Joseph T. Tennis "Epistemic Constructs in the Design, Study, and Critique of Knowledge Organization Structures" Information Resources Management Association, International Conference (Vancouver, British Columbia), May 2007.

Epistemic Constructs in the Design, Study, and Critique of Knowledge Organization Structures

Joseph T. Tennis

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Outline

- Knowledge Organization Structures - definition
- Three threads of research in KOS: design, study, and critique
- Epistemic constructs of these threads

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Knowledge Organization Structures

Knowledge Org. Structures

- Knowledge Organization Structures are used for indexing/classification, display, and sense-making [1, 2, 3].

Knowledge Org. Structures

- Indexing/classification - process of tagging information (documents, parts of documents, explicit knowledge) for future use
- Tools used in this process are taxonomies, ontologies, classification schemes, term lists, etc.

Knowledge Org. Structures

- Display - process of presenting information in an orderly and systematic fashion
- Tools used - information architecture navigation tools, visual metaphors, indexing/classification tools.

Knowledge Org. Structures

- Sense-making - process of making meaning
- Tools used - indexing/classification tools and display tools (people as well… but we'll leave that for now).

Knowledge Org. Structures

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    <label xml:lang="en">Tag</label>
    <subClassOf
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    <skos:definition xml:lang="en">A natural-language concept which is used
  to annotate another resource.</skos:definition>
</owl:Class>

<owl:Class
  rdf:about="http://www.holygoat.co.uk/owl/redwood/0.1/tags/Tagging">
    <comment xml:lang="en">A reified class which defines an instance of a
  tagging by an agent of a resource with one or more tags.</comment>
    <label xml:lang="en">tagging</label>
    <vs:term_status>testing</vs:term_status>
</owl:Class>
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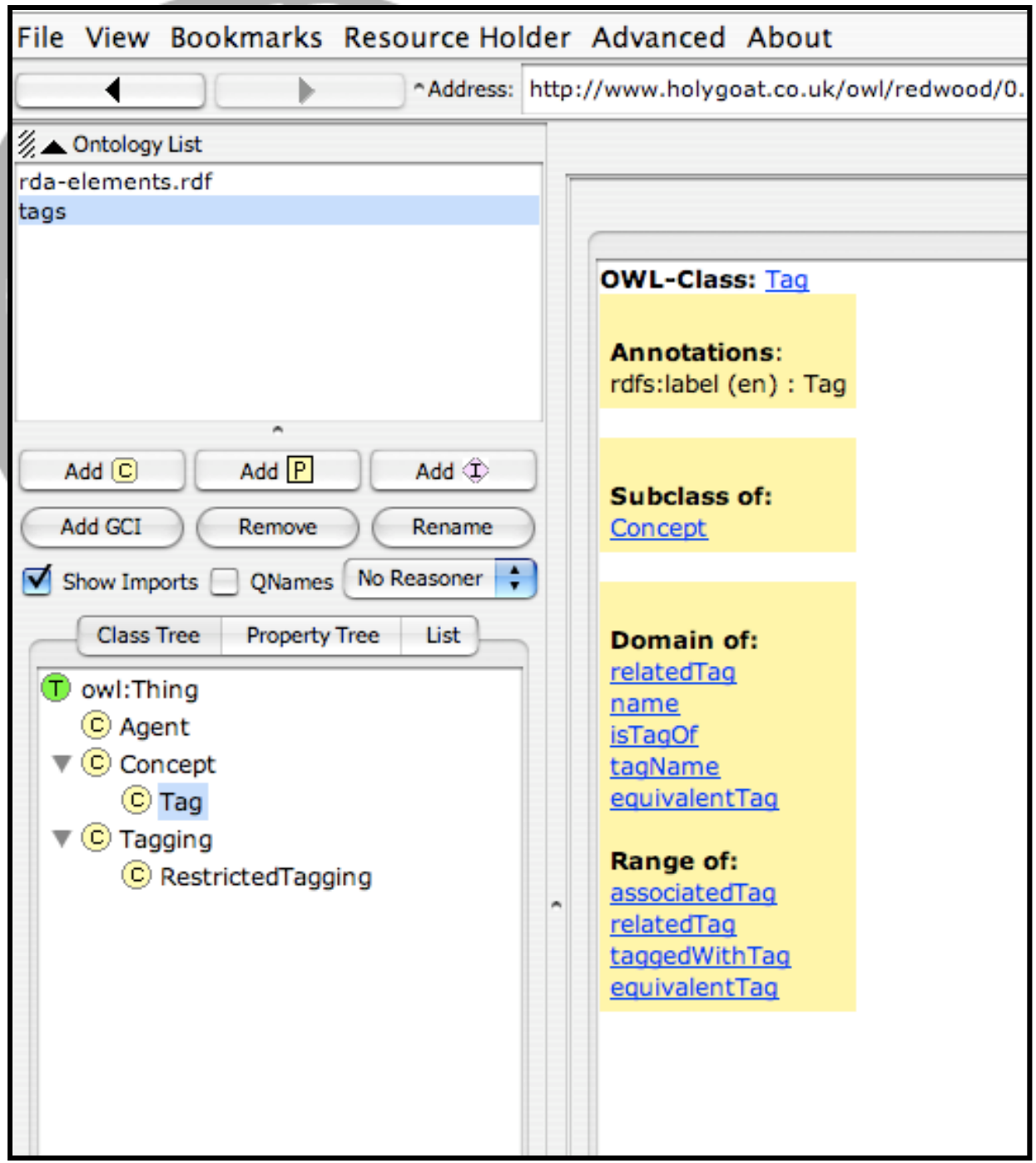

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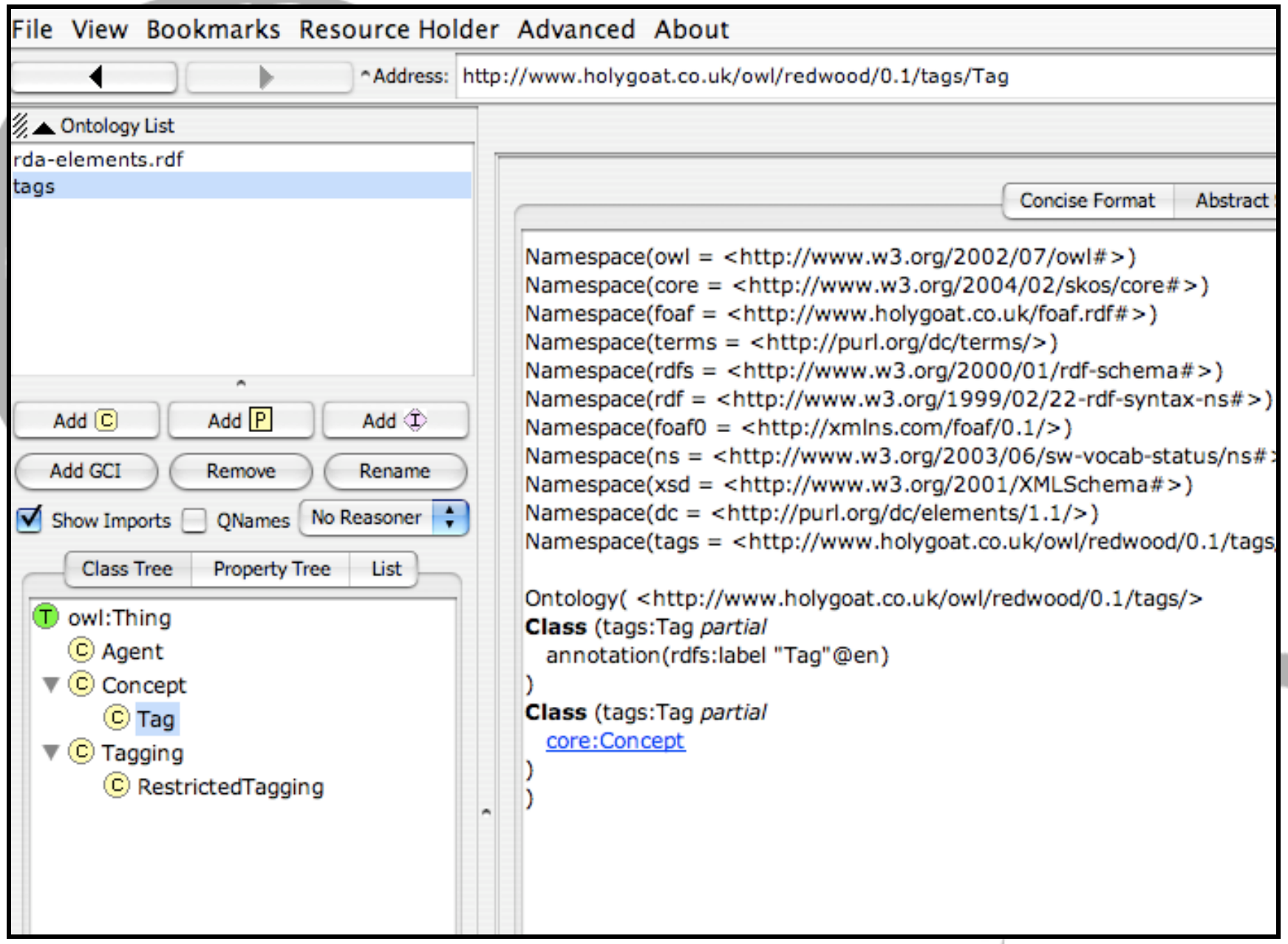

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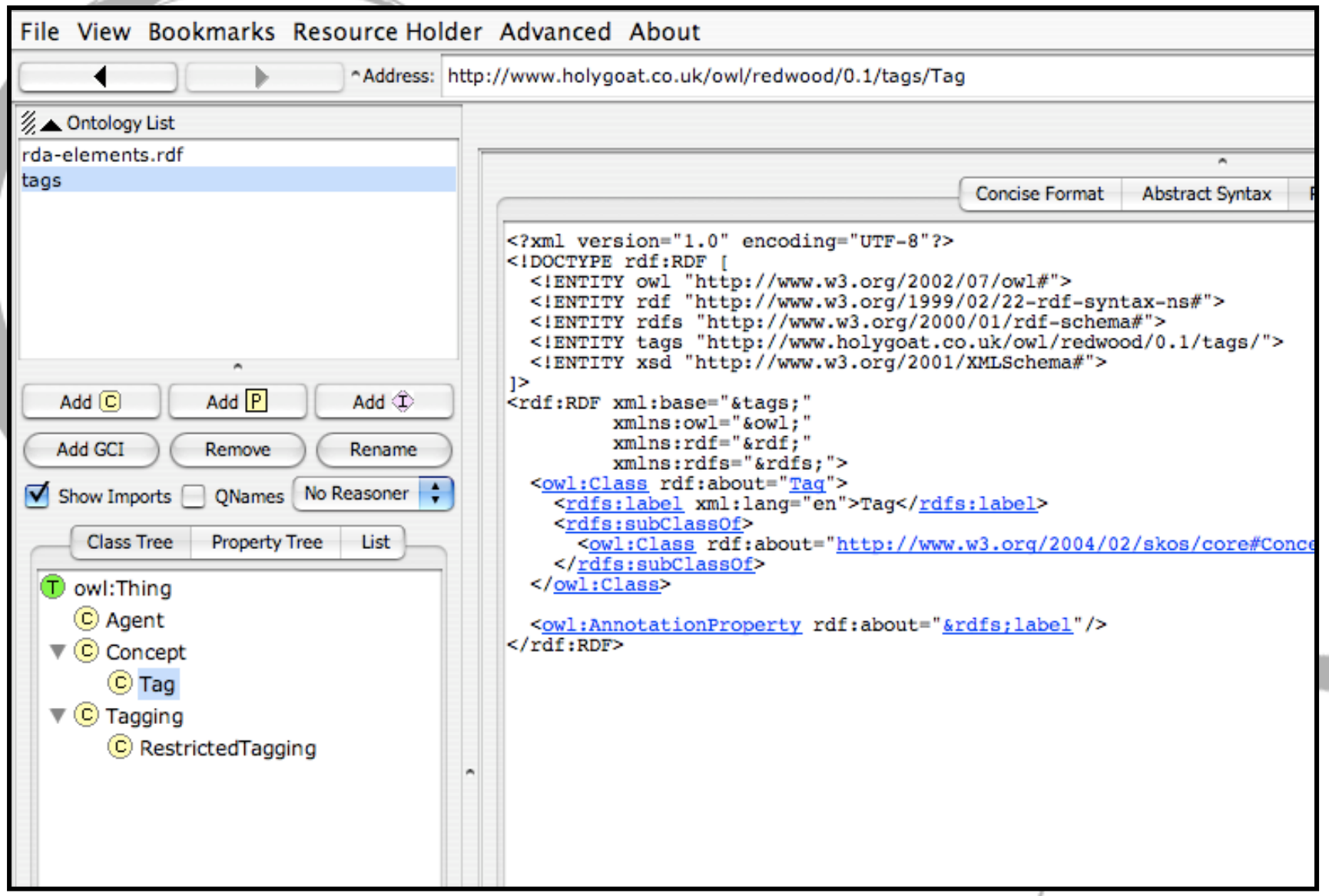

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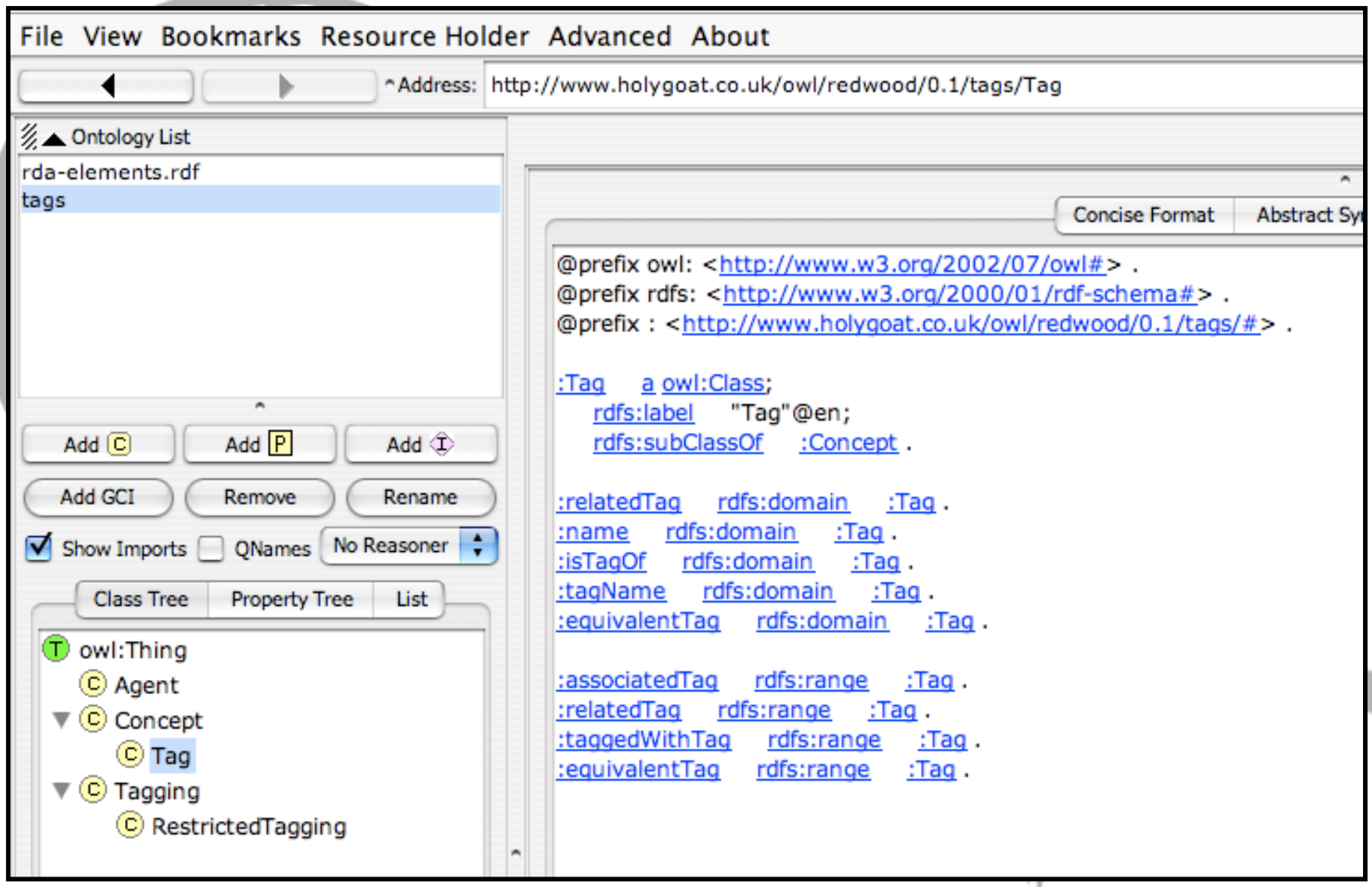

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Threads in Knowledge Organization Research

Threads in Knowledge Organziation Research

- Three major threads in KO research:

- Design
- Study
- Critique

Threads in Knowledge Organization Research

- Design Research on KOS: asks how to build them?
- Study Research: asks what is the nature, extent, and process of existing KOS?
- Critique Research: asks what does it mean? How does it affect work and life?

Threads in Knowledge Organization Research

- Each of these requires its on epistemic stance
- In the first instance we have to lay the groundwork for evaluation
- It is only through expressing the explicit epistemic stance and constructs that will allow us to say whether these KOS are *good.*

Threads in Knowledge Organization Research

- Much of KO research concerns itself with the design of indexing languages, catalogues, and other descriptive apparatus. Key thinkers in the field, like S. R. Ranganathan, have contributed a great deal of thought to the design of schemes for classification. Design research operates in a small and particular set of epistemologies, and a diverse set of theories and methods.

Threads in Knowledge Organization Research

Design:

- Pragmatic Rationalism (Postulationalism)
- Domain Essentialism

Threads in Knowledge Organization Research

- Pragmatic Rationalism (Postulationalism)
  - S. R. Ranganathan and the CRG, in their philosophical approach to classification theory, postulate basic categories and methods for interpreting and representing categories. To postulate categories, in this case, is to create epistemic constructs for classification - in R's systems we have PMEST postulated.
- For example:

Threads in Knowledge Organization Research

- Prevention of virulence of the rice plant in the Madras in 1967.
- P = rice plant
- M = virulence
- E = prevention
- S = Madras
- T = 1967

Threads in Knowledge Organization

- Colon Classification:
- J381,4;4;0c7:5;3:7;5.4411.e50c’N67’el

- In ‘English’:
- Agriculture (BF), Rice Plant [1P1], Stem [1P2], Disease [1M1], Virulence [1M2], Prevention [1E], Chemicals [2M1], Distribution [2E], Sprayer [3M1], Madras [S1], Cauveri Delta [S2], 1967 [T1], Dry Period [T2].

Threads in Knowledge Organization

- Domain Essentialism
  - Methodological Collectivism
  - Methodological Individualism
  - Expertism
  - Userism
- *The truth is out there…in the domain!*

Threads in Knowledge Organization Research

Study:

- Casual Empiricism

- Analytical
- Socio-Cognitive Approaches

Threads in Knowledge Organization Research

- Casual Empiricism
  - Removes the problematic of language and observation bias - what you see is what you get
  - Appears as a journalistic study of KOS, and is not linked to larger knowledge claims about the phenomenon (it’s isolated research).

Threads in Knowledge Organization Research

- Analytical (specifically Socio-Cognitive Approaches) wed the mind and rhetorical discourse together - taking logical argumentation as proof of findings about empirical events.
- Interesting work, but creates a disconnect between observation and argumentation.

Threads in Knowledge Organization Research

Critique

- Deep Structure (meaning is there to be found and represented)

- Critical Theory

- Marxist

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Epistemic Constructs

Epistemic Constructs

- Valid Source(s) of Evidence
- Method of Research
- Stopping Measures

Epistemic Constructs

- Valid Source(s) of Evidence
  - Postulated
- Method of Research
  - Postulational Method (name, use)
- Stopping Measures
  - Postulated findings stand until proven unsatisfactory

Epistemic Constructs

- Valid Source(s) of Evidence
  - What I see
- Method of Research
  - A case or situation
- Stopping Measures
  - When I get tired

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Thank you

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