Classifying the Humanities
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Classification in the humanities faces a host of unique challenges which existing classification systems struggle to meet. The purpose of this paper is to explore whether a new approach to classification is able to better address these challenges. The humanities are defined here as the study of works of art (including literature)—art itself will be defined below. One challenge for the classificationist is that it is necessary both to classify works of scholarship and the works of art themselves.

This paper might have been organized in terms of these challenges. Some of these are briefly surveyed in the next section to provide some context for this paper. But since many challenges will have the same solution it is best to organize the paper around solutions. The third section of the paper briefly outlines the nature of the approach to classification pursued here (which has been developed in many other works). Succeeding sections of the paper then address how the key elements of this approach can be applied to the humanities. In each section it will be shown how particular challenges are thus addressed.

Universal classification schemes are often developed with the social and/or natural sciences primarily in mind, and then stretched to fit the special needs of the humanities. This is the case here as well, but the inherent flexibility of the new approach will allow much better treatment of the humanities. Nevertheless important adjustments are called for within some sections in order to better address the needs of the humanities. The result is a classification which should significantly enhance both humanities scholarship and the ability of the general public to satisfy their curiosity about works of art.

General comments

Örom (2003) speaks of “the ‘bricolages’ of today’s classification schemes. The classifications most in use today were developed over a century ago, and have developed slowly over the succeeding decades. The result in the humanities is that the classifications thus include elements of many schools of thought regarding the arts over the last centuries, but do not represent any one coherent view. The challenge, then, is to take a new approach that encompasses these many ways of looking at art.

Medaille (2010) notes that theatre artists find navigating large research libraries troublesome. Yet they list ‘seeking inspiration’ to be one of their six main goals. If artists would turn to the literature for inspiration, but find it daunting to do so, then society suffers. And if they find libraries daunting, it must seem that it is not easy for them to find what they need. Inspiration will often come in art in the same way that innovation occurs in science: by juxtaposing previously separate ideas. In art as in science, then, we need a classification system that alerts users to items that might be related to their core area of interest.

But this takes us to the vexed issue of the nature of art: along what dimensions should works of art be classified? Winget (2009) captures the essence of the problem:

“The traditional conception of “subject access” posits that the artifact creator encodes a stable and transparent meaning into an object, and the user (or reader, or cataloger) then decodes the meaning while interacting with the artifact … the cataloger then translates that decoded meaning into easily understandable subject headings, with which other users interact, for the purpose, presumably, of finding artifacts that meet their needs. This … overlooks the fact that while many artifacts, like scientific texts, strive for transparency and stable interpretation; there are other types of artifacts, like poetry and fiction, for which numerous interpretations are both valid and supported by the creator’s intention. Representing all works using the scientific model ignores some of the most powerful characteristics of those works whose meaning is not fixed or obvious; and in terms of library systems, access then runs the risk of being limited by this representation.”

Simply put, the “subject” of a work of art is harder to establish than is the subject of other works. And as Winget proceeds to explain, the subject is multi-dimensional. Following Panofsky, she sees three levels. One level simply describes the main elements (woman on horse). Another gives specifics (name of woman). The third records cultural significance (e.g. Christian parable). Information scientists have
generally thought the third in particular too difficult. But as we shall see existing classification systems do a poor job of representing the first two levels as well.

Works of art may capture static elements (as in woman on horse) and/or they may tell a story. They may represent philosophical or cultural ideas.

Baca et al. (2006, 207) defines the subject element as “an identification, description, or interpretation of what is depicted in and by a work or image . . . ” They go on to say:

“Subjects include things, places, activities, abstract shapes, decorations, stories, and events from literature, mythology, religion, or history. Philosophical, theoretical, symbolic, and allegorical themes and concepts may be subjects. Subjects of representational (figurative) works may be narrative, meaning that they tell a story or represent an episode in a story. They may also be non-narrative, representing persons, animals, plants, buildings, or objects depicted in portraits, still-lifes, landscapes, genre scenes, architectural drawings, allegories, and so on. Nonrepresentational works also have subject matter, which may include a reference to abstract content, decoration, function, or implied themes or attributes.”

Baca et al (2006) notably suggest that this asks too much of a classification system. But we should see whether a new approach to classification can encompass all of these elements.

And so far we have dealt only with what a work is about. For works of art, form or style is also important. A work may express a certain artistic style. It may be purely aesthetic in intent or may have practical uses. It may employ particular materials or techniques.

And last but not least we may be interested in not just a work’s creator – and many works may have multiple creators – but who has owned a work, where it has been exhibited/performed, the time and place it was created and so on.

Existing classification schemes cope poorly with these challenges. Dozens of classifications are used in music libraries, suggesting that classification is difficult and existing schemes do it poorly (Lee 2011). The Art and Architecture Thesaurus was developed in large part to compensate for the manifest limitations of existing approaches to classifying art.

As for humanities scholarship, this has inevitably struggled to cope with the multidimensionality of works of art. It is limited by the inability of existing classification systems to cope well with most (some would say any) of these dimensions. A further challenge for both scholar and classificationist/classifier is that humanities scholarship is characterized by a multitude of theories and concepts, both of which change through time.

A New Approach to Classification
The essence of the approach to classification pursued in this paper involves:

- Breaking complex concepts – which lend themselves to differing interpretations across disciplines and groups – into basic concepts that carry broadly similar meanings across individuals and groups.
- These basic concepts generally refer to ‘things’ in the world or relationships among things (see Szostak 2011)
- Works and ideas are then classified in terms of free combinations of any set of basic concepts
- Most works and ideas will be classified in terms of a combination of things and relationships.
- A set of adjectival/adverbial qualifiers is also developed: these can be freely combined with things and relationships.
- Works will also be classified in terms of theories, methods, or perspectives applied in the work.
- Fairly small schedules thus allow very detailed and precise classifications of works or ideas (see Szostak 2012a, b)
Szostak (2011) argued that ambiguity could be substantially reduced by breaking complex concepts – which are understood differently across disciplines or groups – into their constituent basic concepts which are understood in a broadly similar fashion across groups and disciplines. Conceptual atomism suggests that shared understanding will be most likely for things and relationships that we regularly perceive. I thus argued in favor of a classification of works in terms of combinations of such things and relationships.4

The vast majority of scholarly works address how one or more things affect in a particular way one or more other things. It will be argued below that this is true not only of humanities scholarship but often of the works they study: (woman)(riding)(horse) or (gods)(celebrating).

This approach is best facilitated by allowing ‘things’ (women, horses, gods) and ‘relationships’ (riding) to be freely combined in both classification and search. This spares the classificationist from having to enumerate a vast array of combinations, and the user from having to ascertain how a particular combination was treated. The broad outlines of such a classification can be found in Szostak (2012a); the classification of things is treated in Szostak (2011), and of relationships in Szostak (2012d).

Szostak (2013) noted that this classification instantiates a ‘web of relationships’ approach, which allows users to readily follow their curiosity from one work to another. They can easily identify works that relate a subject they have just read about to any other. They can also readily identify works that have studied the same relationship in a different context, or applied a particular theory or method in a different context.

Phenomena:

We will first need to define art itself. Szostak (2003) defined art as that which appealed to our aesthetic sensibility. At least at this point in human understanding we do not understand humanity’s aesthetic sense well enough to determine whether a particular artifact is “art.” We must thus, along the lines of literary warrant, accept as art anything that anyone claims to be art.

Many artifacts – notably pottery and textiles – are intended to be both useful and aesthetically pleasing. Indeed most of the artifacts created by humans embody some aesthetic elements. Our buildings, bridges, shoes, cutlery, furniture (the list goes on) could all be made much more cheaply if we focused only on their function and not their appearance. Works that address the practical side of such artifacts are usually given quite different subject headings, and shelved in quite different parts of the library, from works that treat their aesthetic side. One of the values of a ‘web of relations’ approach is that it should be much easier for users to move between studies of aesthetics and of practicality. And this in turn could encourage ever-better integration of ‘beauty’ and practicality in our lives.

But should ‘china’ or ‘fashion clothing’ themselves be classified as works of art or as items of utility? General practice tends toward the latter, except when a work stresses their aesthetic elements. This is perhaps unfair: a set of china that is put on display in a china cabinet year-round, and only pulled out once a year for a special family dinner, is likely mis-classified as an item that is primarily useful. But we hardly want either classificationists or classifiers to have to decide where particular artifacts (or works about these) fall on a continuum of art to practicality. But if we will follow common practice and (privilege utility over art by) classifying most artifacts as useful artifacts, then it becomes particularly important to be able to readily identify aesthetic treatments of such artifacts.

In other words, we have here a diverse set of artifacts (and many works about these) that do not fit neatly into just one hierarchy. And the hierarchies of works of art tend to be quite distant in most libraries from the hierarchies of utility. Such artifacts are inevitably treated poorly in “universal” classifications that are organized around disciplinary silos, and treat engineering and economic outcomes in a quite different fashion from works of art. These artifacts reflect an intersection of utility and aesthetics that can only be captured appropriately by a classification that stresses relationships.

Having raised the issue of hierarchy, we can now address how we will classify different types of art. Szostak (2013) argued that much (maybe all) of the debate regarding how best to identify subclasses dissolves if we appreciate the difference between things and relationships. For example it is often suggested that pharmacologists would want a quite different classification of chemicals from what
chemists want. But in fact what pharmacologists are interested in causal relationships such as (chemical)(reduce)(blood pressure) and their concerns are thus not just adequately but best addressed through a classification that stresses free combinations of things and relationships. Some would classify art by purpose. But “art as propaganda” is a causal relationship, as indeed is “art enhances understanding” or “art evokes a better world.” Some would classify art by audience, distinguishing fine from popular art. This distinction has long vexed information scientists, for the boundary is unclear and shifting. Much better to treat art as anything thought to be art, and then distinguish works describing that art in terms of what they see as audience or purpose of a work utilizing causal relationships. In particular, masterpieces are works of art thought to be particularly aesthetic. Some would classify art primarily in terms of time and place it was developed. Such distinctions are readily captured by allowing free combination with classifications of time and place. Finally, some would emphasize differences in materials, but again these are best seen as relationships: (art)(made from)(wood).

Some would distinguish art in terms of artistic styles. We will make the novel argument below that styles can be treated in a very similar manner to scientific theories. We are left, then, with the classification of art in terms of “type,” the standard avenue of developing subclasses (occasionally replaced by “parts of”) in the Basic Concepts Classification (Szostak 2012a). In the case of art, “type of” primarily captures what is often termed “medium”:

<table>
<thead>
<tr>
<th>Non-reproducible</th>
<th>Reproducible</th>
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</thead>
<tbody>
<tr>
<td>1. Painting</td>
<td>1. Prose</td>
</tr>
<tr>
<td>2. Sculpture</td>
<td>2. Poetry (rhyming or not)</td>
</tr>
<tr>
<td>3. Collage</td>
<td>3. Theater</td>
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<tr>
<td>4. Cartoon</td>
<td>4. Film</td>
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<td>5. Graphic art</td>
<td>5. Photography</td>
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<tr>
<td></td>
<td>6. Music</td>
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<td></td>
<td>7. Dance</td>
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The reproducible versus non-reproducible distinction is stressed here because it has a host of implications for how art is produced and appreciated. Though it is a logical distinction, it is one that reflects the importance of particular relationships: it was thus discovered inductively rather than deductively.

Several of these subclasses merit further subdivision. At this lower level we also seek subclasses in terms of medium. In the case of music, this would involve distinguishing singing from a variety of musical instruments. We would want a notation that allowed easy recognition of when two or three different types of music were combined (and also some notational shortcuts for indicating common combinations of many instruments such as orchestras). And we would want our subclasses to be free of cultural bias: instruments common in non-western music should not be disadvantaged. Poetry can be distinguished by rhyming scheme and rhythm (and again we want cultural fairness such that haiku is treated similarly to sonnet). Painting can be distinguished by: oil versus water, canvas versus fresco. Film likewise can be subdivided in several ways: silent, black and white, 3D, large screen, made-for-television, 360 degrees. In all cases we want flexibility to allow new mediums to be recognized.

This classification does serve to distinguish art in terms of human senses: auditory, verbal, visual, mixed. It is not explicitly organized in terms of these. In part this is to not ground the classification unnecessarily in an approach where there is scope for dispute: some have claimed that sculpture is really an art of touch. Arguments about how various senses are applied in both production and appreciation of art are best captured through causal relationships.

The classification is flexible such that new subclasses can be added. It is fairly standard, except for incorporating literature within art (where it logically belongs). Architecture was included in previous versions of the BCC but is, admittedly, a misfit. The argument above would suggest that we treat buildings primarily as items of utility, and capture their aesthetic elements through causal linkages:
Architecture is thus (aesthetics)(applied to)(buildings). And if we were to include architecture then we risk the slippery slope of demands to include pottery and other artifacts that mix utility and art.

It is also necessary to classify works of art by artist. Indeed most art scholarship focuses on individual artists (Ørom 2003). This is probably done best separately from the classification above, since artists often produce more than one type of art, and it is then annoying to have to search for them multiple times (Ørom 2003). But each artist should then be connected to the type(s) of art they produce.

Causal links in Humanities Scholarship:

As I have argued in many places (Szostak 2011, 2012d), most scholarly works, and likely most general works, investigate some causal link(s): how one or more of the things in the world affects one or more others. This is true of humanities scholarship as well. Existing classification systems unnecessarily privilege some causal links over others. There is thus tremendous value in moving toward a system that allows works to be freely classified in terms of any causal relationship.

It is fairly straightforward to imagine causal influences between art and every other category of human science scholarship:

- The non-human environment provides both raw materials and inspiration. Art in turn affects both how we perceive nature and how we construct the built environment.
- Our genetic predisposition generates aesthetic universals (literary theory at times suggests that these do not exist), our senses; and our ability to structure say music; many have posited that humans are evolutionarily selected for art because it teaches, raises the spirit, and creates bonding (note that these are then links from art to yet other phenomena)
- Cultural elements and aesthetic sense are combined in most/all artworks. Thus works of art are generally seen to express certain cultural values or beliefs. Art is emphasized in all religions. Art may help us cope with cultural change.
- As for individual differences, artists likely display unusual personality traits and behaviors, and perhaps so do their audiences. And if art does impart meaning, then art changes what people believe and do. Art may be cathartic.
- Economic circumstances influence both the demand for art and supply of art. Art may also reflect and communicate economic ideology. As noted above, artistic sensibility increases the cost of all goods.
- Politics exerts various influences: funding, censorship, ideology, nationalism. The fact that many regimes have funded artistic propaganda suggests a belief that art can have important political influences.
- Social structure affects who becomes an artist and who supports the arts and thus likely the content of art. Art can support group solidarity. It can thus either encourage or level social distinctions.
- Technology influences the cost and quality of art. As noted above, art influences the design of almost everything we use.

The central importance of art to human existence is lost in a classification that does not allow the myriad influences on and of art to be readily captured. Yet in practice art scholarship has emphasized some links more than others. And classification systems grounded in literary warrant thus make it easier to investigate some links than others. Notably, Ørom (2003), in pursuing a domain analysis of art, is necessarily driven to emphasize what art historians have in fact studied. Yet his very treatment highlights the fact that the focus of art scholarship has shifted through time. Traditional art history traced the influence of one artist or style on another; it looked a lot at artist personality. Over time this was largely supplanted by an emphasis on the cultural meanings of works of art (this is the essence of iconography). There was a minority interest in economic issues largely associated with Marxian analysis. This history provides a further argument in favor of a logical classification that provides a place for any connection a scholar might wish to draw. If we instead ground our classification in what scholars emphasize today we
will be unprepared for what they stress tomorrow. As Ørom (2003) notes, the new art history since the 1970s has been interdisciplinary in orientation and thus poorly served by pre-existing classifications.

**Causal Links in Works of Art**

In the preceding section we made a fairly modest recommendation for a classification that can encompass all of the myriad causal links that humanities scholarship might engage. In this section we make a more radical recommendation that the exact same principle should be applied to the works of art that they study.

It is useful to return to Ørom here. Notably, Ørom (2003) references an increased importance of thematic study in art scholarship: To this end he looks at recent Danish art exhibitions: “In “Symbolism in Danish and European painting 1870-1910” there are five themes: Beauty and Death, The Greatness of Man and Nature, Silence till Death, Eros and Melancholy, and The Prophets of Beauty. The painter’s nationality, the art form, and the date of the exhibited works are subordinated to the themes.”

If scholars of art want to study such themes, and especially if art galleries wish to gather together works that exemplify such themes, then surely we should attempt to classify works in terms of the themes they express. Imagine how much easier it would be for scholars – or indeed anyone interested in art – to explore how artworks across different times and places expressed any particular theme if we took this simple step.

The danger in classifying art is the same as the danger encountered above with respect to the scholarship of art: that we become captured by the themes thought to be important at some place and time. LaBarre and Tilley (2012) discuss the (admittedly valuable) efforts to classify folktales in terms of a hundred or so themes. The leading classification of this type would classify “Beauty and the Beast” as falling under “Tales of Magic,” then “Supernatural or Enchanted Wife (Husband) or Other Relative,” and more precisely “The Girl as the Bear’s Wife.” Despite their widespread use, such “motif and tale type indices” are subject to frequent criticism. Critics often note that the classes are arbitrary. And it is felt that these indices are not updated regularly but need to be. There are also complaints that these particular indices are not themselves part of document classification schemes, and thus users must then track down cited works themselves. It would be much better to allow works of art (including fiction) to be freely classified in terms of dominant (and even subsidiary) themes within our documentation classification schemes.

There are of course practical challenges. There is a degree of subjectivity in identifying the theme of a work, and this degree arguably increases for art works that are highly abstract. And the meanings attached to particular works may change through time. Religious works may be appreciated by non-believers as expressing quite non-religious themes.

But ambiguity is a cross that information science must bear. While determining the subject or theme of a work of art may on average be more challenging than identifying the subject of a work of non-fiction, this is not uniformly the case: some works of art are easier than some works of non-fiction to classify.

And of course we do try to some extent to classify the subject of art works within our classifications. But we use a small set of terms rather than allowing free use of any concept employed anywhere in our classification (and surely a work of art might seek to express any thing or relationship that humans study?). And we classify different types of art in terms of different subjects. Prose is classified as romance or mystery or western (clearly not a set of classes that was derived deductively). Paintings are commonly classified as portraits or landscapes or still lifes. The LCC attempts a few more precise classes: animals, birds, hunting, fishing (which Ørom 2003 argues represent a Renaissance sense of art subjects; for our purposes it is worth noting that these are each basic concepts or very simple combinations rather than very complex concepts). If we will attempt to classify art in terms of some arbitrary subjects, why not instead classify works of art in terms of any subjects that they seem to address?

Some works of art may be about a single thing (or perhaps a single relator) rather than some combination. If a work seems to be about “small girl” or “vineyard” or “raining” so be it. But most works
are better described in terms of combinations of basic concepts: (girl)(smiling) or (vineyard)(at)(sunrise). And many/most works of art will express some causal relationship: (girl)(smiling)(because)(gift).

One disadvantage of employing an ad hoc classification is that a user needs to identify precise classes of interest under which to search. If terminology is instead freely borrowed from a logically organized classification, then the user need not worry. If they search for (woman)(smiling) they will find instances of (girl)(smiling) if girl is in some way a logical subset of woman [In the BCC, girl is achieved by combining woman and an age indicator].

We noted above that humanities scholarship evolves, and can thus outgrow any classification grounded entirely in literary warrant. The same is true for art itself. Art is an inherently evolutionary endeavor, where artists build on what has gone before but try to create something new. This will mean among other things that artists will seek out new subjects (say, soup cans) that have not been treated before. We thus need to be able to classify works in terms of any subject.

We had cause to mention artistic inspiration above. Scientific inspiration comes from juxtaposing disparate ideas. The same is true of artistic inspiration. Giving artists easy access to the diverse subjects that have been expressed in prior art might prove an important source of inspiration.

As noted above, abstract art will present a special challenge. It may be possible to classify such works (and maybe even non-abstract works) in terms of form: dominant colors and shapes,[DDC does have a class 752 for color] If this is desirable, I note that BCC contains lengthy classifications of colors and shapes. There is a more rudimentary classification of sounds that might be fleshed out if this proved useful in classifying music. These issues are further address when qualifiers are discussed below.

**Relationships**

Most of what needs to be said about relationships was captured in our discussion of causal relationships. But it deserves to be stressed that what is important about a work of art is often some relationship: if a painting is of a (woman)(riding)(horse), we will not be able to describe it very well if limited only to noun-like phenomena: the concept “riding” is essential to accurate classification and retrieval.

Humanities scholarship is likewise characterized by relationships. These are sometimes external relationships, as when art influences politics or is influenced by cultural values. They may also be internal relationships. As we have seen, art is an evolutionary process. Artists want to innovate, but start from what is. Mutations are selected culturally and thus we can usually point to a dominant style of any time and place, but one that necessarily allows change. Rising incomes and a mass market allow different styles to cohabit in the contemporary world. Much of art scholarship focuses on how a particular artist (or group of these) was influenced by other artists and/or the wider world, and how they in turn influenced other artists and/or the wider world. And this sort of scholarship will be hard to classify and hard to search if we do not classify different types of influence. Among the basic relators identified in the BCC are transforming, energizing, combining, creating, facilitating, experiencing, performing, believing, evaluating, feeling, intending, rehearsing, perceiving, selecting from, thinking, cooperating, imitating, paying, and talking. These can be combined to generate hundreds of further relators. 13

**Qualifiers**

It was noted above that elements of the form and content of works of art might usefully be classified. Some of these are best captured through relationships, such as links to classifications of shapes and sizes and colors, or to materials or instruments. But the Basic Concepts Classification (Szostak 2012a) possesses a class of adverbial/adjectival qualifiers that can be freely combined with any concept. Many of these may be particularly useful in classifying both art and humanities scholarship. They capture not only elements of form and content but also of subject matter and intent: beautiful, ethereal, polished, bright/dull, intense, sleek, sublime, thankful, superior/inferior, successful, good, interesting, enjoyable, suitable, safe, simple, popular, necessary, effective, mechanical, strategic, informative, secretive, true, illusory, romantic, familiar, artificial, authentic, hard/soft, thick, clear, clean, complete, balanced, united, orderly, modern, radical, tidy, holy, and legitimate. This classification of qualities (of which the
preceding is just a selection) has been developed inductively (but then organized into two dozen classes) and can readily be added to if warranted by humanities scholarship.\textsuperscript{14}

**Perspective**

Gnoli (2012) notes that information scientists have been talking about classifying works by authorial perspective for over a century. And he worries that, without a clear understanding of perspective, elements of perspective may be either ignored or conflated with subject (or type of work, an issue addressed below). He further recognizes that classifying by perspective may be especially important in art. A poem, he appreciates, can communicate the same message — say, sadness — through many subjects. Much but not all of what Gnoli surveys in terms of authorial perspective — theory, method, time, and place\textsuperscript{15} -- are captured elsewhere in this paper.

What is left? As I have argued elsewhere (Szostak 2013) we wish with perspective to capture key motives and beliefs of the author or artist.\textsuperscript{16} I suggested that a variety of dimensions (beyond those addressed elsewhere) might be useful in this respect: rhetorical,\textsuperscript{17} epistemological, ideological, aesthetic, ethical. These dimensions seem quite useful for classifying works of art:

- Some artists may be focused on communicating meaning of various sorts and in various ways
- Art scholarship has at times suggested that art serves a revolutionary function, and at other times argued that art always supports the status quo. Both need to have a place in our classifications
- Some artists may be focused on creating a certain type of aesthetic pleasure
- Religion is the most obvious but hardly the only avenue through which an artist may aspire to encouraging particular values

What about humanities scholarship? Clavier and Paganelli (2012) argue that we should classify all works by authorial stance: criticism, agreement, consensus, and so on. It would seem that it would be useful to distinguish different texts about art:

- Art criticism (which evaluates one or more works in terms of aesthetic standards)
- Connoisseurship (similar, but with a goal of identifying particularly valuable works
- Contextual analysis, which analyses the influences on or of a work(s) without necessarily passing an aesthetic judgment.

This list is certainly not exhaustive but gives a flavor of what a classification by perspective might look like and accomplish. The precise details of this sort of classification are best worked out in collaboration with scholars in the humanities.

**Theory**

In classifying works of scholarship in terms of theory applied, it is necessary both to classify by the name of the theory and by theory type (a classification of theory types was developed in Szostak 2004 and applied there and in Gnoli and Szostak 2008). This is because diverse types of theory operate under the same name, and the same type of theory goes under many names. This approach will be particularly valuable in humanities scholarship which has tended to be characterized by an abundance of theories.

It is suggested here that the ‘theory’ dimension be employed to capture ‘artistic style’ when classifying works of art. The style pursued by an artist is at least somewhat analogous to the theory pursued by a scientist. Here again we should classify both in terms of style name and style type, and for the same reason: style names are not well defined and similar works of art may have quite different styles ascribed to them.

It may be useful to employ Cutter numbers in designating style names, given the profusion of styles. In any case, we want a system that is hospitable, for new styles emerge with some frequency. We must not privilege western styles as existing classifications tend to do (Lee 2011), but allow any style found anywhere in the world to be readily represented.
Scholarly theory types were classified in terms of the Who, What, Where, When, and Why questions (Szostak 2004). A similar approach would be useful in capturing key elements of artistic style:

- The ‘what?’ question could capture degree of realism
- The ‘why?’ question would address issues of purpose – is the intent to inform, shock, energize, and so on.
- The ‘who?’ question might capture intended audience.
- The ‘where?’ question captured degree of generalizability when classifying theories and could capture here the degree to which a work expresses universal aesthetic value relative to particular cultural values.
- The ‘when?’ question might capture the historical relations between one style and another.

The details of this classification could be fleshed out in collaboration with art scholars.

**Method**

Paintings are often classified by technique (Ørom 2003). The practice is less common for some other art forms. But theatre depends on techniques of vocalization, sound and lighting systems, and techniques for building and moving sets. In the world of film the set of techniques is even greater. Music employs not only techniques for amplification and recording but increasingly techniques for artificially creating musical sounds. Scholars, performers (perhaps especially directors and producers), and members of the public may wish to search by technique. And so it makes sense to utilize the method dimension in order to capture artistic technique.

But the very diversity of techniques, and the fact that these largely differ by art medium, makes it harder to classify artistic method here than it was to address artistic “theory” above. As with artistic “theory names” the existence of multiple techniques and the fact that new ones are often created is perhaps dealt with by using Cutter numbers to express particular techniques. There is no obvious way of classifying “type of technique” beyond the strategy of classifying these by medium. Within particular media, it may be desirable to distinguish different types of technique: techniques for lighting from techniques for sound. In cases where the same technique does apply to multiple media (lighting for stage and film, say), it would be important to ensure that works on these would be found by all interested users.

**Time and Place**

It goes without saying that works of art should be classified also in terms of time and place produced. This can easily be done through recourse to classifications of time and place. There is no good reason for different types of art to be classified in terms of different classifications of time and place. Indeed, it will be easier to draw connections between art, politics, economy, and culture if the same categorizations of time and place are used throughout a universal classification.

For reproducible works of art, we may need to classify with respect to multiple times and places: a work may be performed in a quite different time and place from where it was produced. Even for non-reproducible works we may wish to note where and when it was owned and exhibited. And for all works of art we may need to differentiate the time and place that a work is set from the time and place it was produced. For literature especially the time and place in which a work is set is of great interest to users; again it is useful for setting to be captured with respect to a universal categorization of time and place.¹⁸

One advantage of treating time and place systematically is that it facilitates the use of the same classification system in archives and museums as in libraries. Archives especially tend to prioritize classification by time and place (and of course source). This need not prevent them from classifying also along the other dimensions recommended here. This would in turn make it much easier to locate not just works of art but things such as theatre programs, artist sketches, posters, and other documents or objects that are relevant to a particular query.
The Nature of a Work

Smiraglia (2001) has carefully examined the nature of a work, and when a work has changed enough to deserve designation as a new work. He stresses throughout that a work is primarily defined by the ideas it conveys. I have suggested that “ideas” comprise some set of: descriptions of phenomena or relationships, causal arguments, theories applied, methods applied, and perspectives applied (Szostak 2014). Both Smiraglia and I appreciate that the subject matter of any work cannot be separated from its semantic content. Smiraglia was focused on written works for the most part but his analysis applies even more forcefully to works of art: these must be defined (and classified) in terms of both subject matter and what might be termed style. We have striven to capture both elements above.

When does a work change enough to be classed as a new work? When there is a significant change in either style or substance. Smiraglia appreciates that changes in media always generate a new work: a film based on a novel or play is a new work no matter how strictly it adheres to the original. Likewise a print made from a painting is a new work. And a musical score is a different work from a recording or a textual description of a piece of music.19

For performances, the engagement of a new performer (at least in a key role) generates a new work. This is especially important for genres such as jazz music in which a performer has considerable scope to reinterpret a piece of music. But the argument holds more broadly. Yet existing classification systems that stress the composer or playwright often leave little scope for appreciating changes in performer.

Even written texts can be changed through time. In their study of a random sample of folktales, LaBarre and Tilley (2012) found that “illustrators were identified more than 80% of the time, although the original author was identified just over 40% of the time. Records of stories that were retold indicated an agent in only one third of the instances, and editors or compilers were acknowledged in only one quarter of the records. Translators were identified only 10% of the time, and adapters less than 5% of the time.” Yet LaBarre and Tilley found that both scholars and storytellers were very interested in this sort of information.

Scholars of folktales struggle also to identify the key variants of these. These each qualify as distinct works, and our classification system needs to be precise enough to distinguish these (yet another advantage of allowing free combination of numerous concepts)

A Brief Note on Terminology

Ørom (2003) notes that humanities scholarship is characterized by the development of new terms that need to be reflected in a classification. Though Ørom is not specific, new terminology can be used in most of the areas discussed above: phenomena, relationships, theory, and method most obviously. The approach recommended here treats all complex concepts as combinations of basic concepts. It thus alleviates the need to expand the classification when a new term is coined. The challenge for the classifier is that the precise meaning of a new term may be unclear. Scholars should, of course, try to clarify their terminology, but often do not. The classificationist should respect literary warrant but not engage in unnecessary contortions in order to reflect unnecessarily ambiguous scholarship. The classificationist should thus provide an exhaustive set of basic concepts (which can be achieved in a very manageable set of schedules, at least in the social sciences and humanities), and the classifier (or indeed the author) should render complex concepts in terms of these. This strategy has been pursued throughout this paper. It will allow multiple types of user to better find both works of humanities scholarship and works of art that are relevant.

Conclusion

The approach to classification recommended in this paper allows a better classification of humanities scholarship in the following ways:

- It breaks complex concepts into basic concepts for which there is shared understanding
- It classifies works in terms of theory applied, both in terms of a particular theory name and a theory type.
• It facilitates the exploration of relationships between art and all other human science phenomena.
• Last but far from least it allows a better classification of the works they study.

The approach to classification recommended in this paper allows a better classification of works of art (including literature) in several ways:
• It allows works to be classified in terms of any phenomenon or relationship captured in a work
• The ‘theory’ dimension is used to capture artistic style, again in terms both of a particular style name and style type
• The ‘method’ dimension is used to capture particular artistic techniques
• We can thus focus the classification of “types of art” on the medium of expression
• The ‘perspective’ dimension captures rhetorical, aesthetic, ideological, ethical, and epistemological characteristics
• The editions dimension allows recognition of new performances.

In sum, we are able to capture many characteristics of art that are captured poorly at all within existing approaches to classifying works of art.

References
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Notes

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1. There are several other definitions (see Szostak 2012c). These often struggle to embrace philosophy and languages, the other disciplines generally included within the humanities in university administrative structures. Philosophy and languages are – sensibly – treated separately from art in all classifications.

2. It will be particularly difficult for works of art that are non-representational or purposely subjective in approach.

3. Users often search for particular people, places, things, or times.

4. I should stress here that there is a long tradition within information science of seeking a universal classification grounded in (at least) the phenomena studied by scholars. Otlet, Kaiser, the Classification Research Group, and more recently Claudio Gnoli are among many scholars who have pursued such an approach. Many of the principles outlined here were proclaimed in the Leon Manifesto (see www.iskoi.org/ilc/leon.htm).

5. Lee (2011) notes that musical performers are most likely to search by medium. This may well be true for performers more generally.


7. The discussion here draws on Szostak (2000)

8. In class 700 the DDC has incorporated the terminology of the iconographical paradigm in some subclasses. This is apparent in 704.9 Iconography and collections of writings, and in the classes 753-758 Specific subjects (Iconography) comprising Abstraction, symbolism, allegory, mythology, legend, and Religion and religious symbolism. At a lower level the terminology of the iconographical paradigm forms an integral part of the “bricolage” of the DDC. (Ørom 2003)
“Folktales of England” (University of Chicago Press, 1965) includes eight pages of tale type and motif indexes in addition to an eight page general index for a collection of fewer than one hundred tales. Thus, one can identify the story, “The Witch’s Purse,” by one of two assigned motifs (B733.2, Dogs howling ominous of death; G275.1, Witch carried off by devil) or through a variety of conventional index entries (e.g., Animals, magic, supernatural, or unusual: Cat, transformed as witch; Death, cause of: by drowning)” (LaBarre and Tilley 2012). Notably, each of these entries represents combinations of basic concepts.

Nevertheless users find these genres helpful. It is likely thus useful to subdivide works of literature by genre. Since contemporary authors often blend genres, it should be possible to classify a work under multiple genres.

Lee (2011) stresses that scholars, performers, and the public have different search needs and styles. This provides a further justification for allowing search in terms of combinations of basic concepts.

Raieli (2012) urges retrieval of pictures in terms of color, structure etc, videos in terms of types of movement, audio in terms of types of sound. Raieli argues that this will be quite possible once these are digitized. His approach seems akin to full-text searching for particular digital footprints; as with the full-text searching of written texts, it is possible that search results can be enhanced if some sort of classification is employed in concert.

The Art and Architecture Thesaurus compiled by the Getty Museum was one key source employed inductively in developing the set of relators in the BCC. See Szostak (2012e).

As I draft this paper it occurs to me that “realistic” would be a useful qualifier.

He also mentions discipline, which it is also possible to code works for within BCC. We have not stressed this element in this paper.

“In 1664 the Royal Academy of Painting and Sculpture in Paris became a centralized institution that developed a doctrine for the theory and practice of painting. A central element in this doctrine was the hierarchy of motives. The most valuable motive was the human being, i.e. biblical and mythological motives. In a descending fashion came the portrait, the landscape, living animals, and finally still life.” (Ørom 2003) Note that many of these particular motives are captured by subject.

Feinberg (2011) speaks in particular of logical argument (manipulation of evidence), ethos (incorporation of audience beliefs and values to establish trust), genre adaptation (adjustment of formal elements). Her purpose is to argue for an explicit authorial voice in classifications, but her argument can be used for classifying works by authorial voice.

It will be necessary to develop some sort of classification of imaginary times and places to capture works set in these.

DDC applies a special symbol to musical scores. Other classifications provide an entirely different treatment of scores. The approach pursued here would utilize the same universal classification for all types of works, and like DDC employ a specific notation to distinguish scores. Lee (2011) worries that citation order is different for scores and literature about music because users stress medium and form when searching for the former. But the approach taken here would allow searches of score by medium and any other characteristic employed above.