avec les bases de données**

transformation d'une base relationnelle en RDF

- transformation par défaut
[A Direct Mapping of Relational Data to RDF]

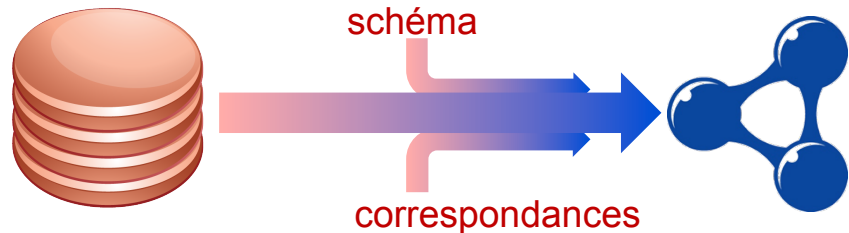


transformation d'une base relationnelle en RDF

- transformation par défaut
[A Direct Mapping of Relational Data to RDF]

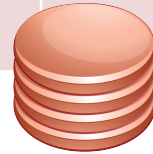


- transformation personnalisée
[R2RML: RDB to RDF Mapping Language]



transformation par défaut / correspondance directe

nom	prenom	age
gandon	fabien	39
buttier	thomas	38



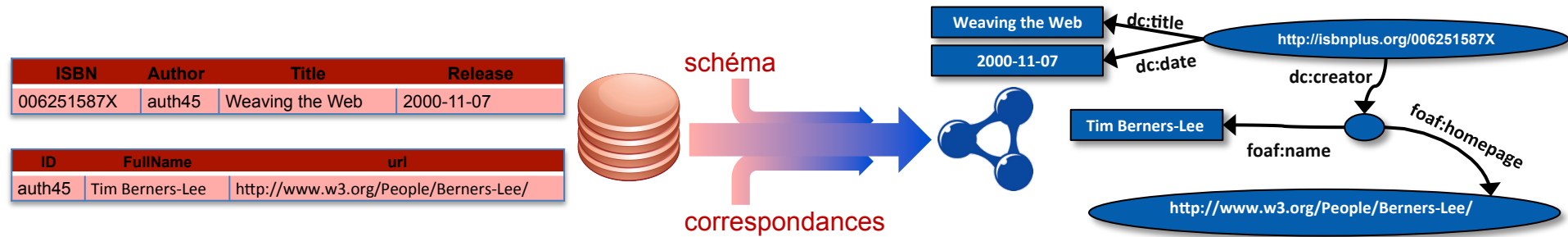
```
#s1 :nom "gandon"  
#s1 :prenom "fabien"  
#s1 :age "39"  
#s2 :nom "buttier"  
#s2 :prenom "thomas"  
#s2 :age "38"  
#s3 ...
```



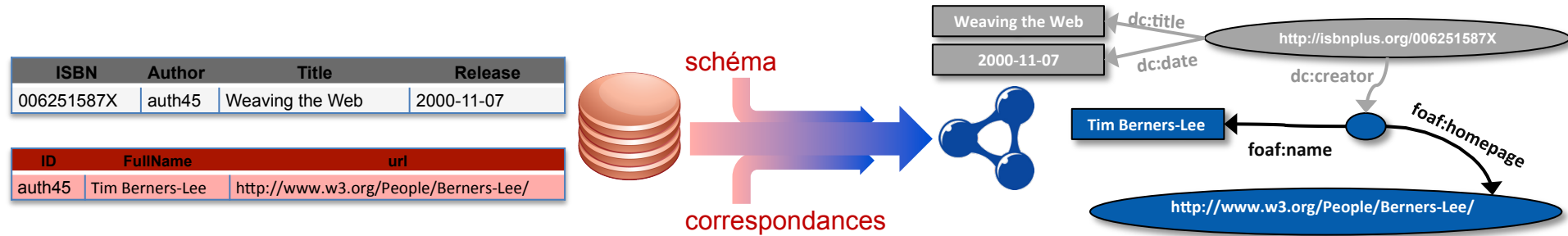
Règles de génération des triplets:

1. les cellules d'une même ligne ont un sujet commun
2. les noms des colonnes donnent les noms des relations
3. la valeur d'une cellule donne la valeur de objet
4. les liens entre tables

transformation personnalisée d'une BD en RDF

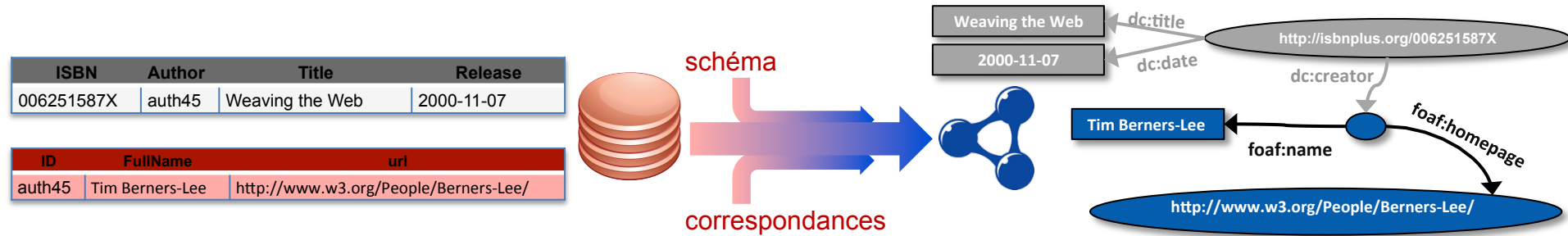


transformation personnalisée d'une BD en RDF



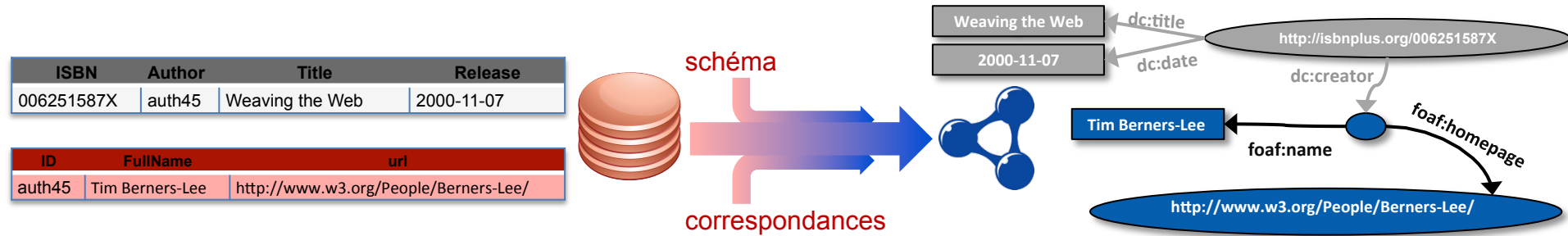
```
:Author_Table rdf:type rr:TriplesMap ;
  rr:subjectMap [
    rr:termtype "BlankNode" ;
    rr:column "ID" ;
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:name ] ;
    rr:objectMap [ rr:column "FullName" ]
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:homepage ] ;
    rr:objectMap [ rr:column "url" ; rr:termtype "IRI" ]
  ] .
```

transformation personnalisée d'une BD en RDF



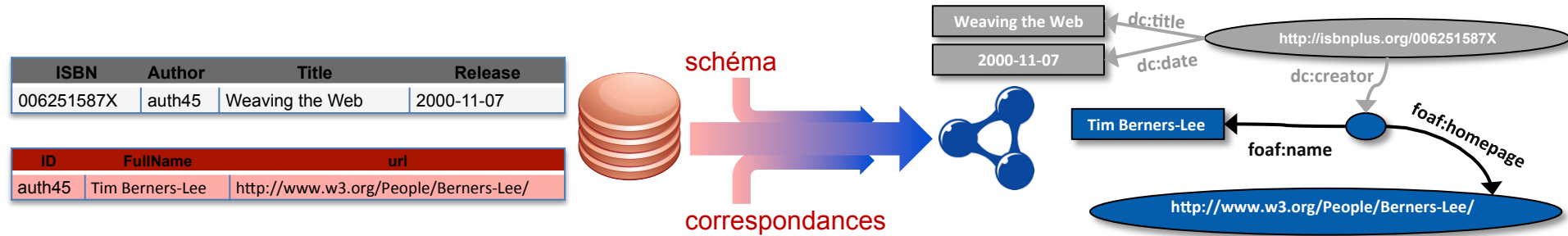
```
:Author_Table rdf:type rr:TriplesMap ;
  rr:subjectMap [
    rr:termtype "BlankNode" ;
    rr:column "ID" ;
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:name ] ;
    rr:objectMap [ rr:column "FullName" ]
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:homepage ] ;
    rr:objectMap [ rr:column "url" ; rr:termtype "IRI" ]
  ] .
```

transformation personnalisée d'une BD en RDF



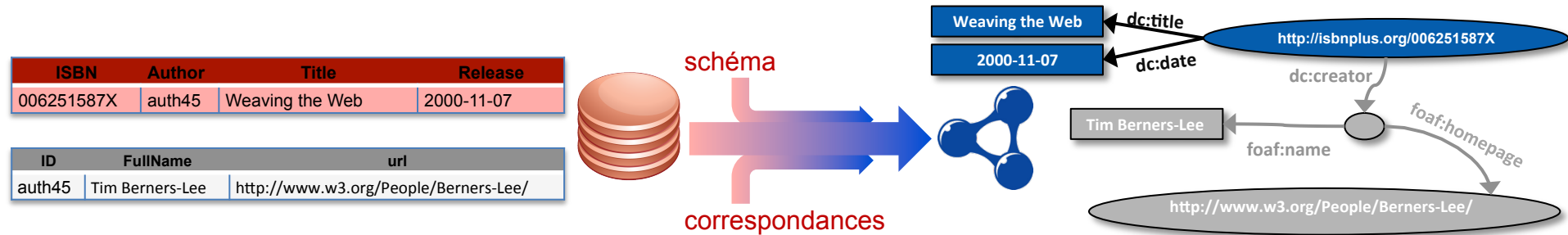
```
:Author_Table rdf:type rr:TriplesMap ;  
  rr:subjectMap [  
    rr:termtype "BlankNode" ;  
    rr:column "ID" ;  
  ] ;  
  rr:predicateObjectMap [  
    rr:predicateMap [ rr:predicate foaf:name ] ;  
    rr:objectMap [ rr:column "FullName" ]  
  ] ;  
  rr:predicateObjectMap [  
    rr:predicateMap [ rr:predicate foaf:homepage ] ;  
    rr:objectMap [ rr:column "url" ; rr:termtype "IRI" ]  
  ] .
```


transformation personnalisée d'une BD en RDF



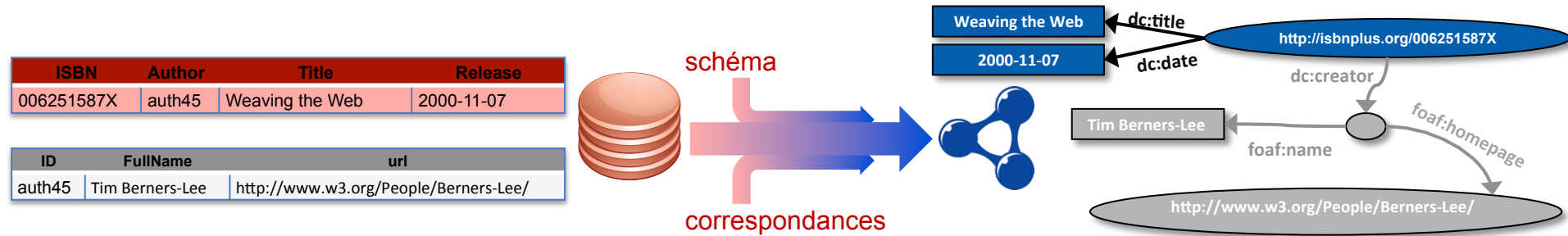
```
:Author_Table rdf:type rr:TriplesMap ;
  rr:subjectMap [
    rr:termtype "BlankNode" ;
    rr:column "ID" ;
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:name ] ;
    rr:objectMap [ rr:column "FullName" ]
  ] ;
  rr:predicateObjectMap [
    rr:predicateMap [ rr:predicate foaf:homepage ] ;
    rr:objectMap [ rr:column "url" ; rr:termtype "IRI" ]
  ] .
```

transformation personnalisée d'une BD en RDF



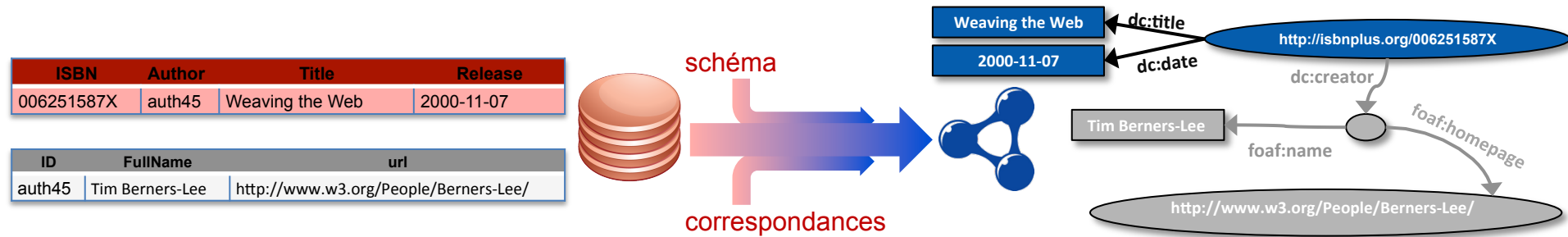
```
:Book_Table rdf:type rr:TriplesMap ;
rr:subjectMap [ rr:template "http://isbnplus.org/{ISBN}"; ];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate a:title ];
  rr:objectMap [ rr:column "Title" ];
];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate dc:date ];
  rr:objectMap [ rr:column "Release" ];
];
```

transformation personnalisée d'une BD en RDF



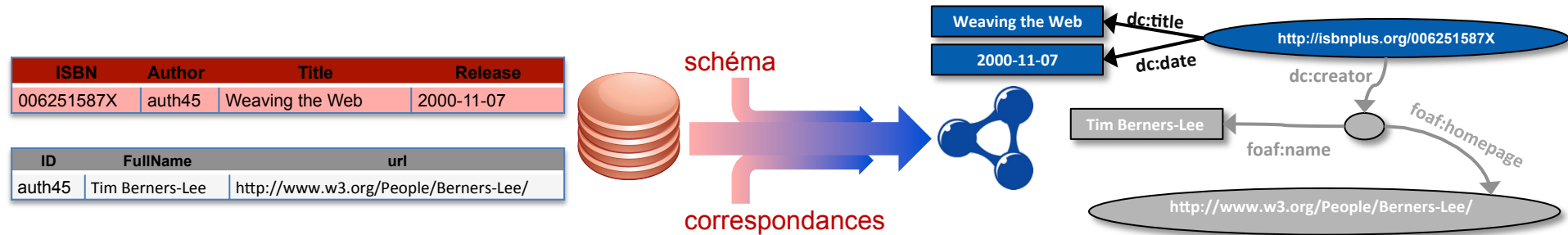
```
:Book_Table rdf:type rr:TriplesMap ;  
  rr:subjectMap [ rr:template "http://isbnplus.org/{ISBN}"; ] ;  
  rr:predicateObjectMap [  
    rr:predicateMap [ rr:predicate a:title ] ;  
    rr:objectMap [ rr:column "Title" ] ;  
  ] ;  
  rr:predicateObjectMap [  
    rr:predicateMap [ rr:predicate dc:date ] ;  
    rr:objectMap [ rr:column "Release" ; ] ;  
  ] ;
```

transformation personnalisée d'une BD en RDF



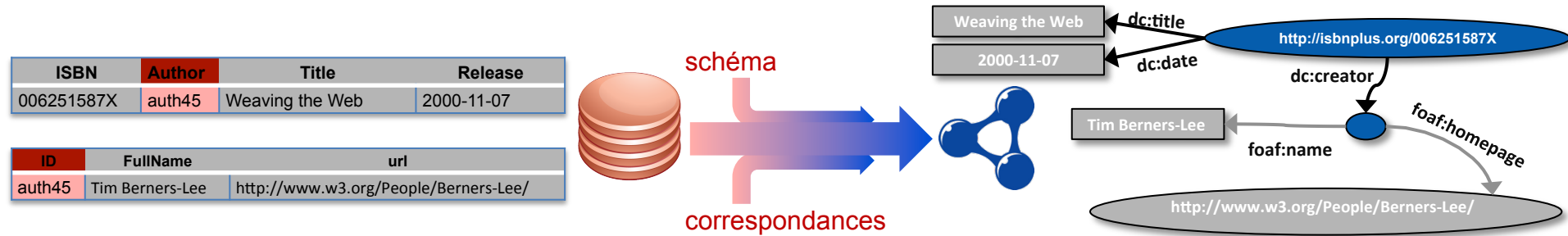
```
:Book_Table rdf:type rr:TriplesMap ;
rr:subjectMap [ rr:template "http://isbnplus.org/{ISBN}"; ];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate a:title ];
  rr:objectMap [ rr:column "Title" ];
];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate dc:date ];
  rr:objectMap [ rr:column "Release" ];
];
```

transformation personnalisée d'une BD en RDF



```
:Book_Table rdf:type rr:TriplesMap ;
rr:subjectMap [ rr:template "http://isbnplus.org/{ISBN}"; ];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate a:title ];
  rr:objectMap [ rr:column "Title" ];
];
rr:predicateObjectMap [
  rr:predicateMap [ rr:predicate dc:date ];
  rr:objectMap [ rr:column "Release" ];
];
```

transformation personnalisée d'une BD en RDF



```
:Book_Table rdf:type rr:TriplesMap ;  
...  
rr:refPredicateObjectMap [  
  rr:refPredicateMap [ rr:predicate dc:creator ] ;  
  rr:refObjectMap  
    [ rr:parentTriplesMap :Author_Table ;  
      rr:joinCondition "{child}.Author= {parent}.ID"  
    ]  
].
```