

## Letters to the Editor

### Phylogenetic Classification Revisited

December 29, 2008

Sir,

In volume 35, n. 4, p. 255-259 of our journal, Birger Hjørland reviews Ereshefsky's *The poverty of the Linnean hierarchy*. Among other interesting comments, he compares Ereshefsky's "historical approach" with my notion of "phylogenetic classification" (*Knowledge organization* 33 (2006): 138–152), suggesting that "genetic" or "genealogical classification" would be better terms. These, indeed, are terms I also thought about. However, phylogenetic classification, as defined in my paper, means a balanced application of both genetic and morphological criteria, not just of genetic ones (which in biology would rather be called *cladistic*).

Also, I don't think to have "overlooked the fact that Ereshefsky (2000) discusses three major principles: logical division based on essential characteristics, cluster analysis based on similarity measurement and historical classification based on common ancestors." Indeed, in my view, both essential characteristics and cluster analysis fall into morphological criteria. Other authoritative sources, like Hull cited in my paper, support my distinction in two basic types of criteria, structural and historical.

I think that these differences in grouping classification criteria are related to my ontological approach: what I am primarily interested in are the characteristics of the phenomena to be classified, which include their forms and their origin. The methods by which we try to assess these characteristics, e.g. "logical" division or cluster analysis, are a later stage, lying in the epistemological dimension. By the way, I agree with Hjørland that literature on scientific classification is relevant to knowledge organization.

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Sir,

In this issue our prolific Italian colleague Claudio Gnoli [see the preceding letter—Ed.] commented on a book review I wrote (Hjørland, 2008), which included some comments on Gnoli (2006). I am glad that we seem to agree on the importance of considering the literature about scientific classification in our community of knowledge organization.

There seem, however, to be some "open ends." Should the classification of things such as biological organisms and musical instruments by origin be termed "phylogenetic classification" or should it be termed "genealogical classification"? In my opinion is the term "phylogenetic" almost always used about biological organisms, while "genealogical classification" is a broader term that should be used when such things as musical instruments are included. I will leave it to the reader to consider this issue further, including considering the arguments put forward by Gnoli (2006) and Hjørland (2008).

Another issues is that I do not find it fruitful theoretically to mix two kinds of classifications (by origin and by structure) under one label ("phylogenetic") as done by Gnoli because this confuses the investigation of whether the methods provide the same result - and if not - which one to prefer. Whether this is a good idea in practical classification is another matter.

The most important issue is our discussion of basic approaches to classification. Gnoli writes: "Other authoritative sources, like Hull cited in my paper, support my distinction in two basic types of criteria, structural and historical." Well, I believe it is more correct to say that Gnoli quoted Hull than to say that Gnoli developed this view independently and thus can claim the support of Hull. The interesting thing is, however, whether Hull and Gnoli are right in claiming that there are only these two basic criteria of classification? I think not. Just think of *the Tree of Porphyry* drawn by Peter of Spain (1329) in which things are classified in animate and non-animate and animate organisms in sensitive and insensitive, rational and irrational etc.: At least behavioral criteria is a third group which differ from both structural and historical criteria.

This provides me an opportunity to address an issue raised in Gnoli (2008, 139) in which the ontological and the epistemological approach to knowledge is

understood as two different approaches. I believe Gnoli here confuses two different things:

1. Discipline based classifications versus phenomena or entity based classifications
2. Questions about the relation between ontology and epistemology and the importance of different views for classification.

As I demonstrated in my book review of Ereshefsky (2000), different epistemologies are at play even when we classify entities like living organisms. It is thus not correct to say: "A completely different epistemological approach has been that of domain analysis, recently spreading in information science (Hjørland & Albrechtsen 1995), which starts KO work by studying how domain specific communities of scholars use terms to denotate concepts" (Gnoli 2008, 139). Whether we want to classify disciplines or phenomena/entities, we have to consider the interrelated epistemological problems of observing, logical division, interpretation and purpose.

I am glad we now seem to agree that when it comes to methods of classification must epistemological approaches like empiricism and rationalism be taken into account (although Gnoli say that this is a later part of the process). It should be considered, however, that epistemological approaches tend to determine what can be (or is) considered in the first place. If we can agree that empiricism, rationalism, historicism and pragmatism represents four funda-

mental approaches to classification, we can move on from that point of departure and make more substantial progress.

Basically both Gnoli and I have found it important to consider works in the classification of sciences (like Ereshefsky 2000) for the further development of our field. Let us continue trying to strengthen the connection between science studies and knowledge organization.

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## References

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