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Article

Some Reflections on the State of the Field of Knowledge Organization

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Abstract

The paper examines several aspects of the field of Knowledge Organization, particularly as they relate to the study of phenomenon-based classification. It argues for a better balance among theory, empirical research, and practice. It also calls for greater emphasis on explanation, integration, and the recognition of novelty. The paper stresses that the field should remain focused on improving access to information. Recent critiques of phenomenon-based classification by Hjørland are used to motivate and illustrate the arguments presented.

Keywords: phenomenon-based classification; theory; empirics; classification; interdisciplinarity

1. Introduction

Hjørland (2026, see also Hjørland, 2025b) has recently launched some serious but erroneous criticisms of phenomenon-based classification, and the Basic Concepts Classification in particular. Rather than focus here on the unproductive task of disagreeing yet again with Hjørland – we began disagreeing almost two decades ago (Hjørland, 2008; Szostak, 2008), and our debate has not progressed as it should (see below) – I will strive instead to raise some questions about the nature of Knowledge Organization as a field, and suggest some constructive ways forward. Hjørland's remarks serve to both motivate and clarify this analysis. As both Hjørland and I approach the twilight of our careers, it is perhaps a particularly apposite time for the field to reflect on its nature, and in particular how the debate around phenomenon-based classification might progress going forward.

I will briefly recap Hjørland's critique, and then discuss various issues that it raises.

2. Recap

Hjørland (2026), in his section on my Basic Concepts Classification, first disagrees with my "claim" that simpler concepts are necessarily more intelligible than complex concepts, providing a couple quotes from others in support of his disagreement. Sadly, I never made the claim he suggests, though I could have been clearer on this. I merely argued that simpler concepts could potentially be more widely intelligible, and provided multiple examples and a description of a classification with dozens of entries (Szostak, 2011). Basic concepts are defined not as those at a certain level of complexity but those that are broadly intelligible across disciplines and cultures.[1] I was making an argument that was not just theoretical but also empirical. We will speak much below about how to evaluate any classification or theoretical conjecture empirically.

Hjørland then proceeds to provide an example from my Basic Concepts Classification (BCC), involving a schedule of biological species, He devotes particular attention to how fish might be treated. We will have much to say about this example below (Hjørland, 2025b treats the BCC more briefly, but employs the same example).

He more briefly treats another isolated example, of how I deal with censorship. This also merits discussion below.

In between the two examples, he briefly engages with my discussion of precision. He wonders how much precision is enough. See below!

He closes with a discussion of my treatment of philosophical concept theory. I strove to develop a classification that was in accord with the handful of main theories. Hjørland argues that it is incoherent to do anything but ground my approach entirely in one of these, as he does. We will have much to say about this below as well.

We shall see that Hjørland's comments inform many useful discussions of the present and future state of Knowledge Organization.

3. Theory and Empirics

Scientific fields should pursue a balance between theory and empirical analysis. Empirical analysis both tests theoretical hypotheses and produces new stylized facts that can invite new theorizations. A field that leans too heavily into theorization can become disconnected from reality, pursuing theoretical clarifications that would not withstand close empirical scrutiny. A theory should only be widely accepted in a field after it has repeatedly been subjected to empirical analysis.

I have been saying for decades that the feasibility of phenomenon-based classification is an empirical question (e.g., Szostak, 2008; Szostak et al., 2016). Moreover, that empirical question is not about perfection but about being good enough – to guide users to the information they seek. I have devoted considerable effort to drafting such a classification (Szostak, 2013, 2020). Smiraglia and Szostak (2017, 2018, 2022) pursued extended empirical analyses in which the Basic Concepts Classification was compared to the Universal Decimal Classification across random sets of subject headings. We showed in each case that the Basic Concepts Classification could provide much greater precision in subject headings than existing enumerated classification systems without needing more extensive notation for call numbers.

In criticizing one schedule in the BCC, Hjørland (2026, 2025b) seems to appreciate the need for some sort of empirical analysis. Yet he avoids recognizing that there is now a body of empirical work investigating (and finding value in) both the Basic Concepts Classification and Integrative Levels Classification (summarized in Gnoli et al., 2024).[2]

There is a well-known joke among quantitative empiricists that "data is not the plural of anecdote". Though we can decry the implied critique of qualitative analysis, we can appreciate the important distinction between serious empirical analysis and cherry-picking particular examples. Examples, to be sure, have an important place in academic discourse. Humans are often better able to appreciate a telling example than a complex analysis. But we all know how dangerous atypical examples can be: We should not base public policy on one case of welfare fraud or abuse of asylum systems, but engage rather in detailed analysis of how common these are. Likewise, in academic discourse we should be careful to establish that an example is typical rather than an isolated case. (I hasten to add that this is a call for careful analysis, not just more examples).

Hjørland's main example also bears scrutiny. Hjørland (2026) asserts that all concepts are theory-laden. To buttress this (I believe misguided) assertion, he celebrates the fact that in the BCC's schedule of species I draw upon evolutionary theory. There are myriad problems with this line of argument:

- I clearly indicate at the top of my schedule of Flora and Fauna that this is the most difficult set of schedules, and very much a work in progress. I began my classification in the human sciences and have slowly expanded it into natural science. Hjørland has thus chosen an example from an atypical schedule, without noting its atypicality.
- Note that Hjørland provides no explanation or justification for why he chose this particular example from a classification with dozens of schedules, or why he thinks it legitimate to draw conclusions about the entire classification from this one example.
- My overarching argument in developing the Basic Concepts Classification is that we can aspire to have broadly shared understandings of the things that we observe and study in the world. The classification of species I propose is grounded more than anything in advances in genetic analysis which allow humans to distinguish species on the basis of genetic differences rather than differences in physical appearance or behavior. We are thus better able to "see" species boundaries because of superior technology.
- Biologists are generally in favour of classifying species in terms of genetic similarity. I am thus acting in accord with domain analysis as Hjørland would usually urge.
- Though individual species are identified genetically, the hierarchy of species is undoubtedly influenced by evolutionary theory. That does not at all prevent those who might disdain evolutionary theory from sharing an understanding of any species in the schedule. You can disagree theoretically about how elephants came to be and still have enough understanding of what an elephant is to be guided to information about elephants. [Hjørland does make some interesting points about how genetic and evolutionary classifications may disagree in practice. He could have seen that as an opportunity for constructive dialogue. See below.]
- Likewise, economists, chemists, and engineers can have a shared understanding of any species without needing to even think about evolutionary theory.
- One key danger of grounding a classification in a theory is that the theory may be overturned (see below). This is unlikely in the case of evolutionary theory. There are sub-theories within evolutionary theory that may rise and fall but even these may have little effect on the classification because it is grounded in genetic analysis.
- The theory-laden case is harder to make elsewhere in the classification. What is the single theory on which our understanding of rocks rests? Income distribution? (there are different theories about the causes and effects of different income distributions, and some empirical debates about how best to measure it, but a shared understanding of what it means). I could go on and on, but wish not to engage in a puerile battle of examples when what is called for is a detailed and even-handed empirical analysis. [Hjørland,

2025b does make the interesting point that "planets" may seem theory-neutral but astronomers nevertheless decided Pluto was not a planet. This is a good point – but if we attribute Pluto's change in status to theory we can reasonably ask whether it was difficult in practice for any classification to cope with this change, or whether a seeming change in theory allowed us to treat "planet" much as before with perhaps some scope notes about Pluto.]

Though I am wary of arguments from example in general, I think it noteworthy that there are numerous flaws with Hjørland's handpicked argument from example. More importantly, he neither engages with nor adds to the literature that empirically evaluates phenomenon-based classification.

4. Theory and Practice

Practitioners of Knowledge Organization (KO) devote far more attention to theorizing about classificatory practices than to developing classifications. This is problematic in multiple ways,[3] but we will focus on one of those here. It is then too easy for KO scholars to imagine that classificationists move without any difficulty from a set of principles to a final classification. Anyone who has ever actually classified anything knows that classification is a messy task: One is faced with many decisions and one struggles to adhere to one's guiding principles as well as possible. One should be transparent when doing so. Those of us who have actually built a classification would not be surprised to find that some other classification occasionally deviated from its guiding principles. This is simply an inevitable characteristic of the enterprise.[4]

With respect to the Basic Concepts Classification, I note there (Szostak, 2013) that a minority of the entries – such as ideologies – may fall short of deserving to be called "basic concepts" for different people might have quite different understandings of, say, liberalism (though we can seek to clarify these). I stress that this is true for only a minority of cases [a line of argument that should discourage anyone from using one example to critique the BCC]. I also note that we can still usefully guide users to works about liberalism – though both authors and users may interpret the word more differently than we might like.

The field would be better off if it achieved a better balance between theory and practice: We should not just theorize about desirable classificatory practices but see if these can actually be realized. I will argue below that we should be collectively putting more effort into developing superior classifications. I would urge our journal editors and conference organizers to encourage this effort. In the meantime, what about scholars in KO that have not developed a classification? In evaluating the classifications of others, some intellectual humility might be a useful guide. Classifications are necessarily imperfect but yet critically important.

Economists have a theory of "diminishing marginal product." If we hold the amount of land and capital fixed, then as we add more and more workers the amount that each additional worker adds to output will fall after some point (marginal product being the addition to output of the last worker added). A similar argument can be made about scholarly productivity. If we accept that the field of KO advances through the interplay of theory, empirics, and practice (much as economic output results from the interplay of land, labour, and capital), and we do little or no empirics or practice, then the marginal contribution of new pieces of theory will decline over time (perhaps unevenly to be sure, but the trend is clear, at least in theory). I would humbly suggest that we are at a point in the field – at least as regards the exploration of phenomenon-based classification – where the marginal product of theorization is low but the marginal product of empirical or practical work would be high.[5]

The argument in this section supports the argument in the previous section that we should expect serious empirical analysis of a new system of classification before dismissing it.

5. Explanation Versus Theory

One of my favourite books is Rule (1997). He makes a compelling argument that human science research should focus on explaining things rather than testing theories. One problem with the latter approach is that all of the work put into testing a particular theory is lost when the theory goes out of favour. His argument accords well with the approach of instrumental (problem-oriented) interdisciplinarity, which integrates across theories toward a more comprehensive understanding.

We of course do not want to turn our back on theory, for our explanations will usually be grounded in theories. Yet there is an important difference in emphasis: an explanation-driven approach focuses on understanding the world, and sees theory development as an important but subsidiary enterprise.[6] An explanation-based approach to KO would focus on questions such as "How best can we guide users to information?" A theory-driven approach instead worries about "Can we justify a theoretical proposition that people in one discipline do not understand people in another?" Hjørland makes some interesting points along the way in both Hjørland (2026, 2025b) but both are exercises in theory clarification. Though he attempts to draw implications for KO practice, these implications are subsidiary to his efforts at exploring theories. The reader may well wonder in each case whether the heavy machinery of theory explication produces much of value in terms of practical implications.

The difference is clearest in his examination in (Hjørland, 2026) of my treatment of philosophical concept theories. He claims that it is "incoherent" for me to try to jus-

tify my approach with respect to several competing philosophical theories rather than ground my approach explicitly in one. Within an "our purpose is to explore theories" approach to scholarship, his contention may make sense. Within a "we are trying to build a superior classification" approach to KO, it makes no sense. The simple fact is that philosophers disagree intensely about the nature of concepts. Hjørland is proud that his entire line of argument is explicitly grounded in just one of the handful of main competing concept theories. I think that it is dangerous to ground an approach to classification in only one philosophical theory. As Rule (1997) warns us, the research focused on one theory is soon forgotten if that theory goes out of fashion. We can imagine that the same fate may befall a classification that tied itself tightly to one theory among several. A classification that starts from a question of "What works best?" and seeks to accord with most or all philosophical concept theories is on much firmer ground.[7]

6. The Purpose of KO

I entered the field of knowledge organization because I sought to enhance humanity's collective access to information. I would argue that the primary purpose of KO is to organize human understandings so that users of various kinds can better access relevant understandings.[8] Though others might disagree, I would suggest that the field's long focus on the definition and identification of concepts serves this larger goal. That is, we organize knowledge primarily so that it can be used.[9] I would hope that most of us entered the field with that goal in mind. I would urge us to keep that goal firmly in mind as we grapple with the challenges of regularly publishing. Did we become KO scholars in order to engage in endless theoretical debates, or are these theoretical debates merely in support of an important endeavor to enhance human access to information?

We live in a world facing a host of complex problems. All of these could be alleviated if decision-makers of all types had better access to information. To be sure, some decision-makers will make bad decisions even if aware of the best possible information, but on average humans can be expected to improve their decision-making as they gain better access to information. If we accept this simple proposition, then it may well be that the field of Knowledge Organization, if it properly stresses the pursuit of improved access to information for all, is the most important academic enterprise of all. Among other things, we can enhance the productivity of other scholarly enterprises.[10] If, instead, we see our purpose as carefully elucidating theoretical objections to the very possibility of improved classification, then our potential contribution to the world is orders of magnitude less.

University administrators and granting agencies commonly urge interdisciplinarity these days. Unless these people are all misguided, the field of Knowledge Organization should be particularly interested in improving access to information from diverse disciplines. Two implications follow:

- Phenomenon-based classifications promise to facilitate interdisciplinarity. This claim should be carefully evaluated. If the claim is found to be justified, the project of phenomenon-based classification should be pursued.
- Extreme versions of domain analysis doubt that denizens of one discipline can comprehend the terminology of another. Such a claim should also be subjected to empirical analysis. How does interdisciplinary analysis proceed if this claim is true? I would suggest that the simple fact that there are thousands of successful interdisciplinary research or teaching programs in the world is powerful evidence that cross-disciplinary understanding is more easily achieved than extreme versions of domain analytic theory imply. (There are also many failures [Fam and O'Rourke, 2021], of course, but it would again be inappropriate to use such examples as "proof" that understanding is impossible.) We should be careful not to let an untested theoretical proposition guide us away from strategies that might advance our primary purpose.

While we should be guided by empirics (see above), we should not lose sight of our goal. We would not want to pursue an infeasible classification strategy, but nor should we reject an approach that might enhance our collective access to information unless we have overwhelming evidence that it is misguided.

Hjørland (2025b) argues that any classification serves some purposes better than others. I think the argument overstated (see below). Yet I can sidestep that debate here by merely noting that such a line of argument can support the pursuit of a classification that will support general and particularly interdisciplinary access to information of various sorts. Hjørland (2025b) would seem to imply that there is some classification that will be best suited to any purpose. Later in the paper, he comments briefly on interdisciplinarity. He is dismissive of the very idea that phenomenon-based classification will serve interdisciplinarity because even interdisciplinary scholars do not want to know what every discipline has to say about a particular phenomenon. Of course not. This is not something that advocates of phenomenon-based classification have ever claimed – or Hjørland would surely have cited us. What I have often claimed is that interdisciplinary scholars often/usually investigate how one or more phenomena studied in one discipline interact with one or more phenomena studied in another. To find relevant literature, they need recourse to a classification that:

- Identifies phenomena in a way that can be understood across disciplinary boundaries.
- Pursues a synthetic approach so that causal relationships among any set of phenomena can be captured in a subject heading: (X)(exerts influence N)(on Y).

• Ideally, would also indicate which theory types and methods were applied, since interdisciplinary scholars also often/usually draw upon multiple theories and methods.

Existing systems of library classification do none of these things well. Phenomenon-based classifications can potentially do all three better.[11] We could take the core argument of Hjørland (2025b), attach it to some serious understanding of what interdisciplinary scholars actually do,[12] and then – if we cared about empiricism or the real world – urge further empirical testing of the hypothesis that phenomenon-based classification is better suited to the purpose of supporting interdisciplinary scholarship.

7. Welcoming Novelty

An important strand of research in the field recognizes serious problems with existing classification schemes. Should we stop at criticizing? Or, appreciating how important KO is, should we attempt to move forward? This would involve proposing improvements to existing classification systems (as many do). Yet if the problems with these are severe, we should also explore the possibility of radically new approaches to classification.

How should we do so? I would suggest that we should:

• Recognize that this is challenging. The library classifications used most widely in the world have sizeable bureaucracies for a reason, and yet these classifications are still criticized in many ways. There is no place for a sort of "hit and run" scholarship that disdains a novel enterprise for one alleged flaw.

• Subject new classifications to careful and even-handed empirical analysis, keeping in mind that the standard by which they should be judged is somewhat less than perfection. (A better standard might be to ask whether a new approach to classification has *the potential to* outperform existing approaches to classification at particular tasks.)

• Recognize in particular that problems like ambiguity and subjectivity can be addressed but necessarily imperfectly. The overarching question should be whether users might usually be guided to the information they need (both information they seek, and related information that they may not have initially sought).

• Not reject a system because it transgresses an untested philosophical theory.

Before we can do any of these things, we must first appreciate novelty when we see it.[13]

As noted above, the Basic Concepts Classification pursues a synthetic approach. Appreciating that interdisciplinary research generally involves exploration of how phenomena in one discipline influence phenomena in others (This is also the case for research within disciplines, as it happens.), I devoted special attention to developing schedules of (mostly verb-like) relators. It is then possible to develop synthetic subject headings of the sort (Phenomenon X) (has effect N on) (Phenomenon Y). The systems of library classification in widespread use in the world focus primarily on nouns and adjectives. There has been limited exploration of how we might classify relators (Perreault, 1994, is the most prominent and recent example, but takes a quite different approach). I published two papers on how this might be done (Szostak, 2012a, 2012b). There and in the BCC itself, I suggested that we might aspire to a manageable schedule that nevertheless allowed careful disambiguation by further synthesis: of verbs with other verbs or with adverbs or sometimes things. The second example that Hjørland (2026) addresses in a couple of sentences, my treatment of censorship, is part of this initiative. Hjørland does not recognize the novelty of the approach, nor even provide context for his analysis in recognizing what I was trying to do or noting that my classification of relators is quite distinct from my classification of phenomena.

8. A "Can Do" Disposition

If we are a practical field, hoping to support the development of superior systems of classification, how should we deal with problems we encounter? Should we run in fear? Or should we explore possible ways of addressing the problem? We as a field should clearly take the latter course. We should not leap from the observation that there is ambiguity in the world to an assumption that we cannot alleviate this to the degree necessary to guide users to the information they seek.

What about individual authors? Since scholarship is a cumulative affair, we can applaud authors who identify problems without immediately pointing to solutions. Such authors should be wary, though, of assuming that the problem is insurmountable. Hjørland (2026) is correct that fish are a challenge because they span many different biological clades. Is the problem insurmountable? Can we imagine a classification that leans primarily on clades but provides some entry point for users seeking information about fish (where connections are made behind the scenes one way or another between "fish" and the various fish clades)? I can.

We can criticize existing library classification systems on many grounds. Yet we can still be glad that some brave pioneers did not give up at the first sign of trouble, but soldiered on in pursuit of a practical goal. We can and should criticize phenomenon-based classifications as appropriate, while appreciating that these are works in progress being pursued by people who neither ignore nor shrink from challenges.

I am reminded of Rosenau's (1992) plea for an affirmative postmodernism. Rosenau recognized that postmodernists made many good points about a variety of problems with scholarly practice – including, we might note, ambiguity and subjectivity. Yet she disagreed with those who moved on from such points to suggest that a progressive scholarly enterprise was impossible, and that we should all just argue for points of view we found congenial. We should likewise not leap from a recognition of scholarly limitations

to a conclusion that a superior form of classification is impossible, but should rather see to what extent we can address each concern.[14]

Nay-saying is fun, and surely has its place, but we have a job to do.

9. Seeking Synthesis

I came to the field of Knowledge Organization decades ago from the field of interdisciplinary studies. I was stunned to find that the daily successes of interdisciplinary scholars in overcoming cross-disciplinary communication barriers were assumed to be impossible by some advocates of domain analysis. As I settled into the task of arguing that we should not run in fear at the first sign of ambiguity or subjectivity, but rather seek to alleviate these challenges as much as possible, I hoped to engage in constructive, respectful discourse.

The literature in interdisciplinary studies talks about how interdisciplinary scholars should appreciate different perspectives, carefully evaluate different insights, and integrate toward a more comprehensive understanding. I try to take this sort of approach in my own research. I came to this field with a narrow goal of trying to facilitate interdisciplinary teaching and research. In engaging with domain analysis, I sought not to disparage this but see how the core idea of engaging with field experts could be harnessed to the project of a universal classification (especially Szostak et al., 2016). In engaging with facet analysis, I sought to show how the laudable goals of facet analysis could be achieved without burdening classificatory notation with facet indicators (e.g., Szostak, 2017b). Along the way, I came to appreciate that the sort of (phenomenon-based) classification that would support interdisciplinary research and teaching would also support other goals stressed by the KO community: reducing social bias in classification (Szostak, 2014a), facilitating a common approach to classification across galleries, libraries, archives, and museums (GLAM) (Szostak, 2017a), supporting interoperability in the Semantic Web (Szostak, 2014b), and leading to a renaissance in subject searching by making this more user-friendly (e.g., Szostak, 2024b). [And yes I would claim that these various publications are strong empirical evidence against Hjørland's (2025b) theoretical claim that classifications can only serve one purpose.]

Thellefsen (2025; see also Dewi et al., 2026), to his immense credit, takes a constructive approach to criticizing the present practice of phenomenon-based classification. He recognizes the potential value and feasibility of phenomenon-based classification, and suggests ways that the problems he identifies might be surmounted.[15] Though I think his problem statement is exaggerated (see Gnoli, 2026), I can imagine a productive interaction.[16] Hjørland (2026, 2025b) makes no such constructive gestures. He pursues a different sort of scholarship in which defeat rather than integration is the goal.

If I understand Hjørland's line of argument correctly, it is something like "I have identified flaws in the BCC. Therefore the project of phenomenon-based classification is unfeasible."[17] Beyond the woeful inadequacy of his "empirical" analysis, as noted elsewhere, it would seem that his line of argument rests on an unspoken assumption that deserves interrogation: "this guy Szostak is clever and will have developed the best possible universal classification in only a few years." If not, then some recognition that the problems celebrated by Hjørland might be transcended would seem to be called for (as Thellefsen does in his analysis). Though I suppose I might feel complemented by the hidden assumption, I happily recognize that the path to a phenomenon-based classification is best traversed by multiple people engaged in constructive discourse.

10. A Progressive Discourse

A scholarly field should be characterized by progress. We should be able to look at the literature over a period of decades and be able to identify new ideas, new evidence, and new understandings. If it seems that we are just talking about the same things, we have a non-progressive discourse.

I am struck by how little the discourse between Hjørland and myself has advanced since 2008.

Hjørland (2008) already (among other things) said:

- That particular classifications should be designed to serve particular purposes.
- That a classification to serve interdisciplinarity was pragmatically impossible.
- In particular, different disciplines, such as pharmacology and chemistry, may need different classifications of phenomena because they have different interests in those phenomena.
- That phenomena are theory dependent (using the Pluto example).

I had already in Szostak (2008) made several key points in response:

- That the fact that interdisciplinary analysis regularly succeeds should encourage skepticism that cross-disciplinary understanding is unattainable.
- That we should not judge the feasibility of a phenomenon-based classification designed to facilitate interdisciplinarity (among other things) on theoretical grounds alone.
- That it was an empirical question as to whether such a classification was feasible, and could successfully guide users to information.
- That phenomena could *usually* be identified independently of theory.
- That we can potentially capture the fact that different groups of people have different interests in a phenomenon through causal relationships (as when pharmacologists care about the effects of chemical compounds).
- That one important aspect of scholarly/interdisciplinary research is to compare across

theories, and this will be facilitated by a classification that allows different theoretical examinations of particular causal relationships to be captured.

In the concluding paragraph of Szostak (2008), I argued that Hjørland and I had clearly laid out competing theoretical visions that could only be adjudicated empirically. Unfortunately, Hjørland (2026) completely ignores this key point when disagreeing with me.

There have of course been some advances. Most obviously, I have developed the Basic Concepts Classification, and argued for its feasibility and desirability in multiple publications (see above). Hjørland has in turn moved on from arguing that such a classification was pragmatically impossible to – based on just a couple of examples – arguing that it was unsuccessful. He has developed some novel theoretical arguments that have tangential implications for the project of phenomenon-based classification. They do not materially change the theoretical disagreement that we had already articulated in 2008. His discussion of *two* examples from the BCC would seem to indicate some appreciation that theory alone cannot discredit the BCC, but neither in 2008 nor in 2025 does he address the critical point that a serious arms-length empirical evaluation is called for.[18] As noted above, he does not even recognize that a significant amount of empirical analysis has already occurred.

Hjørland might well argue in his defence that phenomenon-based classification was not his focus in Hjørland (2026) – though it clearly is in Hjørland (2025b). He might also view the discourse as more progressive than I do if, as I suspect, he does have quite different views of the importance of empirics, practice, and explanation relative to theorization.

11. Style of Argument

The most-cited authors in a field have a responsibility to epitomize the very best standards of argumentation in a field. So let me raise some questions:

Do we want to be a field that engages in serious and detailed empirical analysis of competing hypotheses, or one in which we take isolated shots at opposing points of view?

Do we want to be a field that seeks to integrate across opposing points of view, or one where we hold rigidly to certain preconceived notions?

12. Concluding Remarks

I thank Hjørland (2026, 2025b) for motivating this paper. The principles articulated above may seem self-evident but are easily transgressed in practice.

The next generation of KO scholars will hopefully achieve a better balance between theory and empirics, and theory and practice, lean more heavily into explanation over theorization, pursue integration, encourage novelty, and thus achieve a more progressive discourse aimed primarily at improving access to information. Given the promise of phenomenon-based classification, we should see continued efforts to develop, test, and apply such classifications.

Availability of Data and Materials

There are no datasets associated with this paper.

Author Contributions

As sole author, I confirm sole responsibility for the conception and design of the study, analysis and interpretation, drafting and revising the manuscript, and approval of the final version. The author has read and approved the final manuscript and agrees to be accountable for all aspects of the work.

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Conflicts of Interest

The author declares no conflicts of interest. Rick Szostak is serving as one of the Editorial Board Members of this journal. I declare that Rick Szostak had no involvement in the peer review of this article and has no access to information regarding its peer review. Full responsibility for the editorial process for this article was delegated to Natália Tognoli.

Endnotes

[1] In fairness to Hjørland, I should note that Gnoli (2026) also misunderstands the nature of Basic Concepts.

[2] There is certainly scope going forward for a wider range of empirical analyses by a wider range of authors.

[3] Notably, the extensive literature on domain analysis has induced limited applications (Gnoli, 2025). This should induce some caution in invoking principles of domain analysis in criticizing any classification system.

[4] A field that theorizes endlessly about classification but hardly ever classifies anything risks coming to resemble Hermann Hesse's (1943) Glass Bead Game more than a progressive scholarly enterprise.

[5] Smiraglia (2022, 2022) has documented the shifting balance among theoretical, empirical, and practical research in the field. He found some evidence of a recent shift toward empirical work (and also increased exploration of phenomenon-based classification).

[6] In a previous academic life, I applied his analysis to how economists study the Great Depression (Szostak, 2005).

[7] There seems also to be some dissonance between Hjørland's insistence here that I recognize one theory as best and his more relativistic stance elsewhere such as arguing for a multiplicity of classifications serving different purposes.

[8] I identify other important purposes in Szostak (2024a) that would also be supported by phenomenon-based classification. These include helping authors place their ideas in context, allowing students to appreciate the inter-related nature of the scholarly enterprise, and addressing issues of social justice.

[9] There is of course intrinsic value in understanding the nature of concepts and information, and much valuable work can be done that may have no immediate impact on information seeking. Yet I think we are a much more valuable enterprise if we pursue enhanced access to information.

[10] I have argued elsewhere that we can best do so by linking KO and information retrieval. See for example Golub and Szostak (2025).

[11] I have pursued such relationships in the BCC and various publications. I might make special note here of co-authored attempts to better appreciate the multi-faceted nature of works of music within the BCC: Lee and Szostak (2022) and Griscom et al. (2024).

[12] Barité et al. (2023) argue that an interdisciplinary sensibility should infuse KO education.

[13] It is a challenge in most academic fields to celebrate real novelty – but the challenge may be especially important in KO if we seek to develop novel classifications. Elman, Gerring, and Mahoney (2020) suggest that we first evaluate the importance and novelty of a work before assessing its quality. We should be willing to accept somewhat weaker evidence for a truly novel hypothesis than we require for a trivial hypothesis.

[14] Many scholars, including Mai (1999, 2013), have applied postmodern ideas to the field of knowledge organization. The question for the field is whether we will do so in an affirmative manner.

[15] "[Phenomenon-based classification] is increasingly important for supporting interdisciplinary research and enhancing semantic interoperability in digital environments…"(Dewi et al., 2026, 120). On the very next page they appreciate that the concerns they raise apply to all sorts of classification. On the following page, they explicitly connect their critique to that of Hjørland (2026). It appears, then, that their more constructive approach is not primarily because of the concerns they raise.

[16] Thellefsen (2025) echoes some of the arguments of Hjørland (2026). In particular he worries that theologians and chemists have a different understanding of "water." As I have said above, we can capture such differences with causal relations. We can understand water as a chemical compound, while simultaneously recognizing that it is employed in baptisms or treated in religious texts. Both chemists and theologians can find what they are looking for. Thellefsen's recourse to Peircean analysis, which appreciates the importance of relationships among phenomena, leads me to suspect that he may see promise in this line of argument. I am curious what he would make of my more central argument that we should move past examples of especially challenging cases to empirically establish how hard it is to achieve stable consensus around phenomena on average.

[17] This line of argument is especially puzzling given that Hjørland has in earlier publications criticized the Dewey Decimal Classification (DDC), Universal Decimal Classification (UDC), and Library of Congress Classification (LCC). Yet these flawed classifications guide many users to useful information. See for example Hjørland (2025a).

[18] There are a couple of noteworthy changes between Hjørland (2008) and Hjørland (2026). In 2008 he posited that it might be worthwhile to have both discipline-based and phenomenon-based classifications. Developments in the scholarship of phenomenon-based classification since (see Gnoli et al., 2024) appear to have discouraged him. Perhaps, he has become more critical of phenomenon-based classification as this gains traction. In 2008 he argued that I had contributed nothing new to the discussion. I guess I have since clarified his reasons for skepticism. (He did conclude, though, in 2008 by welcoming my contribution and averring that scholarship advances through discussion.)

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