



Solving the Information Needs of Transdisciplinary through Classification?

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Transdisciplinary face:

- Difficulty finding relevant information
- Difficulty appreciating the meanings attached to concepts in relevant disciplines
- Difficulty in communicating results to all relevant audiences



The León Manifesto




<<http://www.iskoi.org/ilc/leon.ntm>>

argues that interdisciplinary research would benefit from a universal system of document classification that classed each work with respect to:

- the phenomena studied (and relations among these)
- the theory(ies) and theory types applied
- the method(s) applied.

This is What Scholars Need

- Scholars want to know whether a particular theory or method has been applied to a particular phenomenon or causal relationship before. 
- Or they may want to know which theories or methods have been applied.
- At present, we must search discipline by discipline for phenomena, and cannot search at all for theory or method applied.

Is it Possible?



- Extreme versions of relativism have invaded Information Science as elsewhere.
- Induction can be very useful in developing classifications. It is suggested classification is only possible within a community of shared understandings.
- A mixture of induction and deduction allows a universal classification.
- Such a classification also serves to clarify terminology.

Shameless Self-Promotion

- “Classification, Interdisciplinarity, and the Study of Science” *Journal of Documentation* 64:3, 319-32 (2008).
- *Classifying Science: Phenomena, Data, Theory, Method, Practice*. Dordrecht: Springer, 2004. 301 p.
- www.iskoi.org/ilc provides an overview of the ILC project, related publications, and the Leon Manifesto

Classifying With Respect to Phenomena

- Is the key to a non-discipline based classification
- Has proceeded farthest. See particularly the ILC project of ISKO Italy. Szostak (2003, 2004) developed a classification of the main phenomena studied in human science.



Classification with respect to Methods

- This is fairly straightforward as there are only about a dozen methods used by scholars, and these can be further disaggregated in terms of particular tools and techniques.
- The ILC now contains coding for the dozen broad methods.



Classification with respect to Theories

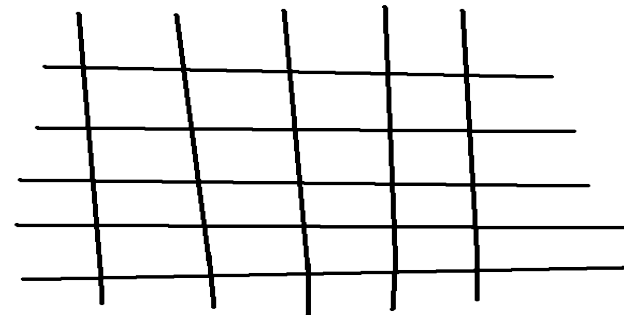
Is particularly challenging for two reasons:

- There is a huge number of theories, and new ones are invented daily
- Different theories are known by the same name, while similar theories are known by quite different names.



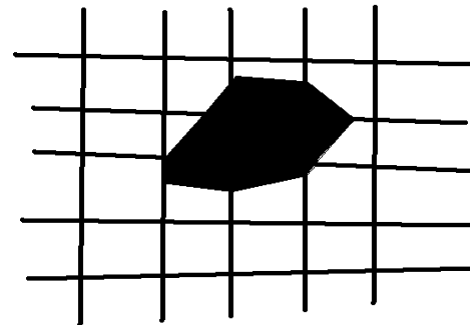
The Recommended Solution:

- Is to develop a classification of 'theory types' and link each theory to its theory types (theory facets).
- Szostak (2004) had developed a five dimensional classification of theory types grounded in the 5W questions. He had shown how several 'grand theories' fit within this classification.



One Challenge Here

- Is that the same theory often sprawls across multiple theory types (especially over time).
- The suggested solution is to identify a most common theory type for each theory, and code works that use a different type of that theory along one or more dimensions



*it's the second
time that happens!*

A Second Challenge



- Is that some theories provide no clear answer to one or two of the five questions.
- The suggested solution is to not classify these along all dimensions. Coding would be added for works that use the theory in a way that does specify an answer along non-classified dimensions

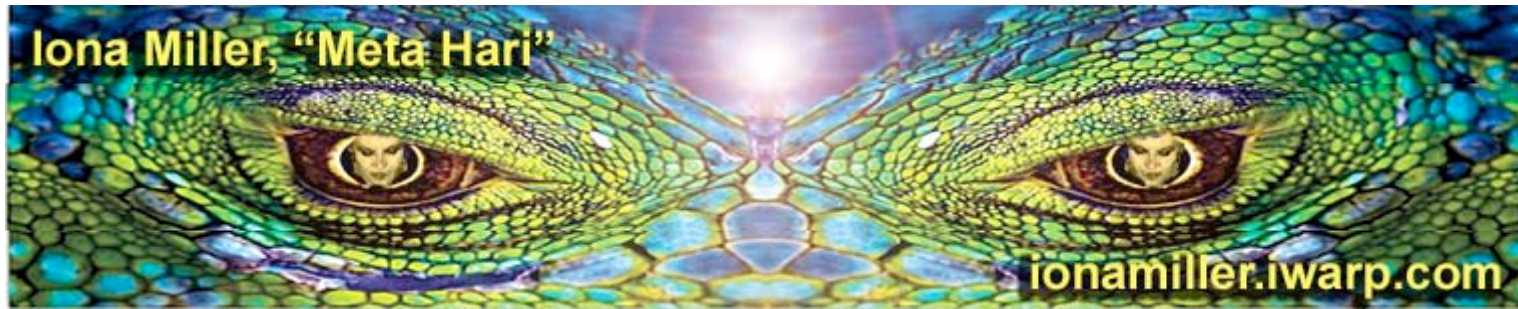
Szostak and Gnoli 2008

- “Classifying by phenomena, theories, and methods: examples with focused social science theories,” in *Culture and identity in knowledge organization*, proceedings of the 10th international ISKO conference, Montréal, 2008, Würzburg: Ergon, p. 205-211.
- Examines five recent (randomly selected) books that discuss a range of theories used in quite different fields of human science
- Shows that for each of these theories it is straightforward to identify the theory type(s) being applied
- Develops a unique ILC notation for each theory.

What Next?



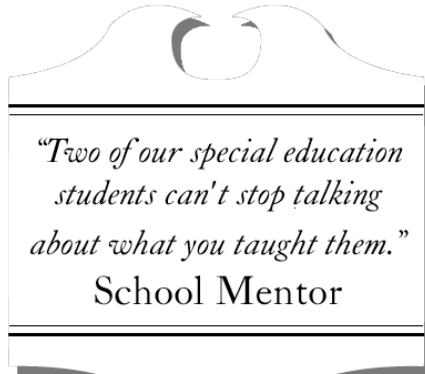
- To be used, a classification system must be developed in detail.
- A universal classification suited to the needs of transdisciplinary researchers is best developed in a transdisciplinary fashion.
- It must be grounded in relevant literatures in philosophy, information science, cognitive science, and elsewhere.
- Yet the deductive structure must be fleshed out inductively.....



Transdisciplinary can:

- Indicate what phenomena need to be included, and how these can be organized hierarchically.
- Indicate relevant relationships.
- Indicate relevant theories, theory types, methods, and techniques.
- Translate disciplinary terminology into basic concepts that can be understood by all.
- Identify any differences in ontological outlook, and how these might be addressed.

Concluding Remarks



*"Two of our special education
students can't stop talking
about what you taught them."*
School Mentor

- It is possible to develop a universal classification.
- It is desirable –especially but not exclusively for transdisciplinary scholarship – to develop such a classification.
- This is best done collaboratively.
- There is much work to be done. Join us.