

Are URIs actually names?

Henry S. Thompson

In the official literature defining Uniform Resource Identifiers, and in (pedantic) commentary on the URI/URN/URL confusion, it is common to assert that URIs are in fact `_names_`. By which is meant, names, not addresses. But there is a more serious question here: to what extent are URIs (proper) names in the sense that e.g. "Henry S. Thompson" is a name? There are clearly some important similarities:

- * URIs and names are both created and assigned in a recognisable discrete act;
- * URIs and names may be opaque, that is, their form may bear no resemblance/carry no information about their referent;
- * There are no natural classes of named things or things identified by URIs;
- * URIs and names can both be indexical, i.e. not rigid designators, but functions from context to referent.

But there are also important differences:

- * URIs are usually `_not_` opaque, whereas names (outside of technical subdomains such as chemical compounds) are rarely descriptive (but c.f. "Eric the Red");
- * Many URIs can be dereferenced mechanically, something with no obvious analogue for ordinary language names;
- * URIs may be more than descriptive, they can be intentional:
Consider the difference between two (hypothetical) URIs with the same extension but different intentions:

`http://maths.example.org/gcd.cgi?x=35&y=14`
`http://maths.example.org/integers/7`

In contrast, we would accept "7" as a name (of the particular sort usually called a numeral), whereas "3+4" is not a name, although both forms clearly denote the same number.

A consideration of these similarities and differences leads us to some insight into a deeper question: where do URIs get their meaning from, and how can we improve the stability of that connection, particularly in cases where it really matters that a URI's meaning does not change.

We consider this last question in the context of a real-life example: species naming.

- * Why are URIs as currently understood not suitable to replace the familiar two- (or three-) part names assigned to plants and animals under the Linnaean system?

* How might the current understanding evolve to the point where URIs would be a suitable replacement?