Using XPath 3.1
(and its friends)
to work with JSON

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https://github.com/amclark42/
code4lib_xpath-to-work-with-json

Overlap between XML and JSON

- one "root",

- hierarchy,

- meaningful groupings, and

- common formats for data interchange.

Maps and arrays in XPath 3.1

```
map {
    "greeting": "Hello",
    "who": [
        "World",
        <orgName>Code4Lib 2021</orgName>,
        $attendees-from-Northeastern
    ]
}
```

Maps and arrays in XPath 3.1

```
map:get($myMap, "greeting")

   eq   $myMap("greeting")

   eq   $myMap?greeting


array:get($myArray, 1)

   eq   $myArray(1)

   eq   $myArray?1
```

Maps and arrays in XPath 3.1

```
$myMap[?greeting eq "Hello"]


$myArray[?*[. eq "World"]]
```

Takeaways from my use of maps and arrays

- Key-value pairs are *great* for mapping parameter names onto human-readable labels!

- The nesting of arrays means I can do complex ordering of values.

- I can cache the XML representation of JSON in my XML database, which gives me indexing and quick query results.

- I can create RESTXQ APIs which return XML or JSON on request (or HTML, after applying an XSL transformation).

- I can pass maps around instead of creating XQuery functions with oodles of required parameters.