Are URIs actually names?

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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 extention 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?