

# Continuum mechanics and memory banks: (2) The making of culture

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Between 1975 and 1988 Frank Upward worked as an archivist, data manager, information manager and recordkeeping systems analyst in government positions and as a consultant. From 1988 until 2004 he lectured within archives, records, information management, and knowledge management specialisations at Monash University. He is now semi-retired but still does some lecturing, consulting and writing. As an academic he is best known for his work on accountability and recordkeeping in the early 1990s (with Sue McKemish and Livia Iacovino) and as a records continuum theorist whose model of the records continuum is used by teachers and practitioners worldwide.

*The first part of this article explored structuration theory for archivists. It attempted to impose a process-based construct that can help explain archivists as recordkeeping professionals, and then without losing the established topology,<sup>1</sup> explain them as information managers (as managers of memory storage), as publishers (as providers of public access to recorded information including, in modern professional terms, as website managers), and as data managers (as ongoing maintainers of data about records). This article will extend the topology by looking at archivists as museum curators or as they are called here in one place without the least bit of intentional irony, cultural enshrinement officers. In outlining a Cultural Heritage Continuum Model I have given a brief overview of the modelling process so if anyone wants to fill gaps (such as the gap in respect of hermeneutics) they will have some idea of how they might do so. The article will conclude with a few brief but heavily academic comments on the cognate disciplines approach that has been presented across the two parts. I have also included three attachments. Two of them indicate how the models, particularly the one discussed in this part, can be*

*used as a tool for focusing discussion. A third attachment, authored by Katherine Gallen<sup>2</sup> within postgraduate course work, uses the first two attachments, extending the indicative illustration of the use of the model discussed in this article.*

### **Memory – a postscript and prescript**

In the title of both parts of this article the word memory appears, although the discussion of it is hardly intense. Archivists are more concerned with memory's crutch, recorded information, than memory itself. It is only when stored in recoded form that the plurality of collective memory or the totality of individual, corporate or community memory starts to take on some form of concreteness, something manageable. Otherwise it is a spacetime distancing phenomenon, an abstraction, or it is a component of the psyche that we carry forward with us.

Rather than kick around the word memory, then, the first part of this article spreads the stress of the management of memory's manifestation, recorded information, across a range of topological models. Continuum mechanics is a phrase used regularly to indicate the spreading of stress in engineering projects but there is nothing isolated to one discipline about the notion. Placing too much emphasis upon anything, including a word like memory, is a recipe for collapse. Modern management techniques these days, for example, emphasise stress-spreading approaches within techniques such as those for risk management analysis or project team operation. The book *Archives: Recordkeeping in Society*<sup>3</sup> shows a stress-spreading method for recorded information in embryonic form. It is obviously not accidental that in the opening chapter (and in her writings elsewhere) Sue McKemmish explores trace, evidence and memory in documents, records, the archive and archives within a continuum topology in which they become part of a single construct with diffractable meanings. When Sue and other authors begin to tease out these relationships in later chapters (particularly 4 to 7) this paradigm is fully tested and the different ways stress can be spread across recordkeeping and archiving processes start to become identifiable.

Memory, like any term in a continuum, is a term best discussed relationally. If too much weight is placed on it we should expect it to creak, groan, and then collapse. Put the spotlight on it and like a fox or rabbit, it will freeze up. Within a continuum approach it is just one logos amongst many. In extending the continuum models one is automatically extending the analysis of relationships between memory and other points in continua, other logos. But where does this fit with notions of cultural heritage? Is another model needed to spread the weight of continuum arguments still further? Can the spacetime logic of the shape of the other models (built out of the relationship between a range of processes and their objects) be applied to cultural heritage as an active process? The next section will explore the construction of a continuum tool for the spacetime examination of memory as part of the process of cultural making.

### Constructing a Cultural Heritage Continuum Model

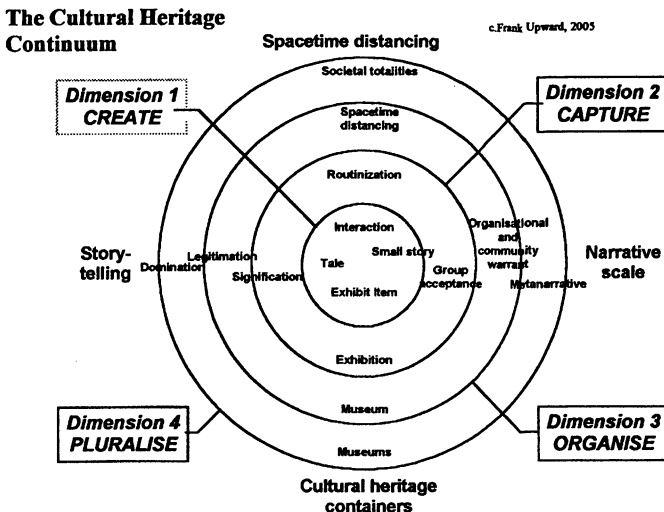
*In this section I want to take the reader through the construction of a Cultural Heritage Continuum Model (CHCM). Most of the words that follow were written during the construction and testing processes.*

A possible starting point for a spacetime distancing template for cultural heritage would be the word museum which conveys the enshrinement of a host of arts and sciences. The choice of a word that conveys the enshrinement of objects suits the information processing rhythm since this requires active creation, capture, organisation and pluralisation processes if the reverential status of the object is to be carried along or across spacetime. The word museum also contains an apt reference to the continuum of content. Its own continuum of meaning (in the elemental sense of continuity) ripples out with increasing complexity from a temple with many goddesses into its current multiplicity of manifestations of shrines to the arts, sciences and the diversity of knowledge.<sup>4</sup>

The next step, having chosen a key word, is to earth the model, tying it in to some sort of concrete particular to keep it grounded in observable

realities. The records continuum model, for example, is earthed by the recordkeeping containers continuum. What sort of things, in the logic of the chosen word museum, would we hold in front of us and say this thing is a *container of cultural heritage*? In the area of immediate interaction with us there is the *exhibit item* itself, the very thing we are viewing. That item is usually captured within an *exhibition*. The larger spacetime distancing framework for an exhibition, its container, is the starting word *museum* bearing in mind that this is a topological description, part of a template for analysis, not a museum in any single manifestation (so forget your own preconceptions about the word if you have any and think about it as a descriptor for something in any place or any era). Beyond that the modelling is even easier. Turn the spacetime distancing processes of the continuum into a plurality by adding 's' to museum.<sup>5</sup> For archivists struggling with or against the terms I am using in this continuum I would point out that for us the exhibit item is not just in the display case in an archive. The cultural exhibit is also there in the files and any other items found in an archive once we choose to highlight them (and at the most basic level simply placing them on a researcher's desk in a reference room is one of many possible highlighting processes that archivists undertake on a daily basis).

Figure 1.



Sociological views need to be present within a cultural heritage model and Giddens's time-space distanciation approach outlined in 'Part 1' is adequate in continuum terms and can be represented in a template by four words or phrases: *interaction*, *routinisation*, *spacetime distancing*, and *societal totalisation*.<sup>6</sup> All of these terms represent key processes involved in the cultural enshrinement of anything. Accordingly I would make them components of the prime position continuum. Prime may seem a strange word to use but, just as in recordkeeping the logical object of the exercise is the formation of evidence (the upper axis of the records continuum model), the logical object in a cultural formation model is time-space distanciation. [Consider, for example, how much effort cultural warriors in modern societies spend trying to get their tales routinised, spread in spacetime and accepted at the furthest reaches of totalisation they can manage.] In giving the physical object such as the recordkeeping containers in the records continuum model or the exhibit item in this one a subordinate position the models concur with a the idea that there is a need for archivists to put 'mind over matter'<sup>7</sup> although of course, as suggested above, the matter axis is also an anchoring one, grounding activities.

If the model is going to help manage the continuum of content (in conjunction with the expanding raft of models) it has to have an identifiable knowledge-based granularity. The information process continuum – creation, capture, organisation and pluralisation – helps provide this unity between process and object but the process aspect of the relationship [in all the models] is extended across the horizontal axes. Cultural heritage is based on storytelling over spacetime so that is where I would look to find the grains of any adequate heritage analysis. Even the most humble of files tells us a story about action. Simply by being part of the ongoing construction and transmission of files of recorded information in spacetime recordkeepers are remembrancers of the stories the files tell. Perhaps this is part of an identifiable grain? One starting point of interaction is the *tale* itself. From this point on, there is the spacetime distancing processes by which stories are disembedded and carried through spacetime within different cultures. It can be argued that tales are captured when they are given *signification* by groups that hear them and repeat them or bow to the authority of the storyteller. Beyond signification there is *legitimation* by communities, organisations or within an individual's mind, giving the story some

breadth by its distancing spatially, temporally, or more strictly in the nature of the movement of time in a continuum, both simultaneously. In the plural domain there is a plethora of tales some in harmony and some in competition seeking, in a heritage model, cultural authority, or in Giddens's theories, *domination*.<sup>8</sup>

As indicated in the discussion of the information continuum in 'Part 1' anyone involved in the storage of information can find themselves in cultural battles, but this model should be starting to give us a sense of why such battles occur. In the archival arena the battles might sometimes be about the control of particular stories (through signification, legitimation and domination) such as those contained in the term 'the Stolen Generation'. The very phrase itself is a controlling one. The perennial cultural battles of the archivist will be of this ilk, relating to fundamental issues of historical accountability in any era or place. The battles will also be ethical and internal in that they set up issues that archivists have to resolve within their own actions.

The storytelling continuum needs to be able to be folded against something (in the manner of other models) to make the grain identifiable. The most obvious to me is a continuum that deals with the stories' narrative scale. Who is telling it? How do groups build it up? To what extent is it embraced by 'whole' entities? How does it fit within the totality – is it one of many stories or does it purport to be a metanarrative? This continuum would start with the *small story*: the story that is competing for attention with many other stories. The next two points in a narrative continuum are probably *group acceptance* (capture), and *organisational and communal adoption*. Finally in the plural domain, a tale can end up posing as a *metanarrative*, competing with other metanarratives for cultural domination in the manner of Marxism, Anthony Giddens' structuration theory, various religions, archival provenance theory, or spacetime continuum theory itself.

With a template like this fleshed out I imagine (perhaps foolishly) that it will be possible for students and practitioners to easily understand the significance and nature of debates about whether metanarratives actually exist in our age, or whether we live in an era of small stories. In drawing up the models there is usually a hidden but significant academic debate being kept in mind but the hope is that discussions connected to that debate can be held independently of its history by means of the model. The aim is to raise such complex debates in ways that enable

archivists, other information professionals and tyros to bring to bear their own understandings without the tyranny of the teacher or modeller intruding (perhaps inevitably I do intrude, but not in the models which consciously have this topological language game element to them which can enable such intrusion to be cancelled out by the mapping of other intrusions). This is activity-based theorising and the teaching hope is to leave those who engage with the models on their own land, rather than wandering around without a compass in the vast continuum of content that debates like this one raise.

This model has been tested out with students who have used it successfully as an aid within projects of their own choosing (See Attachments 1 to 3). Suggestions have been made by them including one critique pointing to the need to include references to interpretation and meaning within any cultural heritage model. This is an area of academic discourse (hermeneutics) that the model neglects. One can define culture as a system of shared meaning which can distinguish communities from other communities and organisations from other organisations. But how do people get to have shared meanings, surely an important part of cultural making? The model does not deal well with how we understand words and stories, as distinct from the sociological emphasis upon how they take hold amongst groups and are spread by them. Perhaps there is a model still to be drawn, one which can be applied laterally across all the other models. It will be anchored in text. It will, purposively, relate to interpretation. These would be the bases of the vertical axes, but what are its 'horizontal' axes (its areas of specialisation) if any?

Like all the models this one conveys a diagonal approach to analysis taking account of joint spatial and temporal spread. It deals with the making of culture in and through eras rather than its ossification in a present one and for those of us who accept that story-telling points to an adequate form of granular analysis of this process the model is useable (a goal of any continuum theorising is adequacy as mentioned in 'Part 1', usability is a goal of activity based theorising). For archivists the cultural heritage continuum even in the above story-telling version can provide a working model for archivists as cultural enshrinement officers, doing so in a format that enables cross references to the other facets of memory formation set out in 'Part 1' of this article.

As with all the other models set out here in 'Part 2' I have kept the description of the CHCM relatively short (relative to the many things that could be written about it). My concern is with the various terms in all the models as building blocks for thinking and operating. Specific meanings and understandings of them will vary from time to time and place to place. The less said the more chance there is that their topology not typography can be seen and used by others.

## **Conclusion (to Parts 1 and 2)**

A series of related attachments to this article addresses the use of the topology of the models in document system design projects and extends the discussion of the cultural heritage model in particular. However, I should make some attempt to conclude with a view across the two parts. Continuum mechanics for memory bank technicians clearly has many facets to it and I have been exploring some of them. In what follows I will just present brief synopses of thinking which is not necessarily formally expressed in the explorations, but is present underneath what has been written.

*Situated analysis:* Using the models we can conduct a range of separate or interconnected analyses from overviews of different sites, including the four regions of spacetime distancing and the granularity of five different information based pursuits. To help with this there is now a clear exposition of the elements of the spacetime distancing form of situated analysis in *Archives: Recordkeeping in Society*, chapters 4 to 7. This two part article uses the topology established in detail in the book to re-focus the paradigm shift on to spacetime distancing processes across five facets of recorded information, not just the recordkeeping facet, while not losing contact with the archival homeland represented by intertwined recordkeeping and archiving processes.

*A topology for a twenty-first century form of diplomatics:* Obviously there is an ambitious agenda in these models. The topological approach in the records continuum model provided an 'any place-any era' approach to the situated analysis of document, record, archive and archives systems and the thinking and practices that surround them. As such it offered a new form of diplomatics, one which is document concentric rather than document centric. In this form the model established a non-linear, unbounded approach which connects



recordkeeping and archiving processes to recordkeeping objects, replacing the linear and bounded separations between diplomatics and archival science that modern archivists have created. This two part article extends this new view of diplomatics in multi-polar fashion.

*Two-way view of cultural making:* This part of the article has added a model which provides a two-way view of cultural making. In one view there is the making of the views of cognate professionals. Each of the models represents a cognate information professional culture – including that of web publisher which I forgot to specify in ‘Part 1’ – and each professional culture is shaped by the processes represented in the cultural heritage continuum as my review of the Museum of Computer History at Monash (see Attachment 1) attempted to illustrate. The phalanx of models also begins to build into an overview of how culture is shaped by recorded information (although as noted above there are still some absences here such as how to treat hermeneutics).<sup>10</sup> Also each of the models, because of its combination of object and process views, represents a perspective on different cultures – with the result that the two way view of the CHCM becomes a multiple view.

*Linear yet non-linear, bounded yet unbounded:* The information processing continuum explained in ‘Part 1’ provides a consistent base across the various models and is non-linear and unbounded. The circular lines in the models represent thresholds that may or may not have been crossed and which can be uncrossed. An inward reading of the model indicates the influence of purpose and function on our actions in any situation. When read outwardly however the models can be used to see our linear and bounded processes and thinking in operation.

*A base for critiquing artificial separations and divisions, yet retention of respect for the significance and depth of specialisations:* The models can be used to draw attention to that which is silly in our professional cultures. The notion that documents are unstructured which appears in some information systems textbooks is one example; another example is the notion amongst some continuum archivists in Australia that there can be a linear progression from documents to archives rather than a series of thresholds that may or may not be crossed. The specialisations, and the granularity of analysis they represent, however, are respected in the models. The aim is to establish a ‘horizontal’ approach to analysis where one can view the ground cover using the five models without losing contact with the specialisations underneath the cover or

conversely getting locked forever in the depths of the mine shafts those specialisations create.

*In relation to discursive practice (the way archivists discuss what they do) the array of models provides an entry into cognate disciplines and their arcane complexities:* The models suggest a very basic strategy for managing the continuum of content. The continuum of content problem in discourse is the reverse of the mine-shaft one. There are so many relationships, so many cross connections that can be made in discourse that it is easy to become directionless. For archivists, the starting point for entry into this complexity is still provenance, the basic frame of reference used in the records continuum model. The archival grain (however it is modelled) can give traction to what archivists can say and do as archivists. It is a way of looking at recorded information for which archivists can claim stewardship. Once we get our bearings we can enter the traffic and negotiate the different directions entailed in managing recorded information in a multi-polar manner drawing upon other discursive and non-discursive practices. It also saves the 'recordkeeping archivist' (the description some continuum archivists give to themselves) from being over centred on records as the object of their endeavour. It makes it easier to see the archivist not only as an archivist, a devotee of the archival grain, but at times as an information manager, access provider including in our era web publisher, system analyst, and – please – someone who is interested in assisting records to play a continuing role in cultural formation.

*No false unities:* Underneath the various models there are unities that in fact do not exist. In the area of recordkeeping, for example, provenance as theory and practice can be used to set up logical overviews, but underneath that there is certainly no professional unity of thought and operation outside of specific places and times. There never has been and never will be. The models strive to offer a form of unity which, unlike many of our past unifying theories, is not a fraudulent or artificial way of bringing things together. Yet paralogically there is an abiding logical unity at the level of action. Cognate information based specialisations are all shaped by the way they handle the information processing continuum of creation, capture, organisation and pluralisation. They all have to cope with a region of action, a region where action is disembedded into recorded information, a region where we organise that recorded information for carriage across or through

spacetime, and a plural region where our organised totalities or fragments thereof compete for attention. At process level, however, (the details of action) they have developed their own granularity, a notion which in itself belongs to a perplexing category of unifying theory – those postmodern theories that argue that unity in our era is defined precisely by diversity. We all have to cope with difference.

*A multi-polar approach to access gets well beyond the simplistic (and pathetically inadequate) binary opposition between privacy and freedom of information in society:* As was argued at the end of 'Part 1', one of the most pressing problems for all of us in the twenty-first century will be to develop concepts of access and closure that truly serve justice. Popular current understandings of the relationship between these terms (the black and white views of access and closure) are nothing short of grotesque. We need to promote more sophisticated ways of thinking about access and the multipolar approach to information provision with its various forms of 'cognate' granularity operating within an overarching logical unity can be part of that greater sophistication. The sorts of things that need to be considered if there is going to be equitable forms of access serving justice include considerations such as:

- How we record 'who did what' which is itself a question that raises fundamental issues about the nature of recordkeeping evidence and memory.
- How we classify what is being/was done and what technologies should be/are/were used to store recorded information raising questions about the management of collective memory as it exists in this information, and the way we structure actions and the way actions structure future actions and structures.
- How we issue material, its reach, the experiences it contains, and the physical storage of the communication.
- How we model data and connect its flow, building it into data stores and using information systems as a power source.
- How we highlight or present the stories told by the recordkeeping objects we manage.

*Knowledge formation:* Beyond the archival profession the suite of models provide a phalanx of analytical tools for understanding

knowledge formation processes, but that use of the models is fanciful. Perhaps one day it will be part of many routine understandings to acknowledge that spacetime distancing is a key concept in knowledge management? We can legitimately dream of Utopian outcomes, however, while working to give some archival perspectives to knowledge management as an emerging area of discourse.

*Memory:* The full suite of models extends the relational approaches that one can take to memory. It opens up ways of thinking and discussing things that can be fresh and useful. Fundamentally, however, archivists are concerned with memory as it exists in recorded information and we should not allow any fancies, including those that might be provoked by these models, to distract us too much from this.

All this modelling, like much adequate theorising, merely drives us to the wall.<sup>11</sup> The postcustodial future of archivists will be within 'use-case' approaches to archives systems not any single over-arching strategy and each use-case will enable us to explore the information processing continuum of creation capture organisation and pluralisation and add to our understanding of it. Researchers and theorists, however, can only take things so far. It will take practice and practitioners to penetrate our custodial walls within postcustodial systems. The continuum models – although generally useful as a means of analysing any activities undertaken by archivists – can help in this process and in the ongoing design, management and maintenance of systems for intertwined recordkeeping and archiving processes in an era when within the logic of some systems the walls of the archives will have disappeared.

The cultural-making model has a particularly important role in this respect and in order to return to the emphasis in this part, the exploration of cultural making, I want to tell a story which refers to a joke form with which some cultures will be familiar. A systems analyst, an information manager, an archivist, a museum curator and a web publisher walked into a bar. 'Would you design me a decent postcustodial archiving system for my business?' asked the barman... . Normally stories that begin this way end up as cultural heritage jokes. Let us hope the stories we tell about the continuum have better endings than this and lead to the development of systems that both protect cultural heritage and overcome it. In the attachments that follow I indicate how in project work the models can be used within use-case approaches in ways that

are meant to open up discussion across groups of students with diverse backgrounds.

## Endnotes

1 Topological modelling is explained elsewhere including in 'Part 1' of this article.

2 Katherine Gallen is the Editor of *Archives and Manuscripts*. In this instance, Glenda Acland has edited the content of this article and the Attachments herein.

3 Sue McKemmish, Michael Piggott, Barbara Reed and Frank Upward (editors), *Archives: Recordkeeping in Society*, Centre for Information Studies, Wagga Wagga, 2005.

4 My use of the word enshrinement is not ironic. The temple image is a constant amongst archivists, museum curators and libraries, with the most widely known archivist's example being the temple of Janus, a switching place on the path between the past and the future.

5 This 'concrete particulars' part of the model construction has always been easy enough, and seems a little banal like a lot of topological representations. I take this banality as a good sign, not a bad one. The banality I think disappears once you begin to use the model and look at the richness of human usage of the terms. The concrete particulars enable an object/process orientation to be discussed from the models, itself a philosophically complex task. This complex task is tackled in a still developing way in chapter 8 of *Archives: Recordkeeping in Society*, pp. 205-8.

6 In 'Part 1' of the article I made the point that time-space distanciation was Giddens's phrase and that it has more specificity of meaning than my term spacetime distancing but in this model – and only this model – I bow to Giddens and allow the term spacetime distancing to be pinned down to a locus in the third dimension.

7 For a discussion of this see Terry Cook, 'Mind Over Matter: Towards a New Theory of Archival Appraisal,' in *The Canadian Archival Imagination: Essays in Honour of Hugh Taylor*, ed. Barbara Craig (Ottawa: Association of Canadian Archivists, 1992), pp. 38-70.

8 Signification, legitimation and domination are Giddens influenced word choices and one can read a quality exposition of the terms in an information systems context in: Geoffrey Walsham, *Interpreting Information systems in Organisations*, John Wiley Series on Information, Chichester, 1993, p. 60ff.

9 The mechanics themselves, of course, do not have to be bothered with this style of thinking unless they are also continuum machinists, designers of recordkeeping and archiving systems. The difference between mechanics and machinists in this footnote is based on the way these words are used by Gilles

Deleuze. See Claire Colebrook, *Gilles Deleuze*, Routledge, London, 2002 p. 55-68 for a full and clear explanation of Deleuze's theory of machinic becoming.

10 This of course is also very ambitious but it has only emerged as such in my work as a result of the work some students produced on the cultural heritage continuum, surprising me with how rich their analyses can be.

11 From memory, I think the wall metaphor is derived from the writings of Gilles Deleuze but I cannot pin down the memory to a piece of recorded information.

## **Attachments**

From a teaching perspective the joke that ends the above article is not gratuitous. I have, for example, used all of these models in teaching an inter-disciplinary course on document management directed at what, in archival jargon, can be termed the 'postcustodial' archives. The models are connected to project work where students develop requirements for a system involving Web browser and Internet technologies. In using them this way I usually ask students to also use one of the models to produce a perspective report in which they should display an understanding of spacetime distancing processes. The following attachments are documents produced within this structure in first semester 2005 at Monash University and deal exclusively with models for which I hold copyright. The three attachments are:

1. Lecture note explaining the Cultural Heritage Continuum Model.
2. Lecture note broadly pointing to the relevance of the various models to Internet/Web browser document management projects.
3. A perspective report on the Cultural Heritage Continuum (by Katherine Gallen) which works out from the eBay auction system within the context of material not presented here, a larger document management systems project relating to the management of antiques.

### Attachment 1: The Cultural Heritage Continuum Model as a tool

[Part of a lecture note produced for students in 2005 by Frank Upward which might seem to be a review of the Monash Museum of Computing History but which is only the vehicle for the logical object which is to explain the Cultural Heritage Continuum Model.]

There is an understandable tendency of some readers to see models as abstractions, assessing them intellectually while questioning their practical – without actually trying to use them. Such a critique is the reverse of how activity based theorising of the type present in this article can be approached and the models can be used. In 'Part 1' I referred to the phrase 'make them dance' and anyone who tries to do this will gain a better and personalised understanding of them and their practical and conceptual strengths and weaknesses. I have never published lecture notes until now, but with students I try to give examples of the dancing and get them to take them out for a spin, as do others who have taught using the records or information continuum models including Sue McKemish, Livia Iacovino and Barbara Reed. My immediate practical use of the cultural model, as with all the models, was in teaching. I included it as one of a number of perspectives students could choose to report on as an adjunct to document management projects they were undertaking. As a guide to the model I presented a number of notes including one which is provided here in slightly edited form. It should be read as such, as a dance not as a review of the Monash Museum of Computer History.

... These notes are an indicator of what is meant by discussing 'grains' [in this case the cultural heritage grain to information systems] and, in 'Part 2', to provide an aid to thinking about just how dramatically the combination of Internet and Web browser technologies changes the way we can 'act' in the workplace ... One of the intriguing aspects of the Internet/Web technology nexus is its cultural effect and how all information systems and information management professionals need to take an innovative and imaginative approach to this.

... All I mean by it [the word culture], as an 'information professional', is the way systems try to cultivate and train their users and their memories. This 'enshrinement' process is part of the logos of culture that is an invariant. Through all the confusing, mangled, wise and strange uses of the term culture, this 'museum' approach is always able to be present (although it might be absent). It explains why I am interested [in this note] in museums and their display. My interest in much of their content varies, but the way exhibitions try to enshrine things points to aspects of information systems and their management that all aspiring information professionals can think about. All information objects can be an 'exhibit', a cultivation and training device. [For archivists this links in to documents as treasures and such devices as the cultivation role the USA national archives has given to the Declaration of Independence, but in a sense every item delivered by an archival system to a user is an 'exhibit'.]

The exhibition discussed in this note was set up in May 2005 at the Caulfield Campus of Monash University. It is called the Monash Museum of Computing History, and it is a great piece of work given all the spatial, budget and presentation limitations it operates within. It aims to give us a glimpse of computing history (that is all). How effective is the cultural heritage model as a tool for analysis? It seems to work in this instance. The cultural heritage grain deals with storytelling and with the scale of the story. The model also deals with the information objects as an exhibit, and with the spacetime distancing of the story. Using these elements one can give an overview of the exhibition.

[Students were doing projects and also perspective reports using any one of the continuum models and were advised for their perspective reports to start by running their eye around the perimeter of the model they would use and the major terms they would encounter there as well as think about the information process continuum of creation, capture, organisation and pluralisation. In what follows I do not get down into the information process continuum which was explained separately.]

If we look to the vertical continua of the model the *containers* are of the glass enclosure type with carded explanations. Everything seemed to be static with one exception – a video monitor displaying a film that over the three occasions I looked at the exhibition was working once ... The interactive element in terms of the model was, then, one where the



interaction is between the item being viewed and the viewer. It relies on conventions that we as viewers are familiar with. [In a lecture I asked whether there was anyone who had not encountered this approach. Not one student indicated that it was new to them]. The analysis of spacetime distancing is both simple and speculative. In an immediate sense you had to be there to see the display. The display has an unspecified duration and might never be re-constituted. But this was called a museum, not an exhibition, giving it a sense of greater permanence and breadth. The fact that the curators have squeezed it into a space between lecture theatres and the library indicates their mastery of scant resources, but is this the long-term home of the museum? This minimal crossing of *spacetime distancing* thresholds does not mean, however, that it is not already some partial crossing over into plurality. In some sense the exhibition already has to relate to societal totalities since it is viewable by students at Monash and our students come from many study based and ethnic backgrounds. Whether students will stop to view and interact with it is one question my model raises, and whether there would be anything that would raise religious or ethnic tensions is an equally significant question for Monash exhibitions, so societal totalities will influence the structuring of the exhibition.

The *storytelling* aspect of the exhibition depends a lot on the interaction with the viewer ... In my interactions I have identified what I see as two *metanarratives* and one major small story. The first metanarrative is related to the theme of 'computing through the ages'. The story it is telling is that today's 'digital age' has a lineage that traces back through computational devices. This is a metanarrative of generational change from early forms of computational device to whatever generation is current. Within this part of the museum the early material includes an abacus, a mechanical calculator dated to Leonardo De Vinci, early mainframe computers, mini computers, a portable Osborne Computer from the early 1980s ... The exhibit ends with a lounge room setting indicating just how widespread the application of digital technology can be. For me the one item that sparked my interest beyond low levels (apart from the sponsor's furniture) was the Osborne computer, because I had once owned one of them.

The second metanarrative was one that those who have gone through academic promotion processes will know well. It is a story about the

functionality of academics, split across brief accounts of the careers of three members of faculty staff, Cliff Bellamy, Andrew Prentice and Chris Wallace. I dwelt longer on and was more interested in this part of the exhibition. The selection of stories was careful. Cliff Bellamy, whom I knew, and Andrew Prentice and Chris Wallace, who I did not know, provide three different styles of faculty member that can be stereotypically represented behind glass much better than I imagined would be possible. Each display included some evocative artefacts and illustrations.

One, Cliff Bellamy, according to the story told on the cards, had come with the Ferranti Sirius supplied by IBM in 1962 to Monash University. He never left. He was the first head of the Monash Computer Centre and the first dean of the faculty of Computing. A photograph linked him to the University's first mini-computer in the 1970s and the theme of the account of his life was that he was a pioneer in developing a computer education faculty. Andrew Prentice and Chris Wallace were presented as two other much respected major types in academia (other than deans). Prentice, was portrayed as the scholar who swims against the tide in relation to particular sets of ideas and lives to see his eccentricities vindicated. Wallace was depicted as a master academic who wrote prolifically, encouraged good students to do very good thesis work and was an innovative teacher. This part of the exhibit tells its story so well that just looking at what was behind glass made me accept its validity. Particularly re-enforcing was the teaching tool Chris Wallace built, a device with a moving arm that his students had to program. Here was an imaginative action-based learning tool that combined research and education objectives in a seamless manner beyond the powers of most academics.

In between the stories of generational computer change and the functionality of University faculty members was the small story, that of Monash's first computer, Ferranti Sirius. Here was an early mainframe computer stripped down to its transistors, printed circuits and nickel delay lines and accompanied by the rolls of paper tape and associated hardware that were its constant companions [minus all the students that used to service it on a part time employment basis]. Here was a strong story ... of why in the 1960s we named an object as a computational one and why some forty years later the acceleration of change has been so massive that we can legitimately question whether

computational devices of this type (let alone the abacus) are really such a linear part of the history of our digital lounge room. To me something of major significance (document computing is the term I use) seems to be being put in the back seat and kept there.

[As a student pointed out to me in the lecture many devices in the exhibit did have a common feature, binary logic and its application to recorded information and this was present, albeit in understated form, in the exhibition. Another student raised the question of what we would call our 'computers' these days if we were free to choose a term that more adequately reflected the digital extension beyond narrow views of computation.]

In terms of testing out the Cultural Heritage Continuum Model as a tool for exploring cultural-making the exhibition gave me the feeling that the model is useful in analysing the topology (invariant nature) of cultural enshrinement. There is the metanarrative of generational change, albeit changes that can be so marked as to make some of us question its linearity. There is the clever method of portraying the sort of functions that academics undertake (administration, management, research, scholarship and teaching). And then there is the potential thwarter of the best laid plans of those who want to make a culture, and perhaps the highlight of any exhibition, the artefact that can almost nakedly tell its small story to us.

**Attachment 2: What about the various information profession 'grains'?**

This is part of a lecture note produced for students in 2005 by Frank Upward which was meant to help them prepare perspective reports within use-case projects. In full sized project groups [not all projects were full sized] six students would develop a systems prototype and/or pre-implementation report. In addition each student was required to prepare a report presenting a different perspective using one of the five models. In the projects they were required to attend to the overarching processing continuum model (creation, capture, organise, pluralise). The student would then have stewardship of an individual perspective within the project so an individual component of assessment could be introduced into the larger task. [The assignment, in other words, uses the action unity and logical differences in the manner indicated in the above article.] That larger task could of course involve archival systems. One student, for example, looked at an over-arching system for reception and Internet/Web-based communication of a particular category of business document that would be kept permanently and had been managed in her organisation over a long period of time and within many systems.

The USA-based systems analyst David Bearman once argued that recordkeeping systems can sit under information systems but here information systems (the exhibition is most definitely an information system even if it is not the sort of system dealt with in information system textbooks), information management, and publishing potential also sit under the exhibition as a cultural device.

I have no idea what information management tools were used to set up the exhibition, what records are being kept of it, or whether the objects on display can actually process data today (or whether they ever could).

In all these respects I have to take the curators on trust. Any thoughts about managing the exhibit on the Web beyond the physical location or recordkeeping are behind the scenes and no Web reference is given on any of the labels. All these things would have to be separately investigated to enter into an analysis. They are outside the enshrinement 'grain' within this exhibit's traditional approach.

But what if the exhibition is photographed and placed on a website in multimedia form? Can these other 'grains' come into play? Of course they can ... in what follows I will briefly ask you to think about this in relation to the museum ... If as a starting point you just run your eye around the outer listing of continua in the diagrams a sense of the extent of the change will be apparent. [The diagrams from 'Part 1' and 'Part 2' of this article were reproduced in the lecture note but have been left out in this version.] If you look at creation, capture, organisation and pluralisation processes after doing this you can think about whether in Web environments they are needed [in respect of any aspects of the various models], how to carry them out if needed, and what sequence if any they can occur in.

I will just present a few dot points for each model, starting with *the information continuum*.

- If you transfer the museum display onto a website the technology of information presentation has changed dramatically. Is the current format like cave paintings? [Think about the obvious parallel – cultural representations spread around walls.] On a website it can be multimedia. It is only feebly and ineffectively so at present (but is its passiveness right for what it is currently doing?)
- The storage/memory capacities relate to what is remembered in the exhibit and what goes into the memory of the viewer, and clearly this changes a lot on a website in terms of the amount of content that can be presented and linked, the way we interact with the exhibit and the totalities that can do the interacting (although at Monash University people from many different backgrounds and cultures are already present).
- The current action/structure relationship seems simple enough: A museum curator with a space to work with and

traditional stories in mind to tell. It may seem strange to use the word traditional for digital technology, but these are common stories if you work in an Information Technology faculty of a university. Page architecture design and use of metadata can attend to action/structure relationships but what is particularly significant about the use of an Internet approach is that the exhibition instead of being a single site exhibit could become part of a museum contributed to by all the partners changing the whole 'action/structure' components of museum building. Would the stories being told within the exhibits change?

The grain of *the records continuum* deals with identity, transactionality, (who did what) and the storage of evidence about this in recordkeeping containers.

- From a recordkeeping and accountability perspective the exhibition gives no real indication of who prepared it other than a vague agency title, The Museum of Computing History ... The museum lists its partners and sponsors on a board but how, if at all, did they contribute to the exhibition?
- There will be records behind the scene that convey some of this information and such information might be destroyed or retained in accordance with university records scheduling processes. Knowing how difficult it is for university records managers to control faculty disposal processes I can only express this tentatively. Does metadata for postings to a website make the accountability/disposal issues more controllable?
- What of records of transactions related to the exhibition? Again most of these might be maintained behind the scene, but this is not interactive so there will not be many of these types of records? Will, for example, adjustments to the displays be documented (the time-bound, redundant, non-manipulable view of records you met early in the course). Is it much easier to retain redundant Web-based information?
- Do you need evidence of related transactions? There is a film displayed on a video monitor accompanying Ferranti

Sirius ... Do we need records of its malfunctioning? Remember in your projects to think of business need. In this case you would not be bothered, but remember that the consistent and reliable operation of your information technologies can be necessary evidence at times. In relation to the continuing operation of websites, what information is already collected and collectable?

- But would you want to put the exhibition on to a website if you were the museum curator? Perhaps the real purpose of the museum is the one that everybody running a museum has to deal with, the need to make the sponsors happy, including those who pay for their employment. If so, on the Web the functional classification of academic life might be expanded upon within categories that look more fully at its components and the display could become part of staff induction processes and tutor training? Does this involve unwarranted intrusions on your freedom as a museum curator to tell the stories your way, or is it simply part of the constraints you operate under?

In relation to the *information systems (data) continuum*, some of you might be wondering what the difference between data storage and information storage is. The exhibition makes no real distinction (and in digital technology the lack of a distinction makes sense) but in the notes below I point to a distinction between the two. Does it make sense to you?

- In relation to data storage the story of Ferranti Sirius, Monash's first computer tells us much. It had a memory even smaller and worse than mine. It could remember 1,000 numbers or instructions but only while it was switched on. At least when I get up in the morning I still remember how to put my left foot in front of my right when walking (well so far I do). Switch Sirius off and its memory was lost, except in punch tape form.
- One student sent me an email saying she was so affected by this (the vast increases in storage) that she went off from the exhibition and spent precious dollars on a USB storage device pointing to how the computer, which in its early

manifestations had no information storage capacity has become a major tool in this respect (many of us could keep a lifetime's information on a USB). That is information continuum stuff (the ICM). Random access memory is data storage, (the DCM), and the computer's capacity to remember and execute instructions has increased just as massively and effectively. This data processing component of memory is what the information systems [data] continuum model is about. [It is the remembering and executing component of an information system as a system, not the content it stores, that explains why information systems are power tools or put more directly the use and abuse of information matters more than the content when one is considering power issues. This power element is built in to system analysis, design, operation and use processes.]

- The drawing down of global categorisation processes for the genealogy and pre-history of digital technology is clearly part of what is going on in the exhibition. But will the story be remembered and retold in this computational form much longer or is the story of digital technology one about binary logic colonising all forms of recorded information as a student suggested? Is the existing exhibit part of the normalisation processes of the past, an indicator of the operation of a suppressive archive of information technologists built out of their data processing rather than information processing background? Is that archive becoming dysfunctional as some information systems analysts would argue. (Use Google to check out Phil Agre as an example.)
- Is the previous point really related to data normalisation as an information systems analyst would understand the term? What do you think of my use of the term 'archive' to reflect the oppressive way we can allow our stories to legitimate views, to control what we say? Does each professional discourse constitute an archive in the records continuum sense?
- In an exhibition of 'computing history' dealing with the processing of data is it good enough to interact with exhibits



and display cards in a passive way or do you really have to be much more interactive in your displays? Can putting the exhibition on the Web increase the possibilities for interactivity?

The publishing continuum is probably the one most dramatically affected by presenting the museum in a Web-browser/Internet environment. Anyone who thinks my choice of the word publishing for this model is strange, given the narrow view many of us have of the term publication, will hopefully understand better why the model uses the words it does. Web-based publishing effectively subverts most of our older paper based notions of what is involved in publishing something (but not, I hope, the topological view presented in the Publishing Continuum Model).

- If the exhibition goes on the Web it should be easy enough for all of you (from within your many backgrounds) to speculate on how this affects issuance, reach, the transfer of experiences depicted in the exhibition and gained from viewing it, and the framing and storage aspects of the website itself as a container (think of metadata for example). You can also then bounce back to the other models and think how this change in the publishing processes and in the published information object offers new ways of approaching the many continua outlined above.

**Attachment 3: Perspective Report – the Cultural Heritage Continuum**

Katherine Gallen

Katherine Gallen is a student of Monash University, completing her MIMS (Masters of Information Management Systems) mid-2006. The following attachment is a perspective report submitted for her coursework in 2005. The report is based on Frank Upward's Cultural Heritage Continuum Model and its connected axes to the antiques industry (in particular, online auctions such as eBay). Katherine works at the National Archives of Australia's Melbourne office and is also Editor of *Archives and Manuscripts*.

The use of eBay to discuss cultural heritage issues opened up by Katherine provided an easy point of discussion about the model with other students and could be used to connect to a totally different project, an online auction system. It would have been interesting to see how a full sized group could have used the models to re-think Internet methods and techniques within, for example, a narrower project like the resale of University textbooks using an auction method. The report uses the method outlined in Attachment 2. After an introduction there is an examination of the model's axes and discussion of creation, capture, organisation and pluralisation processes. The report then gets down to project details. [It uses Harvard style referencing, as one would anticipate in a student report and includes a bibliography].

Of the five continuum grains I found the work-in-progress Cultural Heritage Continuum Model the most thought provoking to consider for the antiques industry, in particular the manifestation of the antiques

industry on eBay. As will be explained further, the online auction of antiques can be mapped across the model in various ways. My argument stems from the notion that just as archives and museums store cultural heritage, antique dealers (including those who self-assert such status) have a unique relationship to cultural heritage storytelling and enshrinement of cultural objects. Acknowledging the fact that the term 'enshrinement' in this argument has less permanence than the dictionary term and is used more broadly than the notion of enshrinement for a crypt or mausoleum, I argue that the exhibition of cultural valuables for online auction is just as relevant to the Cultural Heritage Continuum as any other form of enshrinement. Enshrinement becomes the process where evidence of an individual becomes 'evidence of us' (to quote McKemmish).

The online auction house eBay can be analysed using all axes of the Cultural Heritage Continuum. Storytelling over spacetime is a particular nuance to these sales online because of the human interactions, opinions and culture-making over time and space. Providing evidence of spacetime distanciation (on the many levels selling antiques online implies) eBay provides an example of market domination and totalities. The stories that each object tells are implicit within the image and the explanation provided on the webpages within the site. The cultural heritage container is the electronic projection of the item itself, in an online exhibition or auction page, online in the pluralised sense - not only in the Internet sense of pluralisation, but in the storytelling domination of market value, a casting and recasting of what is valuable and what is antique. (Notice the connection of power, authority and the duality of structure evident in such an environment of interaction and record creation.) These ideas can be linked with marketing and hype cycles, with the basic notion that popularity breeds popularity, and with trends and perception of the antique market itself as an authoritative enabler for cultural dissemination. Narrative scale begins to show its influence here: the greater the story of rarity or value, the notion of value of an item and the story it represents, the more this feeds into a social awareness of the past. The cultural battles between the cultural artefact gatherers are rife on many levels, each entity or group questioning the accountability and authenticity of objects and/or

questioning the methods of categorisation and re-telling of stories. The sale of antiques is a meta category established by eBay itself into which individuals themselves choose to self- categorise amongst the meta culture of online trading.

Concentrating on the eBay store, the major terms of the Cultural Heritage Continuum Model can be considered – on the vertical axis of the model, the term ‘exhibiting’ can be viewed as the display and arrangement of items on webpages, and engenders the reaching out to societal totality of spacetime distancing between near and far, old and new, distant and close in the cultural heritage container of the website itself. These notions are basic foundations to understanding the eBay store in cultural heritage continuum terms. The fluid interactions between culture, e-commerce, society, memorialising, memory and market forces are all elements further to the salesperson-client relationship in the non-timebound sphere of the Internet and can be looked at in relation to the continuum grains. The information on the webpage is presented in terms and conventions users are familiar with, ‘telling’ the audience on a number of levels through an understood medium. (A shop/online auction has its own terms and culture, ones that if unfamiliar to the user may need some explanation via the ‘how-to’ features on the website, another understood convention, again familiar only to those with that particular knowledge.) The horizontal storytelling and narrative-scale axis of the Cultural Heritage Continuum Model highlights the nature of individual and social perspective on antiques; the authoritative nature of groups in the antiques industry, and the subsequent reflection in the meta industry of eBay. Online sellers expect a certain price for their wares, relying on the surrounding metanarratives and cultural understandings for the exchange. The pre-sale jargon, the sale itself, and experiences blogged or logged by others are examples of the authoritative nature of the stories eBay users tell, and the recursive nature embedded in the retail value of objects.

When determining narrative scale it is important to consider: who is telling the story? How do groups build it up? To what extent is it embraced by whole entities? In answer to this last question, the authoritative nature of an online eBay record can be judged by the communal feedback provided by users. The greater the amount of positive feedback and status level a seller achieves, the higher the

authoritative nature of the story behind the antique for sale and power of their advertising message.

Interaction, routinisation, storytelling, and societal totalisation are all terms relevant to the enshrinement of antiquities/antique objects for sale in society. On eBay, dealers (meaning both those in the industry and newcomers, including lone individuals) compete to share and dictate the significance of their stories and the unique story that each object presents. As Upward asserts, this model:

is of clearest relevance to the conduct of exhibitions where stories of different scale are told and compete with other stories but the enshrinement approach is relevant to all forms of recorded information ...

(Upward, *Different Perspectives* Lecture Notes, 2005)

Societal totalities will dictate what antique dealers determine as 'antique' as the dealers themselves recursively mirror and shape perceptions of value, narrative scale and memory trace in culturally saved objects. Antique dealers, by exhibiting their wares on a shelf or online, are training their users to understand a story, the story of the cultural heritage of communities, and the value/narrative scale each item represents. 'All information objects can be an 'exhibit', a cultivation and a training device' (Upward, *Lecture 1*, 2005 reproduced above). Cultivating a collecting market, teaching the public about what is culturally valuable or significant (whether, aesthetically or socially, something 'significance assessment' as it is known in the cultural heritage sector, attempts to do) is fundamentally about constructing a story, about how the story gets constructed, and about the conventions used to permeate that story. Archives and museums have their own cultural conventions to display their memorialised, valuable collections.

The cultural value of a retail antique is not unlike that of an antiquity or artefact in a museum. Its value is directly influenced by the fourth dimension. I would argue that museums or archives make retention decisions based primarily in the third dimension (influenced by the fourth), 'organising' retention or sale of items in a museum according to set guidelines and social/spiritual value of an object - not too unlike the unstructured reasons for bidding on or collecting an item of value from an antique dealer on eBay. The notion of object value can be linked to, and cultural value measured against, what the Australian museum

sector calls significance in a cultural sense. (Note here that cultural institutions, bodies and understandings are both influences on and influenced by the fourth dimension, and by sector protocols and agreements such as the *Burra Charter*.)

How is an exhibition of museum artefacts, art or archives different from an online antiques auction? I would argue that both are a method of exhibiting cultural value. One difference is the notion of 'value', both monetary and cultural, with the bids in online auctions representing a measure of that cultural value. A museum piece or archive is said to be priceless or invaluable, yet there will be countless instances of items sold on eBay that are worthy of a museum or archive. And conversely, artefacts in museums, unless they are placed in the recordkeeping container of their context, are worthless rather than priceless on the market. The container links the object authoritatively to a story, an object fundamentally derived from context which provides the concrete to the more contestable assertions of a story. A discarded toothbrush found on board a migrant ship to Australia in the 1950s displayed at the Immigration Museum in Melbourne is invaluable only in that authoritative context. This raises the question of societal value, indicates the power of identification of objects, and exemplifies the human urge and need to retain collective memory.

A class-based, vanity-based metanarrative, a capitalist striving for opulence by owning items of beauty and prestige could be seen as the catalyst for consumerist society in the twenty-first century, one with a reliance upon sales and revenue; but what I would like to consider here is the notion of retention and enshrinement of memory and the memory traces these items of trade and value represent for the dealer, buyer and wider community/society. A story that one item tells, spiralling out to a story of where a society posits that object in history and what it represents in a community, family, society or personal life, has strong associations with appraisal theories and the notion of retaining an understood memory. A story published on eBay, however small, fragmented or obscured feeds into our cultural (or sub-cultural) memories. Like the linearity of generational change of the Museum of Computing History presented by Monash University, there may be a similar dateline of creation for other random objects, but there is also a complex and fluctuating value structure surrounding memory and objects, monetary value and desirability. Stories and narratives can

compete and overlap with each other: 'My mother used to have one of these', 'I saw that at a garage sale for \$2.00 five years ago' or 'the *Antiques Roadshow* on television says that actually...'. The work of Kaufer and Carley on the notion of the communicative transaction is a further consideration here as 'social communication and adaptation can also precondition motivation' (Carley and Kaufer, 2003). The cyclical yet continuous modelling of knowledge and action of society (and individuals within it) is presented generally in their interaction-knowledge cycle model.

Knowledge and action is predicated also on memory and the human condition to memorialise. 'Evidence of Me/Evidence of us' is presented by Sue McKemmish as critical to understanding witnessing in a collective society. McKemmish's work examines such notions as 'carrying a personal archive beyond the boundaries of an individual life and into the collective archives - how evidence of me becomes evidence of us' (McKemmish, 1996). It is worth mentioning too, the examination of 'memory traces' by various authors and the examination of memory itself. Michael Piggott in *Archives: Recordkeeping in Society* examines memory in an archival sense, while in his most recent article (2005), he explores through examples from the Grainger Museum and Australian War Memorial the significance at the micro-level of the site of the memorial and memory as part of the evidential axis of records continuum. At the macro level, the importance of memorial evidence and enshrinement of objects in society is clearly aligned with cultural heritage and collective memory. In essence, memory and cultural heritage have a symbiotic relationship, and can be mapped as such over the continuum grains.

The invariant nature of cultural enshrinement in the exhibition of items for auction on eBay lies not in the object (due to its sale, resale, visibility and invisibility), but instead the invariance lies in the memorialising of social commodity. The trade in antiques is an 'enshrinement of recorded information' (Upward, *Different Perspectives Lecture*), to a lesser extent perhaps than items in a church vault. Compare the requirement of an archives to cull information objects it no longer deems valuable according to set guidelines/disposal authority, which might result in their destruction, with the method an antiques dealer uses to cull stock. Antique sale items are constantly changing, and the sale of these items

is into another personal or alternate sphere, not often into the realm of destruction as it is with an archives. If an antique is sold, it is sold into another person's personal archive/museum/document web. Each personal sphere will have its own set of ad-hoc rules to define what records and items are retained long term, with informal personal appraisal techniques and variable disposal schedules. Additionally, an individual's perception of an object's value can also outlast the individual themselves, dependant upon how well the value story is made explicit to others.

But are these objects information objects or retail objects? Is not an online auction a form of advertising? Is not advertising a form of publication? If so, where does advertising sit in the continuum grains - it is a form of publishing, in continuum terms? Advertising alone does not fit neatly into the publishing grain. An advertisement is comprised of image, text and data, yet it does not fit neatly into the Information Systems [data] Continuum grain. More could be said here too of eBay as an information system in its own right which could be mapped across the continua. I believe that the trading of antiques and the recorded information this creates can be mapped over all of the grains; however, the publishing and cultural heritage grains seem to exist side by side and intersect at certain points.

I would argue, that like archivists, antique dealers as represented on eBay can be 'seen as dealing with relics of the past, but their actions are themselves part of continuing creation/recreation processes', (Upward, 2004) a shaper of collective memory, albeit without the institutional clout.



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