

Semantic Warrant: A Pivotal Concept for Our Field

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ABSTRACT: Through its focus on the semantic, rather than the syntactic axis of bibliographic classification systems, Beghtol's 1986 article on four perspectives of warrant provides us with a set of conceptual tools that can be used to understand, analyze, evaluate and design any knowledge-representation system. In this way warrant, as a concept, joins the ranks of relevance as a pivotal notion, offering a lens for contextualizing the meanings and uses to which ever-evolving classifications are put. With reference to examples, this paper concludes by invoking Beghtol's warrant as a means for systematically evaluating how legacy and emerging classification systems measure up to their mandates.

1.0 Introduction

One day during my doctoral studies at Rutgers University, while working in Nicholas Belkin's office as his research assistant, I came across two copies of Clare Beghtol's 1986 article "Semantic Validity: Concepts of Warrant in Bibliographic Classification Systems." In the margin Nick had written "Very good!" Yes, it was underlined and yes, it had an exclamation point. I was honored to receive one of those two copies. At about the same time, James Anderson, my advisor, pointed our seminar class to the article and said, "Read it. Just *read it*."

This article made immediate sense, but I was trying to absorb it before acquiring a deeper understanding of the complexity of classification and classifications. I have since used it in course reading lists as an excellent summary of the concept of warrant, but truth be told, I've just glanced at it from semester to semester to refresh my memory, each time appreciating the elegant rhetorical arc and the care with which each assertion is supported with research, but not delving any deeper.

Thus, in preparing this paper to honor Clare Beghtol's contributions it wasn't difficult to choose the aspect of her work to cover, but writing about it has been an unexpectedly satisfying adventure. I re-read Beghtol's article, now, not as a new doctoral student, but from the perspective of twenty-five years of immersion in the subject. This time, every few sentences stimulated new thoughts—the margins of my copy filled with ideas to put aside and think about some more. It reminded me of the heady feeling that reading something good in graduate school induced, but better. I have tried to capture and articulate these thoughts in an effort to understand just why this is such a powerful and enduring piece of work, and what earned it high praise from my mentors.

2.0 Summary of the article

In "Semantic Validity: Concepts of Warrant in Bibliographic Classification Systems," Beghtol (1986) explores the semantic, rather than the syntactic axis of bibliographic classification systems. According to her,

the attention of scholars on faceted schemes and classificatory structures had heretofore pulled our attention to the syntactic aspects (e.g., concept division and citation order), with semantics being considered more or less a question of the terms and their relationships and somewhat taken for granted, or at least construed as a unitary aspect. In this article she attempts “to trace a different thread” (p. 110), namely the semantic axis that comprises (121-22):

Those elements of theory and practice by means of which a classificationist tries to guarantee that a classification system will provide a meaningful and useful organization for the contents of documents A semantic warrant inevitably governs syntactic techniques and devices, just as in natural language the intended meaning of a sentence must be understood before an appropriate syntax can be chosen.

In other words, her attention is on the choice of the classes and their meaning, as well as their connection to the world, and not so much on their syntactic relationship.

This notion is developed by providing an historical and conceptual overview of the various kinds of warrant discernible in working with bibliographic systems. In Beghtol's definition, warrant concerns more than just the selection of terms, but rather the mapping of a classification system to the context and uses to which it will be put (110-11):

The warrant of a classification system can be thought of as the authority a classificationist invokes first to justify and subsequently to verify decisions about what classes/concepts should appear in the schedules, what units classes/concepts are divided into, how far subdivision should proceed, how much and where synthesis is available, whether citation orders are static or variable and similar question. Warrant covers conscious or unconscious assumptions and decisions about what kinds and what units of analysis are appropriate to embody....The semantic warrant of a system thus provides the principal authorization for supposing that some class or concept or notational device will be helpful and meaningful to classifiers and ultimately to the users of documents.

Beghtol identifies four perspectives on warrant. I purposely use the term perspectives rather than

kinds, since this is not a mutually exclusive list and, indeed, the different aspects of warrant can often be interpreted as mapping onto each other. They are:

- Literary warrant—the history of this concept carries with it some ambiguities, as Beghtol points out but, loosely taken, we can say that a classification built using literary warrant is based on the collection, that is, the “literature” in the sense of a body of works (pp. 111-14).
- Scientific/Philosophical warrant—a classification following scientific/philosophical warrant is consistent with scientific and educational consensus and relies on the authority of scholarship and research (pp.114-16).
- Educational warrant—a classification following education warrant is responsive to the pedagogical needs or the specialized needs of an institution (pp.116-19).
- Cultural warrant—an “umbrella concept” referring to the assertion that any classification is the product of the culture that produced it. “Changes in the conceptions and uses of literary warrant, scientific/philosophical warrant, and educational warrant can all, then, be viewed as detailed case studies of the more general concept of cultural warrant” (pp.119-21).

3.0 Warrant as a core concept

What I take away from Beghtol's argument is that warrant is not a feature of a classification as, say, the classes are, but rather it acts as a lens through which we can assess the extent to which a classification has meaning and utility for the purposes it was created. In fact, an articulation of warrant can be thought of as a conceptual framework for assessing any knowledge-representation system. In this way warrant, as a concept, joins the ranks of relevance as a pivotal notion, open for many interpretations and applications but rich in its ability to capture essential qualities.

What makes warrant even more appealing than relevance, in my opinion, is that it offers points of comparison and definition. If we say, for instance, that we are basing our classification on “scientific consensus,” and we have some notion of what that consensus is, then by such identification all assertions, criticisms and classificatory decisions can be made with reference to the system's warrant. Now, the warrant might reveal injustice or wrongheadedness. As well, all of this

is predicated on the fact that we are even aware of the basis of our warrant, and that all parties are in agreement, and that the warrant makes sense both on the level of the designer and the user, and that it hasn't changed over time. These are very big caveats, but it would be interesting to start our discourse about classifications from a systematic assessment of warrant, rather than from fragmented and anecdotal descriptive narratives of the classification itself, isolated from any link to the collection and the users it is meant to serve. By bringing attention to warrant and explicating it so clearly, Beghtol has provided us with a set of conceptual tools that can be used to understand, analyze, evaluate and design classifications.

4.0 What can an understanding of warrant reveal?

One of the exercises in my classes is to compare the treatment of a given subject in several classifications. This turns out to be instructive on many levels, if only to demonstrate to students that our systems are hardly perfect, and that each one is imperfect in its own endearing way. One recurring situation, however, is that of a work having a subject that was once considered exotic or unusual. It might then have been classed together with some other equally unusual topics more or less loosely affiliated, almost as if the cataloger had not known where to put it, or there had been insufficient warrant to develop a class for it. Now, let's say, the topic is popular again, or has seen a breakthrough in research, or has "come around again," and literary or scientific warrant suddenly demands a clear and specific class for it. Newer works on this topic get assigned a class that makes sense, but the occasional older work is orphaned somewhere in the "miscellaneous" home it got years ago. "What were they thinking?" says the student, who only knows the subject in light of its current meaning.

The point of this example is not that new topics emerge, but that systems based on a particular warrant can't always predict which branch of a subject tree will grow or sprout up in a new place, or how we will construe a given subject in the future—in short, how the warrant will shift. Beghtol points out that classificationists, such as Dewey, Bliss, and Ranganathan, believed that a relatively permanent classification could be built (p. 120). Our society's faith in the stability of scientific knowledge, for instance, often gives us confidence that a classification using this knowledge as warrant will endure. Given the difficulties and expense of making adjustments and changes using traditional practices, it's easy to understand

why this would have been a desirable goal, but it was not just a practical matter. The notions of meaning being fixed has guided the design of many of our systems because it was assumed that meaning became more stable and consensus firmer as the evidence mounted and the idea withstood the test of time.

Yet modern approaches assume that meaning is not fixed and is created in use. Contemporary linguistic theories understand semantics in this way and take for granted the phenomenon of multiple senses of a word even within the same discourse community. How can we reconcile two fundamental approaches that seem irreconcilable? On the one hand we can have warrant-based classifications that aim for a strong mapping to the meanings and uses to which they will be put, or we have classifications that are constantly shifting and therefore difficult to nail to the wall, or more accurately, arrange on the shelves. Beghtol addresses this in her discussion by pointing out that we are no longer physically or conceptually bound to books as the equivalents of "subject units." Put another way, the subject class in traditional bibliographic schemes was more or less equivalent to a particular package—namely, the book (p.112). We now understand that subjects can manifest themselves in a variety of media and genres. Once freed of literal shelf order, it's possible to imagine a classification that can shift into a variety of views (p.121) based on whatever warrant seems the most valid and valuable. In this way, the dilemma of permanent and stable versus temporary and customized classifications can be resolved by adjusting the view rather than the underlying structure.

Moreover, a classification doesn't have to be valid under all circumstances or useful for all people, and it doesn't have to last forever. Beghtol suggests that a "biased" culturally warranted system or one that is mission based, can be valid for representing its collection and useful to its constituents (p.121). At the same time, I think it would be unwise to reject all consideration of stability and enduring warrant. After all, we use classification not only to find things, but also to communicate about them. As knowledge and collections change and grow, it's a good thing to have a point of reference, a historical perspective as it were. It may be an odd affinity and perhaps a factor of having now lived through several historical cycles, but I enjoy reading authority records for famous people and places, as well as for subjects. The authority record succinctly provides a view of the various names and the dates of changes. Similarly a classification system that could show the tracks of change over time would

provide needed context. Warrant is one way to capture that context because it represents the relationship of the classification to the world. Thus, we could see not only that the class “firemen” changed to “firefighters” but also the warrant for why this change came about.

It’s also interesting to consider contemporary phenomena such as wikipedia.org, where the classification and the content are built cooperatively. That is, in principle, both the text and the classification that organizes the texts in these emergent systems are not managed from the top. Nobody questions the fact that such systems must be flexible and dynamic, and yet nobody wants an amorphous mess either. It would be fascinating to use warrant as a framework to analyze the organizational logic of such systems. Do they in fact exhibit some implicit warrant? Do the contributors align themselves with this warrant, compromising individual perspectives for the purpose of getting things found and read? Are there conflicting warrants? Are they really democratic, or does a guiding hand emerge quietly for the purpose of maintaining order and stability? If so, whose hand is this?

5.0 Warrant and evaluation

Beghtol does not specifically link warrant with evaluation and analysis, but it seems an obvious extension of her thesis. Like DNA or carbon dating, warrant can serve as a tool for systematically evaluating how the classification measures up to its mandate. Some examples now follow.

The Library of Congress *Classification* was in part devised following literary warrant to organize the collections of the U.S. Congress, and in part following the scientific/philosophical warrant of turn-of-the 20th Century knowledge and sensibilities. Now it serves a worldwide population. What is the warrant now? How should the LCC be evaluated? Has the warrant become so confused that we no longer have a firm articulation of it?

Putting the concept of warrant to work in my classes, I teach my students how to analyze and evaluate a classification—any classification. Besides the basics of structure and so on, they must ask: Why are these concepts here? Who says this is the way to divide them? Who thought this classification up and under what circumstances? What is the conceptual framework or theory that determines the choice of concepts, the rules of division and the relationships? What are the assumptions both hidden and explicit? Is this classification extensible? That is, given that this classification was devised to serve X, does it do a

good job of now serving Y? In answering these questions, it’s amazing what emerges. Students realize that in fact there are many examples of mixed warrant, misunderstood warrant, misapplied warrant, and changing warrant.

We can also use warrant to explore the intersection of classificatory decisions and human endeavor. What are the consequences of relying on one kind of warrant over another as it plays out in practice? This does not necessarily refer to dire consequences, such as life, death and happiness, but can also apply to mundane situations. Should a bookstore follow scientific or cultural warrant, for instance? Do we judge a website’s classification decisions using the same yardstick as those for the Library of Congress? There are very few concrete tools for evaluating classifications and yet they are needed as more and more classification is done by amateurs or people without classification training. The thoughtful use of the concepts of warrant as outlined by Beghtol could provide a robust framework for developing such a toolkit.

6.0 Warrant in practice

Thus far I’ve described how Beghtol suggests that warrant can be used as a lens to understand classifications and to evaluate them with respect to how they connect to the world. Her article was written in 1986, and the notion of everyone being able to be a classification designer was not on the horizon, although she was already suggesting that big changes were afoot. Now we know that every web designer invokes some form of classification, and consciously or unconsciously, coherently or incoherently, invokes some authority for the decisions.

This raises some interesting questions for the future. In traditional systems, who decided on the warrant? Often it was the original designer, such as Dewey or Bliss. Their systems were then maintained by committees or “the profession.” In the case of institutional systems such as the Library of Congress *Classification*, each of the schedules had its own philosophy of warrant. In any event, the warrant derived from the collection, from consensual science, and from practitioners. Users learned and adjusted to the system; the system in turn influenced their frame of reference so that the adjustment could continue in a fruitful manner. Now, the sources of authority are no longer clear, and we can usefully ask whose warrant should be privileged – the designer’s or the user’s? On the other hand can we design for every eventualty and every use and user? In other words, are there

limits to the extent to which warrant can be accommodated?

Even so, and despite these quandaries, it's clear that being mindful of warrant can be helpful in many situations. For example, a clear sense of warrant can help shape all parts of the process of creating new classifications, because it focuses the decisions and provides guidelines for choices, such as the interface with controlled vocabularies, for instance. Applying warrant to system design, I can imagine interfaces to classifications being developed with explicit consideration of educational or cultural warrant. Warrant can be used to teach students (as well as adults) how to critically evaluate the tools at their disposal. As Beghtol describes, we can use classification to study history, using the explicit analysis of the classification's warrant as evidence of movement and change (p.120).

7.0 Conclusion

In summary, Beghtol's article, "Semantic Validity," introduces a seemingly simple construct and traces it historically to show how it has developed over the last century. A closer reading reveals a useful framework for the study, evaluation, and even development of classifications. It is always a delight to be in Clare Beghtol's presence at conferences and workshops. Her contributions are thought-provoking and carefully

crafted, but at the same time not self-aggrandizing, and uniformly generous in supporting others. She makes you appreciate how much fun and how rewarding a life of the mind can be. It was, therefore, revelatory to realize that her writing can achieve the same cozy sense of having an intellectual conversation with her. Like much of her work, her 1986 article doesn't merely explicate a scholarly position; it draws you in, making it possible to bring to bear your own ideas. In this way, Beghtol's writing is expansive and welcoming. It provides a foundation, a strong conceptual structure, and you can rely on its ability to stimulate further thought. I marvel, too, that this was an early work that she wrote while still a doctoral student.

It's no wonder, then, that my professors valued the article so much, and that I have appreciated it many times over as well. I have no doubt that if I read it yet another dozen times I'll still find reason to comment "Very good!!!"

References

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