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The John Latham Archive: An Online Implementation Using Drupal

Athanasios Velios

This article is an account of the online presentation of the personal papers of the late British artist John Latham. The John Latham Archive online follows the proposal of creative archiving and has been implemented using the Drupal content management system. The author begins with a summary of the ideas of creative archiving and explains how these depend on recent innovations of online software. The article continues by highlighting the potential of Drupal as an archiving tool for creative archiving. An example implementation of the John Latham Archive online is described by relating the cosmological ideas of the artist with practical software tools which have been used to model them. The author concludes with some remarks on the capacity of the recommended software tools for creative archiving.

Introduction

Traditional archiving practice developed techniques which were suitable for sheets of paper as the medium for record keeping. Material was organized in lists, often sequential and ordered according to a specific criterion. The physicality of the records and the archival material itself meant that there was little flexibility in presenting the records in different ways. The material was (and is) kept on a shelf, and therefore it could be arranged in only one way. Producing an index was a time-consuming and elaborate task, and it was therefore limited by resources. These limitations of physical material meant that archives were organized using very similar techniques regardless of their content.

With the introduction of computer records and digitization of archival material, some limitations were removed. Although keeping the material on a shelf in a particular order is still necessary, this does not exclude other ways of presenting and retrieving it through the computer. Modern computer software allows the organization of content in many ways simultaneously, based on the characteristics of its description. Automatic index production is straightforward, and organizing and examining the material in different ways is possible immediately and with little effort. All of these options are offered online through dynamic websites. A mature content management system called Drupal is discussed in this article as a suitable candidate for such implementations. It is because of the maturity of such software that archival practice can evolve online.

Artists' archives are a good testing ground for this software for two reasons: they are often manageable in size, and therefore their processing does not require extensive resources; and they reflect the inclusivity, creativity, and experimentation of the artists' practice, which could positively influence the archiving sector.

John Latham was an important figure in twentieth-century art with interesting ideas about classification and cosmology. This article describes the presentation of the artist's personal papers online[1] in accordance with the proposal of creative archiving.

Creative Archiving and Interpretation

A Short Historical Account

In a recent publication[2] I used the term "creative archiving" to propose a new approach to artists' archives after establishing the role of the archivist in safeguarding history. Since the publication of the *Manual for the Arrangement and Description of Archives*[3] in 1968, there have been many discussions on the role of the archivist as the keeper of the truth. The manual introduced important rules for archiving practice, including the principle of provenance—the fact that material of one provenance should not be mixed with material of another—and the principle of original order—the fact that material should be kept in the order that it was when it was being produced. Some years later, Sir Hilary Jenkinson[4] emphasized two more important concepts in archiving practice: the archival material as evidence of history and therefore proof of the truth; and the inevitable selection of material from large volumes and the question about the objectivity of an archive. Following that discussion, T. R. Schellenberg[5] highlighted the value of archival records for historical research, placing the archivist at a pivotal point in historical research and the future interpretation of history. In more recent years, other discussions[6] questioned the selection of materials based on administrative patterns and proposed the adoption of social criteria for selection as more accurate reflections of history. Postmodern thinking (for example, Rachel Hardiman[7] after Jacques Derrida[8]) is applied to traditional archiving practice, resulting in two conclusions: there is no exclusionary truth in accepted meanings, or in other words the archivist (or anybody in that role) is unable to approach the archival material objectively; and deconstruction is a necessity in archiving, where the overall understanding of archiving practice takes into account the subjectivity of the archivist. Deconstruction matured in archiving practice in parallel (or just before) the rapid expansion of the Internet at the beginning of this century. The development of online social networking tools allows an implementation

of a deconstructed archive where users/visitors debate the provenance/description of records.[9] Although in theory this is possible, arguably deconstruction is not truly implemented this way, because visitor contributions are often made outside the official record (e.g., a free text comment on a date entry) and therefore it never becomes official data. In the unlikely case where visitors do alter the actual data, this is done based on a framework that the archivist has set.

Therefore, after more than a century of archiving practice and theoretical discussion, the archivist is still the safeguard of historical truth, while being often criticized by postmodernists for adopting absolute and rigid methodologies. Creative archiving can perhaps address this problem.

Creative Archiving Proposed

The above account of the role of the archivist focuses primarily on the subjectivity which comes into play at two points during archival work: selection and description. The choice of material to be entered in the archive (the worthwhile material) is done by the archivist who inevitably introduces subjective criteria in the process. Selection is inevitable for large organizations with huge output, but it is not always a problem with artists' archives which tend to be limited to one person's lifelong output.[10] One could argue that in archiving artists' personal papers of a manageable size, the archivist is relieved from the burden of selection because the archivist can simply ingest the complete material into the archive without having concerns about the objectivity of material selected. If selection is unnecessary and the whole collection is ingested, description is the only point where the archivist makes subjective decisions.

Because partiality is unavoidable in archival description and since the perceived truth according to postmodernists may be changing anyway, why not consider partiality an advantage? Archivists with an expertise in specific material often have a better understanding of the history that the archive holds than researchers who visit the archive to consult specific resources. The archivists' education, social background, religion, ethnicity, and other factors influence their understanding of the material and lead them to a biased version of the truth. This, however, does not deny them authority on the subject area.

Archivists are also trained as classification experts. They demonstrate the ability to identify material of similar types and to build relationships between records as part of the context of the archive. These relationships are often a biased representation of how material is interrelated because they are a result of the subjective views of the archivist. Nevertheless they are useful as a study aid and therefore influential to researchers.

Creative archiving is taking the inevitability of partiality to an extreme and celebrating the archivist's role in history while at the same time clearly admitting that this is only one version of the truth: the archivist's own interpretation.

Interpretation and Compatibility

Perhaps the true concern of postmodern thinking about archival practice is standardization. Deconstruction and the attempt to question the meaning of archival records contradict the existence of a single correct methodology of building an archive. If we accept that selection is not a concern for artists' archives, description is the only point in archiving work where

postmodern criticism is valid. In practical terms this translates into the following problem: standardized archives require a data/metadata structure which is repeated in every complying archive. The structure is chosen not because it better reflects the truth about the archive material, but because it is essential for compliance with the standard. Arguably, standardization inadvertently reduces the value of an archive as evidence of truth, although it may ensure discoverability through machine searching.

The archivist who is prepared to alter the archiving methodology and add his/her interpretation to an archive faces the risk of breaking compatibility with widely used standards. Conversely, an archivist who is determined to respect standardization is unable to fully interpret an archive. This, however, is not a true dilemma because technology can help overcome possible limitations in combining compatibility with this element of interpretation. Eric Ketelaar[11] could introduce the idea of archiving with social networking only because technology allowed such a proposal. The social networking tools available were mature enough to be used efficiently in an archiving context. Similarly, creative archiving can be implemented only because advanced online tools have recently become available. Over the past few years many websites and web services have switched from custom setups to widely used content management systems. Institutions with larger resources are using institutional repositories to manage their content whether it be digitized or born-digital. At the core of such systems is a set of tools responsible for producing, editing, versioning, and preserving or expunging records. These tools allow the description of archival material in a variety of ways. Another increasingly important set of tools, offered with or in addition to these systems, is responsible for querying, selecting, presenting, and theming the records. These tools do not interfere with the data itself, but merely present the data according to the audience's requirements.

The Drupal content management system is a good tool for managing and presenting archives with limited resources, such as artists' archives. The system is described here before its application to the John Latham Archive in order to emphasize the fact that creative archiving discussions could have taken place only after tools such as Drupal had been established.

Drupal for Creative Archiving

Drupal[12] is an open-source content management system which was released in December 2000. Although its strengths were appreciated from the beginning, it became popular around 2006 after the 4.7 and 5.0 releases, when it was adopted by a range of major content providers. Drupal is supported by a large community of developers not linked to a particular company as a group. The openness of the platform makes Drupal a safe option for archivists who are not skilled at programming and who require technical expertise for their systems to be widely available. Some of the benefits of Drupal for archivists are outlined below.

System Description

Drupal, like many content management systems, separates content from presentation. Typically a database holds the content in a structure of tables and columns, and a set of theming files which control the look and feel of the webpage is respon-
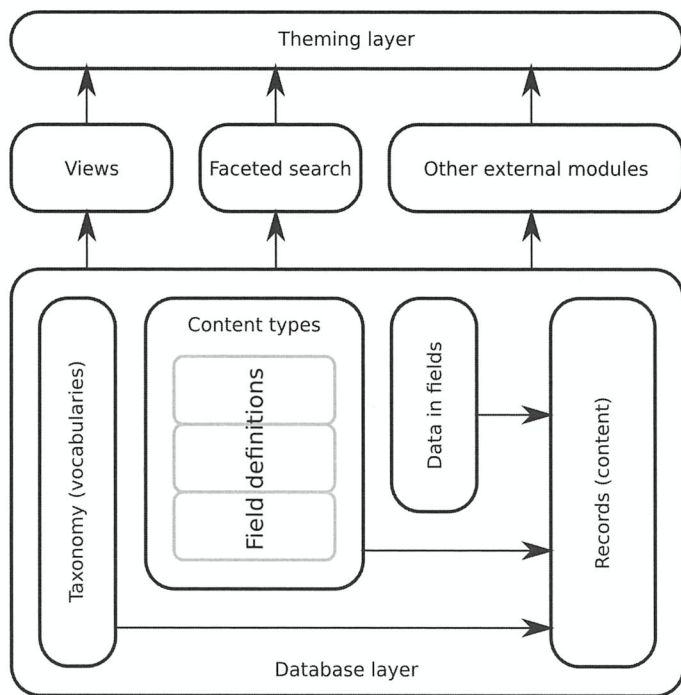
Figure 1: Drupal components for separating content from appearance.

sible for selecting and presenting the content. Figure 1 shows a diagram of the different components of the system and how they are interrelated.

Drupal is built for deployment online, typically on a web server. It supports a range of related tools including the popular Apache web server and the MySQL database server. It is written in PHP, the widely used web-programming language, and it is supported out-of-the-box by many web-hosting companies. The choice of such standard tools for Drupal makes it easily deployable and very cost effective. At the moment it is possible to run a Drupal website in the United Kingdom with a monthly cost of less than £3.00.

Drupal's support for multilingual websites has been available since the early versions, and it was the development focus for version 6.0. It also offers tools for translating the content into many languages. It is possible for non-textual content (e.g., images) to remain common for every language to avoid replication.

Drupal makes no assumptions about the type of content one needs to publish. There is an unlimited number of content types that could be created in any Drupal installation. Each content type is customizable by adding a set of fields according to a specification. For example, if the content is an image and one wishes to attach Dublin Core[13] metadata to it, then fields corresponding to creator, coverage, date, and format can be included. In using Drupal for online archives, the archivist can follow this strategy for content organization: all items in the archive share a common content type, and the distinction in formats (e.g., video, image, text, etc.) comes from the attached metadata. This strategy has been used in the John Latham Archive online.

Drupal has been developed with extensibility in mind. The system is a set of core files (Drupal core modules) with a given functionality, such as creating content types or allowing for content translation. This set of core modules—generally accepted as a useful set of common functions for a content management system—is the output of the Drupal project. Drupal, however, does not exclude the possibility that some users will require extra functionality which the core developers have not included. Therefore, external (non-core) modules have been developed to offer additional functionality to the system. The number of these modules currently listed on the Drupal project website shows the strength of the open source community. There are 8,179 modules which allow Drupal to host anything from a full-fledged e-commerce site to a Tetris game machine. While the core Drupal modules tend to be well-tested, secure, and very robust, the more peripheral modules are not always equally mature. The objective of the Drupal community is to improve them.

Taxonomy

Perhaps what makes Drupal particularly useful for managing archival material is its Taxonomy module. Content, in Drupal, is classified using vocabularies. Each vocabulary features a set of terms, and these terms can be assigned to an item of a specific content type. For example, a photograph is taken at a specific place. The name of the place (alongside many other geographical locations) is listed in a vocabulary called Location. By assigning the term with the name of the place to the photograph, content is classified according to geographical location. With this process Drupal could be used to implement the concept of classes and create an easy retrieval tool: one is able to view all photographs shot at a specific location.

Terms in a vocabulary may be arranged in a list, or they may be arranged hierarchically. For example, the term Flat Time House (John Latham's house and studio) is under the term Peckham, which is under the term London, and so on. There is additional functionality for synonym terms—for example, the term UK is the same as the term United Kingdom, with each term pointing to the other.

The Taxonomy module is a particularly important tool for the archivist because it allows for the organization of archival material in more than one arrangement. In traditional archiving, original order defines the correct arrangement of the material, thus limiting the archivist to only one way of describing and organizing information. In Drupal, when taxonomy terms from vocabularies are assigned to digital content, any of these vocabularies can be used to arrange the material. Therefore the archivist is offered a number of different ways to describe and present the material because the archivist is no longer bound by the physicality of the item.

The adoption of multiple vocabularies for organizing content has no impact on the physical original order which, of course, should be kept. This order can be easily replicated digitally in a separate Drupal vocabulary which matches the physical location of items. In many artists' archives, there is no meaningful original order, or it is irrelevant.[14] However, it is possible that researchers will want to study that seemingly random order to examine whether there is a pattern.

Another interesting feature of the Taxonomy module is its unlimited integration with content. In well-structured content types, descriptions are formed by a number of fields. To continue with the previous example, a content type could have fields corresponding to Dublin Core metadata and perhaps NISO[15] technical metadata for images. The data of these fields (meta-

data) can often be drawn from a controlled vocabulary. Dublin Core, for example, does suggest the use of controlled vocabularies for some of its fields. If one were able to use a controlled vocabulary for almost all of the fields, then taxonomy and content type fields would merge. Content in a field is offered as a term from a controlled vocabulary, and the combination of terms from each vocabulary represents the archival record. Therefore, data emerge from a combination of metadata as part of the core modules in Drupal.

The ability to use extensive controlled vocabularies in Drupal to describe archival records offers useful retrieval tools. Apart from the default view of all content belonging to a class—in other words, all content linked to a specific term—a range of external modules enable more sophisticated querying of the database through faceted searching. This allows the progressive filtering of records which fulfill specific criteria. The user can choose terms from all vocabularies in the form of a structured question. For example, if one is interested in the evolution of the Flat Time House into a work of sculpture, one might want to find out which photographs of Flat Time House were shot by John Latham in 2003, the year in which a sculpture of a large book was installed in the front window. As a faceted search this would appear as: "Location: Flat Time House, Date: 2003, Creator: John Latham," and it would return a complete result set which exactly matches the specified criteria.[16]

The combination of the taxonomy and content core modules with powerful faceted searching modules offers a high degree of flexibility for archivists to describe and organize the archival content as they wish. These modules make Drupal an archiving tool which can compete with purpose-built software for archiving.

Theming Layer

While content and taxonomies are stored in the database, their creation, viewing, and editing take place through the interface offered by a Drupal theme. Drupal comes with a number of themes available with the default installation. These are optimized to offer the core module functionality. There is also a range of external themes which can be used with Drupal; currently 975 themes are listed on the Drupal project website. The theming layer of Drupal allows content from the database to appear in a variety of ways. Typically certain fields of a content type, for example technical metadata, need to be displayed in a different color than the rest of the fields. The theming layer allows for such processing. Another use would be hiding content/terms altogether as with a vocabulary that concerns only the archivist and which should not be visible to the user.

The theming layer is a very large and complex part of Drupal, the technicalities of which are beyond the scope of this article. The Drupal project website offers a wealth of information about customizing themes. Suffice it to say that programming the theming layer of Drupal should be simple for a programmer, and an intrepid archivist with some understanding of HTML and plenty of time would be able to customize Drupal without the help of a programmer. The theming layer is an important tool when using Drupal for creative archiving because it allows the archivist to build the interpretation layer. Such flexibility with choosing and displaying content is not normally available in typical software packages, which is why it is more difficult to implement creative archiving using these tools.

The Internet's evolution shows that standardization is meaningful when applications adhere to a generally accepted standard. Not all users can be forced to use a single application to ensure compatibility. Rather, compatibility is possible when all applications exchange data in a common format. Drupal's theming layer is able to export data held in Drupal's database in any specified format; it can therefore be an equally useful tool for the archivist alongside software packages designed specifically for archives. The combination of structured data storage in the back-end database with the flexible theming layer makes Drupal an ideal tool for creative archiving with the added benefits of open source software.

John Latham Archive Online

The concept of creative archiving was initiated before 2008 when, in collaboration with Simon Gould, then curator of Flat Time House, I proposed the digitization and organization of John Latham's archive using a classification system based on the artist's work. The John Latham Archive online is the first attempt to apply creative archiving to an artist's archive, and the result is promising. The project was challenging from an art historical point of view, as understanding and interpreting John Latham's theory and work was not trivial.[17] In the following paragraphs I will explain my understanding of Latham's theory and work, and at the same time describe the archive's interpretation layer with reference to screenshots from the online archive. John Walker[18] has written extensively on Latham's work, and the artist himself has described it in his *Report of a Surveyor*,[19] among other publications.

Basic Structure

Because one of the project's objectives was digitization of each document, the archive was described at an item level. Drupal comes with a default content type called *Page* which can be used to produce a static web page. This is not a sufficient entity for archival description. A new content type called *Item*[20] was defined. This is an abstract representation of any item in the archive. Each item record consists of fields that were chosen after investigating both the ISAD(G) (General International Standard Archival Description) and Dublin Core standards; these fields are listed in Table 1.[21] The suggested configuration is not fixed and could grow to include other fields if required.

Table 1: Fields of Content Type Item

Field	Description
Item number	Number of item as marked on its physical folder
Title	The title of the item or a short description if the title does not exist (e.g., Letter to John Latham)
Date	The date of the item where available using ISO dates (YYYY–MM-DD)
Extent	The quantity of the item—typically the number of pages

Description	Free-text description of the content of the item—typically a summary of the text
Dimensions	The item dimensions (width, height, and depth) in mm
Photograph	Indicates whether the item has been digitized
Access Status	Indicates whether the item is suitable for public viewing (i.e., non-sensitive material)
Time-Base	John Latham specific field
Location	Indicates the original physical position of the item in the archive boxes
Index Terms	Terms which can be used for keyword searching (document specific)
Type	The general content of the item using UKAT as a controlled vocabulary (e.g., correspondence)
Creator	The creator of the item if known
Geographical Coverage	Borrowed from Dublin Core and special-ized
Date Coverage	Borrowed from Dublin Core and special-ized (divided into decades, i.e., 1960s, 1970s, etc.)
Language	The primary language of the document
Format	The physical format of the document
Medium	Condition assessment field (related to conservation)
Binding	Condition assessment field (related to conservation and digitization)
Condition	Condition assessment field (related to conservation)
Treatment	Basic treatment during description (e.g., removal of rusting paper clips)
Urgent Treatment	Indicates whether urgent treatment is required
Re-examination	Indicates whether the item needs to be re-examined
Can be scanned	Indicates whether the item can be placed in a flatbed scanner without risk of damage

Figure 2: Record formation by selecting terms from vocabularies.

Figure 3: Resulting indexes from terms.

Many of these fields hold information which could be selected from controlled vocabularies. The *UK Archival Thesaurus* (UKAT)[22] has been used for most of these vocabularies. Records belong to classes, and controlled vocabularies act as indexes for the records, thus allowing many ways to organize the content—one for each controlled vocabulary.

The records are structured as shown in Figure 2, which results in the use of indexes as shown in Figure 3.
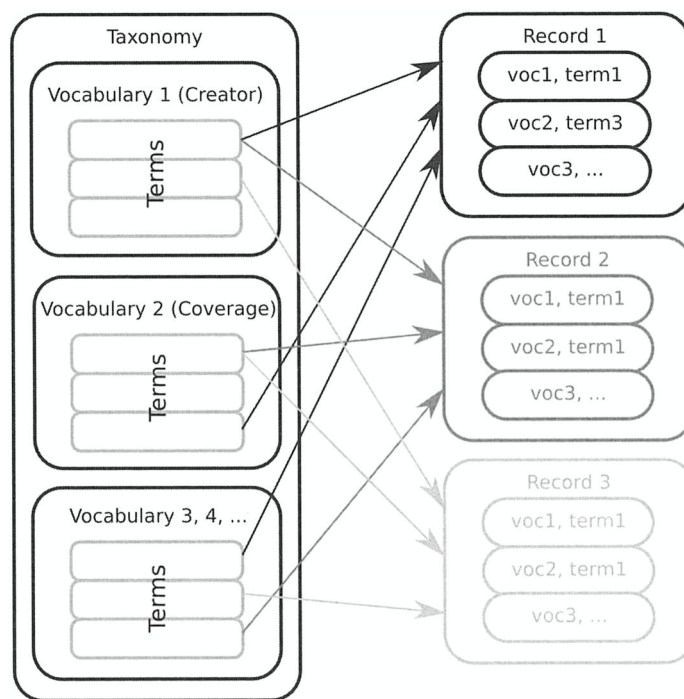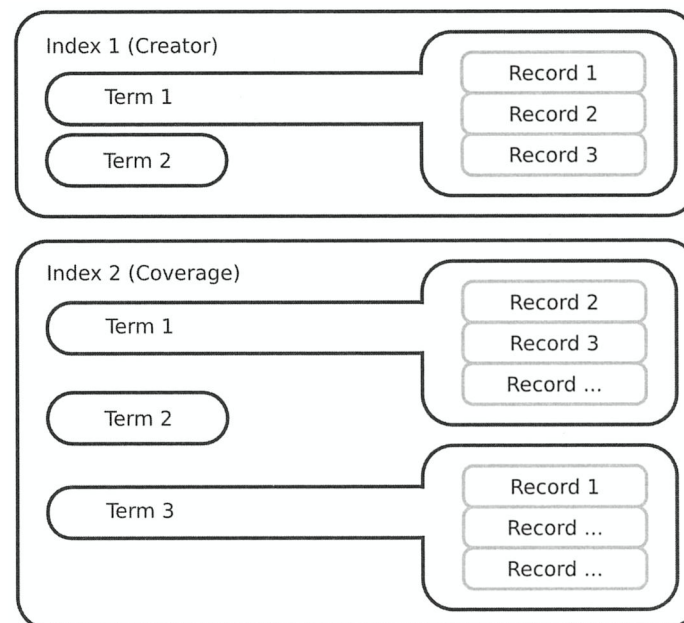
Interpretation Layer

The online representation of the John Latham Archive keeps the traditional concept of the home page as a starting point for navigation (Figure 4). The visitor is presented with three links (MA, IA, AA) arranged in a triangle and a fourth called *login as RIO*. Latham attempted a model to describe three types of human character and their reactions to social situations. These match the characters of one of Latham's favorite novels, *The Brothers Karamazov*, and they should be considered in conjunc-tion with Latham's *Observer* series as discussed by John Walker.[23]

Figure 4: Entry point to the John Latham Archive online.

The three character types are instinctive/impulsive *Dimitri* (*Mitya*); rational/structured *Ivan*; and reflective/intuitive *Alexei* (*Alyosha*).

By mapping this separation of characters on the archive, the visitor is asked to choose between entering the Mitya/impulsive version (MA), or the Ivan/structured version (IA), or the Alyosha/intuitive version (AA). Switching from one version to the other, or in other words making a shift from one character/state-of-mind to the other, is possible. However, having to choose a path stimulates the visitor and demands some investigation into this core element in Latham's theory. To assist with the initial choice, the homepage is populated with explanatory pop-up texts offering a brief description of each brother. Since the options are limited to only three, it is easy for a new user to experiment and decide which brother is suitable. In Drupal the homepage was constructed by building a static page with a customized CSS (Cascading Style Sheets)[24] template to allow for these links.

RIO, the Reflective Intuitive Organism, is presented by Latham as an advanced state of Alyosha and has been reserved for visitors/users of the archive whose understanding of the underlining concepts and whose experience with the material is enough to allow them to contribute to the description of the records. At the moment this includes only the staff at the Ligatus Research Center who develop the archive, but there is discussion about how external contributions can be incorporated.[25] The *login as RIO* link points to the standard Drupal login page since the privilege of editing material is offered to registered users only.

OI-IO

The choice of character from the home page leads the visitor to a blank screen while the title of the browser window changes to OI-IO. The blank screen is presented to the visitor momentarily, then automatically redirects to the archive's Mitya, Ivan, or Alyosha version, depending on the link selected. This sequence represents another key idea of Latham's work, that of the potential of an event versus the event itself. In July 1983, Andrew Dipper and John Latham published a paper[26] explaining this concept as the comparison between the atemporal state of non-existence and the evidence of existence. The term *atemporal* is used by Latham to characterize the state of the cosmos *before* it existed, although the word before is not valid if time started with the birth of the cosmos. In this state of no time, Latham suggests that the potential for anything to happen is omnipresent; a state of nothingness (O state) changes to the birth of something (I state). In Latham's artwork this is depicted with the *One-Second Drawings* in which a blank canvas simulates the omnipresent capacity of an event, and the first spot of ink from a spray gun simulates the Least Event. A good example from that series is *Two Noit. One-Second Drawing*, 1970–71 (Figure 5).[27] The blank screen that the visitor experiences indicates the blank canvas on which the event of the online archive takes place. In Drupal, this was implemented by creating another static page without content, apart from the title in the header of the page which changes to OI-IO and a rule for redirecting the browser to the next page.
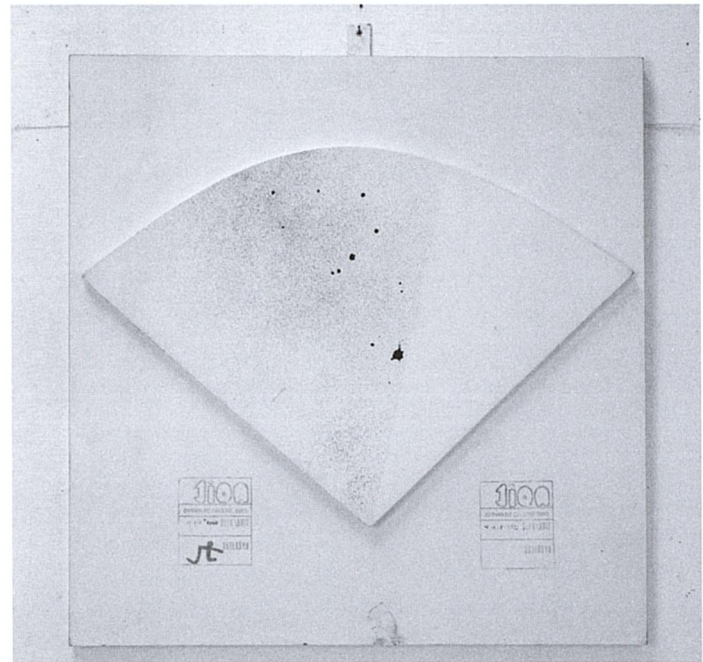

Figure 5: John Latham, Two Noit. One Second Drawing. *1970-71. Board mounted on conti board, paint. Courtesy the artist and Lisson Gallery.*

Mitya

MA represents a state-of-mind to match the older brother in Dostoyevsky's novel. The impulsive and instinctive character would approach the material in the archive spontaneously, without extensive analysis or in-depth examination of the texts and related metadata. Mitya is there to look at photographs in the same way he might look at tabloid newspaper headlines.[28] Mitya is not interested in a systematic survey of the material. Therefore MA only shows the photographs of documents and returns no other data from the database (Figure 6). Moreover, these photographs are projected in a random order and only for a few seconds each as in a slideshow to emphasize the casual nature of the presentation. In terms of usability the learning curve is minimal, but no significant scholarly information can be retrieved in Mitya.

The slideshow of MA was implemented in Drupal with a combination of external modules: Views and Views Slideshow. Views, which has for a long time been the most popular external
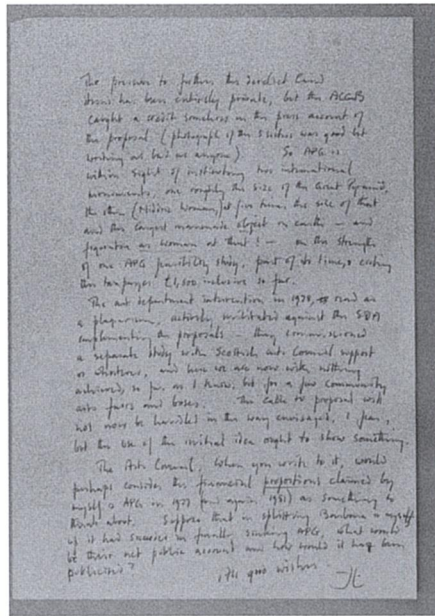
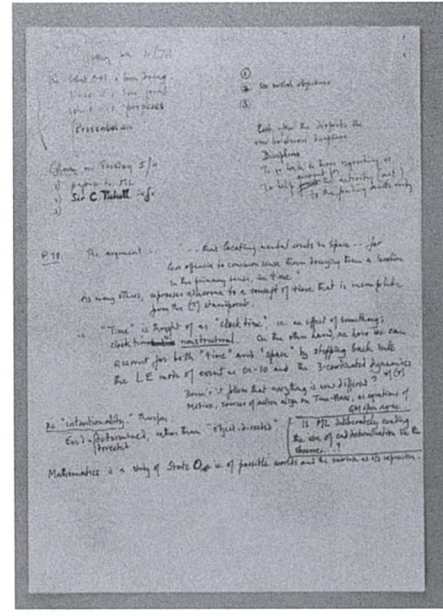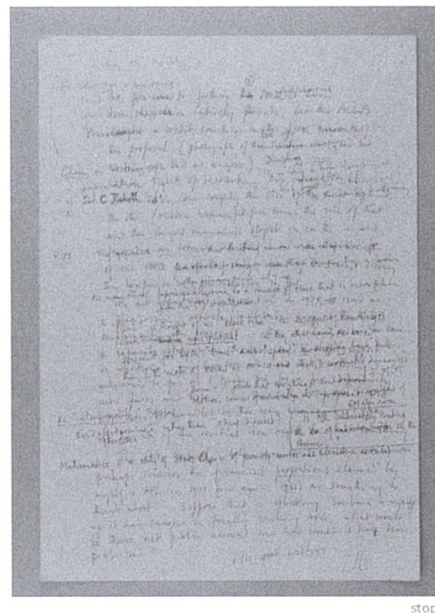*Figure 6a: Image of random document in MA slideshow.*

Figure 6b: Cross-fade transition between image of current document and image of following document.

module for Drupal, allows the selective presentation of content from the Drupal database. In this case Views queries the database to return only photographs of documents in a specific size and quality. It orders these photographs randomly and passes them on to Views Slideshow, a specialized module for presenting content in a slideshow format. Both modules offer rich customization settings to control the time interval between slides, transition effects, start and stop controls, and more. In the current implementation of these modules, the content needs to be loaded alongside the rest of the HTML page, thus limiting the number

Figure 6c: Image of following random document in MA slideshow.

of photographs that can be loaded without significant delay. However, recent developments[29] allow content to load independently from the rest of the page through the AJAX framework. Therefore, one of the scheduled updates to the current implementation is to use that solution for loading content.

In MA the visitor is given the opportunity to stop the slideshow. This action indicates the need for a closer/lengthier examination of the record or document. By clicking on the photograph, the visitor is able to visit the specific record in the database with an opportunity to find out more about the document—and perhaps attempt a change of character from Mitya to Ivan or Alyosha.

Ivan

IA represents the structured, rational, and methodical character of Ivan, the middle brother in the novel. Ivan would approach the material from an academic researcher's point of view. The metadata, index, and choice of terms for the controlled vocabularies are important for him, and the retrieval of documents through systematic searching may eventually lead to viewing an image. However, it is the concepts encapsulated in the text and metadata that Ivan is after, not the casual and random browsing of Mitya. IA reflects the ultimate search tool for an archive and is perhaps the closest to a typical archive search experience which does not require a steep learning curve. The visitor is offered two ways of accessing documents. One is by simulating the original location of the documents in the physical archive in boxes and folders, thus offering the principle of the original order online. Another way of searching documents is by using a wide range of indexes, automatically formed by the controlled vocabularies. Each term from the controlled vocabularies has been used to describe certain documents, and the choice of that term from the index returns these documents along with their metadata and associated photographs. Combining terms is possible through faceted searching.

In Drupal, implementing this functionality was done by using the Taxonomy core module. During the survey and description of the material, items were linked to terms and classified according to vocabularies. An external module called Taxonomy Menu collects the terms of a vocabulary and presents them as a menu index. By clicking on the menu items/terms, all content linked to these is returned. Any hierarchical structures of the vocabularies can be preserved. The possible physical locations of a document in the archive are kept in a vocabulary of terms holding all boxes and folders used in the archive. When describing a document, the box and folder(s) in which it is kept are marked in the location vocabulary, therefore linking them to the document. Retrieving documents by clicking on their physical location term showcases the principle of original order online.

Another external module used in IA is Faceted Search. This employs taxonomy in Drupal and allows the use of terms from different vocabularies as criteria for searching. Faceted Search forms a query for content which satisfies these criteria. It presents the results as an item list. It also presents the criteria used which can subsequently be modified to further develop the search. This is the easiest way of locating material in the archive and one which is perhaps closest to archiving practice.

Alyosha

AA represents the reflective and intuitive character of the youngest brother in the novel. Alyosha is charismatic, able to observe a situation and react to it, not necessarily in an informed way, but successfully through intuition. Latham sees the artist in society as the person closest to Alyosha. To emphasize this intuition, AA is implemented based on Latham's own classification system—the Time-Base Spectrum—and as such users can only begin to employ it meaningfully after having studied Latham's theory. Alyosha requires a steep learning curve.

Following the development of the concept of the Least Event, Latham described more complex events based on the accumulation of Least Events and associated the complexity of an event with its frequency. Short (high-frequency) events are placed on the left of a line, whereas long (low-frequency) events are placed on the right of the line. This arrangement was used in the *Time-Base Roller* series (Figure 7) where the events on the left (close to A) occur rapidly (too rapidly for human perception), and the events on the right (close to Z) occur slowly (too slowly for human perception). Events around the middle of the line can be experienced by humans, and in 1975 Latham proposed the use of the Time-Base Spectrum as a filing system for ordering these events and their frequency.[30] He later defined a terminology for these events:

1. Bio-physical, for events which relate to human life (such as birth, death or illness);

2. Socio-political, for events concerning society and politics which span longer than a human's life (such as institutions or organizations and political parties);

3. Geo-political, for events related to almost permanent social and political constructs (such as countries or religions); and

4. Geo-physical, for geological or planetary alterations and events caused by human activity with a long-term impact on the environment (such as the melting of ice caps or the movement of tectonic plates).[31]
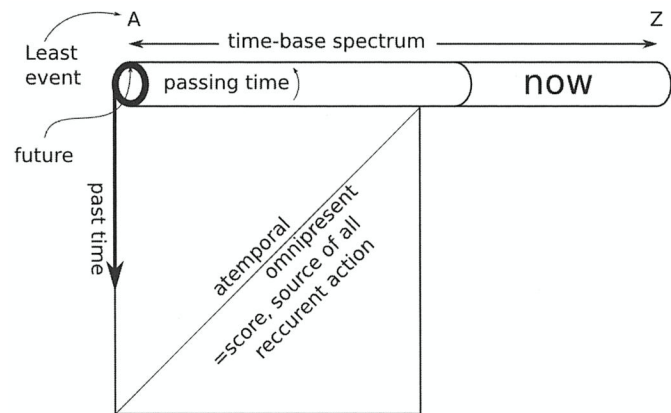

Figure 7: Drawing of Time-Base Roller (after John Latham).

The archive items have been described based on these four categories with numerical values indicating the relevance of the document to each of them. For example, a utility bill scores high on the first two categories but has little relevance to the last two. Similarly an essay about theoretical physics scores high on the last category but is not as relevant to the others. Alyosha is an intuitive retrieval tool for the reflective visitor who is prepared to search using Latham's own classification.

In Drupal this again has been implemented using the Taxonomy core module where the numerical values of these categories are arranged in a vocabulary with content linked to them. The Views module is again used to return content. Instead of using Views with a predefined set of criteria (which was the case with MA), the taxonomy terms for Time-Bases are offered to the visitor as a web form (Figure 8). Submitting the form with selected terms as query conditions returns a set of matching documents.

Document Record

MA, IA, and AA function as tools to present a list of items in either the form of a slideshow, or a list of titles and metadata. All three tools are searching aids for items in the archive according to the visitor's initial choice at the home page.

Although one could argue that it is only IA which allows individual inspection of archival content given the organized and systematic character of Ivan, Latham did not make absolute divisions between Mitya, Ivan, and Alyosha. The brothers' characters overlap in some cases, and therefore an opportunity for individual inspection of documents by MA and AA is allowed.

In MA when the visitor identifies an item of interest from the random slideshow, the visitor can click on it and view the document record. Similarly from IA and AA, clicking on the title of the item brings up the same record page. This includes the photograph of the document and also features a switch for the ip box (Figure 9). The abbreviation "ip" stands for Incidental Person, which is another term that Latham used to describe the
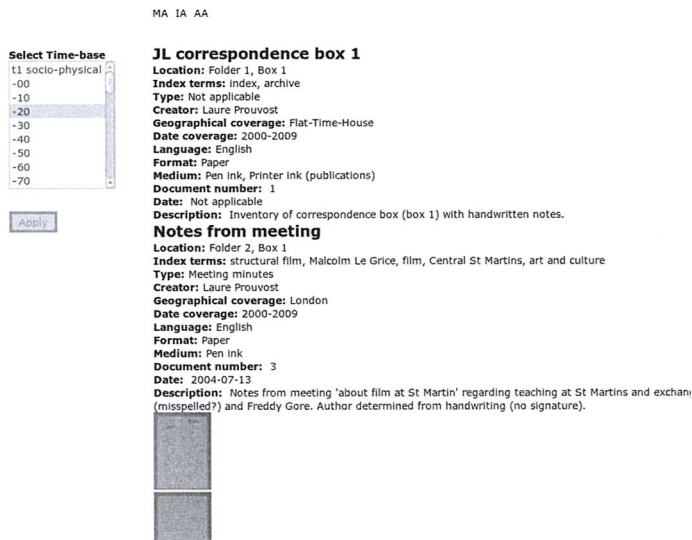
Figure 8: Sample query in AA for a value of 20 in bio-physical.

Figure 9: A record of a document with the ip box (noit) visible.

intuitive person, the Alyosha state, the position of the artist in society. By clicking on that switch a panel appears with metadata about the document which includes IA and AA details, making the document record the meeting point of the three different versions of the archive.

In Drupal, the ip box has been implemented using the Views module as explained earlier.

Design

There has been no involvement of a graphic designer in the development of the online archive which would have improved the usability or the aesthetics of the website. There are two reasons for this:

1. Most of Latham's work is used to illustrate his cosmological ideas and therefore it has reduced aesthetic value compared to work by other artists. An aesthetically pleasing website would distract from the raw ideas communicated through it and offer a distorted view of the artist's ideas.[32] Latham's work is notoriously difficult to interpret for a newcomer. Although the intention is to assist first-time visitors to the archive, making the website user-friendly would again offer a false impression of the artist's work.

2. The involvement of a designer during the development of the interpretation layer for the archive would have introduced an additional set of views about John Latham's work and how it should be presented. Although in some cases amalgamating different views is possible, the complexity of Latham's theories could have posed a risk of failing to agree on a single structure. Moreover, this project focuses on the interpretation of the archivist working on the archive than the interpretation of a designer.

Some design elements were inevitably introduced during the development of the online archive, because choices about font and layout had to be made. When this was necessary, the choices made were either the default offered by the software
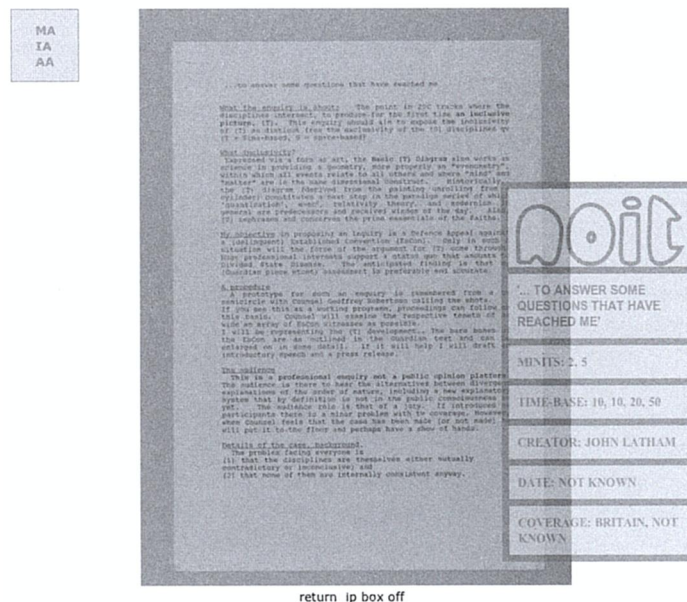
tools, or random, with no particular meaning. One choice is the use of a top layer with the full-size photograph of a document when a thumbnail is clicked (Lightbox2 module), which removes the need to load an extra page or browser tab with the image and is therefore faster. In Drupal, managing the appearance of the different pages is done through the use of CSS.

Conclusions

The implementation of the John Latham Archive online has offered different opportunities. The interpretation layer required in-depth examination of the archive's content and allowed the conclusions from that examination to be made public. The attempt to produce an interpretation layer for John Latham's archive required extensive reading of the artist's text and led to the choice of an important element of his theory as the basis of the interpretation layer. This element is the use of the Karamazov brothers characters as models for mapping members of society and visitors of the archive. The examination of the archive's content has also uncovered Latham's own classification system, namely the Time-Base Spectrum, which is one of the ways documents in the archive have been organized. Disseminating these conclusions has been done in a novel and interactive way through the retrieval tools of the website (MA, IA, AA). Using the website itself introduces the visitor to John Latham's ideas before any content has been examined. The final result, as presented to the visitor, is a unique retrieval tool closely related to Latham's theory.

The use of Drupal for implementing the archive online has been a good choice. Its strong Taxonomy module allows the use of controlled vocabularies to describe content and the storage of these descriptions in a structurally mature database. Drupal is also a good fit because of the available theming tools which are ideal for developing the interpretation layer as required by creative archiving. The wealth of external modules associated with Drupal allow for customizing different ways for presenting content.

The John Latham Archive online is an effective delivery platform and a reflection of the artist's work which would not have been the case if traditional archiving tools had been used. It makes Latham's archive a resource that stands out because it is tailored around the artist, not around an archiving tool. Most importantly, the online archive showcases creative archiving. It highlights the archivist's subjectivity and interpretation as an advantage of the archiving process and not as a point of criticism.

Acknowledgments

Notes

1. The archive is accessible at http://www.ligatus.org.uk/aae or through http://www.ligatus.org.uk/jla.

2. Athanasios Velios, "Creative Archiving: A Case Study from the John Latham Archive," *Journal of the Society of Archivists* 32, no. 2 (October 2011) (forthcoming).

3. Samuel Muller et al., *Manual for the Arrangement and Description of Archives: Drawn Up by Direction of the Netherlands Association of Archivists*, trans. Arthur H. Leavitt (New York: H.W. Wilson Co., 1968).

4. Hilary Jenkinson, *A Manual of Archive Administration: Including the Problems of War Archives and Archive Making* (Oxford: Clarendon Press, 1922).

5. T. R. Schellenberg, *The Management of Archives* (New York: Columbia University Press, 1965).

6. Hans Booms, "Society and the Formation of a Documentary Heritage: Issues in the Appraisal of Archival Sources," *Archivaria* 24 (1987): 69–107.

7. Rachel Hardiman, "En mal d'archive: Postmodernist Theory and Recordkeeping," *Journal of the Society of Archivists* 30, no.1 (2009): 27, http://www.informaworld.com/10.1080/00379810903264591.

8. Jacques Derrida, *Archive Fever: A Freudian Impression* (Chicago: University of Chicago Press, 1998).

9. Eric Ketelaar, "Archives as Spaces of Memory," *Journal of the Society of Archivists* 29, no.1 (2008): 9, http://www.informaworld.com/10.1080/00379810802499678.

10. Selection in personal papers is undertaken by the creator during his/her life when choosing to keep or discard a document, and it does not necessarily concern the archivist who often receives the material at a later date.

11. Ketelaar, "Archives as Spaces of Memories," 17.

12. Drupal project website, http://www.drupal.org.

13. Dublin Core Metadata Initiative, http://www.dublincore.org.

14. Jennifer Douglas and Heather MacNeil, "Arranging the Self: Literary and Archival Perspectives on Writers' Archives," *Archivaria* 67 (2009): 25–39; Jennifer Meehan, "Rethinking Original Order and Personal Records," *Archivaria* 70 (2010): 27–44.

15. Library of Congress, "NISO Metadata for Images in XML Schema," http://www.loc.gov/standards/mix/.

16. The same result would not be had from a keyword search with the same terms.

17. Dr. Antony Hudek was appointed to assist with this interpretation, and his contribution was critical to the project.

18. John Walker, *John Latham: The Incidental Person—His Art and Ideas* (London: Middlesex University Press, 1995).

19. John Latham, *Report of a Surveyor* (Stuttgart: Hansjorg Mayer, 1984).

20. The name of the content type is not important, provided it has a clear meaning.

21. These were selected after consultation with Karyn Stuckey from the Archives and Special Collections Center at the University of the Arts London.

22. *UK Archival Thesaurus*, http://www.ukat.org.uk/thesaurus/hierarchy.php.

23. Walker, *John Latham: The Incidental Person*, 47–50. The *Observer* series of works typically include three clusters of books stuck on the canvas using metal, plaster, and other materials. Walker describes how the largest one symbolizes the oldest brother Mitya, the cluster with more order in its arrangement symbolizes the middle brother Ivan, and the smallest one, the youngest brother Alyosha.

24. Cascading Style Sheets home page, http://www.w3.org/Style/CSS/.

25. These are beyond the scope of this article.

26. Andrew Dipper and John Latham, *Sub Quantum: Notes Towards a Concept* (July 1983), http://ligatus.org.uk/aae/node/144.

27. Walker, *John Latham: The Incidental Person*, 109.

28. Antony Hudek, ed., *Sun Times* (London: Occasional Papers, 2009).

29. "Views Slideshow Ajax," Drupal home page, http://drupal.org/project/views_slideshow_ajax.

30. John Latham, *State of Mind: John Latham* (Düsseldorf: Städtische Kunsthalle, 1975), §3.3.

31. John Latham, *Time-Base: And Determination in Events* (London: Tate Gallery, 1976), 16.

32. Or at least a different view from what this project seeks to present.

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