Information scientists have long recognized the potential benefits of classifying authorial perspective. In particular, this would help users evaluate the potential relevance of works (Clavier and Paganelli 2011). And of course it would alert users to potential biases in the text (Gutierrez and Martinez-Avila 2014). Lukoianova and Rubin (2013) suggest that it might also enhance detection of purposeful deception. In addition, such a classification would facilitate communication both within and beyond social groups (Szostak 2014). Individuals might wish at times to consult only works reflecting a particular perspective; if so this is a desire that knowledge organization systems should serve. We might hope that users will often be interested in exploring particular issues from multiple perspectives; this task too will be aided by classifying works in terms of authorial perspective. But such a classification has never been developed.

One problem is that there are a variety of dimensions – rhetorical, ethic, epistemological, and so on (see below) – along which authorial intent or perspective might be evaluated. It might be worried, then, that it would prove too costly to classify works by perspective. In the contemporary world, in which the costs of data entry and storage are much lower, this may no longer be an unsurmountable barrier. Classifying works by perspective may prove especially feasible if most works need only be classified along a subset of these dimensions.

A second problem involves identifying a set of possibilities along each dimension. It might be worried that there are innumerable such possibilities. We will devote much of our attention to identifying possibilities along each dimension. We will find that the number of possibilities is not only countable but manageable in size.

A third potential problem is that it may prove challenging in practice to establish authorial perspective of a particular work along at least some dimensions. The degree of difficulty can only be estimated once a classification of authorial perspective has been developed. This paper will focus on addressing the first two problems, and thus set the stage for an evaluation of the scope of the third. We will, though, briefly address strategies for classifying the perspective of particular works toward the end of the paper.

In the next section we propose three guiding assumptions for classifying authorial perspective. We will in the succeeding (and much longer) section employ these three simple assumptions in order to generate a multi-dimensional classification of authorial perspective. We will address in turn a variety of dimensions that have been suggested, and show how each can be addressed. Examples of synthetic constructions utilizing the Basic Concepts Classification (BCC; see Szostak 2013) are provided throughout, but similar constructions could likely be provided from other general classifications. The various dimensions, and possibilities along dimensions, are summarized in Table 1. As promised above, a brief discussion of practical considerations follows. This is followed in turn by a concluding section.

### Three Guiding Assumptions

We propose three helpful guiding assumptions:

1. Since authorial perspective is an element of human behavior, it should be the case that what we need to capture here with respect to both dimensions and possibilities along dimensions should already be classified within a general classification (where ‘general’
is taken to mean comprehensive in coverage). That is, a general classification should already contain terms for every possible aspect of authorial perspective. One important implication of this assumption is that we can potentially deal with authorial perspective synthetically without needing to add new schedules to our classification.

2. Kleineberg (2013) has recently urged us to explore the ‘how, what, and why’ of a work. We can usefully expand this suggestion to include ‘who, where, and when.’ An author’s perspective might be anticipated to reflect who the author is, what they are doing, why they are doing it, how they choose to proceed, and when and where they operate. In conjunction with assumption 1, this guides us to explore existing classifications of personality characteristics, cultural values, political ideologies, and so on. Szostak (2004, ch. 5) showed how these ‘5W’ questions could illuminate various sources of scholarly bias. As journalists will attest, different W’s are more important for different texts. As we will discuss below, it is thus likely that only a subset of possible dimensions will be important for particular works.

3. If we face numerous dimensions and possibilities, and can have recourse to diverse schedules within a general classification, then another useful starting assumption is that a synthetic approach will serve us best here. A synthetic approach to classification has been commonly urged in the literature since at least Ranganathan (1937), though less commonly employed in practice. Yet even enumerative schemes have had some success introducing synthetic elements.

These assumptions, we hope, do not require more extensive justification. Yet they have, as we shall see, important implications for the classification of authorial perspective.

**Addressing Particular Dimensions**

Szostak (2014), drawing on many others, suggested a variety of possible dimensions. These can be addressed in (roughly) the order of increasing difficulty:

**Discipline/Field:** We can indicate the disciplinary (or interdisciplinary) home of the author. A general classification should have a place for all such fields. It may also be useful to indicate the institutional home of researchers: university, public research center, non-profit, private, and so on.

**Methods employed:** We can first indicate which of the dozen broad methods any author employs: experiment, survey, interview, statistical analysis, modelling, classification, examining physical traces, mapmaking, observation, textual analysis, intuition/experience, and hermeneutics/semiotics (Szostak 2004). We can then further distinguish particular techniques within these. For example, interviews may be structured or open format, individual or group, and may also be distinguished in terms of the number of interviewees; particular interview situations such as doctor/patient consultation can be designated. The BCC provides a detailed classification. It should be possible to indicate when a researcher pursues mixed methods, followed by the methods that are mixed.

**Theoretical orientation:** We can reference here any theory the author explicitly employs. Gnoli and Szostak (2008) discussed how best to classify theories, and the Integrative Levels
Classification (ILC) and BCC both contain detailed classifications of theory types. The key point here is that—since theories evolve, theory names are ambiguous, and new theories are created with some regularity—it is important to classify by ‘theory type’ as well as by theory name. Gnoli and Szostak showed both the utility and feasibility of employing a five-dimensional classification of theory types. Notably, these were grounded in the 5W questions recommended above: ‘who’ is the causal agent within a theory?, ‘what’ does the causal agent do?, ‘why’ does the causal agent do this? (which for intentional agents involves classifying different types of decision-making, for non-intentional agents it means examining the agent’s inherent nature), ‘where’ does the causal process occur? (that is, how generalizable is the theory?), and ‘when’ does the causal process occur? (or in other words how does the causal process unfold through time: change in a particular direction, a new equilibrium, cyclically, and so on). For each of these five dimensions/questions a handful of key answers can be identified. Causal agents, for example, can be either intentional or non-intentional, and either type can comprise individuals, groups, or relationships.

**Ideological outlook:** There are only a handful of ideologies commonly referenced in the literature. Classical Liberalism, Libertarianism, Pragmatic Liberalism, Conservatism, Socialism, Communism, Fascism, Anarchism, and Nationalism are the most common (and are listed in BCC), though a few others might be added. A challenge here is that ideological labels are contested. It might at times be useful to reference a more precise attitude toward a particular political issue (e.g. pro-choice). It is worth noting here that the first four dimensions address different aspects of ‘why’ an author might have written a particular text. The method dimension, and to a lesser extent the theory dimension, also speak to ‘how’ this was done.

**Ethical outlook:** Authors might be distinguishable in terms of the types of formal ethical approach they take: consequential analysis, deontological (focus on rules), virtue/value oriented, tradition-based, or intuition-based (Szostak 2004, 194-8). Note that each of these five types of ethical analysis opens up a broader set of possibilities that are best addressed synthetically, but with recourse to diverse elements of a general classification.

i) Consequential analysis most often focuses on economic outcomes but at times focuses on political or social or aesthetic outcomes. A perspective might be denoted (perspective)(consequentialist)(beauty). Potentially an author might be consequentially disposed toward phenomena across diverse subclasses of a general classification. The synthetic approach obviates any need to enumerate these here.

ii) The most common rules are the Golden Rule and various Rights. The Golden Rule deserves treatment somewhere in a general classification. As long as ‘Rights’ appears also, specific rights might be captured synthetically: Right to property.

iii) One of the challenges of virtue analysis is that there are a host of virtues/values one might invoke (which often compete, though far from always). The BCC provides a comprehensive list of ‘cultural values’ that could be employed synthetically here.

iv) If an author stresses tradition we could then synthetically specify the country, ethnic group, religion, or social group whose traditions are invoked. Many traditions are
broadly shared; this too can be captured synthetically: (tradition)(all)(major)(world religions).

v) Intuition suggests that we look either at personality dimensions or human emotions. These are each classified in some detail in the BCC.

It is noteworthy that in exploring ethical perspective, we have addressed ‘who’ the author is (personality dimensions, emotions), and ‘when’ and ‘where’ they are situated (traditions, ethnicity, etc.).

**Epistemological outlook:** Epistemology addresses both the possibilities of human understanding and questions of how we can/should best attempt to enhance our collective understanding (if this is judged possible). We capture here elements of why an author writes, what they write, and how they proceed.

How can we best get a handle on key epistemological concerns? The Toolbox project centered at the University of Idaho has tried to enhance interdisciplinary collaboration by exposing and then mitigating the hidden epistemological assumptions that would otherwise hinder collaboration on interdisciplinary research teams (Eigenbrode et al 2007, Looney et al 2014). They have to this end developed and revised a questionnaire that they give to researchers. The purpose of these questions is to identify the key elements in differing epistemological approaches. Their research thus highlights the sort of epistemological distinctions that are important to (especially interdisciplinary) scholars. Though they ask questions about a researcher’s general attitude toward research, the questions could also illuminate the epistemological nature of particular works. The questionnaire has six main sections:

- **Motivation:** They distinguish basic versus applied research. This we could easily do. They also speak of advocacy. This could be captured synthetically in association with what is being advocated: (advocates)(war)

- **Methodology:** Does the research have a guiding hypothesis? We could perhaps best capture this element by distinguishing deductive from inductive research. They also explore openness to mixed methods. This was addressed above when discussing methods. Finally they explore the spatial and temporal extent of research. We can hope that research specific to a particular time and place will have these signified within the subject heading. Beyond that we can note that the degree of generalizability is one of the dimensions along which theories should be classified.

- **Confirmation:** What types of evidence are considered valid? We can best address this consideration by indicating the method(s) used in particular research. It might also be both possible and desirable to treat the type of data employed (Szostak 2004 discussed classifying data, but did not at that time develop an operationalizable classification.) Toolbox also asks whether strict replication using the same method and data is sought or rather evidence from different methods and data. For categorizing particular works the most important consideration likely involves signaling “replication.” (Mixed methods were addressed above.)

- **Objectivity:** Is objectivity possible? Is objectivity desirable? We could employ descriptors such as (believes)(objectivity) and (believes)(subjectivity); we should
recognize that there is a continuum between these possibilities: (believes)(some)(objectivity).

- Values: Can values be excluded from research? Should values be driving research? For our purposes, the fact that we can signal values that drive a particular research project or report (see above, virtue ethics) may suffice here.
- Reductionism versus emergence: Do researchers believe that all phenomena can be understood in terms of constituent elements? While an important epistemological question, we can avoid it. The relevance of a work in this respect will be adequately signaled by a subject classification that accurately captures the causal relationships being investigated. The same can be said of a related epistemological question: to what extent can we isolate particular causal relationships from external influences?
- Reality. In later versions of the questionnaire a question(s) about attitudes toward reality have been added. Do research results reflect (mostly) the real world or researcher perspective? We might wish to distinguish ‘realist’ from ‘constructivist’ and perhaps even ‘optimist’ and ‘pessimist.’

**Aesthetic Outlook:** Beyond the example cited under consequential analysis, we may need little more here than a synthetic (perspective)(X)(is beautiful).

**Rhetorical strategies:** Here we address ‘how’ an author strives to convince (as well as elements of ‘what’ not captured by the main arguments of the work). And various information scientists have addressed elements of rhetorical strategy (generally without using that phrase). Clavier and Paganelli (2011) have suggested that we distinguish criticism, agreement, consensus, and so on. Feinberg (2011) distinguished logic, appeal to beliefs, and adjustment of formal elements.

Ideally we could refer here to some consensus list of key rhetorical strategies identified by the community of rhetoricians. There is indeed some consensus that there are at least 100 such strategies, and a fair bit of consensus on what each of these involves. We could rely on literary warrant to identify a subset of the most commonly employed (if that were desirable for, say, notational convenience).

It should be noted that a variety of rhetorical strategies, such as alliteration, operate generally at the level of particular phrases rather than entire texts (though shorter texts, and especially poetry, provide important exceptions). We may find it desirable to stress the subset of rhetorical strategies that operate at the level of (longer) texts.

A distinction is often made between three broad rhetorical strategies. The first, called ‘logos’, relies on logical argumentation (we may wish to capture the inductive versus deductive distinction here). The second, ‘ethos’, focuses on efforts to establish the author’s authority. The third, ‘pathos,’ involves appeals to emotion. Each of these can each be readily identified in a classification. (The distinction made by Feinberg 2011 echoes this tripartite distinction.)

A distinction is often made among (at least primarily) types of ‘logos’:
- analyzing cause/effect
- compare/contrast
- define
- classify
- describe person/place/thing
- explain how something happens
• narrate a story

For ‘pathos,’ synthetic reference to particular emotions should be feasible. For ‘ethos’ synthetic links might be imagined to any justification for authority: occupation, education, social status, and so on.

A variety of more particular strategies likely deserve treatment: argument from analogy, metaphor, argument from absurdity, understatement, thought experiments, litotes, and inference to the best explanation. The differences in rhetorical purpose stressed by Clavier and Paganelli (2011) also deserve reference.

These can all be captured synthetically within the BCC. In particular the BCC contains a (expandable) list of ‘types of statement’ drawn from the critical thinking literature (though, like alliteration, these may prove less applicable to long texts). Note that while rhetorical strategies are applied most often to written texts, they can also be applied to conversations and visual media. It is thus desirable here as well that the same terminology be employed across a general classification.

Though there may be as many as 100 distinct rhetorical strategies, the rhetorical approach of the vast majority of texts can likely be captured by reference to the tripartite distinction of logos, ethos, and pathos, followed perhaps by some reference to the dozen or so strategies listed in the preceding three paragraphs. Though rhetorical strategy is thus one of the more challenging dimensions to address, it is nevertheless manageable in scope.

Others: Soergel (1985) noted that it would be useful to designate the level of previous understanding required for a text. The easiest way forward here might be to reference the degree of education assumed by the author, perhaps synthetically linked to particular fields of study.

Commentary: Gutierrez and Martinez-Avila (2014) suggested that perspective can often best be seen in terms of a continuum between two dichotomous positions. This is true for some of the dimensions above: the generalizability dimension within theoretical perspective, the agreement versus criticism distinction of Clavier and Paganelli (echoed by Gutierrez and Martinez-Avila) and perhaps the values and objectivity dimensions within epistemology and some others. Such continua represent a small challenge to the classificationist; the easiest strategy is likely to divide the continuum into segments and apply different notations to each segment, and likely provide separate notations to the endpoints. It should be stressed, though, that the vast majority of the dimensions above are not continua but lend themselves rather to a manageable number of distinct possibilities.

Gutierrez and Martinez-Avila (2014) also suggest that it is possible to signal perspective in value-free terminology. This has been the intent above. There is value in a wide variety of different perspectives.

Smiraglia (2001) stressed that it is not possible to separate the style from the substance of a work. Most of our classificatory effort with respect to subject classification naturally focuses on the substance of a work. And many elements of authorial perspective likewise address the substance of a work (especially the theory and method employed). But the rhetorical dimensions in particular, and also often discipline, tell us much about style.

Summary: The various dimensions and possibilities along dimensions are summarized in Table 1.
<table>
<thead>
<tr>
<th>Main Dimensions</th>
<th>Subsidiary Dimensions</th>
<th>Possibilities along Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>12 main types, particular techniques</td>
<td></td>
</tr>
<tr>
<td>Methods</td>
<td>12 main types, particular techniques</td>
<td></td>
</tr>
<tr>
<td>Theories</td>
<td>Intentional/non; individual, group, relationship Act, react, form attitude Innate nature if non-intensional; 5 types of decision-making if intensional Continuum of generalizability Equilibrium, cycle, change in one direction, stochastic</td>
<td></td>
</tr>
<tr>
<td>Ideology</td>
<td>Several distinct ideologies; also issue-specific attitudes</td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td>By desired consequence Golden Rule, or particular rights Particular values Particular groups or general Emotions, personality dimensions</td>
<td></td>
</tr>
<tr>
<td>Epistemology</td>
<td>Basic versus applied; advocate particular outcomes Deductive/Inductive?; Mixed? Replication?; Data? Continuum Realism, constructivism; maybe optimism, pessimism</td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td>What is beautiful?</td>
<td></td>
</tr>
<tr>
<td>Rhetoric</td>
<td>Analyze cause/effect; define; compare/contrast; classify; describe person/place/thing; explain how something happens; narrate a story Occupation, education, etc. Link to emotions A dozen or so</td>
<td></td>
</tr>
<tr>
<td>Target knowledge level</td>
<td>Education level assumed, by field if necessary</td>
<td></td>
</tr>
</tbody>
</table>
Some Practical Considerations

Should authorial perspective be handled in one or multiple metadata elements? Or should it somehow be handled within subject classification? We think it advisable to distinguish authorial perspective from subject classification. It is nevertheless advantageous to employ the same terminology for each. We are agnostic regarding the first question.

As was hinted at the outset, we should appreciate that different dimensions will be of different importance for different works. One point to stress here is that each of the dimensions discussed above would be useful to some users in evaluating some works. Rather than allowing only some dimensions to be applied to some fields, in an interdisciplinary world it makes sense to allow any dimension to be applied to any work. Yet the fact that in practice some dimensions can be ignored when classifying a particular work should significantly reduce the costs of classifying with respect to authorial perspective. The classifier can determine whether classification of a particular work along a particular dimension is worth the effort.

How might these various elements be identified in practice? It could be that authors might be asked to self-declare (though they might lie). Authors wishing to signal relevance might have an incentive to identify their perspective. It is then important that the classification be easy to comprehend and navigate. Some authors may choose for a variety of reasons not to indicate their perspective. Crowd-sourcing is another possibility, though the risk that a work might be purposely mis-classified would need to be patrolled. There is of course a danger that cross-indexer consensus might prove particularly low along some dimensions. We cannot proceed to measure the degree of indexer consistency until we have developed a potentially useful classification of perspective. The purpose of this paper has been to develop such a classification. It should be stressed that the different possibilities along each dimension above are precisely defined. Works of non-fiction in which an author is making a particular argument from certain premises should generally prove feasible to classify. Debate often rages regarding the intentions of the authors of fiction, of course; if authorial perspective is to be addressed there it may be desirable to allow scope for disagreement.

Concluding Remarks

This paper has outlined a classification of authorial perspective. The classification utilizes for the most part terms already present within general classifications. If a synthetic approach is taken, then, authorial perspective can be classified without requiring a significant expansion in the schedules of any general classification.

We briefly addressed practical considerations in the preceding section. Though these are significant there are strategies that should make it practicable to classify many/most works in terms of authorial perspective.
References


Integrative Levels Classification (ILC) (n.d.) www.iskoi.org/ilc


Szostak, Rick (2013) Basic Concepts Classification.
http://www.economics.ualberta.ca/en/FacultyandStaff/~/media/economics/FacultyAndStaff/Szostak/Szostak-Basic-Concept-Classification2.pdf

Some would argue that some other approaches, such as the ethics of care, do not fit cleanly in any of these five classes. We could investigate whether any philosophical approach is not captured by the procedures suggested below. If this were to be the case we could then identify how to treat works pursuing that approach.

We will likely have little use to classify here the myriad shortcomings in perception or cognition that afflict us all, nor particular personality 'defects' that would detract from science (unless some authors confess to these, if conscious of them) (Szostak 2004), though these should be captured elsewhere in the classification.

Another key aspect of ‘when’ involves how a particular work fits within the broader academic conversation (Szostak 2004, 186-91). This is perhaps best captured through bibliometric analysis of citations. There might be some limited value in signaling ‘revolutionary’ works, though authors tend to exaggerate the revolutionary character of their research.