Encyclopaedist Rivalry, Classificatory Commonality, Illusory Universality

Abstract: This paper describes the cultural construction of classification as exemplified by the French Encyclopédists, Jean d'Alembert and Denis Diderot, and the encyclopaedism of Samuel Taylor Coleridge analysing original texts digitized and encoded using XML and an adaptation of TEI.

1. Introduction

This paper, focusing on encyclopaedism, is part of a larger study exploring the cultural construction of classification. The larger study explores possible foundations for bias in the structure of classifications with a view to more equitable practice. Bias in classification has been documented relative to race, ethnicity, gender, religion, sexuality and other factors. Analyses and proposed solutions have addressed only acute biases in particular systems, not the systems themselves. The project tentatively identifies the systemic roots of bias are culturally specific and reflected in the structure of conventional classificatory practices. A wide range of western cultural texts from classic Greek philosophy to twentieth-century ethnography is being analysed. The consistency with which certain presumptions are revealed, no matter how different the philosophical and social views of the authors, indicates their ubiquity in western thought, though it is not mirrored in many other cultures. We hope that an understanding of these fundamental cultural presumptions will make space for development of alternative approaches to knowledge organization that can work alongside conventional methods.

This paper describes an example of the first phase of the project, which is a deconstruction developed from relevant texts. In the context of encyclopædism the key texts used in this paper are Jean d'Alembert's Preliminary Discourse to the Encyclopédie, selections from Denis Diderot's contributions to the Encyclopédie, and Samuel Taylor Coleridge's Treatise on Method and Prospectus of the Encyclopedia Metropolitana. We are analysing these texts in digital form using Extensible Markup Language (XML) implemented via a document type definition (DTD) created for the purpose including elements of the Text Encoding Initiative (TEI). We will first explain the encoding methodology; then define the differences between the French Encyclopaedists and the English Coleridge; deconstruct these differences by allowing the commonalities between the texts to emerge; and, finally, examine their cultural specificity.
2. Encoding texts

Encoding texts for analysis involves three stages: acquire each text in digital form, establish the DTD, encode the texts. The first stage began by identifying texts available in digital form from sources such as IPL Online Texts Collection: http://www.ipl.org/reading/books/ and http://www.ipl.org/reading/books/other.html and Project Gutenberg: http://www.promo.net/pg/. Completeness and reliability of the e-texts were verified as some "full-text" versions were actually partial and even where full e-texts were located, proofreading and editorial issues of originating agencies emerged. Texts not on the Web needed scanning and optical character recognition (OCR). This required obtaining copyright permission where we wanted to use more of the texts than allowed under fair. Permission was denied only once, but responses are slow and some publishers failed to reply. Such texts must be analysed from print, allowing comparison of the two approaches and assessment of digital encoding in deconstruction. For scanned texts, tagged image files (.tifs) were created, proofread and edited using two OCR software programs for comparison. The resulting text still required considerable tidying-up and close reading to ensure that nothing was lost in the conversion process from OCR to text document.

The second stage involved developing the DTD, which is a sort of authority list for the codes used to mark both explicit and implicit manifestations of key research themes. Exploring the potential of XML is an important component of the project. An XML version of the TEI Lite DTD was developed containing the necessary elements for prose textual analysis. We created our own set of thematic tags compatible with the TEI Lite DTD, facilitating human reading and XML parsing by providing more explicit identification of themes. It is effective to date in maintaining a format readable in a standardized structure while meeting the needs of our particular project.

Finally, with digitized texts and DTD in hand, we have begun encoding texts. Further encoding and development of full cross-referencing and a database continue to allow analysis of the texts from multiple perspectives. The remainder of this paper is a product of our initial work on representative encyclopaedist texts.

3. Encyclopaedist rivalry

Highlighting the obvious differences between the French Encyclopaedists and Coleridge's English reaction to them sets the stage for looking at their startling similarities in relation to classification. Three areas are sufficient to demonstrate differences between these two schools: their purposes, their historical grounding, and Coleridge's views on the French Encyclopaedists.

3.1 Purpose in encyclopaedism

The Encyclopaedists led by Diderot and d'Alembert created their Encyclopédie as a voice of reason denouncing the French crown and church. Their idealistic mission was: "to collect all knowledge ... to present its general outlines ... that our children, by becoming more educated, may at the same time become more virtuous and happier ..." (Diderot, 1751, p 92). They saw the corruption of crown and church as antithetical to reason and to the project of an enlightened populace as Diderot noted in his Encyclopédie entry on Consecrated Bread: "We are astonished that there is so much misery around us; and I for one, when I see all our extravagance and folly, am even more astonished that there does not exist much
more” (1751, p. 79). Statements like Diderot’s in his entry for Political Authority — "No man has received from nature the right to command others" (1751, p. 185) — are indicative of the subversive intent of this work. Such comments are common in most of the contributions to the Encyclopédie, illustrating the goal of Diderot and his colleagues to establish a reign of enlightened reason in place of the dominance of the church and the divine right of kings.

Early in the following century, Coleridge proposed his Encyclopedia Metropolitana. His focus was on “the vivifying power of Method” as he described in his Treatise on Method (1818, p. 53), one of the few parts of his endeavour to be published. Coleridge deplored the “worse than immethodical” attempts of his continental predecessors. Alluding to the Encyclopédie, Coleridge laments the lack of logic in the arrangement of such works, a shortcoming to be remedied by application of method with the primary purpose of being “to the rising education of the country at once a reservoir and a fountain.” (1849, p. 72). Coleridge describes how “the fountains of education may be poisoned ... (through the) insinuation of sceptical principles into Works of Science ...” (1818, p. 52) by the French. In a sermon, Coleridge accuses them:

it seems to have been about the middle of the last century, under the influence of Voltaire, D'Alembert, Diderot, say generally of the so-called Encyclopedists, and alas! — of their crowned proselytes and disciples, Frederick, Joseph and Catherine, — that the human understanding, and this too in the narrowest form was tempted to throw off all show of reverence to the spiritual and even to the moral powers and impulses of the soul; usurping the name of reason, openly joined the banner of Anti-Christ, at once the pander and the prostitute of sensuality, and whether in the cabinet, laboratory, the dissecting-room or the brothel, alike busy in the schemes of vice and irreligion” (1938, p. 109)

Coleridge articulated the differences between his view and that of the French Encyclopaedists. He believed “that reason is the knowledge of the laws of the whole,” a higher faculty than understanding, which is merely the result of observation (1938, p. 106). He links reason to the divine so the French Encyclopaedists, as bearers of the banner of the Anti-Christ, cannot possibly be genuine followers of reason, but only practitioners of a shallow empirical understanding. Coleridge filtered their critiques of crown and church were through the intervening horrors of the French Revolution. They lived in entirely different political and religious times.

3.2 Historical grounding

The French Encyclopaedists, acolytes of enlightenment, found their historical grounding in the European Renaissance. D’Alembert, in his Preliminary Discourse describes the Middle Ages when classical texts were available only in limited and often inaccurate form:

The masterpieces that the ancients left us in almost all genres were forgotten for twelve centuries. The principles of the sciences and the arts were lost, because the beautiful and the true, which seem to show themselves everywhere to men, are hardly noticed unless men are already apprised of them. Not that these unfortunate times were less fertile than others in rare geniuses; Nature is always the same. But what could these great men do, scattered as they always are, from place to place, occupied with different purposes, and left to their solitary enlightenment with no cultivation of their abilities? (1751, p. 61)
D'Alembert views the reintroduction of classical texts to Europe that spawned the Renaissance as the dawn of enlightenment: "On emerging from barbarism, the human mind found itself in a sort of infancy. It was eager to accumulate ideas, but incapable at first of acquiring those of a higher order because of the kind of sluggishness in which the faculties of the soul had for so long a time been sunk" (1751, p. 63). He tracks European thought following the Renaissance thinker Francis Bacon's three stages of human development: memory, reason and imagination. D'Alembert and his colleagues took Bacon as the source of their classification and the basis of their view of history and development. Like so many thinkers of the European 18th-century Enlightenment, they were grounded in classicism, especially as introduced by the Renaissance.

Coleridge, however, regretted the loss of medieval order. He valued the classification of liberal arts and sciences of the trivium (grammar, dialectic, rhetoric) and quadrivium (arithmetic, geometry, astronomy, music) leading to the crowning study of theology in medieval Scholastic education: "the SCIENCE of Theology was the root and trunk of the knowledges that civilized man, because it gave unity and the circulating sap of life to all other sciences, by virtue of which alone they could be contemplated as forming collectively the living tree of knowledge" (1938, p. 167). He explained in his prospectus and preface to the *Encyclopedia Metropolitana* that the liberal arts and sciences gave method to knowledge organization (1818, pp. 71-72). The trivium and quadrivium were the basis for definition of disciplines as developed in the medieval university by the Scholastics, medieval scholars focused on method. Coleridge's own focus on method makes this link unsurprising. D'Alembert, on the other hand, said the Scholastics "mistook for the true philosophy of the ancients a barbarous tradition which disfigured it" (1751, p. 62).

Coleridge and the French Encyclopaedists seem leagues apart.

4. Classificatory commonality

However, both D'Alembert and Coleridge assume that a unified circle of knowledge is not only possible, it is desirable. D'Alembert writes characteristically about the ideal of a unified view of knowledge: "The mind acquires reflective knowledge by making use of direct knowledge, unifying and combining it" (1751, p. 6). Here unification is through logic: "[t]he discovery of truth, which is the aim of Logic, produces the art of transmitting it to others" (1751, p. 54). Logic is used to bring reflective knowledge, the fruits of empirical observation, to an understanding of a unified view. Coleridge is similar in his quest for a "universal Method, by which every step in our progress through the whole circle of Art and Science should be directed" (1818, pp. 2-3). This universal structure of knowledge presumes three attributes: mutually exclusive categories, teleological progression, and the primacy of hierarchy (Olson, 1999).

4.1 Mutual exclusivity

D'Alembert introduces, in the *Preliminary Discourse*, the concept of "impenetrability" which is a variation on the idea of mutually exclusive categories:

In our study of Nature ... we note that bodies have a large number of properties. However, in most cases they are so closely united in the same subject that, in order to study each of them more thoroughly, we are obliged to
consider them separately. Through this operation of our intelligence we soon discover properties which seem to belong to all bodies, such as the faculty of movement or of remaining at rest, and the faculty of communicating movement, which are the sources of the principal changes we observe in Nature. By examining these properties – above all the last one – with the aid of our own senses, we soon discover another property upon which all of these depend: impenetrability, which is to say, that specific force by virtue of which each body excludes all others from the place it occupies, so that when two bodies are put together as closely as possible, they can never occupy a space smaller than the one they filled separately. (1751, pp. 16-17)

Impenetrability carves up space, physical or intellectual, into mutually exclusive categories.

Coleridge lays the basis for mutually exclusive categories by differentiating between law and theory as the 'uniting' and 'progressive' powers of method. Law is, for Coleridge, “a rule to which the subjects of the Law must necessarily conform” (1818, p. 4). Law is the unifying factor. The progressive factor is “THEORY, that in which the existing forms and qualities of objects ... suggest a given arrangement of them to the Mind ...” (1818, p. 4). Law, like Coleridge's view of Reason, is linked to the “absolute perfection conceivable only of God” (1818, p. 4). Theory is of a “second order of relations” (1818, p. 58). Mutually exclusive categories begin with pure sciences (based on Law and reason) versus mixed sciences (based on theory and the mind) (1818, p. 58).

D'Alembert and Coleridge, through impenetrability and the distinction between law and theory, each set up the incompatible differences that construct mutually exclusive categories.

4.2 Teleology

Both D'Alembert and Coleridge exhibit teleology in two senses: progress in human culture and the logical progression of topics in classification. D'Alembert states that efforts at self-preservation caused humanity “to make some progress along the path of knowledge” (1751, p. 15). He develops this through a hypothetical description of motives. Logic, the “science of reasoning, which is rightly considered the key to all our knowledge” was a product of this progress(1751, p. 30). Coleridge took a similar view: “As in the individual, so in the whole community of Mankind, our cogitations have an infancy of aimless activity; and a youth of education and advance towards order; and an opening manhood, of high hopes and expectations; and a settled, staid, and sober middle age, of ripened and deliberate judgment” (1818, p. 47).

The development of thought and knowledge leads logically for both D'Alembert and Coleridge to the appropriate order of classification. D'Alembert largely follows Bacon by adopting the three main branches of Memory/History, Reason/Philosophy and Imagination/Art. Within each of these branches, subdivisions are developed in a logical progression:

The general distribution of beings into spiritual and material provides a subdivision of the three general branches. History and Philosophy are occupied with each of these two kinds of beings, while imagination deals only with purely material beings... At the head of the spiritual beings is God, who necessarily holds the first rank ... Below that Supreme Being are the created spiritual beings whose existence is taught us by Revelation. Next comes man. Composed of two principles, he belongs by virtue of his soul to the spiritual
beings and by virtue of his body to the material world. And finally comes that vast universe which we call the corporeal world, or Nature. (1751, p. 52)

Coleridge works through a list of disciplines clearly representing the legacy of the Scholastics in his explanation of “the Arts and Sciences in their Philosophical harmony” (1818, p. 55) as he works methodically from grammar leading to logic leading to mathematics and so forth to “the great Cause of all” (1818, p. 55) “for at the head of all Pure Science stands Theology” (1818, p. 57).

4.3 Hierarchy

These teleological chains of topics lead seemingly ineluctably to hierarchy: We have shown that this METHOD consists in placing one or more particular things or notions, in subordination, either to a preconceived universal Idea, or to some lower form of the latter; some class, order, genus, or species, each of which derives its intellectual significancy, and scientific worth, from being an ascending step toward the universal; from being its representative, or temporary substitute. Without this master-thought, therefore, there can be no true Method; and according as the general conception more or less clearly manifests itself throughout all the particulars, as their connective and bond of unity: according as the light of the Idea is freely diffused through, and completely illumines, the aggregate mass, the Method is more or less perfect.” (Coleridge 1818, p. 54)

Hierarchy is the result of nesting subordinate topics under superior ones — class, order, genus, species — just as above d’Alembert pursued subdivision of Bacon’s three main classes by spiritual and material and then by rank similar to the Great Chain of Being extending from God to Nature. D’Alembert uses the image of a tree of knowledge with its branches constantly dividing into more specific topics as does Coleridge when speaking of “the subordination which necessarily arises among the different branches of Knowledge, according to the difference of those Ideas by which they are initiated and directed; for there is a gradation of Ideas, as of ranks in a well-ordered State, or of commands in a well-regulated army ...” (1818, p. 9).

The development of a hierarchy is not, however, simply a matter of division. It is also a function of reduction, a reversal of division and mirroring induction. The particular leaves and branches of the tree lead to the unity of the trunk:

... it is not at all by vague and arbitrary hypotheses that we can hope to know nature; it is by thoughtful study of phenomena, by the comparisons we make among them, by the art of reducing, as much as that may be possible, a large number of phenomena to a single one that can be regarded as their principle. Indeed, the more one reduces the number of principles of a science, the more one gives them scope, and since the object of a science is necessarily fixed, the principles applied to that object will be so much the more fertile as they are fewer in number. This reduction which, moreover, makes them easier to understand, constitutes the true "systematic spirit." (d’Alembert, 1751, p. 22)

Coleridge concurs when he says that the task of his Encyclopaedia Metropolitana follows “the principles of unity and compression” (1818, p. 54). An arbitrary arrangement, such as an alphabetical one, is one in which “the desired information is divided into innumerable fragments ... like a mirror broken on the ground presenting, instead of one, a thousand images, but none entire ...” (1818, p. 66). It is the focusing capabilities of hierarchical organization that compresses and reduces the fragments into the generalized truth of a law.
5. Illusory universality

In spite of their differences, d'Alembert and Coleridge base their encyclopaedic efforts to organize knowledge on the same three classificatory principles of mutually exclusive categories, teleology and hierarchy. In doing so they draw from the different traditions of the medieval Scholastics and the classical revival of the Renaissance. The similarities in fundamental presumptions indicate the potential for these three classificatory principles to be universal. However, there are other factors that suggest they may be culturally specific to western thought.

The most obvious indicators of cultural specificity are comments on other cultures. Coleridge is frank in such matters. He imagines "an unlettered African, or rude, but musing Indian, poring over an illuminated manuscript of the inspired volume; with vague, yet deep impression, that his fates and fortunes are, in some unknown manner, connected with its contents" (1818, p. 52). Coleridge goes on to suggest that this African or Indian might well sort out the concepts, but, because the result is "without soul or substance, a talisman of superstition" it will lead only to death or vanity (1818, p. 51). "But see, the friendly missionary arrives!" translating and explaining, with enlightenment as the result (1818, p. 52). For Coleridge's the African or Indian cannot attain enlightenment, because Method is required for infinite progression (1818, p. 7).

D'Alembert is more subtle in his view of other cultures. He does not specifically state an intolerance. Diderot writes against intolerance in his Encyclopédie on that topic (1751, pp. 152-156). However, the implication is still there in expressions on progress. D'Alembert gives considerable space in the Preliminary Discourse to the development of rational thought. He explains how self-preservation naturally leads to ethics and ethics to reason. The implication of this progression is that any cultures that do not adopt the same logic are not fully developed.

Teleology, in the sense of progression towards a goal, suggests that there is some end toward which societies or cultures are progressing. Hierarchy validates both the notion of superiority and that of reduction of differences to some universal truth. Both teleology and hierarchy tend toward universality. Teleology, as developed by both d'Alembert and Coleridge, suggests that there is a universal goal: reason (or logic). Hierarchy, especially in its tendency to reductionism, focuses differences into some unity — some grand category of truth.

Homi Bhabha defines "cultural difference" as "the process of the enunciation of culture as 'knowledgeable', authoritative, adequate to the construction of systems of cultural identification" (1994, p. 34). The alternative is homogenization. Teleology and hierarchy, and their necessary precursor mutual exclusivity, suggest that universality is the goal as well as the method. The result is that cultures not characterized by these principles are not able to have knowledge, are not authoritative and lack identity. "The concept of cultural difference focuses on the problem of the ambivalence of cultural authority: the attempt to dominate in the name of a cultural supremacy which is itself produced only in the moment of differentiation." (1994, p. 34) Implementation of supremacy found in the hierarchies created to focus truth down to great universalities instead of broken fragments, denies differentiation. These two variant strains of encyclopaedism grow from the same genetic sources. They are integral parts of western culture. Their differences are superficial so that ultimately they present a united identity. If the classificatory principles of mutually exclusive categories, teleology and hierarchy
are allowed to engross classificatory practice, the result is a homogeneity that
denies difference and identity. Drawing boundaries between topics, sequencing
them in a culturally defined stream (such as Bacon’s three main classes) and
subsuming some under others has the potential to erase cultural identity, especially
for cultures that foster the lateral and/or cyclical integration of overlapping or
porous concepts (see Olson, 2000).

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