

Catalogue and Index

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Editorial

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Welcome to C&I 178.

I'm the new co-editor who is following in the illustrious footsteps of Heather Jardine who stepped down at the end of last year. I've been a member of the CIG committee as the representative for Wales since the start of 2013. I am a cataloguing librarian at Cardiff University with special responsibility for items for the medical and healthcare libraries. I am sole cataloguer for the Human Genetics Historical Library, housed in our special collections department (SCOLAR), and I spend one day a fortnight working on the rare books collection.

This is an 'open mic' issue which has given plenty of scope to people to send us papers on a variety of topics.

Anne Welsh has written up her presentation from the CIG 2014 conference on metadata output, and also contributes to a piece on the Linked Open Bibliographic Data Project taking place at UCL which is looking at developing a BIBFRAME dataset as an open educational resource. Alan Vaughan Hughes offers his insights into the world of project management. We also have reports from the CIG event on Linked Data which took place in February, and the Jane-athon Hack day at the ALA Midwinter Conference which combined RIMMF (RDA in Many Metadata Formats) and Jane Austen.

In addition we learn about the Salford Zine Library which has just received Heritage Lottery Funding to catalogue their collection and build a website.

We hope you enjoy this issue.

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Introduction

This article, based on a presentation at the CIG Conference 2014, presents a brief foray into the question of data output and why it may be of interest to the ordinary catalogue user – specifically the ordinary catalogue user who wishes to download a quantity of catalogue data for further analysis at a later date. It highlights ways in which library metadata may be a source for scholarly research as opposed to a simple finding aid and tentatively suggests that library managers, cataloguers and systems librarians might fruitfully test the output options available and compare these outputs with the data available using staff options in-house.

The Purpose of Catalogue Data

Catalogue records as computer data have a comparatively short history. The original focus of the MARC pilot project was “to test the feasibility of a distribution service of centrally produced machine-readable cataloging data” (Avram, 1968), and although Information Retrieval was acknowledged as one of the “criteria to judge the flexibility and usefulness of the format,” it was the third in a list of four criteria, top of which was “printing – bibliographic data display in a variety of forms (3x5 catalog cards, book catalogs, bibliographies, etc.)” (Avram, Knapp and Rather, 1968, p. 3-4). Moreover, a limit on the development of the nascent communication format was acknowledged: “Since so little is known about how a bibliographic record will be used in machine-readable form for retrieval, it was only possible to anticipate future applications.” (*Ibid*, p. 4).

At base level, then, although MARC was seen as opening doors to new possibilities, at point of original design its main purposes were no different from those set out by Jewett (1852) over a century earlier and highlighted by his report’s commissioners: “The most important of them, perhaps, will be the economy of time, labor and expense, required for the preparation of a new edition of a catalogue” (Everett *et al*, 1853, p. x).

Although there has been plenty of research into Information Retrieval from the 1960s onwards, and although MARC has gone through several versions to reach the current MARC 21, it is important to note that the structure of library data, MARC, predates XML, and that structure is not flexible for sharing with other web resources outside libraries, as has been asserted in many other places, from Tennant’s (2002) famous ‘MARC Must Die’ opinion piece through the BIBFRAME Primer (Miller *et al*, 2012) and beyond.

MARC data is not easily compatible with the web, but within the specialist Library Management Systems that have grown up since the 1960s, it provides an environment in which users can search and retrieve surrogate records of a library’s holdings, and the geographic spread and long history of the format is such that users can search in a consistent manner across a large number of library databases and collections. Consortia have published catalogue data on the web, requesting their contributing libraries to submit records following the consortium’s MARC cataloguing policies (*cf* OCLC, 2008-) or creating mapping tables and cross-walks from the originating libraries’ own catalogue records to the consortium’s own (*cf* COPAC, 2012). These are, clearly, good starting points for researchers, offering a quick way to find a large number of resources that are relevant to a search.

Catalogue data also continues the tradition of the card and dictionary catalogues in fulfilling Cutter’s second object, “To show what the library has” (Cutter, 1891).

User tasks

Cutter’s (1876) Objects, Means and Reasons for Choice had a seminal influence on both the practice of cataloguing and its scholarship. His work placed users at the centre of the cataloguer’s concern and identified the ways in which they could search using the technology of the 19th century. His primary object was “To enable a person to find a book of which either (A) the author, (B) the title, or (C) the subject is known.” These three entry points (A-C) corresponded to the three common catalogue card runs and dictionary catalogue volumes

at the time, and continued into the computer era as three of the main fields by which users could search, in the days before whole-record searching was possible.

These were distinct from his third object, “To assist in the choice of a book (G) as to its edition (bibliographically), [and] (H) as to its character (literary or topical).” These aspects of the record were recorded not for search but so that, having performed a search, the user could differentiate between the records he found. The means for achieving objects (G) and (H) was largely through the use of notes; again a feature that has continued to the present day – the edition itself appearing in its own space in the record (later MARC field 250) but often supplemented by notes, and the item’s “character” described in structured or unstructured notes (later MARC 5XX fields).

We can see here that in predicting the ways in which a user might search the catalogue, the 19th century librarian was limited by the technology of the card and dictionary catalogue: it was not until machine-readable cataloguing was relatively well-developed in the 1980s that whole record keyword searching was possible (Bowman, 2007). Being able to search in this way notionally freed librarians and catalogue users from the limitations of the structured search by a limited number of entry points, but it was not until the draft of RDA (Joint Steering Committee for RDA, 2008) that a move away from main and added entries was mooted. Even this has not been brought to fruition: the MARC record is structured around main entry (fields 100, 110, 111, 130) and added entry (fields 700, 710, 711, 730), and so this 19th century concept remains with us.

However, just as the FRBR entity relationship diagram is not the whole of WEMI (Coyle, 2014), the four generic user tasks are not the complete user picture. This is made clear in a close reading of FRBR itself: “The tasks are defined in relation to the elementary uses that are made of the data by the user.” (IFLA Study Group on Functional Requirements for Bibliographic Records, 1998). The use of the word “elementary” is significant: it acknowledges that these are only a starting point for our understanding of what it is that catalogue users are doing when they are using our catalogues. Until recently, when ethnographic methods for observing “Catalog users ‘in the wild’” have begun to be employed (Wilson, 2015), research into user behaviour has focused almost exclusively on these tasks, which, in turn are focused on search and disambiguation of records (“find” and “identify” in FRBR terms) as a means to the end of obtaining a full-text resource (“select” and “acquire or obtain”).

Catalogue Records as Textual Cultural Artifact

Certainly, the search and inventory functions of the catalogue continue to be its most important facilities both for the library and its users: when we catalogue, we do so to fulfill Ranganathan’s (1931) ‘Five Laws of Library Science’, in the order in which he organized them (his capitals):

BOOKS ARE FOR USE. (p. 1) ...

EVERY PERSON HIS OR HER BOOK! (p. 75) ...

EVERY BOOK ITS READER. (p. 299) ...

SAVE THE TIME OF THE READER. (p.337) ...

A LIBRARY IS A GROWING ORGANISM. (p. 382).

However, as cataloguing theorists point out, the catalogue is useful as an object of study not solely in terms of its primary intended uses, but also as a cultural artifact (Smiraglia, 2008). As Kate Whaite (2013) has put it, “A catalogue that is in use is a finding tool, but when a newer version is introduced, the old catalogue becomes a relic of its time.” Moreover, the catalogue record constitutes not only paratext for the item which it describes, but also a written text in its own right. This is not only significant, as Andersen (2002) highlights in terms of Information Retrieval – that users who understand the structure and content of the text of the catalogue record are better positioned to interrogate it successfully in their search enquiries. Nor is it only cataloguers and cataloguing theorists who are aware of the catalogue as text and textual artifact. Significantly, here I want to stress that researchers are beginning to recognize that quantitative tools used in scholarly research might yield interesting findings when applied to catalogue records. Here, library research intersects with the Digital Humanities, applying software tools devised for Computational Linguistics, and repurposing library tools for Collection Management to answer scholarly questions. In this sense, we are beginning to see an answer to

Wilson's (1968) questions about the "exploitative power" researchers bring to the catalogue – using it as a source, in itself, to answer what we may consider to be standard Humanities questions, summarized by Smiraglia (2008) as "the power of a scholar to make the best possible use of recorded knowledge" (p. 35). In Wilson's (1968) terms, this power was the greater of the "two kinds of power [in] bibliographical control" – greater by far than the general "descriptive power" on which cataloguing and cataloguing theory have been focused, for pragmatic reasons. To borrow and amend Les Coleman's (2002) famous quote on printing – for us to know the catalogue to be worth studying, it has to be studied.

Quantitative Analyses

Quantitative analysis of literary texts has a long history (Burrows, 1992), dating back to the pre-computer era (Hoover, 2008) and sometimes attracting controversial responses from literary scholars who feel that literature cannot and should not be quantified (Corns, 1991). Recent examples of computational analysis of texts include Gibbs and Cohen's (2011) reanalysis of Houghton's (1957) *The Victorian Frame of Mind*, which examined the use of emotion-rich words by Victorian authors, to determine the mood of the era; and the use of text-mining techniques to reveal the structure of Pynchon's novel *V* (Tsatsoulis, 2012). Quantitative approaches have also been used in studies of author attribution (Stamatatos, 2009) and, of course, cultural trends (Michel *et al*, 2011).

Within Bibliography, quantitative methods are beginning to lead to significant projects, such as *Early Modern Print*, which "offers a range of tools for the computational exploration and analysis of English print culture before 1700" (Humanities Digital Workshop at Washington University in St Louis, 2013-), including the EEBO-TCP N-grams Browser, and the EEBO-TCP Keywords in Context tool. CERL (the Consortium of European Research Libraries) (2012-.... b) provides the Material Evidence in Incunabula (MEI) service which builds on the records of the Incunabula Short-Title Catalogue, adding notes on manuscript notes and provenance, including links to the CERL Thesaurus of Provenance names and to the CERL Thesaurus of Place Names, which includes geo-coordinates. The Heritage of the Printed Book Book (HPB) Database, also managed by CERL (2012- a), combines data about hand press materials from catalogues across Europe and North America, providing researchers with a single, consolidated file that they can search and / or use for further quantitative analysis.

These CERL projects take as their starting point MARC records, which are then enriched within datasets that we might recognize as scholarly databases, and, while we might be excited by their possibilities, we might also question the limitations of our own, originating library catalogues, and why they do not already contain such enrichment that will be of use to scholars. We might, in effect, question just how far we have come, since Attar's (2004) article eleven years ago asserted "the developing function of a catalogue record as a research tool in itself, instead of a mere finding aid" (p. 11).

Within Digital Literary Studies, there is an interest in computers as 'writing machines' and catalogue output has been identified as a form of computer writing: "Library catalogues over the globe spew out countless replies to queries (author, keyword, call number, title, subject heading, year, language, editor, series)" (Winder, 2008). As cataloguers, we know that the data that is output is written by us – only the order is changed by the means of retrieval. We decide the level of cataloguing we will carry out on each item within a collection; we use our judgment to describe and provide access to each item to the best of our abilities.

Cataloguer Judgment and the Individual Collection

Although touted as something that has been restored to us by the introduction of RDA, "cataloguer judgment" is an important issue with regard to data presentation and quality. It has ever been with us (Welsh and Whaite, 2012). It is cataloguer judgment that decides which notes we will include (Provenance? Binding? Dust jacket?) and, perhaps more significantly, it is cataloguer judgment, along with the judgment of the systems librarian, that decides the classmark or other device we will use to indicate the cohesion of a small collection within a larger one. The ability of the catalogue user to find, for example, all those books once owned by Walter de la Mare, is greatly aided by the use of a separate classmark as well as by a provenance note that informs of the previous ownership. At Senate House Library, for example, it is possible to use an advanced catalogue search on "Mixed classmark" for "WdIM" which retrieves every item from the Walter de la Mare Working Library and the De la Mare Family Archive of Walter de la Mare's Printed Oeuvre. This is

significant in allowing the researcher not only to “find ... identify ... select ... [and] obtain” (in FRBR terms) the materials, but to isolate the catalogue records and use them as the basis for her own research database.

If cataloguer judgment is focused solely on the four generic user tasks, it is focused solely on the “elementary” uses that the researcher may make of the catalogue, and this is a missed opportunity for both library and researcher. As Tomm (2012) has pointed out, “The availability of electronic data opens possibilities for general overviews or comparisons now of active interest that were previously either extremely laborious, or simply not feasible, and argues for the great value of consistent forms of description as well as effective access to complete metadata” (p. 72).

In her PhD thesis, Tomm made use of the library catalogue and reference management software in order to manipulate the data about the Raymond Klibansky Collection, which was the focus of her study. The output options from the McGill Library catalogue were not sufficient for her to be able to interrogate the data in all the ways that she needed in order to answer her research questions. James Baker (2013) describes how in a small project to analyse British Cartoon Archive data, he had to run programming scripts to cleanse the library metadata provided to him in XML format, before he could proceed to carry out his quantitative analysis: the data itself in its raw state was not suitable to simply be fed into the software, in this case Voyant tools. In writing about this activity, Baker is far from complaining: he possesses the necessary technical skills to carry out this work with ease, and is sharing his process for the benefit of others with an interest in creating new knowledge from library data.

Similarly, Mitch Fraas (2014) documented how he created a network diagram of Penn codex manuscripts and former owners from MARC data “in the hopes that it will be not only useful to scholars but also might generate some conversation over how libraries and archives distribute their valuable descriptive information.” Later in his blog post he asserts, “I realize now that this task would have been near to impossible at most libraries where the online catalogs and back-end databases don’t easily allow public users to batch download full records. Fortunately at Penn all of our catalog records are available in MARC-XML form.”

In the absence of such data that can be easily downloaded and manipulated, researchers are left to massage catalogue records through one of the outputs provided by the public version of the catalogue. Training for catalogue output focuses on reference management options, which, in turn is focused on keeping track of publications for a bibliography and citing them correctly. Articles that go beyond the simple training of researchers in this basic use focus on tracking where references have been cited (so that, for example, the academic can assess the impact of their published work on later writers).

Perhaps as a result of this focus, I found when I came to download catalogue records for my PhD research that despite an impressive list of export options, there was not a single one that provided me with what I needed: a clean, tab delimited file of MARC fields that I could import into Excel. The CSV and tab delimited text files did not work correctly – even assistance from the then systems team did not result in my having a clean copy of the data. Attempts to export to any of the reference management options did not carry the notes field through, which, given the focus of my work is largely provenance, meant that the most useful elements of the records were lost to me. Inhouse work on the staff version of the catalogue software could have given me a MARC-XML file, or at least a slightly cleaner data dump, and this is the option I would have taken if I were conducting research for an article. However, PhD research should be one’s own work and it should be possible for others to replicate it – the assumption of the examiners will be that I have obtained the data myself from the public version of the catalogue.

Ahead of the CIG Conference 2014, I tested the output options of the catalogues of other major libraries. I did not find one in which all of the download options offered to the catalogue user resulted in clean records in a format that could be imported to a database or spreadsheet. At the conference itself, I asked for a show of hands from anyone who had tested the output options on the public version of their catalogue. Only one hand, from the British Library, was raised.

The purpose of this paper is not to make us feel bad about our catalogues, or about our lack of prior concern about how our metadata could be used by researchers not just as a source of information about where to find

resources, but as research data itself. Instead, its objective is to excite the current cataloguing community with the potential for research that we have in all these catalogue records we have been amassing since the 1960s.

OCLC (©2015) and COPAC (2012-) both provide collection management tools that can be used to perform quantitative analysis. At the moment, they are available only to member libraries, and have not been envisaged as tools for researchers. I would argue that they should be; that not only bibliographers and library historians could use them to discover more about particular collections within our great research libraries, but that those with an interest in Big Data could find them useful to add to their equipment for analyzing the huge amount of metadata we have in our libraries. If researchers have been energized to study the mood of the Victorians, surely they can be encouraged to breathe new life into the study of what the Victorians (and others) owned? If digitized books have fed into our quantitative understanding of 'cultiromics', what do the records of our books' former owners tell us about cultural trends – in what was kept and valued; how it was dressed up (in bindings); and the extent that ownership was valued (through bookplates, book stamps and simple signatures)?

In reaching beyond our library sphere of data, we don't simply have to push our data out and link it to the cloud; we can, with a very few checks that our LMS is working, and the sharing of our collection management tools more widely, invite fresh researchers in. As Wilson (1968) asserted in the 1960s, when machine-readable cataloguing was brand new, there are two powers of bibliographic control: descriptive and exploitative. Let us continue in the first of these, as we have proven to be masters of description, while building our skills in the second.

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I have worked in digital cultural heritage and projects for over 10 years and this is a great opportunity to air my thoughts on project management, outline some of the lessons that I have learnt - the good, the constructive and the disheartening - and share some useful tips.

Here's a bit about me... I have worked at the National Library of Wales (NLW) in various capacities and in a variety of business areas - digitisation, policing traditional 'cataloguing' activities, and then the more sexier 'metadata', and collection care. I am currently responsible for the digitisation strategy, our historical print and map collections and data standards - a hybrid role juggling conflicting priorities, streamlining workflows and absorbing constant change. I also lead a team of PRINCE2 (P2) practitioners at NLW with the aim of tailoring and embedding the project management methodology within the philosophy of the organisation. I'm also the owner of the 'agile workforce' theme on the Business Transition Programme. My immediate priorities include planning our migration to a new ILS in November 2015 as part of an all-Wales university consortium, opening up our digital content for reuse and aligning business-as-usual activities in the context of ongoing organisational restructuring.

During 2009-2012 I was the dedicated Project Manager for the main development phase of Welsh Newspapers Online (WNO; see welshnewspapers.llgc.org.uk; it's free) and at £3M this is still Wales's most ambitious cultural heritage digitisation project to date. The project aims to digitise 1.5M pages of historical newspaper print (and 1M pages of journals as a secondary product). In a nutshell this means scanning 2.5M pages, dealing with copyright strategy, sending large terabyte files to an external contractor in France for OCR and identifying the article metadata, building a new bilingual resource discovery tool and aggregating 50% of the content on Europeana.

As the project received substantial capital investment from the Welsh Government and the EU the project was immediately thrust into the spotlight and the pressure was on. I was responsible for building, leading, managing and motivating a new cross-domain transient team of around 40 technical and non-technical staff (including an external European contractor) - staff were either mostly 100% dedicated to the project or those who also had a zillion other things to do for other projects. Everybody had high expectations and WNO had to be "better" and more innovative than our "competitors" whilst also delivering value for money. We had never worked on this scale before and we had to build a robust, scaleable and sustainable technical infrastructure and implement new workflows - everything had to be "bigger", more efficient and lean. An additional challenge was the rigid spending profile meant we HAD to spend £1M in 10 months or we would lose it. This sounds like an enviable position in times of austerity but we had to be accountable for every penny within the context of complex capital legislation and lengthy OJEU procurement procedures. It felt a bit like Brewster's Millions.

PRINCE2 is useful but don't get lost in the detail. We decided early to follow an approved project management methodology. Not only to help us deliver but also for accountability - we had to show the world that we meant business. I became a P2 Practitioner early on by following a distance learning course combined with a residential day for cramming and examinations. A variety of study options are available including a 5 day residential school - you arrive on the Monday knowing very little and you sit the exams on the Friday afternoon. This was the first project at NLW to adopt a recognised methodology and it was a learning curve for everybody - new terminology, a different way of thinking about things and a different way of working. Before I go any further I want to say that I love P2! It's structured, logical and provides an organised framework that is - taking a step back - just good old common sense. My belief is that everybody - whether you are working on a 'project' or not - should become familiar with P2's '7 principles'. These are instilled in my brain. I use these everyday in my approach to everything that I do and many are highlighted further in this article. P2, however, can be very document heavy and it's so easy to get lost in the detail. With P2 the Devil is often not in the detail. P2 should be tailored to your project and your organisation, not implemented from cover-to-cover. Focus on what is relevant to your project and what works for you but don't ignore the principles - stick them on your office wall if you have to.

Yes, you can stop doing things if they don't make sense! If you have started to do something and you suddenly realise it does not make sense anymore - maybe the context of the project has changed or it's a lot more work that you thought it would be - just stop doing it or try something else or do it differently. Continued business justification is a core principle of P2. Things that made sense at the beginning of a project may not make sense as you proceed. There's a perception that stopping doing something is an admission of failure and a lack of robust planning, particularly under the watchful gaze of scrupulous funding bodies. Things change and assumptions made at the planning stage may not hold water as you journey deeper into a project. Keep the concept of 'the viable planning horizon' firmly in mind. Managing a project in stages is another core principle of P2 - it was impossible to create detailed plans at the outset of what everybody was going to do everyday for 3 years on WNO and we worked in cycles of 3 months, keeping a constant eye on the bigger picture. It's scary, but admitting that you need to stop or change what you do or how you do something is a sign of diligence and that your finger is on the pulse. Rapid developments in technology and changing user requirements is a fact of life - things change and we have to change what we do if libraries are to remain relevant and deliver worthwhile and innovative project outcomes.

Revisit business case assumptions and find opportunities. Don't believe everything you read in funding applications! Even though I wrote the successful bid for £2M part-funding for WNO certain assumptions we made in the pre-project business justification case were unreliable. Bids for funding often have to be submitted NOW and we usually don't have the luxury of time to undertake rigorous planning. We have to make assumptions. A significant proportion of our newspaper collection was undescribed - and we're still not there yet - so we had to guesstimate the extent of the content that would likely not be subject to third party copyright restrictions - those published before circa 1870 by our informed reasoning - to permit us to re-publish online in digital (copyright relating to digital cultural heritage is another quagmire perhaps reserved for another article). Delighted that we had secured the funding we set about recruiting to build the project team but it soon dawned on us that we had a not insignificant shortfall in the number of pages falling within our risk appetite for copyright, effectively jeopardising the entire business justification and the award of funding. This realisation was disheartening. Do we stop the project and reject the funding? Or do we do something else? At times like these I use a tool I have adapted from an earlier version of the Five Case Model. This is a framework used in the public sector to build a case for change to assess the public value and commercial viability of Government spending. Basically you have to identify options and evaluate the options to identify their viability. The first option is always 'do nothing'. What happens if we maintain the status quo and bury our heads in the sand? Then get creative. Brainstorm as many options as you can, whittle them down to a handful and evaluate each in terms of **Operability** (will it work), **Achievability** (can we do it), **Technology** (is the technology there), **Risk** (does it fall within our risk appetite) and **Interoperability** (strategic fit in the bigger picture). By working through each option you will be able to distill the most appropriate course of action and it provides the relevant authority with a transparent, simple and objective structure for decision making. I find this tool is invaluable - in my head, on the back of an envelope or in formal recommendations to senior management - irrespective of whether the problem is big or small. In the WNO example above we adopted the hybrid approach of broadening our risk appetite to copyright and introducing third party collaboration resulting in wider organisational benefits that we had not envisaged before we started the project. When you are faced with a complex situation, unbundle it, strip it down, distill the facts, be creative with options and justify your actions. Problems will make you think outside of the box and are often the source of inspiration, unforeseen opportunities and innovation.

What is your project NOT going to do? I'm obsessed with this! Scope creep is not inevitable if everybody is clear from the outset what your project is going to do - but more importantly - what your project is NOT going to do. What is IN and what is OUT. P2 comes in useful as it recommends a structured approach to creating a Project Brief before you start doing anything. This can be as simple or as lengthy as your time permits but you must get everybody's approval and sign-off on the project scope or there will be unnecessary conflict down the line. This will eliminate the 'I thought we were going to do this' and 'why have we not done this' half-way through the project. If all you do is make a list of what the project is going to do you must also say what the project is not going to do. With WNO, for example, we made it clear from the outset that we were not going to create item level MARC21 holdings data for our legacy newspapers - we had a finite pot of funds and this would have been too much of a drain on resources without a tangible positive impact on project outcomes. There are so many things that a project COULD do but you can't do everything that everybody wants. Document these key decisions - believe me you will be glad that you did - and make sure that these get the

formal approval of all relevant parties. Incidentally, a technique I often use is 'approval by silence' as not everybody is comfortable in making timely decisions and some people can often be non-committal and passive. Circulate key decisions and any rationale with an explicit 'this decision will be approved at 14:00 next Thursday if we do not hear otherwise'. This makes people stir and spring into action.

No news is not good news. I have to admit that a core P2 principle that I struggle with is 'manage by exception' where tolerances are set for each task and the assignee has delegated authority to just get on with it, only communicating with the project manager if anything falls out of tolerance. For example, we had a team of cataloguers create CONSER descriptive metadata for our newspapers and we all agreed the team would create x number of records per week with a tolerance of say ± 10 bibliographic descriptions (again, documented and approved by all parties). P2 recommends that unless productivity falls out of tolerance I should just leave them to get on with it and I should assume that everything is going well until they complete the task or the phone rings. I am, however, a bit of a control freak and I like to know what is going on. Not everybody is comfortable and brave enough to admit that they have made a mistake, that there's slippage or that they have got it wrong. Perhaps I need the reassurance that all is going according to plan but it's essential to know at the earliest opportunity if a potential problem is looming on the horizon that could impact on our ability to complete the project to spec, on time and on budget. Transparency in communication is key and I always implement a clear strategy to manage the bidirectional flow of communication within the project team and stakeholders. For example, I always set up regular weekly slots with key members of the team and work package leaders that we try to keep clear. We don't meet every week but the slot is there if we need to discuss progress if only for a few minutes or to just comment on the weather. It's essential to build a transparent and trusting relationship with members of the team (whether they are sitting in the next office or whether they are managing a data production line in Lille) so that when problems arise it's not such a big deal. Such a considered and structured approach to communication should be incorporated into a project's philosophy, practices and governance to establish a healthy culture of engagement and honesty.

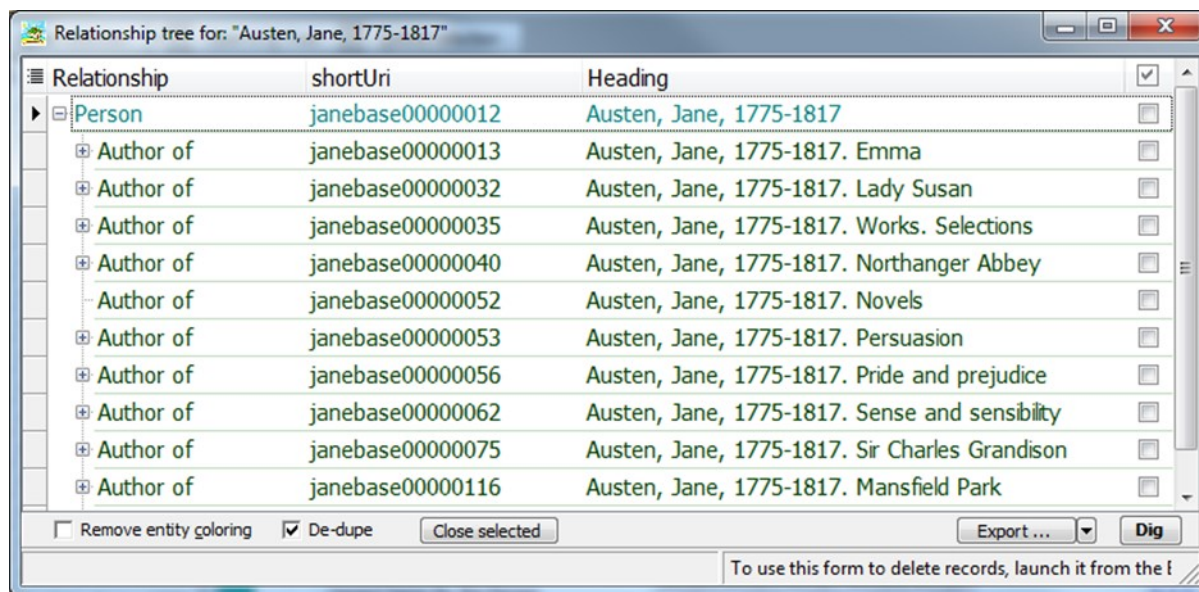
Right, I'm running out of space and there are countless other aspects of project management that I could get into, such as risk (don't just ignore risks - identify, manage and embed within the team - and they are not all threats), outcomes and benefits (keep a constant eye on the big picture and any opportunities to do something better) and the future (projects usually bring about a change to business-as-usual functions). I hope you find my ramblings are useful in whatever you do, whether as part of a 'project' or not - whether you are migrating data to a new ILS or setting up a programme to implement RDA or building a new library stack. It's really just common sense.

Welsh Newspapers Online was launched in March 2013 and has received an overwhelming response from user and business stakeholders. It is NLW's most visited digital resource and during the first 6 months it was accessed from 72 different countries. Future plans include opening up the content as linked data, crowdsourcing text corrections and named entities, and building a virtual national collection for Wales.

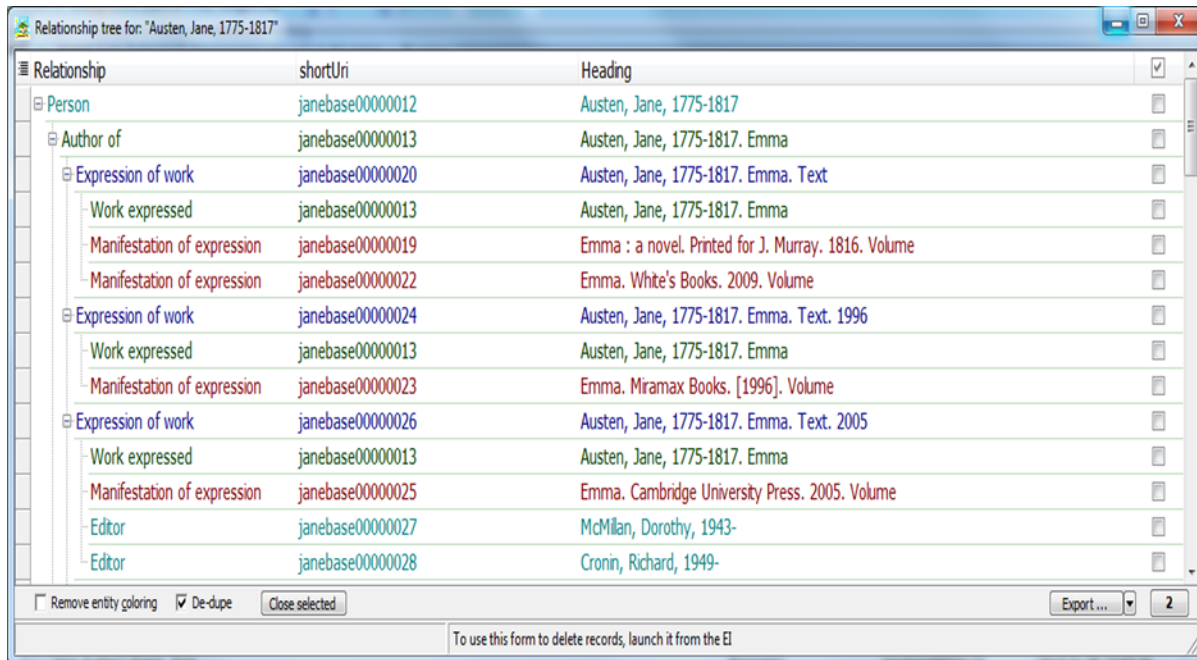
Ever wondered how to catalogue a Jane Austen themed box of sticking plasters? If so, dear reader, then the following may pique your interest. On January 30th I had the chance to participate in an Austen themed hack-day which took place at the American Library Association Midwinter Conference in Chicago. The 'Jane-athon' brought together 60 attendees from 55 institutions with the purpose of cataloguing Jane Austen related resources using the data visualization tool RIMMF (RDA in Many Metadata Formats) created by Deborah and Richard Fritz.

The Jane-thon was sponsored by ALA Publishing and organized by the RDA Technical Development Team. Its aims were to explore RDA beyond the limitations of MARC and identify potential improvements to RDA instructions and elements. It also sought to demonstrate the functional requirements of RDA as well as linked data management tools. Finally, it provided a means of creating useful metadata conformant with FRBR and learning more about Jane Austen's bibliographic linked data universe.

Using RIMMF, attendees were able to create records based on the FRBR entities representing persons, works, expressions, manifestations, etc. In addition, RIMMF displays the relationships between FRBR entities in a tree structure. The following screenshot shows a relationship 'tree' linking Jane Austen to her works.



The following screenshot depicts the expansion of 'Emma', revealing a number of the English language expressions and printed book manifestations associated with it.



Attendees catalogued 11 different categories of bibliographic resources, adding to a Jane Austen 'r-ball' (a basic core of records already created in RIMMF). The core 75 records were expanded tenfold, to 756, during the course of the event. The following table illustrates the breakdown by FRBR entities.

Core 'R' Ball	Expanded 'R' Ball
15 Works	141 Works
37 Expressions	154 Expressions
15 Manifestations	149 Manifestations
8 Persons	248 Persons
0 Corporate bodies	64 Corporate bodies

Most of the resources catalogued consisted of printed books. Nevertheless, a broad range of carriers and content were covered. The following table lists the types of bibliographic material catalogued at the Jane-athon by carrier type.

Carrier
108 - Volume
16 - Videodisc
12 - Object
3 - Online resource
2 - Sheet
2 - Card
1 - Videodisc
1 - Audio disc

The following table lists types of bibliographic material catalogued at the Jane-athon by content type.

Content
105 - Text
18 - Two dimensional moving image
6 - Three dimensional form
2 - Spoken word
2 - Tactile image
2 - Still image
1 - Tactile three dimensional form
1 - Computer dataset

Jane-athon participants faced a major mental challenge in screening out MARC and thinking about cataloguing purely in terms of FRBR and RDA. They also needed to set aside other conventions associated with composite descriptions, such as the [provider neutral model](#)¹ and recording ISBNs for different manifestations on the same record.

FRBR's work, expression and manifestation and item (WEMI) structure forces cataloguers to think about the appropriate entity in which to record bibliographic information. In the MARC bibliographic record WEMI information is combined to form a composite description. In the RIMMF context however, the cataloguer is required to treat each entity separately during data entry. For example, illustrative content has to be entered in an expression rather than work or manifestation record. Furthermore, RIMMFing requires explicit links between records which would be implicit in a composite description.

¹ Program for Cooperative Cataloging (PCC) Provider-Neutral E-Resource MARC Record Guidelines <http://www.loc.gov/aba/pcc/scs/documents/PCC-PN-guidelines.html>

The event demonstrated that a challenge for the designers of next generation user interfaces is to produce tools that are sufficiently intuitive for efficient use. However, participants also welcomed the hierarchical approach which RIMMF takes to displaying bibliographic data. This feature prompted at least one participant to exclaim “Awesome!”

The Jane-athon also exposed potential issues with RDA, which may require further development. Realia provoked a great deal of discussion. For instance, how should you catalogue, a finger puppet, fridge magnet, paperweight or the aforementioned box of sticking plasters (all bearing Jane Austen’s likeness) with RDA? How should you relate these resources to Jane Austen the person? Adding new subject relationships, such as ‘depicts’ and its reciprocal ‘depicted on’, was one suggestion. This matter and others which emerged concerning relationships will form part of the discussions to be undertaken by the new JSC Technical Working Group on Designators.

The FRBR/RDA model generated much discussion, both regarding Jane Austen’s literary oeuvre and the wider bibliographic universe. For example, although it is not currently represented in FRBR, some attendees felt that ‘super-work’ may be a useful additional entity in order to relate such works as the novel and film versions of ‘Gone with the wind’.

Taking this idea further, a putative ‘super-expression’ entity was envisaged as a means of recording the attributes known to unite all the expressions which fall into a single category, such as every French language expression of ‘Hamlet’. It is not clear that ‘super-work’ or ‘super-expression’ are really new entities. JSC introduced ‘agent’ as a super-entity encompassing person, family and corporate body, therefore aggregating three different entities. However a ‘super-work’ or ‘super-expression’ would only aggregate different instances of the same entity.

Many resources catalogued during the Jane-athon are not strictly single works but rather multiple works aggregated in a single manifestation. For example, an edition of ‘Emma’ could be edited with a preface, an introduction and include other complementary content; each of these components might be regarded as a work in its own right. Whilst such differences would currently be handled as variant expressions in RDA, questions arose as to whether this was the best approach to take from a conceptual viewpoint. The complexities associated with cataloguing aggregate resources will be addressed by the new JSC Aggregates Working Group.

The expanded r-ball, enriched by the Jane-athon, has been made available via the RDA Registry website for review by the wider metadata community. Also made available is feedback from the event attendees. A follow up event is being planned for the American Library Association Annual Conference in June.

RIMMF is free to download from The MARC of Quality (TMQ) website or via the RDA Registry. It is accompanied by an online user manual, tutorials and other supporting documentation. The latest version of RIMMF (RIMMF3) allows the user to import MARC21 authority and bibliographic legacy data, display it in the context of FRBR entities and export it as RDF linked data.

The following links provide resources associated with the Jane-athon:

RIMMF download

<http://www.marcofquality.com/>

<http://www.rdaregistry.info/rimmf/>

Pre event R-ball

<http://rballs.info/topics/p/jane/janebase.html>

Post event R-ball

<http://rballs.info/topics/p/jane/jane1raw.html>

General information on R-balls

<http://rballs.info/>

Participant responses

<http://rballs.info/topics/p/jane/janethon1/survey/results.html>

Background

The publication of the BIBFRAME Primer (Miller et al, 2012) provided cataloguers with a glimpse of the new cataloguing model proposed by the Library of Congress to replace MARC. Prompted by the findings of the US National RDA Tests, the Bibliographic Frameworks Initiative sought to find a structure that would allow for the linked data capabilities of RDA while accommodating the legacy data created in libraries in MARC from the 1960s – 2010s.

As such, BIBFRAME is the fourth major model with which cataloguers in the Anglo-American community are required to familiarise themselves in order to understand modern cataloguing and meet the needs of the job market, and, therefore, the fourth model that educators must teach beginning cataloguers (Table 1).

Card / Dictionary Catalogue	Paper-based system; entry points and length of description limited by concerns around physical space (size of card / page and size of catalogue cabinet / shelving unit). Each record describes the item in the cataloguer's hand entirely – its intellectual and physical contents.
ISBD and AACR in MARC	ISBD, AACR and AACR2; built on principles of the card and dictionary catalogue; monolithic record structure in which information in fields is contextualised and explained by reading the entire record; inherited the card / dictionary catalogue's description level, covering both the intellectual and physical contents of the item in hand.
FRBR in RDA	Although much is inherited from ISBD, AACR and AACR2, the principle of RDA is a version of FRBR's WEMI model: Works, Expressions, Manifestations and Items are catalogued separately and linked to each other (and to the appropriate WEMI of other records); moves away from the monolithic record, favouring instead field-level links between records, aiming for the linked data environment. Currently constricted by systems based on the MARC format, which does not accommodate RDA's linked data capacities.
BIBFRAME	Linked data solution proposed by the Library of Congress; based on RDF; data model proposes Work and Instance, allowing for simplified analysis on the part of cataloguers and, significantly, the construction of RDF triples – a foundation for linked data in the wider web environment. Many triples in BIBFRAME incorporate Annotations – pieces of data that provide information about the Work or Manifestation, such as creator, publisher or ISBN.

Table 1. Cataloguing Models Anglo-American cataloguers learn in 2015

The tension between teaching cataloguing principles and practical cataloguing (Pattuelli, 2010), the difficulties of accommodating cataloguing within the curriculum (Robinson and Bawden, 2010) and the need for a longer syllabus to be taught within a fixed time-frame (Welsh, 2013) have been well-documented. Alongside these issues, an awareness of the scarcity of visualization tools that students can use without advanced technical skills led teaching staff and researchers at UCL Department of Information Studies to scope a project to create a teaching tool for BIBFRAME.

Project aims

Funded by an E-Learning Development Grant from UCL E-Learning Environments, the aim of the Linked Open Bibliographic Data project (UCL Department of Information Studies, 2014-15) is to develop a BIBFRAME dataset as an Open Educational Resource, which will help students to learn the new standard in an interactive way, and at the same time become familiar with linked data concepts and principles, RDF and other state-of-the-art web technologies. An important aspect of the project is its interdisciplinary nature, combining methods and techniques from Library Studies, Digital Humanities and Computer Science.

Another key feature of the project is collaborative co-learning with students – a concept in Higher Education that is becoming embedded in teaching practice. At UCL, it is expressed through the Connected Curriculum (UCL, 2014-15), which underpins our Teaching and Learning Strategy 2010-2015 (UCL, 2010) and is in line with the UCL 2034 Strategy (UCL, 2014), which advocates student involvement in research at all levels of study.

Within the Linked Open Bibliographic Data project, there are two forms of student involvement. The first is our Student Systems Developer, Natalia Garea Garcia, who is currently working with Anne Welsh (Project Coordinator) on data selection and Antonis Bikakis (Project Lead) to develop the product. She is also advised by Simon Mahony on what is necessary to make an Open Educational Resource – a tool that can not only be used in the core and advanced Cataloguing modules at UCL, but also by other educators and learners. Later stages of the project will see this work intensify and Simon's expertise will be crucial.

Another key activity in which Natalia is involved is product testing, and in this she works with Charlie Inskip and, indirectly, with Mira Vogel. So far, Charlie has held focus groups with UCL MA LIS students from the class of 2014-15 following a session in the core Cataloguing module on RDF led by Antonis and Natalia. This has provided us with feedback that the tool is needed to assist a non-technical audience in grasping the power and significance of RDF, and, therefore, of BIBFRAME. Although the class was highly interactive, with well-thought-out activities to guide students through creating and visualizing RDF triples, there was a high cognitive load in getting to grips with software designed for use primarily by computer programmers. This result was positive, as it verified module coordinator Anne Welsh's instinct which initiated the Linked Open Bibliographic Data project in the first place: that something designed specifically for those with no programming skills was necessary to maximise learning and understanding of the BIBFRAME model.

Focus group participants are another important group of student collaborators. Students from the Advanced Cataloguing module are working with Charlie and Natalia to test both the concepts used in the tool and the tool itself.

All of these students – Natalia and the product testers – are meeting the Connected Curriculum's 'seven dimensions of connectivity' (Figure 1) and are collaborating with the project's teaching and research staff in creating the new knowledge needed to complete the project and create the Open Educational Resource.

Later in the year, we'll also be issuing calls for practitioner focus groups, and hope that members of the Cataloguing and Indexing Group will be among the first to step forward and contribute. The contribution of current cataloguers is essential to make the Open Educational Resource as relevant as possible to the community as a whole.

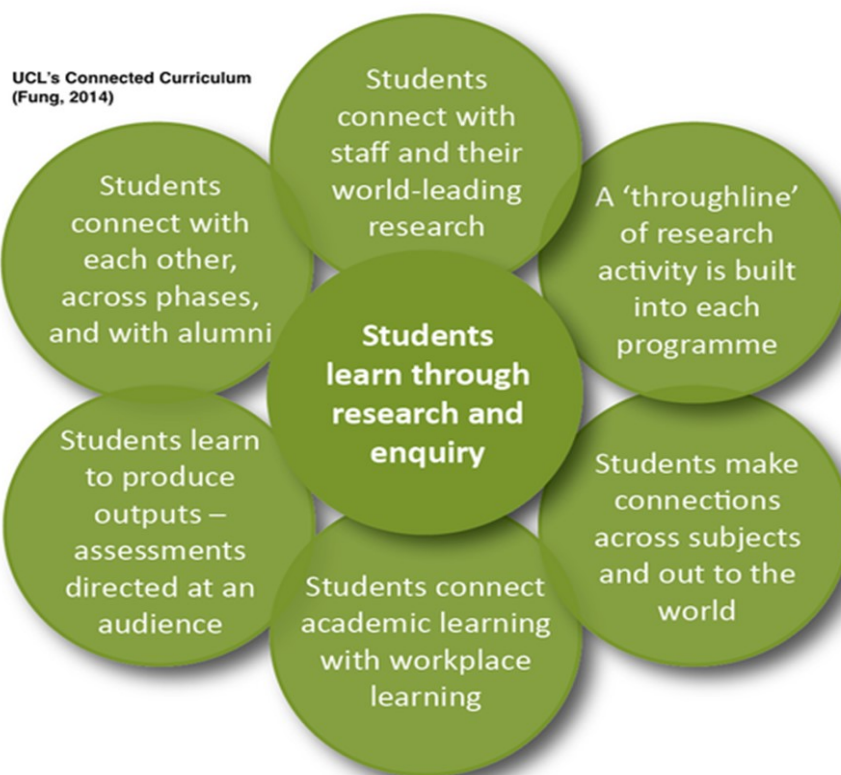


Figure 1. Seven Dimensions of Connectivity

http://www.ucl.ac.uk/teaching-learning/strategic_priorities/connected-curriculum ; full paper by Dr Dilly Fung currently in press. Reproduced with permission.

Building on existing knowledge

As background to their project work, and as an important part of their own individual learning in Advanced Cataloguing, Natalia and the product testers have tried RIMMF (RDA in Many Metadata Formats) (MARC of Quality, 2015) to see how it visualizes RDA. The Jane-athon data (R-balls, 2015) was released just in time for us to play around with it in class, and students also created their own sets of WEMI (Work, Expression, Manifestation) data, using examples Anne pre-selected for them, including a paperback and hardback of the same book; the various editions of AACR, and a proof copy of a book and its final published version.

As well as consolidating their knowledge of RDA (building on their cataloguing policies submitted for assessment in the core Cataloguing module), and providing a neat tree structure of relationships, creating data on RIMMF highlighted issues for students in applying the Expression part of the WEMI model. The intellectual challenges of WEMI have been documented elsewhere (Parent, 2014), and we did discuss them in the core Cataloguing class practicals, but creating records on RIMMF provided students with practical examples. What exactly *is* the status of a proof copy? In theory, it's simply a different Manifestation of the same Expression as the final published copy, but does that hold true when there have been so many changes and additions between the proof and the final published version (de la Mare, 1952a and 1952b)? Similarly, there was a productive discussion around the many different releases of AACR (Joint Steering Committee for AACR, 1967; 1978; 1998; 2002), although that was easier for students to resolve. Certainly, after tackling these, and other examples, we could all see the pragmatism of BIBFRAME's simplified WI (Work, Instance) model. The binary choice of whether something is a Work or an Instance appeals.

From a pedagogical point of view, it was interesting to see which items caused issues for beginning cataloguers, and it was noticeable that the two students with workplace RDA experience had far less difficulty in reaching conclusions. However, as Deborah Lee (2014) has pointed out before, working with RDA does force cataloguer judgments at many turns because of the wide range of options built into the standard. Certainly, the more experienced students were confident in making *their* decisions, but were not dogmatic in forcing their points home.

From Natalia's point of view as Student Systems Developer, creating records on RIMMF as part of a class with other students has given her food for thought, both in terms of the structure and presentation of the tool she is building with Antonis and Simon. As Project Coordinator and Project Designer, it is important to Anne and Antonis that the project's offering be familiar enough to the cataloguing community to be useful without creating too great a cognitive load to learn how to use it.

Project Outcomes

So, you may well ask, what will our Open Educational Resource for Linked Open Bibliographic Data look like? The honest answer is that it is too early in the process to be clear on presentation: there is much development work for Natalia, Antonis and Simon to carry out, and Charlie and the product testers are still in the very early stages of their work.

By July, when Natalia and Anne are presenting a Masterclass at the CILIP Conference, we will be ready to share our experience in identifying appropriate datasets for student learning (rich in relationships that were not represented in MARC) and in converting pre-existing data from MARC to BIBFRAME using the conversion tools supplied by the Library of Congress and Zepheira (BIBFRAME.ORG, 2014). As Tom Meehan (2014) has pointed out, many of the efforts in creating BIBFRAME have, so far, focused on conversion of legacy data, and the BIBFRAME standard might have looked quite different had that not been the case. However, as students and educators within a vocational discipline, we do not see such constraints as a problem. Rather, working with the practitioner community to solve its real-world issues, and closing the research:practice gap so often identified (Haddow and Klobas, 2004) is a core part of our research and learning. We look forward to continuing to work with the CIG community in developing teaching and learning resources and models for beginning and intermediate cataloguers.

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Bursaries for CILIP conference 2015 – “Connect. Debate. Innovate”

CIG is pleased to offer two sponsored places (one funded by CILIP and one funded by CIG) to this year's [CILIP Conference](#), held on 2-3 July 2015 in Liverpool. The conference will feature high profile speakers and cover a diverse programme around the four main themes: *Information management, Information literacy and digital inclusion, Demonstrating value, and Digital futures and technology*.

The bursaries include the delegate fee for both conference days, accommodation at Z Hotels on Thursday 2 July, attendance to the drinks reception at The Museum of Liverpool (also on Thursday 2 July), and travel expenses of up to £50.

Applicants must be CIG members (though CILIP membership is not required). We would like the sponsored delegates to attend at least one session related to cataloguing, classification, metadata etc., and write a report/summary to be publicised on our blog and/or journal. Your application should demonstrate why you would like to attend, how you would use your attendance to highlight or promote CIG and why you would not be able to attend without CIG sponsorship.

Please send your application to Helen.Doyle@nortonrosefulbright.com by 17th April 2015. Applications will be judged by members of the CIG committee and candidates notified by 15 May

I've been running Salford Zine Library - a not-for-profit archive of self-published materials housed at Nexus Art Café in Manchester - with my partner since some time in 2013. We reckon that the collection comprises of around 1500 zines but we have absolutely no evidence to support this claim. There's no selection policy and all of the collection has been donated over the last few years. We're always looking for more.

Our aim is to promote and encourage the enjoyment of reading and making zines through workshops, exhibitions and other outreach activities, while also helping to facilitate research into zines and DIY culture. We do talks in schools and colleges and try and take the collection around the country as much as possible.

There's currently no catalogue or even an inventory, so we can't even say for sure what we have. This is about to change, though. We've recently been awarded £8,800 by the Heritage Lottery Fund to help us catalogue the collection and build a new website for the library. For this article, I thought it would be useful to talk a little bit about zines and DIY culture before going through the HLF application process. It's actually a lot easier than you'd think!

What's a zine?

I've already used the word "zine" six times (including this one) in the first three paragraphs, but it might be useful to provide a basic definition for the uninitiated. A zine (or fanzine) is a self published magazine, typically produced in short runs on a not-for-profit basis. They can be about absolutely anything, though they tend to provide a medium for non-mainstream voices. The zine as a medium has been co-opted by various groups throughout the years, including science fiction fans, punks, football supporters and the LGBT community (among many others). If you can think of a topic that people get enthusiastic about, there is probably a zine about that!

It has been suggested that the internet would bring about the death of zines – what can you say in a zine that you can't say on a blog? But this has proven not to be the case. In fact, the internet is being used to develop and maintain communities of zine makers and allows people to find out about and buy zines from around the world. Zines are here to stay!

Zines perfectly sum up the spirit of DIY culture – if your voice is not represented in mainstream media, make your own media! Salford Zine Library provides access to these underrepresented voices. Zines are often very temporary, being printed in short runs and passed around between friends, so we think it's important that someone is collecting and preserving these unique publications. We believe that they contain the kind of stories and experiences that won't make it into history textbooks but are nonetheless an important insight into non-mainstream culture.

HLF funding

We had previously attempted to apply for funding to help us catalogue the collection through Arts Council England but had been unsuccessful. We then turned our attentions to the Heritage Lottery Fund, who we hoped would be able to see the heritage value of our collections. Before we applied we put together a brief (and probably quite incoherent) summary of what we wanted to achieve as part of the project and we were given some excellent advice. We were encouraged to demonstrate more clearly the benefits to the community and seek supporting statements from organisations that we'd previously worked with.

The application form itself is quite simple. It's just a case of putting forward the case for your project – why should the project be funded? Who will benefit? We'd spent a lot of time getting quotes for various parts



of the project so we were able to provide a fully costed plan. We submitted our application and, around six weeks later, received an excited phone call from our adviser with the good news. As a qualified librarian with lots of cataloguing experience, I managed to persuade them that I could do a good job of cataloguing the collection and I think the supporting statements we were able to submit really helped.

Our lovely adviser patiently answered all of our silly questions and guided us from start to finish. We felt like she was really rooting for us. I'd thoroughly recommend putting together an application if you have a collection that needs to be catalogued. The worst that can happen is that they say no!

Zine cataloguing

Now we have the funding, we can start thinking about the catalogue. The website is currently being built and will include a simple search interface with the ability to refine by a number of fields. As we're a reference only library, we didn't think we needed a fancy LMS, so the database is being put together by the developer who's building the website. We're going to be using a very rough approximation of Dublin Core for simplicity, with a couple of added fields with controlled vocabularies (I'll talk more about that later).

When it comes to actually cataloguing the collection, however, there'll be some fairly unique challenges to overcome. For example, it's often difficult to identify authorship – zine makers frequently use pseudonyms, write anonymously or go by first name only. Authority control is almost impossible. Similarly, the nature of zine writing and zine writers often leads to some difficult decisions around the question "what is this zine about?" Early on we made the decision to create a controlled vocabulary of zine genres that should help us to put the collection into a small-ish number of categories. We're also going to use a load of non-standardised keywords as we're going along with the project. We think this fits the DIY ethic of zines while also giving browsers some kind of loose structure on which to narrow down search results.

Rather than worrying about the challenges that cataloguing zines pose, we're going to embrace the chaos! For some records, there may be a number of fields that we haven't been able to adequately complete, but we just have to accept this. This is where the users of our website might be able to help, though. Visitors to the website will be able to post comments under each zine in the catalogue so we're also hoping that suggestions will be made in order to improve the metadata as we go along – perhaps they recognise the zine and have more information about it, or they might have better keywords for describing the content. We can't be too precious.

The future

We're hoping that the new Salford Zine Library website will go live in May 2015 to coincide with [Northwest¹ Zinefest](https://twitter.com/nwzinefest), a zine fair we're helping to organise in Manchester. We won't be able to get the entire collection in the catalogue by then, but we should be able to get around 1/3 catalogued ready for the launch so we can get some feedback and start demonstrating it at events. It's going to be a difficult couple of months, especially as I have a full time job too, but we're looking forward to being able to show off our collection online as soon as possible.

If you'd like to keep up to date with the project, you can follow us on all of the usual social media channels:

Twitter - @SalfordZineLib

Blog – <http://www.salfordzinelibrary.blogspot.co.uk>

Facebook - <https://www.facebook.com/salfordzinelibrary>

1. <https://twitter.com/nwzinefest>

The day began with an Introduction to Linked Data from Tom Meehan. He explained that we can't just go ahead and start cataloguing Linked Data but MARC is on its way out and Linked Data will most likely replace it possibly (although not necessarily) in the shape of BIBFRAME. He then went on to talk about MARC data and described how it is structured and labelled in a recognised format so that we (libraries) can share it with each other. We were also reminded that MARC records are for the most part not open and that people often don't have explicit sharing licences in place. Tom then demonstrated what Linked Data looks like when it isn't 'open' by showing us a blank slide. There is no point in creating Linked Data unless you make it open and by open we mean freely available and licensed to be re-used, redistributed, and repurposed. To provide our definition of Linked Open Data we were presented with Tim Berners-Lee's guidelines...

- use HTTP URIs as names for things.
- put it on the web and make it open.
- when someone looks up a URI provide useful information using the standards RDF (Resource Description Framework) and SPARQL (**SPARQL Protocol and RDF Query Language**).
- include links to other URIs so that people can discover more things.
-

This gave us a broad understanding of what Linked Data means and next we learnt how to construct an RDF triple composed of a subject, predicate and object using URIs. We were shown how to write it in Turtle, which is easier to read, and how to use prefixes for our chosen vocabularies to save ourselves some typing. There are lots of ways to combine the various vocabularies and you can choose any combination you like to model the data – whichever is most suited to your library's need. There is also the option of making up your own schema should existing ones not be appropriate. Tom described the RDF and Linked Data in a way that I felt most people attending would have understood – we were taken through the processes step by step and it all seemed pretty clear to me. I did feel like I'd had a bit of a head start as I'd written an essay on Linked Data for my MSc the previous month but I think as an introduction to the topic this couldn't have been better. We were able to view a 'real life' example of Linked Data through an OCLC WorldCat record. OCLC use schema.org and RDFa for their model and we were shown the Linked Data tab at the bottom of the page which allows you to view the N triples or Turtle. I think most people will have found this useful as it gave us a way to study the data after the event and to try to make sense of what we have learned.

Next up was Owen Stephens to talk to us about how to publish and use Linked Data. He described how to create the URIs themselves and how to make them cool! URIs are fundamental to Linked Data because these *are* the links. He explained how it's important to be very precise in what you are identifying, for example London the 'thing' and London the 'concept' are two different statements in RDF. Also we need to think about

page URIs. Should we re-direct the link to the page or to what the page is about? Apparently there is a lot of ambiguity and a lot of time spent in the Linked Data community arguing about it. With library data the URIs need to not change or disappear. It's good practice therefore to use Cool URIs which should have a numerical unique identifier and avoid things subject to change (such as terms, names or programming languages). I think this would have struck a chord with the audience and I expect everyone realised at this point how traditional library authority files are not accurate enough when it comes to identifying things uniquely.

Following this Owen gave us a rundown of the vocabularies and ontologies we might consider using before explaining the different publishing models:

- Static files of RDF statements stored like you would do HTML pages on a web server (not always appropriate for a whole catalogue).
- Dynamically generated views where you have data in the back end of the system and then generate views of it when people want to look at it i.e. when the page is viewed. Most RDF is published this way.
- Embedded Linked Data within HTML documents. This can be done with existing catalogues and it's what OCLC have done with WorldCat. Generating these views is not necessarily a difficult step but it does involve work for systems and cataloguers.

As we had already learnt from Tom this morning there is no point creating Linked Data unless you are going to make it open so Owen briefly discussed what this might entail in terms of licenses and copyright. We need to keep track of licensing across all the data from multiple triple sources, and this may not be easy but it is certainly possible and metadata licensing is not a new thing. Current Linked Data models have used various Creative Commons or Public Domain licenses.

Corine Deliot from the British Library was next to present, describing how they went about publishing the British National Biography (BNB) as Linked Open Data. It was really great to have an actual use case described to us and she gave us a nicely detailed description of the project and the workflows. She began by giving the justification for carrying out the project in the first place saying that since 2009 the UK government has been committed to public bodies having open data and the British Library particularly wanted to look beyond library formats and start trying to adapt to cross domain standards. She said that they tried to be pragmatic and choose a definite data set to work with which is why they went with the BNB. This record set also benefits from data that is as consistent as can be reasonably expected. I was interested to learn that they used existing staff and resources and built on their existing skills with MARC. They had no programmers or data architects involved but they did get training and mentoring from external provider, Talis who also hosted the data for them afterwards.

Next she described the process they used to model the data and explained how they went through the

various steps highlighted previously by Tom and Owen. We were shown the BNB data model slide and its complexity drew a few gasps from the room but she assured us that it is not as complicated as it looks and that models such as these can be useful tools to refer to when creating SPARQL queries. In terms of usage statistics Corine told us that they were still gathering data and that due to the necessary 'openness' it will always be hard to find out who is using it. They are currently gathering information on the number of hits on the SPARQL endpoint, the number of downloads from the British Library webpage, weblogs and analysis reports and also anecdotally from tweets etc.

We were treated to a couple of examples where they had to find their own way of doing things (specifically modelling publication as an event). Overall it is clear to see that if we were creating Linked Data from scratch it would be easy but it's the transforming of legacy data (MARC records in the majority of cases) that makes it hard. This reminds me how valuable it is not just to have open Linked Data but to be open with the projects and procedures used to create it. If people are willing, like Corine and the British Library, to share their work with us then we can learn from their processes and benefit from a collective knowledge on the topic. Indeed towards the end of her talk she suggested it would be good to get some more collaboration with other libraries.

The following presentation was the one I had been looking forward to the most. We got to get our hands dirty having a go at querying the data in the BNB with SPARQL in a session led by Owen. After a brief introduction to the RDF query language we followed Owen and wrote queries in the BNB SPARQL editor. I found this fun and, although I got a bit lost towards the end I was able to get some of the SELECT queries to return results. At this basic level the syntax was similar enough to SQL for me to feel comfortable but the speed of the session meant that I needed to revisit the editor and have a play later to truly understand what I was doing. We built on the first simple SELECT statement, adding to it line by line and running it to make sure the results (all Jane Austen related) were good before building it up further, querying first using strings then moving onto URIs. We had to be very specific if we wanted to return results. Owen explains how this need for specificity demonstrates how SPARQL is not so good for searching but is very good at precise retrieval.

As the next section 'What's wrong with MARC' was introduced I overheard a couple of comments suggesting that there might not be anything wrong with it, but after Tom calmly and clearly exposed its failures to us one by one, I knew no cataloguer in the room could justify wanting to hold onto it. He started with a slide of a catalogue card pre AACR2 and everyone began to sit up and pay attention. Data is organised in OPACs with labels down the side saying what each bit is. But with a catalogue card it's the order that the data is laid out in that tells us what it means and its place in the drawer. You understand it because of where it is in the record and how it is separated by punctuation e.g. a comma tells us 1965 isn't part of London in 'London, 1965.' But if you take a bit out of context or out of the record it doesn't make any sense because it's not self-

-describing. So from these card catalogues MARC was born and so it really wasn't designed for use in OPACS. We have to fight against it for example if you want a title to display without a statement of responsibility you're going to have to muck about with it to get it stripped out of the 245 field. It was designed for human comprehension not for machine comprehension, and even cataloguing with RDA in MARC hasn't changed much about the way it is stored.

We were then shown a .mrc record with MARC in its 'natural form' to make the distinction that RDF is not hard and that MARC in its raw state is not easily readable anyway. Everyone was all quiet – I think it worked well as it showed us how complex the MARC encoding is that everyone has got used to working with, and showed that if we can cope with that then we could learn to cope with something like Linked Data. Tom then explained how MARC is for storage, manipulation, display, input, exchange and distribution, publication, and is the lingua franca of library cataloguing he told us that Linked Data shouldn't take on all these roles and none of us would be expected to sit and type out RDF. What followed was an in depth analysis of specific issues. I'll explain some of them briefly...

- Information is duplicated e.g. languages could be in 008, 041, 240, 546 fields.
- What should be unique identifiers for author names are written in various ways with different dates and various punctuation and it is problematic when they change for example when a person dies.
- Text processing is slow when we need to do things like strip out punctuation.
- Information in a 700 field is meaningless without a relator term.
- RDF triples can be isolated and still remain meaningful but with MARC sections of data have no other context.
- Only libraries use MARC so we are tied to library specific software and processes and outside agencies can't take advantage of library data and standards.
- The issues with finite notations and too few indicator fields prompted Tom to jokingly mention SuperMARC because it has 4 character tags, 3 indicators, and character codes of 3 figures. I got the feeling this is not where we want to be headed.

By this point in the day we all had a lot to think about and of course it's not going to be too comfortable to accept that MARC's days are numbered. I had all MARC's failings swimming round in my head when Alan Danskin began his demonstration of 'RIMMF RDA in many metadata formats.' In comparison to MARC this looked fantastic to me but we were soon to learn it's not a tool for cataloguing but a tool for training and visualising RDA. It shows FRBR works, expressions and manifestations and sticking to the Jane Austen theme Alan demonstrated how to create a record for Emma. I liked the way fields were pre-populated with content, media and carrier depending on the template chosen and I appreciated the drop down menus that appeared each time you typed into a field enabling you to select text that has already been entered into the dataset. The system generated composite key builds up as you add more information to the record and acts as a unique identifier for the thing in the database. For each new authorised access point included, a link

to the relevant section in the RDA tool kit is added and, unlike MARC, you can generate effective retrieval based on the relationships between works. Clearly a proper understanding of FRBR and RDA is important for new (and experienced) cataloguers but I think I would be more inclined to use RIMMF for this purpose if it allowed me to create records that could actually be imported into my own library management system. Maybe future realisations of the software will have more functionality in this area.

Finally it was time for the bit we'd all been waiting for and Tom's discussion of BIBFRAME. He explained how the BIBliographic FRAMEwork initiative is the Library of Congress' attempt at demonstrating credible progress towards a replacement of MARC. By this point in the day I was feeling super inspired and positive about Linked Data and was excited by the prospect of learning more and preparing for it to feature in the future of cataloguing. I felt I had understood the main principles including reading RDF and grasping SPARQL. When it came to BIBFRAME, however, I felt like I had gone back to the beginning again. It might have been because it was the last presentation of the day but I found it difficult to comprehend and I couldn't easily connect the BIBFRAME model with the things I had learnt so far. It left me wondering whether 'replacing MARC' with another similarly closed, complex, library defined system such as BIBFRAME would truly allow us to make the most of the benefits of Linked Data.

The final comments of the day gave us some tangible ideas to take back to our institutions. For a start how much can we reasonably demand from our LMS vendors? Owen reminded us that Open Source software provided by Koha and Evergreen for example will often support Linked Data but the large proprietary vendors are not there yet. Whilst they don't yet offer systems that support it, we should expect our LMS providers to be active in the Linked Data community and to contribute to the discussion. Warning bells should ring if the subject is ignored by a vendor completely. We should also understand that when creating tender documents it may not be enough to simply request that a LMS 'supports Linked Data' as the vendor can easily say that it does by mentioning something to do with RDF but in reality this may mean a minimum amount of functionality. Despite this, as Céline Carty pointed out, there is still value in asking the question for unless it is asked then the vendors will not develop anything, as they will assume there is no demand.

Overall I came away from the event feeling pretty good and having learnt a huge amount. It's clear that we, as cataloguers, have a responsibility to educate ourselves about the Linked Data landscape and the worst thing we could do now would be just to wait and let it happen to us in whatever prescribed form 'it' may take. We have to make sure we are stakeholders in the systems of the future. This may mean critically engaging with the BIBFRAME debate or perhaps it may mean supporting our own Linked Data projects in house, but either way cataloguers should be part of the discussion. For me, I know I have a lot more to learn but I like to be prepared and as we are clearly on a road to Linked Open Data I'm going to make sure I stay fully engaged.

Twitter storify:

<https://storify.com/CILIPCIG/cilip-cig-linked-data-event-february-2015>

The presentations:

<http://www.cilip.org.uk/cataloguing-indexing-group/presentations/linked-data-what-cataloguers-need-know-2015>

CIG annual bursary

The CILIP Cataloguing & Indexing Group intends to support research, best practice, and professional development in the field of metadata, cataloguing, classification, indexing, and the technology for these areas with an annual bursary of up to £500. CIG also wants to help disseminate the outcomes of any sponsored projects or activities.

Purpose: The CILIP Cataloguing & Indexing Group intends to support research, best practice, and professional development in the field of metadata, cataloguing, classification, indexing, and the technology for these areas with an annual bursary of up to £500. CIG also wants to help disseminate the outcomes of any sponsored projects or activities.

Conditions: This bursary is intended for future or ongoing projects (i.e. not awarding past achievements) where no other funds are available. It is available to CIG members. Candidates are expected to report on their results/findings/output etc. to the CIG committee; these reports are to be published in the group's journal, members' newsletter, and/or blog. If the report or results are otherwise published, the support from CIG Annual Bursary should be acknowledged. The bursary is not intended for primary professional training (e.g. library school fees). Depending on the suitability of applications, the bursary may be split or not awarded.

Application: The bursary will be announced at least four weeks in advance of its deadline which shall be 31st May 2015; the candidates will be informed of the outcome within another four weeks. Applications should be submitted to the [CIG Chair/Secretary](#) and should include:

- A covering letter of application
- Details of how the bursary will be spent i.e.
 - a description of the aims & objectives of the project or activity
 - how it will contribute to the professional development of individuals or generally to CIG's field of interest (not more than 500 words)

A supporting statement from anyone in the wider library profession is optional.

Decision: The panel of judges for the CIG Annual Bursary will be comprised of three persons:

- CIG Chair or CIG committee member nominated by the Chair
- Professional academic, invited by the committee
- Professional practitioner or other expert in the field, invited by the committee

Payment: Payment will be made to the successful applicant(s) by cheque or electronic bank transfer, at a time determined by the judging panel. The panel may impose conditions, such as proof of expenses, that have to be fulfilled before the full sum is paid out.

RDA for cartographic resources

Paige G. Andrew, Susan M. Moore and Mary Lynette Larsgaard

London: Facet Publishing, 2014 ISBN 9781856047722

Reviewed by Paula Williams, Curator, Maps, Mountaineering and Polar Collections, National Library of Scotland

The advent of Resource Description and Access (RDA) as the most recent international guidelines for cataloguing all types of resources across the library profession has caused at the very least a sea change in many institutional approaches to cataloguing. The full extent of the ripple caused by its acceptance and subsequent adoption by the major cataloguing libraries is still to be determined. The philosophy underpinning RDA is that the records describing individual materials are created to support resource discovery. The reader is always at the heart of the cataloguer's work.

Although RDA was initially published in 2010 there have already been two revisions and the work is ongoing. This has led to lack of clear guidance for cataloguing practitioners, sometimes even within the rules and guidelines themselves. This book is therefore well timed and necessary due to the lack of specific format guidance, caused partly by RDA's emphasis on relationships and move away from format description.

"RDA for cartographic resources" is essentially a useful book, or, more specifically, Chapter 4 "Navigating RDA to describe cartographic resource elements" is useful to anyone charged with cataloguing a map or atlas using RDA. This chapter, described by the authors' themselves as a manual gives MARC field by field guidance on creating a catalogue record. The rest of the book concentrates on describing the differences, and indeed similarities at a practical level between the Anglo-American Cataloguing Rules (AACR2) and RDA. This is helpful background information.

The book does however have something of an internal conflict between its design as a manual and also a cursive exploration of the two separate sets of rules and guidelines. I found myself flicking back and forward through the book, either between parts of the descriptions and the field information in chapter 4, or to the appendices. I found that this latter information would often have been better arranged at the point of discussion within the book. Chapter 3 "Comparing standards" giving field by field changes could also have been merged into the manual section, as the two chapters frequently referenced each other. There were also inconsistencies in the use of examples, where some fields have several and others none, or only in the appendices... In total this means that the "manual" element of the work is not as clear and helpful as it might have been. In addition the examples given are almost exclusively American, with some being relatively obscure to British and European map specialists. There is also heavy reliance for precedence on the guidelines produced by the Library of Congress Program for Cooperative Cataloguing. Again this will be unfamiliar to many European cataloguers.

This issue of precedence and development of cataloguing guidelines through custom and practice is one of the major problems with this whole work. RDA is not yet well enough established nor been implemented in enough institutions for there to be authoritative decisions made throughout the map cataloguing community about how best to proceed. Much of the lack of clarity is directly caused by issues within RDA itself, and its implementation within the existing MARC structure. The authors are all hugely experienced within the field and are well placed to assess how RDA is being used "on the ground". As a result this book does go in some way towards addressing that issue and, in the absence of anything else, will be useful to map cataloguers. As the authors say themselves in their postscript, their major goal was to help cataloguers get started down the RDA path. This book achieves that aim.



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