

**More TEI / XSLT / etc.**

# Markup Exercise

- We're going to look at a couple of pages from a book.
- How would we plan to mark them up in TEI (using P4)?
- Look at <http://www.tei-c.org/P4X/REFTAG.html>
- What tags/tagsets would you need?

# Advanced XSLT

- Let's look at what XSLT 1.0 can't do:  
<http://www.dpawson.co.uk/xsl/sect2/nono.html#d1640e16>
- EXSLT <http://www.exslt.org/>
- XSLT 2.0 <http://www.w3.org/TR/xslt20/>
  - much more powerful
  - new and not widely supported

# Schematron

- A different approach from DTDs (also from XML Schema and RELAX NG).
- Schematron doesn't attempt to be a comprehensive schema language, instead it let's you make assertions about XML documents.

# Schematron

- Only six basic elements!

- (There are others, but they're not required and largely govern report formatting)

`<schema xmlns="http://purl.oclc.org/dsdl/schematron">` contains

optional `<title>` then

zero or more `<ns prefix="???" uri="???" />` giving the namespaces and prefixes used for the XPaths, then

several `<pattern>`, which contain

several `<rule context="???">` where the context attribute is an XSLT expression, which contain mixed

`<assert test="???">` where the test attribute is an XPath location, and which contains rich text expressing the statement being asserted in plain language, and

`<report test="???">` where the test attribute is an XPath location, and which contains rich text expressing the fact to be reported in plain language.

# Schematron

- Lets you make sensible checks on documents that really can't be done otherwise.
- For example: a TEI document shouldn't use both `<bibl>` and `<biblStruct>` in its bibliography section. One or the other is fine, but having both is inconsistent.

# Schematron

- How does it work? XPath.
- Reference implementation uses XSLT.
- <http://www.schematron.com>

# XQuery

- XML query language
- FLWOR expressions
  - for
  - let
  - where
  - order by
  - return

# XQuery, XPath, XSLT

- XPath 2.0 and XSLT 2.0 share their function library with XQuery
- <http://www.w3.org/TR/xpath-functions/>
- XQuery has some overlap in both spirit and function with XSLT—you can do similar things with both

# Uses of XQuery

- Page/document templating language
- Document analysis
- XML Database query language