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Editorial

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Welcome to C&I 196,

Welcome to this issue on training and outreach; now more than ever, the educational needs of metadata specialists are a hot topic. CIG often receives queries from people wanting to know where they can learn to catalogue, or how they can upskill, or keep up to date with a variety of standards. We also sometime struggle with explaining what we do, and emphasising our key roles, to other library colleagues. Articles in this issue demonstrate a sample of what is available, training-wise, and also provides some excellent outreach ideas. We are fortunate enough to have contributors from around the world (not just the UK) which offers us an international perspective on this topic.

We start with Diane Pennington's overview of teaching cat and class and how it has changed in the last decade. Anne Welsh then discusses the challenges in keeping up to date with standards, especially when working in non-RDA settings, and her article includes some useful explanations of common acronyms and jargon.

Paul Daybell, Andrea Payant and Becky Skeen from Utah State University Libraries tell us about some of the exciting outreach activities their Cataloguing & Metadata Services (CMS) unit has undertaken towards both fellow library staff and also students at the university, including pop up exhibits, social media contests, and a trivia quiz. Whilst Victoria Parkinson created a Choose-Your-Own-Adventure game to explain cataloguing and metadata to her non-cataloguing colleagues, and she talks us through how she came to create it and the open-source tool Twine that she used.

Ahava Cohen from the National Library of Israel gives us an overview of their current transition from Aleph to Alma, providing a useful insight into identifying training issues and the complexity of organising and undertaking a major change in LMS.

CILIP SPECIAL INTEREST GROUP

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Contents

Natasha Aburrow-Jones and Paul Cunnea provide us with an in-depth review of the CIG Scotland World Café Workshop held in June on the future of cataloguing. The interactive format of the event provided plenty of discussion, ideas and questions, and the topic of training was amongst those raised.

Leslie A. Engelson gives an extensive overview of the different kinds of resources available to access that will help keep the metadata professional up to date, or where you might find answers to questions you have, from books to Youtube videos, webinars to conferences, not forgetting the Troublesome Catalogers and Magical Metadata Fairies Facebook page.

Yukiko Morita undertook two of the Library Juice Academy courses that are on offer and gives a review of her experiences on both. It should be remembered that CIG members get a 20% discount on LJA courses so email Info.cig@cilip.org.uk if interested in pursuing this line of training.

Natasha Aburrow-Jones also provides a timely and thorough retrospective of SUNCAT which was switched off this summer, being replaced by the Jisc Library Hub services. Anyone who has ever catalogued serials will we're sure have fond memories of their experiences with SUNCAT.

We end this issue with several reviews; our two bursary winners, Siobhan Cottam and Eugenia Fernandez Almiron, who attended the CILIP conference in Manchester relate their experiences. CIG normally award a bursary every year to the CILIP conference so do keep a look out for notifications as they provide excellent opportunities for attendance. We follow this with three book reviews.

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RDA education: the who, what, when, where, why, and how

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I have fond memories of teaching cataloguing and classification to postgraduate students a decade ago. We had multiple print copies of Anglo-American Cataloguing Rules, Second Edition (AACR2), Library of Congress Subject Headings (LCSH), and the Dewey Decimal Classification (DDC) manuals that we wheeled into the classroom on a trolley. Overhead projector notes illustrated how to follow International Standard Bibliographic Description (ISBD) guidelines. Printed worksheets led students through the process of filling in a MAchine-Readable Cataloging (MARC) record with bibliographic data. We knew there was this mysterious new set of cataloguing rules coming out sometime in the next couple of years that would handle the description of electronic resources in a different way, but it seemed far off in the distance. Web-based interfaces were becoming available for cataloguing tools, but they remained novelties for the moment.

A decade later, what has changed (or not changed) in cataloguing education? LCSH is fully online, so students do not get the satisfaction of flipping through the Big Red Books to visualise its syndetic structure. WebDewey provides the only current version of DDC. Descriptive cataloguing rules are no longer based on relatively self-explanatory AACR2-based ‘areas’, but rather are beholden to complex conceptual and relational data models.

As lecturers, trainers, students, and practitioners venture into this ‘brave new world’ of cataloguing with the Resource Description & Access (RDA) standard (Lee, 2014, p. 166), our knowledge base seems even more uncertain than the chief source of information on a classical music compact disc. As a devoted cataloguing educator, what should I be doing as I prepare people for this uncertain RDA present and future filled with evolving definitions of Agents and Relationship Designators? This article explores teaching practices, research findings, and other inspiration to help us consider the who, what, when, where, why, and how of teaching RDA, although not necessarily in that order.

What should I teach?

At first glance, this seems like an easy question to answer: teach RDA. But as I learned the rules myself in the early 2010s, its complexity became apparent. As I reconstructed my approach to accommodate RDA, I had to keep room in the schedule for the usual introductory material such as the history of cataloguing and the International Cataloguing Principles (ICP). But now there was also the Entity-Relationship (E-R) Model on which Functional Requirements for Bibliographic Records (FRBR), Functional Requirements for Authority Data (FRAD), and Functional Requirements for Bibliographic Records (FRSAD) is based, to include. This would then lead to the FRBR family of models, which are highly conceptual and difficult to access at first. Next, students would need to learn ISBD rules and how they correspond to MARC fields. Breaking up RDA into manageable tasks would be another challenge; teaching Manifestations and Items in one week, and Works, Expressions, and Agents the following week seemed to work best. After the descriptive cataloguing, there was more to include: Access Points, RDA Relationships, subject analysis and LCSH (without the visual aid of the Big Red Books), authority work, DDC, Library of Congress Classification (LCC), and developing areas such as BIBFRAME if time allowed at the end – which it never does. And this is all in 11 weeks! Bertolini (2012) discussed the essential nature of understanding the intertwined relationship between FRBR, ICP, ISBD, and RDA; we cannot ignore it ethically, despite time pressures and intellectual demands, as well as the complexity of teaching it (Snow & Hoffman, 2015).

I mention AACR2 in passing when discussing the history of RDA to help students understand why the community needed this new set of rules. Because I am aware that not every library has implemented RDA, I worry that my students will miss out on learning AACR2 and will need it in a job. This may not be as concerning as it was earlier in the transition (see Lisius, 2015), but I asked my student Annick Stein, who just finished her excellent MSc dissertation on the comparative use of FRBR within AACR2 and RDA records, whether she thought I should teach AACR2 as well. Although Annick found it important for her work to learn AACR2, she feels it was best to not learn it in a class that is already overwhelming to new cataloguers. In her words:

'I personally think that it is best to start straightaway with teaching RDA and the related models. The reason why I think so is that teaching both AACR2 and RDA might be confusing especially for those who are new to cataloguing. RDA, the Toolkit and the models are quite complex by themselves and as RDA is now used in most libraries in the English-speaking countries it might not be necessary to go into too much AACR2 detail. In turn, what I noticed when I wrote my dissertation is that it is super interesting and also important to know where the rules come from, how they developed over time and how much influence AACR2 has on RDA. And also for me personally, studying AACR2 was important in order to better understand how much will change and what needs to be changed once Luxembourg decides to change their rules to RDA' (A. Stein, personal communication, August 2019).

[Note: Luxembourg, her native country, has not yet implemented RDA on a national level].

The coming changes to the RDA Toolkit interface, and the associated changes resulting from the 3R Project and the Library Reference Model (LRM) (Sprochi, 2016; Adamich, 2018; Žumer, 2018), will be the next 'what' to think about in my teaching. As noted in Dobreski's (2019) recent webinar 'Teaching RDA after 3R', some teaching materials, examples, and labs will need to change, especially in relation to the Toolkit's new interface, LRM, and the new Relationships. I am learning the changes myself, which obviously is necessary for me to then learn how to teach them; these are separate things (Lee, 2014).

How and where should I teach it?

Much has been published about cataloguing instruction, but also much of it does not apply to the new setting of RDA and the exclusively online cataloguers' tools. Lee (2014) emphasises the importance of considering pedagogical methods and instructional strategies in teaching cataloguing that goes beyond simply knowing the standards and rules. Dominican University ILS students participated in the RDA Test that occurred in the USA prior to RDA implementation by creating both AACR2 and RDA records and then making recommendations; although they found RDA to be unclear on many points, they realised the importance of adopting it due to its flexibility for digital materials (Bloss, 2011). Bloss said the students met weekly in class with additional online meetings if needed; she reflected on this as a major difference from cataloguing in a real work setting, where cataloguers collaborate much more closely on a daily basis and can meet whenever necessary.

Many of today's ILS programmes and CPD modules for working practitioners are delivered online, but some papers have published their experiences of teaching cataloguing online with mixed results. The importance of having technical support available for effective online instruction has been noted (Bloss, 2011; Salem & Peña, 2015). Regardless of delivery setting, there is a demonstrable need for a focus on the practical side of cataloguing: how does one actually use RDA for creating or editing a record? Snow and Hoffman (2015) found four elements to be important in learning cataloguing according to recent students: practice, instructor knowledge, a balance between theory and practice, and real-world contextualisation. Veitch, Greenberg, Keizer, and Gunther (2013) experienced some success with teaching students RDA in a concentrated 'boot camp' format, although students indicated a desire for more hands-on practice at the end of it.

My students create original cataloguing records in their own Koha Integrated Library System, which our department's systems staff administers and manages for myself and my students. The final assignment requires students to have 10 original bibliographic records of various materials and formats catalogued consistently and correctly, with at least the RDA Core Elements included, as well as 10 associated name authority records. The students value this real-world experience, especially when they go out on work placements or internships, where they are frequently required to create or edit MARC records in many settings and with many materials, from academic libraries to the NHS to archival collections.

To whom should I teach it?

There is ongoing debate regarding how much about cataloguing all information professionals should know. In my opinion, even if they never work in technical services or systems departments directly, they should know how records are structured in order to produce the best searches possible. The best way to learn this is to work with their structure hands-on. I have noticed a difference, of course, in learners who are completely new to cataloguing, who have had AACR2 cataloguing experience and who have worked with RDA records. Frequently, those with experience learn that their library's local practices are not as solid and reliable as they could be; they say things to me such as "We put everything in just the 600, so I never knew there were other 6xx fields to choose!" I also hear this from students who go to placements with ongoing cataloguing projects. I have taught workshops to librarians who need refresher training due to an impending Alma migration or an otherwise mandated switch to RDA. Unless they catalogue full-time, they are commonly unfamiliar with the very basics of descriptive cataloguing and MARC tags, which ties into concerns about the quality of our catalogues (Schultz-Jones, Snow, Miksa, & Hasenyager, 2012).

When should I teach it?

This question does not have anything to do with time of day or year, or how much coffee is needed in a 9am session on but it does relate to various stages of a cataloguer's professional development. In my course, I teach the general principles of the Organisation of Knowledge in Semester 1, which includes structures such as faceted analysis and classification, taxonomies, thesauri, social hashtags, linked data, and ontologies. I think this prepares them well for the more library-centric cataloguing and classification in Semester 2 (although RDA is not meant to be MARC-specific, I am struggling to find examples outside of library catalogues where it has been implemented). Students just learning the basics of the profession, or new cataloguers in entry level positions need more time spent with initial concepts and principles, although professionals who are transitioning from AACR2 to RDA – or migrating to new systems such as ExLibris' Alma that require the switch – require more time on practicalities than the theories and concepts (Tosaka & Park, 2014).

Why should I teach it?

RDA should be taught as a current or emerging professional standard, but this alone is an oversimplification. Employers expect students to know the 'cutting edge' topics when they are hired, because they may not have learned the latest standards whilst completing their MSc qualification or on the job. According to Schultz-Jones et al. (2012, p. 79):

'RDA represents a fundamental shift in how catalogues function and thus a shift in decisions cataloguers make about the kind of data that goes into a record and the level of detail or granularity of that data … Cataloguers new to the profession … will most likely be the ones driving these changes … libraries … must realize … NGCs [next-generation catalogues] are heavily dependent on a strong generation of cataloguers.'

Employers who hire entry-level technical services librarians expect candidates to possess knowledge of metadata standards, particularly RDA. This is 'a trend that is likely to continue' (Hall-Ellis, 2015, p. 131). As someone who has a passion for teaching cataloguing, I realise I could sound biased on this point, but I have empirical reinforcement: 'LIS schools must continue teaching cataloguing and classification because the literature indicates that it is the core of librarianship and the results indicate that cataloguers are needed in the job market' (Sibiya & Shongwe, 2018, p. 485).

Looking further ahead, even beyond the official adoption of LRM and the newly designed RDA Toolkit, today's students (and current professionals) have a responsibility to continue developing and adapting the RDA standard. Even after several years of hard work, there is so much we have not resolved. For example, in Europe and in other parts of the non-Anglicised world, translation is in question: should the rules themselves be translated, and in what language(s) should the metadata appear in countries where English is not the primary language (Ducheva & Rasmussen Pennington, 2019)? Also, as Annick noted in her research, user studies into the FRBR model have not been particularly successful in demonstrating that there is a direct link between the four 'user tasks' (five in LRM), what users actually do, and whether MARC-based catalogues can accommodate these tasks at an acceptable level (Stein, 2019). Because, as our systems exist now, there is not that much substantial difference in an AACR2 and an RDA-formatted record, except for details only apparent to us cataloguers such as the 260/264, the 336/337/338, the Statement of Responsibility, position 18 of the Leader, and so on. Will users notice? Probably not until they can find every item of every Harry Potter-based work, manifestation, and item – all with a single-fingered swipe on their smartphone. That day will come next, hopefully. This is why I call myself a cataloguing educator: 'Training prepares for the current environment; education prepares for change' (Young, 1987, p. 149).

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How much is too much? Keeping up-to-date in non-RDA settings

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Introduction

Since 2008, the creation, constituency consultation and dissemination of *Resource Description and Access* (RDA) has been the major focus of the cataloguing community not only in the Anglo-American Cataloguing world, but in an increasingly large and varied number of countries and language groups. Internationalization has been a win for the new standard, and this has been timely, reflecting and in some cases running ahead of the decolonizing agenda within Higher Education in general and library collection development in particular. While no-one is claiming the sweeping away of *all* the issues around representation of wider perspectives and previously marginalized voices, a quick glance at the last text of AACR2, released in 2002, alongside that of RDA shows that we have taken strides in the right direction.

Many cataloguers do not work in Higher Education. The major advantages of international standards, from data sharing to decolonization, are not as relevant to their institutions, in which they are able to implement changes quickly and efficiently by taking direct action themselves. A small law firm collection of circa 1,500 current texts barely needs a library management system and creating records that will help the lawyers find what they need is quicker and cheaper from scratch in the house style than downloading from a consortium and amending to reflect local needs. A collection of even 5,000 history books can be decolonized and reordered manually just as quickly as a bookshop's, without the need for the processes that large academic libraries require (See, for example, the pressure University of Manchester faced regarding David Irving's books (Griffiths, 2017).

This means that there are now lots of cataloguers working in environments in which the main discussions they see in the professional press – RDA, MARC, Bibframe, the critical cataloguing changes to Dewey Decimal Classification and the Library of Congress Subject Headings – don't, at surface level, affect their daily work. Some may wonder about whether any of the changes are impacting their data in a less obvious way. Others may have concerns about how to perform at interview if they apply for a job in a library that does use RDA in MARC and / or one of the general subject cataloguing schemes. How much do they need to engage with the new bibliographic models they hear national libraries discussing? How do they keep themselves feeling on top of Cataloguing as a discipline and, as the title of this article asks, how much is too much?

In under 2,000 words, it is not, of course, possible to summarise every change in cataloguing since 2008. This article takes a case study approach, highlighting three major issues. After reading the article, you will know more about the specific issues and also have some ideas how to identify similar changes in future.

Linked Data / The Semantic Web

Advocates for RDA and its underlying structure, IFLA's Library Reference Model, of which more below, correctly identify linked data and the semantic web as challenges facing the library community that RDA goes some way towards meeting. Those of us who trained in the 1990s and earlier can feel wary of such claims – I know I remember sitting in classes in Aberystwyth in 1994 in which the guest speakers told us that the semantic web – in which computers could form the same sorts of value judgments about language that humans can – was no more than five years away. Twenty-five years later, it is still a work in progress. However, that progress has been rapid in the last four or five years, and there are many tools that we use which harness the power of linked data - the ability to take information stored in one dataset on the web across into other datasets. VIAF: The Virtual International Authority File, https://viaf.org, is used by and contributed to by many libraries of different sizes, and has easy to understand overview information on the OCLC website - https://www.oclc.org/en/viaf.html - and its Wikipedia page - https://en.wikipedia.org/wiki/Virtual_International_Authority_File. DBpedia - https://wiki.dbpedia.org - is another linked data resource used by many in libraries and also the wider developer community.

It contains information about itself that is slightly more jargonistic than VIAF's but is still fairly easy to understand. Its Wikipedia page - https://en.wikipedia.org/wiki/DBpedia - is useful not only in describing it, but also in its discussion of structured data – something at which libraries excel, but have traditionally organized differently from the general online world. (To over-simplify the issue horribly but usefully, "we" are structured around MARC while everyone else is running on native XML).

Not only is the importance of linked data discussed frequently, it is usually connected to an issue that we all know we have – the silo of our data in the dark web. To put it bluntly, many of us spend hours of our days, and effectively years of our lives, inputting data to systems that although online are not picked up by search engines. Run a search for something you know you catalogued recently and see if your beautiful data shows up on a general web search, and, if so, how many pages into the search engine results it appears.

There's a 2016 interview with Gordon Dunsire on the BDS website - https://www.bdslive.com/page/article-detail/gordon-dunsire-interviewed/ - that really brings to life the increasing role of machines in creating, ordering and searching for information. The sections headed "Automation" and "Five Information Ages" are quick, easy reads and summarise in broad brush terms the way that cataloguing has evolved, and why. If we work in environments in which we want our data and metadata to be available to the widest number of searchers (people and machines), we have to free it from its silos. Here, I am not using "if" as a rhetorical device. Many cataloguers work in places in which this is not an aim that can, or should, be taken for granted. Some catalogues are created by organizations for use only by that organization, and so the need for linked data is not so that it can offer up its resources to be discovered and reused, for free, by anyone in the world. However, even in such organizations, there are likely to be ways in which data that is structured as linked data can be reused and repackaged within the organization itself. So keeping at least a weather eye on the developments in this area is useful for cataloguers.

Although published in 2013, Willer and Dunsire's book, *Bibliographic Information in the Semantic Web* is a straightforward introduction to the principles. There are many texts produced by computer scientists that explain linked data, but Willer and Dunsire is aimed at librarians and uses vocabulary we know and understand. It also has the advantage that the ideas within it, naturally enough, are reflected in many of Gordon Dunsire's presentations, available at http://www.gordondunsire.com. A leader not only in RDA but in many other IFLA initiatives, he shares ideas that underpin and expand upon the issues we, as non-computer scientists, are grappling to understand.

Bibliographic Models

The opportunities provided by linked data are so great that it is understandable that those responsible for AACR2 wanted to change the structure of our catalogue data so we could take advantage of them, and so RDA was created. As usual in the world of cataloguing, this has resulted in a raft of new acronyms and other jargon, including:

- RDA (*Resource Description and Access*), the successor to AACR2 - https://www.rdatoolkit.org
- Bibframe (BIBliographic FRAMEwork Initiative), the proposed successor to MARC - https://www.loc.gov/bibframe/
- IFLA-LRM / LRM (Library Reference Model), the bibliographic model that underpins RDA - https://www.ifla.org/publications/node/11412
- WEMI (Work-Expression-Manifestation-Item) model, the part of the LRM that maps the relationships between materials
- WII (Work-Instance-Item) model, the part of Bibframe that maps the relationships between materials
- agent – the term used in both RDA and Bibframe to denote someone with a relationship with materials (can be an individual, family, organization, etc.)
- entity – any RDA "thing" (work / expression / manifestation / item / agent, etc.) also any Bibframe "thing" (work / instance / item / agent, etc.)
- res – a "super-class" of other entities – essentially a way to cluster entities together
- nomen – the "appellation" (name) for an entity

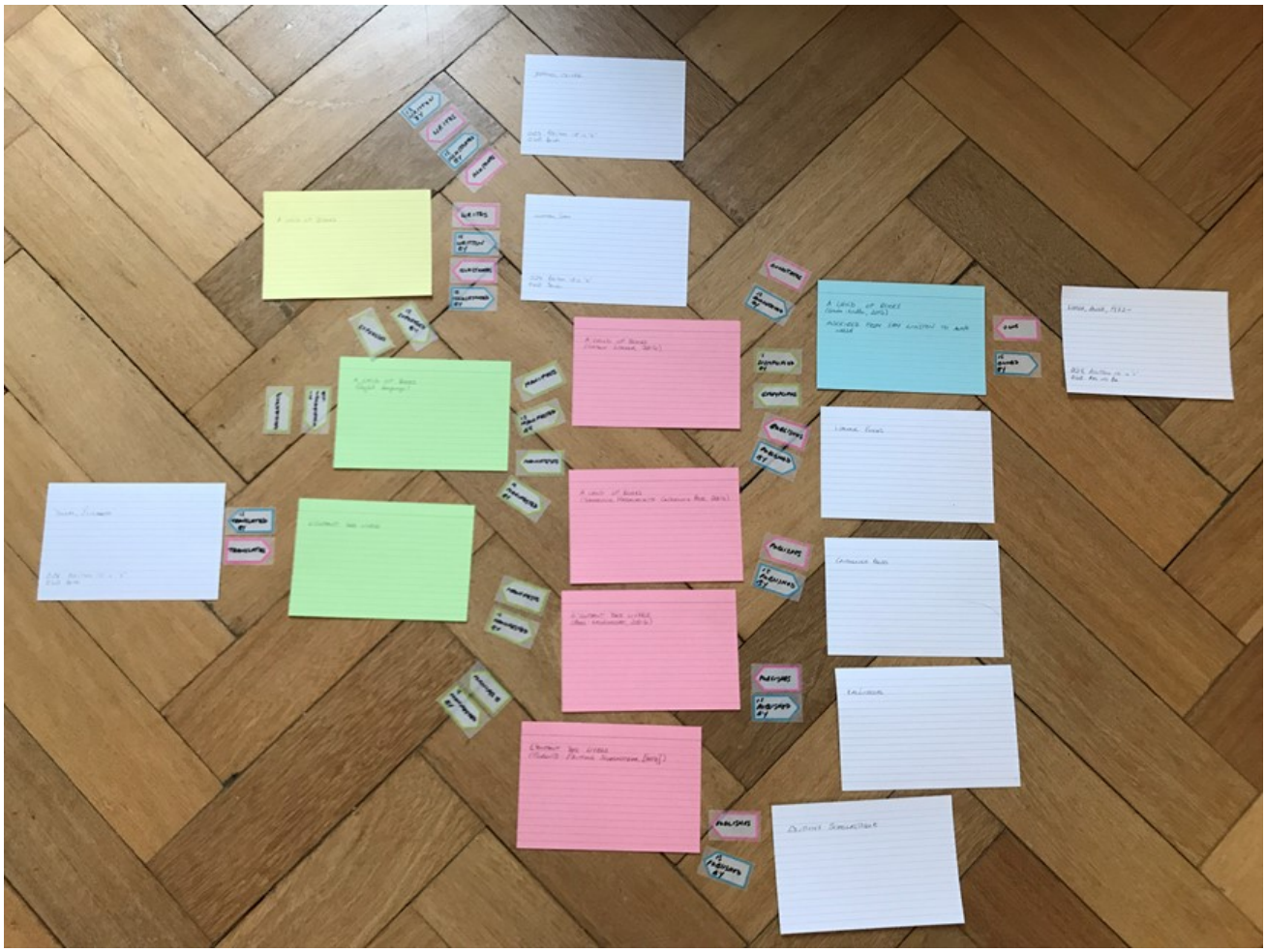
To complicate matters further, there is currently a major restructure of RDA which has almost been completed, which is referred to as the "3 R Project." So articles published before this year (when the new RDA Toolkit was released in beta) talk about a previous structure, prior to the LRM, res and nomen. You will see FRBR (*Functional Requirements for Bibliographic Records*) referred to. It is a precursor to the LRM and also discusses the WEMI model. However, discussions about WEMI-agent relationships are more limited than in the LRM and "new" RDA.

Similarly, the release of Bibframe 2.0 in 2016 means that documentation and articles produced before then are out of date. The most crucial change was the evolution of the original WI (Work-Instance) model to the current WII (Work-Instance-Item) model. The new issue of *Cataloging and Classification Quarterly* has just published an article by Sofie Zapounidou and Michalis Sfakakis which maps relationships from RDA to Bibframe 2.0. Alex Keane, winner of the Sherif Prize in 2017, captured these changes just as they were happening in his dissertation *One Step Forward or 2.0 Steps Back? Representing MARC in Bibframe 1 and Bibframe 2.0*, http://www.sherif.ac.uk/prize/keanealex2017.pdf. The literature review section provides a quick overview of what had been written about Bibframe 1 and the changes to Bibframe 2.0. Alex was one of the students who took the Advanced Cataloguing class which, along with a workshop at CIG 2016, informed my 2017 article, 'From WEMI to WI to WII: FRBR, Bibframe and the 21st Century Bibliographic Model.' Three of the models discussed – Card / Dictionary Catalogue; ISBD and AACR in MARC; and Bibframe – still remain accurate. However, where we had FRBR in RDA, we now have LRM in [new] RDA. For continuity, in the current article, I'm using one of the examples I used in 2017 – Jeffers and Winston's *A Child of Books* (London: Walker, 2016) – and adding to it the French translation (Paris: Kaléioscope; Toronto: Éditions Scholastique, [2016]).

The LRM's introduction of agents is actually a really useful piece of jargon. It gives us an umbrella term that we can use for individuals, but also for organizations and other groups of people. This allowed IFLA to draw out the ways in which all of these people / organisations can relate to materials we are cataloguing:

- (an) agent(s) create(s) a work; a work is created by (an) agent(s)
    - ◊ authors / compilers / painters / composers are some examples of agents who create works; illustrators are creators of works when they collaborate with an author in the act of creation
- (an) agent(s) create(s) an expression; an expression is created by (an) agent(s)
    - ◊ editors / translators / adapters are some examples of agents who create expressions; illustrators are creators of expressions when they take a text by an author and illustrate it
- (an) agent(s) create(s) / manufacture(s) / distribute(s) a manifestation; a manifestation is created / manufactured / distributed by (an) agent(s)
    - ◊ publishers are the most obvious agents who manufacture and distribute manifestations
- (an) agent(s) modifies / owns an item; an item is modified or owned by (an) agent(s)
    - ◊ annotators and extra-illustrators are common examples of agents who modify items; where binders are known, they are agents who modify an item.

In the picture, you can see the relationships that it is possible to record using the LRM within RDA. The picture itself uses cards from a workshop on RDA for organizations outside the international standards at SLA Europe's first conference.



Name Headings

The eagle-eyed amongst you will have spotted that each of the cards for people have been annotated, "008 position 10 is 'z'" and "040 $e is 'rda'." This is the quickest way to identify RDA data in authorities datasets like http://authorities.loc.gov One of the cards has "008 position 10 is 'c'" and "No 040 $e." This means that it has not been upgraded to RDA.

If your organization uses authority data, it is inevitable that some RDA will creep into your data. There are few potential disadvantages for this – generally RDA is more detailed and so data created using its rules are enhancements. However, you should be aware if you ingest authority data (so it can be accessed directly through your library management system during cataloguing) that some of the details may be more data about individuals than you or your organization feel comfortable holding.

Here's a screenshot of https://lccn.loc.gov/nb2012020352:

LC control no.: nb2012020352
LCCN Permalink: https://lccn.loc.gov/nb2012020352
HEADING: Bikakis, Antonis, 1978-

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370 __ **la** Êrakleion, Greece **lc** Greece **lf** London, England **l2** naf
372 __ **la** Artificial intelligence **la** Computer science **l2** lcsh
373 __ **la** Aristoteleio Panepistēmio Thessalonikēs **ls** 1996 **lt** 2002 **l2** naf
373 __ **la** Panepistēmio tēs Krētēs **ls** 2002 **lt** 2009 **l2** naf
373 __ **la** University College London. Department of Information Studies **ls** 2011-04
374 __ **la** College teachers **ls** 2011-04 **l2** lcsh
375 __ **la** male
377 __ **la** eng
670 __ **la** Rules on the Web, c2012: **lb** t.p. (Antonis Bikakis) t.p. verso (University College London, Department of Information Studies)
670 __ **la** UCL www site, 30 Aug. 2012 **lb** staff pages (lecturer of computing and artificial intelligence in the Department of Information Studies at University College London (UCL) ; PhD and a M.Sc. in Computer Science from the University of Crete and a degree in Electrical and Computer Engineering from the Aristotle University of Thessaloniki ; born 26/5/1978, Heraklion, Crete, Greece)

In it you can see the level of information that is stored. In particular, note the "375 $a male." https://www.loc.gov/marc/authority/ad375.html defines the contents for this field as "The gender with which the person identifies." However, this screenshot shows the entry for a colleague of mine, and although he does identify as male, he was not asked about this – his identity was assumed by the cataloguer entering the data. The example in the MARC manual itself highlights that such assumptions are made:

"100 1# $a Nabokov, Vladimir, $d 1869-1922"
"375 ## $a male"

Obviously Nabokov's identity has been inferred from his work and has defaulted to "male."

Without highlighting specific individuals here, it is clear that the issues of identity and of dead-names (when someone does not want their former, other-gendered name to be associated with them after they have transitioned to the gender with which they identify) is an important one. Movie database IMDb recently responded to demands from actors to remove links between dead-names and names for actors who have transitioned, unless the actor wants the link to be in place (Smith, 2019). It is worth being aware of the implications of retaining such links in library authority data, and of the similar issue around the 375 field for recording gender. If you ingest authority data it may be simpler to remove the 375 field from all your data at the point of ingestion.

Staying Up-to-date

Challenges in working in settings outside the international standards include knowing when changes have been made; knowing which of them are significant and relevant to your own organization; and unpacking any new jargon that emerges from the changes. Mailing lists for cataloguing tend to be heavily used, so are not so convenient for people who are working in smaller, inhouse systems. Instead, you may wish to look on the websites for the standards once a month for changes and then use Twitter search to find tweets by cataloguers about these changes. Cataloguing Twitter is very active, and most of us are happy to clarify tweets that are accidentally too jargontastic.

The RDA Toolkit itself is a paid-for service, but its homepage is free to access and includes news items: https://www.rdatoolkit.org MARC 21 is still a free service that highlights changes since its last update in red: https://www.loc.gov/marc/ OCLC also provides clear information on changes: https://www.oclc.org/bibformats/en.html

Of course, CIG is a great source of information for all cataloguers, and its Twitterfeed is not overwhelming. If you follow no-one else on cataloguing Twitter, it's worth giving them a follow: https://twitter.com/CILIPCIG

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A peek behind the curtain: a case study for technical services outreach at USU libraries

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Introduction and Background

The Cataloging and Metadata Services (CMS) unit at Utah State University (USU) Libraries is exploring new outreach activities for technical services. Our concerted effort is a result of observations made within our own institution. After conducting intensive research on communication patterns between our unit and others in the library, we found that there were general misconceptions about the day-to-day duties and range of capabilities cataloging staff possess. (Payant, Skeen, & Woolcott, 2017) We also noticed that technical services units at USU Libraries rarely engaged in outreach activities that were common among other units outside of technical services. Because of this, we decided to implement an education initiative to help others understand what we do and why it is important. Our efforts began with a preliminary goal to teach our fellow library colleagues about our work and contributions to the library's mission.

The initial education initiative involved the creation of infographics to highlight the accomplishments of the CMS unit at a year-end celebration. The celebration was a luncheon held in a centralized conference room where the CMS staff and library administration gathered to look at and talk about the infographics which highlighted impressive statistics for the year, different challenges catalogers face, interesting facts, and our specific contributions to scholarship and innovation in our field. The infographics were left displayed in this conference room over the course of the year. After a couple months on display, we surveyed the library to gauge whether they had seen the infographics and if they learned anything new about the work done by our unit. Many of our library colleagues had seen the visuals and responded positively to our message. Survey results showed that a large number of respondents reported having learned something new about the CMS unit and wanted to do something similar for their own units. (Payant, Skeen, & Woolcott, 2017)

The positive response and outcome of our first education initiative encouraged us to pursue similar activities with an expanded objective of communicating the impact of technical services campus-wide and beyond. The 'CMS Celebration Week,' a series of outreach activities discussed further in this article, illustrates the efforts made recently to broaden and increase the scale of our outreach.

Outreach Event: CMS Celebration Week

We wanted to take a multifaceted approach to the CMS Celebration Week that would provide outreach to both internal and external audiences, provide multiple daily programming options for varied levels of engagement, and involve audiences in both face-to-face and online interactions. The three main programs consisted of: 1) an interactive CMS pop-up exhibit, 2) a social media '#cataloging' contest, and 3) a library open house to culminate the week.

Cookies and Cataloging Pop-up Exhibit (Monday)

To highlight the work of CMS, we created an interactive exhibit that engaged patrons in a simple 'cataloging' exercise with post-it notes. We selected five unique items from our collection (4 physical and 1 digital) that were put on display and numbered with different colored post-it notes. The exercise for patrons was to examine the items and then write down their own descriptive language on a corresponding colored post-it note and stick it on a nearby wall creating a vibrant collage for each item on display.

The majority of items chosen for the display came from the library's Special Collections & Archives. The physical items included a homemade felt book of fairy tales with a fur cover, a conceptual art 'poem' contained within a sardine can, a collection of stamps, and an old 'Uranium Rush' board game. The digital item on display, which was played on a loop on a computer monitor, was of a YouTube video of a 'silent dance party', which is a finals week tradition at USU's Merrill-Cazier Library where students gather in the library atrium and hold an impromptu dance party while listening to their own music on their headphones. These items were chosen to highlight both the Library's collections and to show the range of material that can be cataloged by the unit.

In addition to the interactive displayed items, there were also several banners posted with infographics highlighting the work that CMS provides to the library and the larger university community.

To encourage patron interaction with the exhibit, we held a two-hour CMS celebration week kick-off event where CMS staff and student workers passed out 200 cookies to students passing through the exhibit space. Staff engaged with patrons as they described the work of the CMS unit, explained the post-it note cataloging exercise, and rewarded patrons with a cookie for their participation. The combination of cookies, crowds of students, and a growing, colorful wall of post-it notes created an active experience with dozens of students participating at a time.

The exhibit was then left up the rest of the week. Library visitors and staff could still add post-it notes to the wall throughout the week, peruse the items, and read the over 200 descriptive post-it notes created by previous participants. CMS staff were tasked with checking on the exhibit every few hours to make sure supplies were stocked and ready to use.

#Cataloging Social Media Contest (Daily)

In addition to the physical exhibit, we also wanted to encourage interaction on social media with the same cataloging exercise. The social media campaign was branded '#cataloging'. The idea was similar to the physical exhibit, but, instead of using post-it notes, patrons could contribute their ideas online using hashtags to describe the items.

Working with the library social media team, we crafted a contest where photos of the items in the pop-up exhibit were posted across the library's three social media accounts (Facebook, Twitter, and Instagram) each day. Patrons would then respond in the comments of the posts with their descriptive hashtags.

To drum up interest in these daily posts we ran it as a contest in which there would be daily winners for the most creative hashtags, as well as a grand prize for the best hashtag of the week. We received $100 for prizes from the library administration. Daily prizes consisted of USU swag, ice cream vouchers, and a grand prize of a Kindle Fire.

Voting for the contest was done at the library open house at the end of the week. CMS student assistants created lists of all submitted hashtags on a large whiteboard where library colleagues were encouraged to vote for their favorite descriptor for each item. Winners were then contacted via social media after the contest to coordinate picking up their prizes.

CMS Library Open House (Friday)

The culmination of the week was a library open house hosted by the CMS unit. The room was decorated with a number of posters and infographics highlighting the units work throughout the year. Many of these posters were also re-purposed from previous professional conference presentations done by the unit.

The CMS open house was branded as a 'Pub Trivia Lunch,' in which CMS provided pizza, salad, and an Italian soda bar. In addition to lunch, CMS also hosted a trivia game for our library colleagues to get to know the CMS unit better.

We created three quizzes on Kahoot!, a platform which creates online quizzes that can be played on people's smartphones. This enabled an easy opt-in with little work in hosting a physical game. The CMS unit pooled together to create trivia questions that were based on individual work plans, general cataloging practices, general library trivia, and personal 'get to know you' facts about individual CMS members. We created three quizzes so that attendees could come and go throughout the open house without having to play through one long trivia game.

Exhibit Word Clouds

To finish up the week and highlight the outreach efforts of both the exhibit and social media campaign, we created individual word clouds built on the descriptive metadata for each item that was gathered through the physical post-it notes and online hashtags. These word clouds were them disseminated out to the public via our social media accounts, as well as internally through a library wide email thanking everyone for their participation throughout the week.

Lessons Learned

While the CMS celebration week was a success it did not come without some challenges. The biggest of which was the time constraint for planning the week of events. We found out that our library administration wanted us to do the celebration week only 5 weeks before the event. While we were able to pull something together to meet this deadline, we had more ideas for activities, but were limited by the quick turnaround. Another challenge we found was the use of the library social media applications. The USU Library did not, at the time, have a strong social media presence, which hindered online participation. Also, during this period of time, the library did not have a marketing or public relations person and relied on two interning students from a Journalism and Communications class to maintain the library's social media accounts throughout the semester. While we appreciated their help, it was not an ideal situation and limited the outreach potential.

Other lessons we learned through the process include: publicity for the event needs to be better and more far-reaching; flyers are not used or taken so there is no need to print very many of them; the earlier you can print your posters and infographics the better; food and incentives help bring more participation; and the importance of involving all CMS unit staff in the outreach activities because it provides ownership for the events and not only builds stronger relationships between unit staff members, but also between library units as whole.

There were also some amazing benefits. Conversations with students, faculty, staff and visitors coming into the library were a unique opportunity to explain what catalogers do to help patrons discover library resources. Also, by asking them to describe library items, we got them to think about our materials in a different way because most of them did not realize the steps involved in making our collections available for them to use. We were able to further engage with library users through the numerous hashtag cataloging posts on social media throughout the week. Through our daily posts and competitions, we were able to increase the Library's social media traffic significantly.

The CMS open house on Friday was also a huge hit with our library staff. We had over half, 45 to 50, of the library's full-time staff attend the event as well as many student assistants. This too gave us a chance to talk with our fellow co-workers about what we do and for them to ask questions about the different infographics posted around the room. They especially loved the pub trivia games we had put together. As they were leaving, several faculty and staff mentioned that they learned something new about the CMS unit at the event. Overall, the CMS celebration week went very well, and we were able to reach a large audience.

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CYOA: Catalogue Your Own Alpaca?

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1.

You are a Metadata Coordinator in a library where most staff don't catalogue as part of their job, and the variety of metadata experience varies from "used to catalogue in a previous job but not here" to "first job in a library, haven't met a data yet". You have booked a one-hour training slot to try and explain to colleagues what metadata is, and why it's relevant to them. What's the best way to explain and engage your audience?

If you put together a comprehensive set of 142 slides, explaining everything starting with the card catalogue and ending with BIBFRAME, ***go to paragraph 2.***

If you put together a small number of slides explaining the basics, how you handle cataloguing, and why it's important, and then create a game in the style of a choose-your-own-adventure (CYOA) book that gives players a flavour of some of the choices and rules cataloguers deal with, ***go to paragraph 3.***

2.

It starts out well but as you continue you see drooping eyelids and nodding heads. Finally, in minute 34 just as you reach slide 91 "why centimetres are a symbol", you hear a snore. At the end everyone congratulates you on the best nap they've ever had. Perhaps you need to go back to the drawing board.

The End.

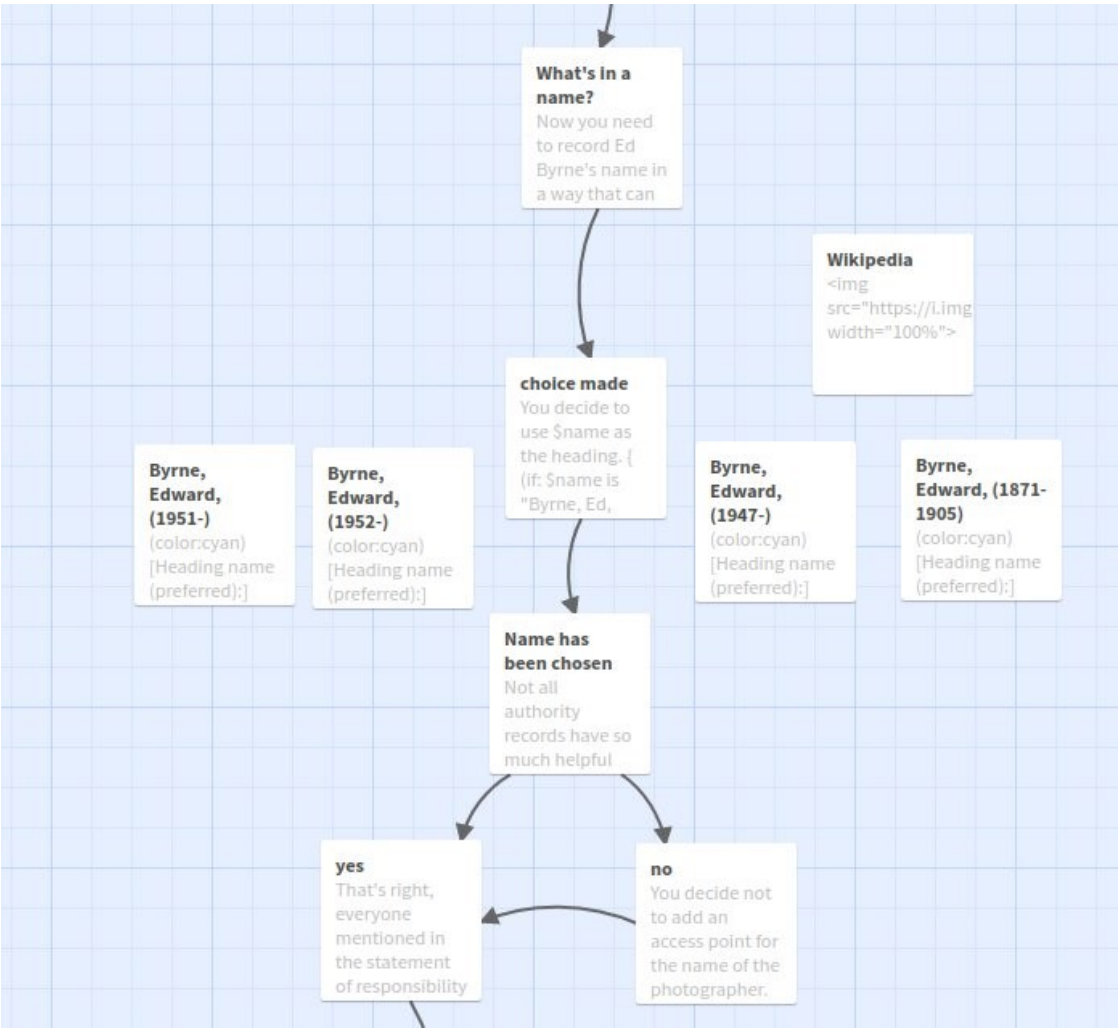
3.

An excellent choice! After creating a game and receiving positive feedback on it, you decide to write an article for Catalogue and Index about it. As you do so, you realise how hard it would be to do in the second person all the way through…

For the past couple of years, I've offered a one-hour session aimed at informing non-cataloguing colleagues about what cataloguing and classification are, how we do them at King's, and how metadata relates to our users' experiences. It is a lot to cover in an hour! Last year I finished the session with a quiz, but this year I wanted to give people the chance to experience cataloguing and classification, to get a sense of the rules and decisions that are involved, and to produce something online that staff who missed the training or future staff could do. They also needed to be able to complete it in 20 minutes, so that I could waffle on for the other 40.

The concept of a decision-based game came to me early on, but when my colleague introduced me to Twine, I was hooked. Twine is an open-source tool designed to create interactive stories. As it says: "You don't need to write any code to create a simple story with Twine, but you can extend your stories with variables, conditional logic, images, CSS, and JavaScript when you're ready."

Although Twine is fairly straightforward it did require some time to get used to the syntax, and to work through how to use some of its more sophisticated features. The back end of it displays in a story-board style which is really useful for “plotting” the steps.



Now I had a tool to create the game, and a vague idea of how it should look, I faced the most daunting task: reducing the incredibly comprehensive set of cataloguing and classification rules into something my colleagues could have a go with in 20 minutes.

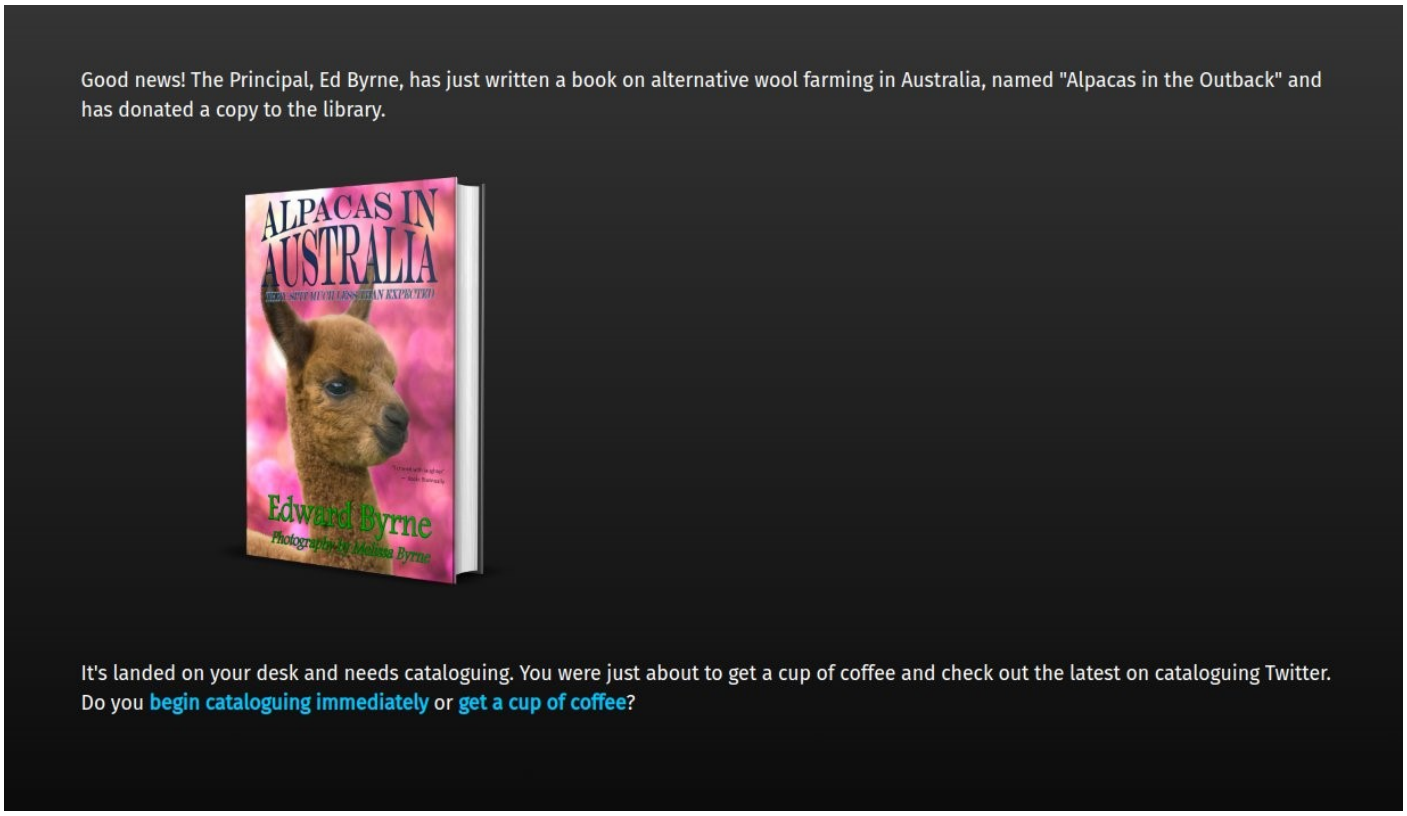
I broke down what I wanted people to take from the game:

- That cataloguing involves (a lot of!) rules and decisions, it isn’t as simple as “data entry”.
- Some idea of the role authority control plays.
- That classification can be subtle and can be influenced by knowledge of the collection.

And what I didn’t want them to worry about:

- Punctuation!
- Every single rule pertaining to a field.
- MARC.
- Our library management system.

I also knew that I wanted to show them the right answers at the end but not make anyone feel like they'd failed, and for the game to have a sense of fun too. Even though I have a good list of amusingly titled books that I usually use for cataloguing training (AbeBooks' Weird Book Room is useful for this), I wanted to have full control over the book's details, so I decided to make up a book rather than use an existing one:



I would love to make the process of creating the game sound like a well thought-out and logical undertaking, but in reality it was much more like a very convoluted CYOA game of its own: *"You learn a new trick with Twine. To add this to passages you have already created go back to pages 3, 5, 6, 11 and 14."* This was partly because I was learning to use Twine at the same time as making the game; I've always found the easiest way to learn a new system or program is to use it for a real thing.

Key to making the game friendly and playable were the friends that playtested the game throughout the process, and told me what needed simplifying or clarifying. Suggestions such as colour coding the different parts of the game such as clickable links and field names, came from my testers.
It was important to me that the players didn't feel like it was a test of how well they'd been listening, or that they could fail it, but also that those who wanted to know the right answer could find it. Some of the features to help with this are:

- Some of the abbreviations or terms can be clicked on to expand into a definition.
- When the player chooses the wrong answer, the next screen reflects this with a feeling, e.g. "you feel a vague sense of unease".
- At the end of the game the player can see the correct record, and they can also choose to see the record in MARC with correct punctuation.
- Also at the end they can click on each field to see a brief explanation of why it was right, and the rules again.
- Each correct answer adds a value to a hidden score variable, and the player has the option of seeing their final score if they want to, along with a comment telling them how well they did.

Subject headings were the most challenging aspect of game play for me to work out--how could I let players choose several headings and define whether they were right or wrong. In the end I made it more prescriptive than real life--players must choose three and they couldn't choose the non-preferred terms. In contrast, the game play for choosing a classmark was straightforward but I struggled with simplifying it enough and giving an idea of how the schedules look.

The feedback on the game has been very positive and it's given my colleagues some insight into cataloguing. As well as a positive outcome for my colleagues, raising awareness of what metadata is and how we handle it, whenever I run these sorts of training or informational sessions I always find a better or clearer way to explain an aspect or rule, or I refine my understanding about what people need to know. Creating the game was no exception, and now that I'm familiar with Twine I'm keen to find other uses for it in training in the future.

The cataloguing game is available online here if you would like to play:

http://victoriaparkinson.co.uk/library/cataloguinggame.html

If you'd like to try out Twine, you can find it here: www.twinery.org.

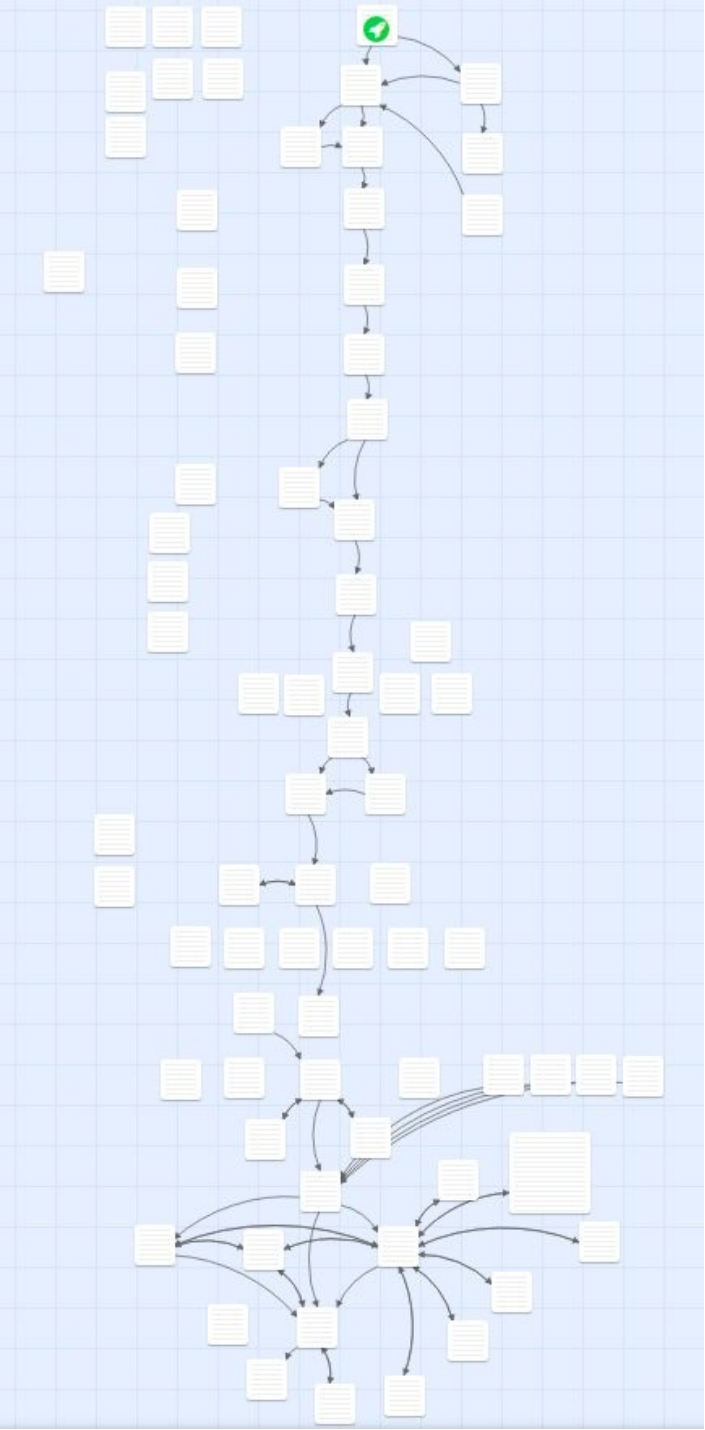
Some of the resources that helped me create the game are:

https://twine2.neocities.org/

https://twinery.org/cookbook/modal/harlowe/harlowe_modal.html

https://twinery.org/forum/

http://twinery.org/questions/



Failure is not an option: training for mastery in an ILS migration From Aleph to Alma at the National Library of Israel

Ahava Cohen, Hebrew Cataloguing Department, Head Alma Training Team Leader, National Library of Israel, Jerusalem

As part of the Hebrew University library system, the Jewish National and University Library was on the ground-floor of Aleph ILS implementations; Ex Libris was born on the Hebrew University campus as Aleph Yissum (Bercovier, 2018). In 2017 the library was legally reconstituted into the independent National Library of Israel (NLI) and, after over 30 years with various Aleph systems, NLI decided to migrate to Ex Libris's Alma system as part of its overall renewal process. The new ILS will go live in November 2019.

On August 9, 2018, senior staff of Ex Libris and of NLI met with library workers to announce the decision. In October a project manager who had helped other Israeli academic libraries migrate was brought on board and teams were created to oversee metadata, technical services, public services, IT, interface development, and training. Each team aside from training was led by an expert in the field; the library has no dedicated professional development or staff training department.

It was decided the training team would be led by the head of one of the library's three cataloguing departments. Though she has no formal background in education or training, she leads NLI's continuing professional development program for Israeli cataloguers. It was felt that this was sufficient qualification, given the available personnel.

The initial focus of the training team was managing the change and lowering the stress felt by library staff; a negative impression of Alma at the project start would complicate later efforts to teach use of the ILS. Starting in December, 2018, the training team ran quarterly open meetings about the transition. Each meeting focused on a different topic.

December 2018	The experience of a neighbouring library one year after migration and NLI's plan for the year leading up to our migration
April 2019	How the library's metadata fared in the test migration and the plan for further clean up before the final migration
June 2019	The training plan
September 2019	Work plans during the cutover period
December 2019	How the library's metadata fared in the final migration and plans for Q1 2020
March 2020	Project close and summary

Following the first public meeting a second member was recruited for the training team. The new trainer was chosen because he had helped with NLI's transitions from Aleph 300 to 500 and from local encoding to MARC 21. He was seen by many in the library, particularly by the older members of staff, as an authoritative voice on technology and was able to calm fears of change because of his prior experience.

The leader of the training team met with each department manager to map their current use of Aleph and to help them review Ex Libris documentation and training materials in an attempt to identify appropriate workflows in Alma and analyze gaps. Following the mapping exercises managers were invited to request a trainer visit their department for a "play hour" in which Alma was introduced using examples from their own workflows. These sessions were not meant to be training for production in Alma but rather an initial look at the new system and a way of aiding staff in refining their choice of Alma workflows.

Every Tuesday during the course of the migration project, from noon to 1300, a member of the training team held "office hours" during which any library employee could come and ask anything about Alma without needing to set an appointment. Visitors requested information ranging from demonstration of the ILS, to help winnowing through the masses of Ex Libris documentation, to assistance in writing and routing internal help tickets, to questions about specific local subfields and how they would migrate to Alma. It was emphasized that training team members would not necessarily be able to answer all questions on the spot; during office hours their function was to serve as an information junction, routing questions to the right people within the library. This function positioned the training team as the primary information brokers within the migration plan.

The second part of the training plan focused on the new skills needed to continue doing the work currently done in Aleph. It was determined that the most appropriate method to undertake was mastery learning (Bloom, 1968). Failure to learn how to do one's job in Alma was not an option nor, with over 300 new items arriving in the library every day, was a long-term drop in production. Therefore each staff member had to learn how to do their job and to do it well enough to switch smoothly into the new ILS on the go-live date. Keller's Personalized System of Instruction (Buskist, Cush & DeGrandpre, 1991) was modified into a departmental system after it was determined that there were too many trainees for personalization and that competence rather than excellence was the goal and that departments could support the slower learners on their teams.

At the end of July, 2019, formal training sessions began. During the course of the first week of training eight separate two hour "Alma Basics" training sessions were run in which participants learned how to log on, switch languages, change font size, and perform basic and advanced searches. To support these sessions two more trainers were recruited from the metadata staff. A total of 127 library employees underwent training during this week.

During August and September specialized training sessions were held: four full-day sessions for those working with metadata (covering the metadata editor, community zone, authority zone, holdings and items, sets, and work orders), two full-day sessions for archivists (covering the same material as the metadata sessions, but geared to archives workflows), two half-day sessions for acquisitions staff, two two-hour sessions of basic metadata work for non-cataloguers, three two-hour sessions on managing reading rooms, and two-hour lightning classes on batch loads, reports, downloading bibliographic records from OCLC, purchase orders for selectors, electronic portfolio creation, and linking entries fields. In addition, the training staff were asked to assist in planning and teaching half-day seminars for specific departments within the library. The instructional program’s goals were functional (Mager, 1988) and geared toward training each department to do in Alma the jobs they were already doing in Aleph.

It was emphasized at all training sessions that the staff must practice doing their jobs within Alma between courses; department managers and division heads were asked to create work plans for daily staff practice. Though the training staff had sat with department managers and mapped usage of Aleph before training started, there was no assurance that all special cases were accounted for, nor that managers were fully aware of the nuances of every staff member's Aleph usage. In addition, it was clear that no training course alone could adequately prepare staff for a typical working day; in-department practice would more closely simulate the real conditions under which they would be working once transition to Alma was complete. Training staff were available most hours of the day in the three major cataloguing departments as well as in the indexing department to assist staff in learning through doing. The synergistic results of this productive struggle (French, 2018), including successes and failures, were then fed back into the ever-evolving Alma guidebook available to all staff on the library's internal portal.

In order to provide "knowledge of results" feedback (Erez, 1977) staff were asked to use their practice time to recreate in Alma the work they were doing in Aleph. This way the standard Aleph daily and weekly error reports would also be applicable to Alma. Managers were encouraged to log monthly production statistics and report them not only to the division chief but also to staff so all would have a sense of how close to Aleph-based standards of quality and quantity each staff member was working.

Using a modified form of the Performance-Learning-Satisfaction document (Dean & Ripley, 2016), department managers were asked to provide the training team with evaluations of their staff by the end of September, 2019. These evaluations, along with work processes which finalized or modified since the summer training and staff requests for further training will be the focus of the final round of training before the November go-live date.

Several problems with the organization of the migration project hampered the work of the training team. Though the larger workflows had been mapped by the end of June, many of the details had not been resolved before training start, forcing the second round to be redefined with a focus on complete workflows and opening the possibility of a third round of training after go-live. Planned changes in Alma (particularly in the metadata editor) mean that the training program will need to extend into Q2 of 2020 with cataloguers, indexers, archivists, and reference staff undergoing a revised version of their August training.

A further complication existed due to the organizational structure of the library, exacerbated by the structure of the migration team. Training was the only working group composed of people who had library jobs unrelated to the group. Thus, in addition to their tasks in preparation for Alma, they had to continue their regular jobs in the library, including involvement in other Alma working groups related to their jobs. These multiple roles confused the rest of the library staff, who had difficulty drawing the line between the team's responsibilities for training and their responsibilities in their professional areas. The training team were asked to get involved in decision making which was not in their remit as a working group (Douek, 2016) and found themselves with added workloads of coordinating inter-divisional communication. This created an undue burden on the team and they had to be proactive in turning down mediation requests which were out of scope.

Placing responsibility for training in the hands of the division which most extensively used Aleph allowed the working group to easily plan the bulk of the training sessions but placed greater responsibility on the reference and reading room staff to define their own needs. As the training team had no professional experience in their field of responsibility a long lead-up time was needed for trial and error, as failure was not an option. The confusion of roles which resulted from asking the training team to take on additional responsibilities in the migration team was disadvantageous to the project, dividing team attention during the crucial training season.

Future training, both for the ever-changing environment of Alma and for other large projects, will be needed at NLI. Based on the lessons learned from the ILS migration it is recommended that several library staffers be trained in training, creating a professional core within NLI which are not only experts in their field of librarianship but also in teaching others. Terms of reference also needed for working groups in future large-scale projects to prevent responsibility creep.

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The Future of Cataloguing: a CIG Scotland world café workshop held in the National Library of Scotland on Friday 7th June 2019

Natasha Aburrow-Jones, CIGS Events Secretary, and Paul Cunnea, CIGS Chair

Background

The Future of Cataloguing – it's a massive subject. Where do you start? What do you cover? What do you omit? Can you look back (you can never look back)? Do you cover data processing, computer programming, or focus on 'traditional' cataloguing activity – record creation, metadata sharing, standards, quality? Do you limit it to library cataloguing, or do you include the wider world of metadata and the sematic web? What are the metadata boundaries, and how far is its reach? Where do you start when it is suggested that CIGS (the Cataloguing and Indexing Group in Scotland) hold an event on the Future of Cataloguing?

Planning

CIG Scotland had been thinking of running a Future of Cataloguing event for some time, but a suitable format eluded us. It was agreed that the standard seminar-style event would not be appropriate: attendees would have a wide range of ideas regarding the future of cataloguing (catalogues, cataloguers, cataloguing, metadata, standards, formats, new technologies, new environments etc.), and although six or so speakers on the topic would be sure to be interesting, it wouldn't cover the full range or depth that the delegates would want to explore. An alternative event format was suggested: the world café. This format is well established for discussion orientated meetings and was sold to the CIGS Committee as a "not-so-speed dating for cataloguers" event. The aim of the world café style is to engender open discussion between delegates across a range of topics, working in small groups. For the CIGS FoC world café, it was proposed that around six tables, covering six different topics on the future of cataloguing, would capture what we wanted to achieve. Each table would have its own facilitator to start the conversation, move it along, collate points, and ensure that all delegates would have a chance to share their thoughts. Each session would have a time limit, and there would be the chance for delegates to attend each table. However, when working out the session timings, it became clear that this would result in very short sessions with insufficient time for discussion, or a very long – and exhausting - day. Therefore, we decided to settle on four sessions across six topics and tables, with delegates able to decide which topic they wanted to join over the course of the day.

The next task was to find facilitators who would be happy to collate notes, keep the discussion flowing, ensure that one person did not dominate the table, to keep the conversation to the table topic, and to give a summary of discussions at their table at the end of the day. No small task, but appropriate inducements in the form of refreshments, as well as being a vital part of an interesting day, were enough! CIGS were extremely lucky in being able to identify a range of subject experts who were willing and able to act as FoC facilitators: the day would not have been half as successful as it was without them.

We decided that the event would benefit with a presentation at the beginning of the day; this would set the scene, motivate delegates and prepare them for the discussions ahead. CIGS were extremely fortunate in attracting the services of Alan Danskin, Metadata Standards Manager at the British Library. Alan has been key to the development of the BL's metadata strategy, which we agreed would be a great introduction to the issues surrounding the future of cataloguing.

The World Café

Alan didn't let us down, and provided a fascinating insight into the drivers behind the British Library's new Collection Metadata Strategy (2019-23) *Foundations for the Future*, which was a perfect scene setter for the day. Alan started off by asking delegates how many of them had been to events previously that covered the future of cataloguing; not as many people as Alan had expected raised their hand. He asked what had the audience been doing, and a lone voice piped up, "Cataloguing!". That set the tone nicely for the day.

Following Alan's scene setter, delegates were asked to join their first session. The tables and topics on offer were:

1. **The future of authority control, identifiers, linked data** – facilitated by Diane Pennington, from the University of Strathclyde
2. **The future of subject analysis and controlled vocabularies (LCSH, FAST, TGN, etc.)** – facilitated by Will Peaden, from Aston University
3. **The future of content standards (& data models) – convergence, divergence (RDA, ISBD, DCRM, ISAG(G), etc.)** – facilitated by Gordon Dunsire
4. **The future of encoding models and formats – convergence, divergence, emergence (MARC, BibFrame, DC, Schema.org, EAD, etc.)** – facilitated by Jenny Wright, from Bibliographic Data Services
5. **The future of data quality: data sources, supply, volume, management** – facilitated by Alasdair Macdonald, from the University of Edinburgh
6. **The future of cataloguing practice: what will the cataloguer or metadata manager of the future look like?** – facilitated by Alan Danskin, from the British Library

Delegates had 35 minutes at each session, whilst facilitators had 5 minutes to collate each session's discussion, and further collate at the end of the day. The four sessions were intersected by a much needed buffet lunch.

Due to the diverse range of perspectives, opinions and backgrounds, and the complexity of the topics covered, clear answers and conclusions were not expected. However, delegates rose to the challenge, and many challenging and thoughtful insights were captured by our excellent facilitators over the course of the day. These are summarised below, which, due to the nature of the event and the multiple sessions, may appear ad hoc, overlapping and tangential, but provide an interesting overview of the issues, questions and challenges facing the cataloguing and metadata community today.

Summary of discussions

Each table had a selection of questions, which had been gathered from all facilitators and CIGS Committee members prior to the event. These were aimed at starting and continuing conversations, allowing the discussions to flow naturally.

Table 1 : the future of authority control, identifiers, linked data

Questions included:

- How do we handle ethical and legal (GDPR) considerations of authority control?
- What identifiers are proving most useful?
- Are our library specific authorities too much of a silo, or can they teach and influence the direction of authority management?

The discussions raised concerns over the different vocabularies that are available; how should these vocabularies be linked together? Which vocabulary is useful for which audience? How do you choose the appropriate vocabulary for your collection and audience, and how does it relate to other collections, other audiences? There was much curiosity regarding this topic, but also concerns on how to implement solutions, what would make sense for the cataloguer on the ground, or indeed if this was necessary.

It was questioned where linked data was actually linking to and from, especially in the MARC environment, which is still the standard environment for libraries and not easily connected to the linked data environment, highlighting the challenge – and potential - of bridging traditional metadata silos with the semantic web.

It was agreed that there is a need for linking our data more seamlessly and semantically, but questions over what sources and authorities and data could be trusted were raised. There are multiple options for managing authority control and linked data, but it is still not clear how these can be connected effectively in current systems. It was highlighted that authority standards are used in different ways in different institutions – and despite the presence of the standards, these are not always adhered to systematically or consistently. Hanging questions included: in a linked data environment would these standards still be relevant; should there be more standardisation; or were standard vocabularies and authorities becoming less important? (Which links nicely to this comic from xkcd: https://xkcd.com/927/)

Table 2 : the future of subject analysis and controlled vocabularies (LCSH, FAST, TGN, etc.)

Questions included:

- Is subject analysis still a worthwhile exercise?
- Are subject indexes too Western focused, and is this a problem?
- Can library standards impact on other non-library standards on the web?
- Are FAST headings a good compromise between detailed subject analysis and heading construction, and crowd sourced subject headings?

The discussions agreed that subject analysis is a good thing, but that subjects needed to be more visible and embedded in discovery layers to realise their value and full potential. The “aboutness” that subject analysis provides is currently lost, as modern discovery layers, etc – and indeed users - focus on the use of keywords rather than utilising the value of subject analysis and subject vocabularies – has it not always been thus? It was questioned how much subject analysis is carried out today, considering the amount of records that are created – issues of duplication, variance, incompleteness, skewed results, skewed analysis, misleading the user.

It was agreed that LCSH (Library of Congress Subject Headings), despite its global reach, had a number of challenges for the modern day cataloguer: it is still very American-centric; it is slow to change; it is difficult to influence for most institutions and cataloguers; and on the whole is not sensitive to changes in terminology, modern usage, and prone to archaic, “non-PC” terminology – one of the handicaps of such an extensive and comprehensive behemoth. Despite these challenges, it was noted that better use of LC subject headings in modern discovery layers would be of value to users, although it was queried if LCSH was the correct lens to discover content, for the reasons noted above, and whether more agile, modern vocabularies were better suited to the modern discovery environment.

A discussion regarding FAST headings (Faceted Application of Subject Terminology) revealed that some delegates considered there to be a lack of unity in the application of the headings; some delegates viewed FAST as a dumbing down of subject analysis; that FAST headings resemble a keyword approach, and don’t offer detailed or effective subject analysis. Opportunities to link FAST with other vocabularies and data were highlighted, with use of IDs and URIs in a linked data environment – one of the benefits of adopting a modern subject vocabulary such as FAST. Others questioned how more external links would work with existing systems in use, highlighting some of the linked data concerns raised above.

The ethics of subject headings was also discussed, and also the extent to which end users identify with and use subject headings, or rely on keywords for their discovery – is this a failing of subject analysis and vocabularies, their lack of visibility in current discovery systems, information literacy, or simply user preferences and the power of modern indexing and search techniques ... or indeed has it ever been thus?

Table 3 : the future of content standards (& data models) – convergence, divergence (RDA, ISBD, DCRM, ISAG(G), etc.)

Questions included:

- How important is it for cataloguers to understand the data models underpinning the content standards?
- Is ISBD still relevant?
- Will RDA become a standard beyond the library world? Will RDA take hold of the whole library world?
- Are developments in the standards (such as RDA) fit for purpose? If so, how? If not, why not?
- Is there any prospect of a uniform standard applicable across the information world?

As can be imagined, this was an interesting table to attend. There was a mixed response to whether or not cataloguers need to understand the underlying data models for content standards. There were arguments to be made for both sides: on the one hand, knowing about data models can help cataloguers with trouble shooting, data manipulation and how to interpret cataloguer's judgement. On the other hand, it was noted that many cataloguers simply require an input form, and there is no need for burdening cataloguers with technical or abstract data modelling. The discussion then moved onto the more cerebral notion of what a cataloguer might be, as the term can cover a range of skills. It was noted that a range of users and environments might well need a range of data models, or application profiles at least, such as RDA offers. Then the inverse question was asked, how important is it for data modellers to understand cataloguers? There appeared to be agreement that it was important for systems support to understand why cataloguers do what they do, and that underlying aims of cataloguing needs to be understood beyond the cataloguing community, and vice versa. Cataloguers use their skills to describe content in order for users to discover, identify and access content; it is the content that is important, not the carrier or format. It was also noted that – some, all? - cataloguers need to be more technically minded, and more adept at data processing and manipulation, semantic web possibilities, and using data tools and techniques such as MarcEdit, OpenRefine and others.

The next discussion was regarding the relevancy of ISBD. The practical point of view is that legacy data is still important – good metadata endures - and the library / cataloguing community will have to live with that legacy and subsequent hybrid data for a long time to come. It should be possible for catalogues to co-exist with different standards. However, there is a move away from descriptions to relationships between entities when describing items, and a recognition for the need for consistent authorities to support this effectively. ISBD is still useful for consistent displays of metadata.

It was acknowledged that RDA would not be adopted across the web as the one single descriptive data model, and that is not its aim. The consensus was that RDA was the most effective global standard for describing library and cultural materials, but that a lack of a common encoding model was a limitation to realising RDA's full potential. It was noted that RDA is making progress outwith the library world, for example, in describing museum collections, and synchronising with other data models through the Library Reference Model, with RDA vocabularies supporting linked data applications. Archives appear to be in a different situation, with delegates suggesting that they are thinking more about linked data possibilities. It was suggested that linked data would be an expensive method of describing any collection in current library or archival environments, especially if this was done as a solo exercise.

The question was also raised about the link between content standards and information literacy, as well as the role of cataloguers and trusted metadata against the rise of fake information and fake metadata.

Table 4 : The future of encoding models and formats – convergence, divergence, emergence (MARC, Bibframe, DC, schema.org, EAD, etc.)

Questions included:

- How do we break through the impasse of LMS suppliers only supplying systems for formats of the past?
- Does it matter that Bibframe does not use the same data model as RDA?
- Will Bibframe deliver a new content standard to replace MARC?
- Is MARC really a dead man walking? Does it really need to die?

It was noted that MARC21 is the working format for most traditional libraries. Libraries are bound by their legacy systems and the limitations of the marketplace. There might be complaints about the development of systems with other standards, but the future format beyond MARC is still not clear, with the status of Bibframe and other emerging encoding models still embryonic. How can LMS and metadata management systems be designed with an uncertain landscape for modern encoding models? The discussion moved around to leading the necessary developments from within the library community – this links back to discussions on Table 3 regarding cataloguers needing to be more technical. It was also noted that no one else would do the system design we require for the library community, so it would have to be specified by those who understood what was required. Legacy issues with using MARC in the modern environment were highlighted, which was no surprise to delegates. However, future formats and encoding models would have to enable efficient and flexible data entry, as more and more items need appropriate metadata attached to them. New models will need to reduce level of duplication, as well as support non-expert entry. It would have to enable data to join up seamlessly with other data forms, and also enable that data to be extracted and manipulated: the consensus was for clean, granular, interoperable, adaptable and neutral encoding models, able to realise the potential of modern data models, such as RDA offers.

This table also noted that there was currently a limited business and use case for linked data in the library environment. A question was asked regarding the impact of the background format on collection management – how do the two link together in a new system?

The final comment made on this table was: Free the data (out of the MARC box)… for example, using RIMMF, which is freely available and designed to exploit the full potential of RDA. (Other format neutral systems are [not] available.)

Table 5 : The future of data quality – data sources, supply, volume, management

Questions included:

- What can we do with our data derived from outside sources? How can we share it, what may we do with it?
- Does the sheer volume of e-resources render traditional cataloguing obsolete?
- Are there ways to improve vendor derived metadata?
- What are the most significant problems that you face? Are they related to metadata quality, speed of delivery, accuracy of content coverage?

This was a table which was full of lively discussion, revolving around vendor-supplied data, and how that can - and should – be improved. It was noted that there are enough issues at present when working with MARC-centred data. There were discussions as to what is good enough when considering data quality. Records supplied for bulk loading were mentioned, along with the associated issues of quality, consistency, and ensuring the correct content coverage. Resources at the libraries are spread thin, so it is not possible to check every record that is entered into the catalogue – potential for bulk data processing, analysis, correction? If not addressed, this can lead to “lost” content due to the metadata not being discoverable or leading to the correct content (e.g. simple spelling mistakes, incorrect URLs, plain bad metadata, poor authority control etc.). On the plus side, the scarcity of cataloguer time has led to more collaboration with regards to resource and metadata sharing.

It was noted that legal deposit libraries face different challenges to academic libraries, for example, using BNB numbers rather than ISBNs for matching purposes. This brought the conversation around to the idea that one size does not fit all, even though that seems to be what is received from vendors. There was a demand for better quality and customisation of records that libraries are purchasing. There is an increased burden on staffing, especially in cataloguing and systems, and an ever-increasing workload. There are many uncatalogued items (such as those without ISBNs, or lack of other identifiers), which are not able to be tackled due to lack of staff and effective data processing solutions. However, there appears to be an appetite for upgrading legacy data, along with an unsurprising ethos of sharing data, given impetus in the UK on the back of recent NBK developments and community involvement. This gives some optimism for future cataloguing endeavours, leading to more effective workflows, better quality metadata, and an improved metadata ecosystem.

There was one final suggestion: if a library is contributing to a consortial cataloguing system, and paying a subscription, should that library be getting credit back for uploading records? A system similar to using solar panels and generating electricity for the National Grid could be employed. That would an additional incentive to increase cataloguing output.

Table 6 : The future of cataloguing practice – what will the cataloguer or metadata manager of the future look like?

Questions included:

- What will be the future function of the library catalogue?
- How do we attract people to become cataloguers of the future?
- What opportunities do you see for a more integrated, collaborative approach to metadata creation and maintenance?
- How do you explain the purpose and potential of metadata to decision makers in your institutions?

There was much discussion around the subject of change: changes to standards (AACR2 to RDA, for example); changes to systems (slow to change, but there are changes); changes to expectations, of users, of institutions; changes in cataloguing resources (there are fewer cataloguers now, on lower salaries). However, at the same time, there is a forging of new relationships.

Another discussion posited that librarians and cataloguers understand the value of metadata, what it can do for the user, and how far it could help with discovery and other reports, but it was not clear whether the systems underneath the metadata layer are able to utilise the richness and granularity afforded by good metadata effectively. This can prevent us realising the underlying value of and investment in our bibliographic metadata and controlled vocabularies.

With the rise of communal knowledge bases, vendor supplied data, etc., it was questioned whether libraries and librarians are losing control of the metadata. There are risks associated with having central sources of metadata, such as the de-skilling of cataloguers, at a time when deeper cataloguing knowledge is required to understand the underlying models behind cataloguing standards. What replaces this skill? Will the resulting metadata deliver the expected results? There is a wide skills base at the root of any cataloguer, but it is clear that more collaboration between cataloguers is needed. There is also a need for more data manipulation and management, which is outwith the skills range of the standard cataloguer.

Q&A

Following the summing up of the day's discussions from the facilitators, the floor was opened to questions and comments. The need for effective training was raised. Is training for cataloguers provided at Library School appropriate to the future needs? Cataloguing is normally an optional course in a post-graduate degree, and there is a lack of focused training, especially on the technical side, which is commonly learnt on the job. However, it would be difficult to plan technical training on an academic course, as it would be difficult to keep such training neutral and non-vendor focused; the software and hardware is constantly changing – unless training tools such as RIMMF were employed? On a different level, it was suggested that there needs to be in-service training for copy cataloguers, especially in public libraries. The lack of cataloguing trainers across the UK was noted.

Leadership from the community was also highlighted. It was also suggested that individual libraries need to take a leadership role in the development of solutions, metadata standards, systems development, and data quality, and take it forward. One example would be working with vendors and suppliers to improve the cataloguing modules of different Library Management Systems, something that SCURL is actively pursuing in Scotland. It was noted that the British Library are doing a good job in this area too, but that the historical system of libraries working in silos was a barrier. Regional consortia are one way of breaking this mould, such as SCURL's SHEDL model, or the White Rose Libraries, but the feeling was that there needs to be more community and consortial involvement, with more libraries joining consortia, and cross-consortia collaboration too.

Finally, it was noted that the value and importance of metadata is recognised much more widely in the modern information age; it is prevalent everywhere and in all spheres! It is no longer the sole purview of libraries, museums and archives – it never was, but even less so now. The day's discussions had focused inwards, on metadata in libraries, but, the future of cataloguing and management of metadata may not lie in libraries; a cataloguer's skill set is extensive, and these skills are very transferrable from libraries to other industries. There are vast swathes of metadata work outwith libraries, and cataloguers and the cataloguing community need to consider how we can influence metadata creation, use and re-use across all aspects of modern society.

Conclusion

The Future of Cataloguing was a sell-out event, with very positive feedback from delegates. There was a lively buzz across the whole day, with some tired delegates – and facilitators – at the end of day. Due to the nature of the event, delegates provided a much more active and fruitful contribution to the day than would be expected at a standard seminar, and this was seen as a very positive outcome. As to the points that were discussed, more questions than answers were supplied. This was expected, as the aim of the event was to spark thoughts, debates and new ideas. It helped that the facilitators revealed their passion for their subject areas, and this spurred on the discussions, leading to a very lively, energetic buzz at all the sessions.

CIGS is very happy with how well the day went, and we are pleased to see that the format has inspired a series of events across the country, notably the Mercian Collaboration and CIG. With the success of the event and the positive feedback, CIGS aim to run the FoC world cafe again in the future, possibly as a regular event, and there are many other topics to include and discussions to be had. We will work with colleagues across Scotland and the UK to consider how we can take the outcomes of this event and others forward, and how the community can address the issues highlighted in the discussions on the future of cataloguing.

CIGS would like to express their deep-felt thanks to all the facilitators, as the Future of Cataloguing world café could not have been a success without their energy, enthusiasm and expertise – there were some very tired, though we hope very happy, facilitators at the end of a very successful day.

Figuring it out: where to find training opportunities for a job that is constantly changing

Leslie A. Engelson, Metadata Librarian, Murray State University

In over 20 years as a cataloger, I have seen every aspect of cataloging change. In fact, the very premise upon which cataloging is based is shifting from records created for exchange to a collection of facts and asserting relationships of those facts (OCLC, 2019, p. 9). To support this new environment of linked data, we not only have new guidelines for description, we also have many choices of which guidelines to use for descriptive metadata depending on the resource and the system in which the metadata will reside. The MARC record structure has changed to accommodate new descriptive rules and new information resource formats. New and changed subject terms have always been a factor of subject cataloging but now we have multiple thesauri from which to choose in addition to different types of headings such as genre/form, FAST (Faceted Application of Subject Terminology), demographic group, and medium of performance terms. Linked data requires additional vocabularies which include relator terms as well as content, media, and carrier terms and coding. The systems we use are constantly updating and changing with cloud-based systems replacing client-based systems, and libraries migrating to new systems. Current cataloging tools change with upgrades and new tools become available because of new software and new technology such as APIs. Furthermore, as new technology is developed, new information resource formats are created.

In my first job as a cataloger after library school, I naively thought that I would focus on learning how to catalog print monographs until I understood all aspects of cataloging (rules of description, subject access, authorized names and titles, classification, and so on). Then after I completely understood all aspects of monograph cataloging, I would add to that foundation by broadening my repertoire to serials and non-book resources. That idealism was swiftly quashed by the realities of cataloging departments and the changes previously mentioned. I quickly learned that I will never fully understand any aspect of cataloging and that often the need to know provides the best catalyst for learning.

As a cataloger who must be aware of changes in standards, new tools, and ways to incorporate efficiencies, as well as a supervisor who provides training for staff and students, I would like to share with you some resources I have found that help me learn about cataloging as well as provide training for those new to cataloging. One caveat is that I work in the United States so my familiarity with training opportunities is with U.S. based resources. However, similar resources are available in other countries and many training opportunities are web-based so are available to anyone with internet access. Do be mindful of time-zones changes when utilizing live online training opportunities.

To assist with the learning process, it is helpful to subscribe to at least one cataloging email discussion list. There you will learn about formal training opportunities, upcoming changes to standards, as well as how fellow catalogers wrestle with the standards in the real world. One way to learn with an email discussion list is to read the submissions every day. Even if a post addresses something that you have not yet dealt with, you may recall the discussion later when that format or problem crosses your desk. Furthermore, email discussion list archives are excellent answer databases. I often search the archives for answers to questions about resources with which I am currently working. Granted, email discussion lists can also be tremendous time-suckers so be wise about the time you spend reading discussions and balance your time with the rest of the work waiting for you. Two email discussion lists from which I have learned a great deal are Autocat and OCLC-Cat. A discussion list for the integrated library system our library uses is helpful for dealing with issues specific to that system. Many other discussion lists are available for regional groups, special formats, subject area, and standards.

Similarly, accounts on social media platforms related to cataloging topics or written by experts in the field may also be useful. These include Twitter, blogs, and Facebook. To be honest, I don't follow very many of these accounts; I simply don't have the time. Also, while a specific cataloger's perspective may be of interest, be mindful of the limits of that one perspective. Moreover, Twitter and blogs are not ideal places for asking questions. However, I do find the Troublesome Catalogers and Magical Metadata Fairies (TCMMF) Facebook page to be a good place to ask cataloging questions and get quick responses. Posts on this page include training opportunities as well as information about upcoming changes in the standards. Posts to the TCMMF page have frequently alerted me to recent changes or issues of which I might not otherwise be aware.

Training opportunities available on the web can be both formal and informal. YouTube is a valuable on-demand resource for learning about cataloging as well as a variety of skills related to cataloging. I recently cataloged a skeleton and upon searching YouTube found a video on Cataloging Three-Dimensional Objects and Kits with RDA. It provided a lot of practical information on the relevant RDA guidelines as well as MARC fields that pertain to these types of resources. YouTube videos have taught me how to use different features of Excel, formulate regular expressions, and utilize OpenRefine. I also find cataloging documentation from other libraries to be very helpful. I use Yale's online cataloging documentation https://web.library.yale.edu/cataloging when cataloging reproductions and classifying music and Emory University's documentation http://emory.screenstepslive.com/s/alma for help with our integrated library system.

Tutorials, webinars, and online courses are more formal means of training available from a variety of providers.

The Library of Congress' Catalogers Learning Workshop https://www.loc.gov/catworkshop/ provides links to free training on RDA, BIBFRAME, subject headings, and classification. It also includes links to training available through the Program for Cooperative Cataloging (PCC) and its programs. A good place for a staff member new to cataloging to start with is the Alternative Basic Library Education (ABLE) courses. These free self-paced courses are available from the Idaho Commission for Libraries https://libraries.idaho.gov/continuing-education/able/ and provide a basic understanding of cataloging elements such as descriptive cataloging, subject headings, MARC, and Dewey Classification.

The Association for Library Collections and Technical Services (ALCTS), a division of the American Library Association (ALA) provides e-Forums, webinars, and web courses http://www.ala.org/alcts/confevents. The e-Forums are free and once you sign up for one, content for all future e-Forums continues to arrive until you unsubscribe. Fees for webinars and web courses vary depending on if you are a member or not. The web courses are in high demand and are frequently sold out; however, because several sessions are offered each year, it is not difficult to find an opening in one. Webinar topics in the areas of institutional repositories, preservation, cataloging and RDA, collections, and linked data are posted several months in advance. The webinars are recorded and made available for free six months after the original presentation.

Courses that focus on various skills in librarianship are available through Library Juice Academy (LJA) https://libraryjuiceacademy.com/. These courses are web-based and vary from four to six weeks in length and cover the areas of cataloging, metadata management, XML & RDF, and digital curation. Although the courses are a little pricey, I have heard positive reports about the content. [*As mentioned in the Editorial, CIG members can get a 20% discount on LJA courses. See also the following article, in which Yukiko Morita reviews two of their courses.—Ed.*]

Member based resource sharing networks such as Lyrasis and Amigos provide course catalogs on their websites for online courses or webinars. These training opportunities are often open to both members and non-members.

Additionally, the National Information Standards Organization (NISO) https://www.niso.org/events/upcoming provides webinars and virtual conferences related to issues such as cataloging, linked data, and preservation and archiving.

Product vendors, including integrated library system vendors, usually provide free product specific training opportunities, whether face-to-face or online. In addition to their product training webinars https://help.oclc.org/Librarian_Toolbox/Training/Available_OCLC_training, OCLC also provides access to live webinars and recorded training through WebJunction https://learn.webjunction.org/. WebJunction has cataloging training as well as recordings on topics such as management, staff and professional development, and technology, among other topics.

Conferences are great places to learn about the latest developments in cataloging. These can range in scope from national or international conferences (e.g. Chartered Institute of Library and Information Professionals (CILIP), European RDA Interest Group (EURIG), International Federation of Library Associations (IFLA), and ALA) to regional or other local conferences. [*And of course there's also the biennial CIG conference, coming up in 2020! - Ed.*] The United Kingdom Serials Group (UKSG) and Online Audiovisual Catalogers (OLAC) are two content specific organizations that hold annual conferences. Associations that are geared toward librarians in specific types of libraries such as public libraries (PLA), law libraries (AALL and IALL), music libraries (MLA), or librarians who work with religious and theological resources (e.g. Atla and Catholic Library Association (CLA)) also sponsor conferences. The Special Libraries Association (SLA) has an annual conference for librarians from other types of libraries such as government, business, or non-profit libraries and the Association of Christian Librarians (ACL) provides a conference for academic librarians who identify as Christian. Library systems vendors provide national and regional conferences and OCLC has international as well as regional conferences. Of course, it can be quite expensive to attend conferences, especially if travel and hotel stays are necessary. Because of this, local and regional conferences are sometimes more accessible. Additionally, some associations provide financial support to attend their conference for those whose institutions may not be able to afford to send them.

Sometimes libraries join cooperatives and consortia to benefit from shared resources and staff in these libraries may not be aware of training opportunities available through these groups. In addition to practical training, these groups provide opportunities to gather together with local colleagues for a day or two and exchange ideas, discuss challenges, and commiserate. If your library is part of a consortia, check to see if there are training opportunities available through that consortia.

Last, but certainly not least, are books and periodical articles. Louis Mai Chan's A Guide to the Library of Congress Classification may be old but it is the first place I look when I have a classification question. The second edition of Maxwell's Handbook for RDA is due to be released in 2020 and is the recommended text for understanding how to use RDA. Likewise, his text on authority work, Maxwell's Guide to Authority Work, is equally valuable for help with understanding authority records and implementing authority control. A number of texts are available for learning different aspects of cataloging and I would be remiss to not mention Subdivisions for Biblical Studies, Theology, and Ministry: Making Search Terms Do the Work. This is an open access book I wrote that provides guidance on the use of subject subdivisions in the disciplines of religion and theology. To learn about cataloging specific formats, read information about new cataloging guidelines and the concepts upon which they are based (e.g. linked data, semantic web), and discover workflows for new projects or implementations, I search library literature databases to find articles on these and other topics.

While it is necessary to stay current in the many areas pertaining to cataloging, it is also crucial to pursue professional development in areas that are not exclusive to libraries such as management, customer service, supervision, time management, and human development. Organizations such as Pryor Learning Solutions https://www.pryor.com/ in the U.S. and Dale Carnegie https://www.dalecarnegie.com/en in the U.K. offer face-to-face as well as online training. Training Magazine Network https://www.trainingmagnetwork.com/ provides access to free live and recorded webinars. If you cannot find what you need in these resources, a quick Google search may result in other options.

While training opportunities are easy to find, finding the time and finances to take advantage of the opportunities can sometimes be a challenge. However challenging it may be, ongoing training is fundamental in order to facilitate resource discovery. It is imperative that cataloging staff learn to embrace the reality that the cataloging environment is one of constant change and learning. An attitude open to change and a willingness to embrace the new are essential for a cataloger to flourish.

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Biography

Currently Associate Professor and Metadata Librarian at Murray State University, Leslie A. Engelson has been cataloging for over 20 years. In addition to attempting to keep up to date with the latest in cataloging, she has provided training in cataloging as an adjunct professor, a conference speaker and presenter, a workshop trainer, a supervisor, and a colleague. She enjoys learning as well as training those who like to learn.

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Library Juice Academy courses “Using MarcEdit” and “Introduction to Cataloging”

Yukiko Morita, Senior Library Assistant, King’s College London

1. Introduction

I work in the Enquiry Service team at King’s College London Libraries & Collections. My current duties do not involve cataloguing, but I want to learn the basics as part of my continuing professional development (CPD). I saw an advertisement for a free training place for the Library Juice Academy (LJA) course on MarcEdit in the Cataloguing and Indexing Group (CIG) newsletter in December 2018. I had been looking for training opportunities for cataloguing and heard about LJA courses from a colleague in the Special Collections team at my workplace. I considered the CIG’s timely offer of a free place as their endorsement of LJA courses and enrolled without hesitation in two courses, “Using MarcEdit” (March 2019) and “Introduction to Cataloging” (May 2019). I did not apply for support, however, because I am employed full-time and thought I would not qualify. I then saw in the February 2019 newsletter that there is a 20% discount for CIG members on LJA courses. I immediately contacted the CIG and asked whether I could apply for the discount retrospectively. The CIG kindly contacted LJA on my behalf and I successfully secured a refund as the courses had not started yet. This was an enormous help since the pound to dollar exchange rate has been so unfavourable in the current economic climate.

In the following, I would like to report on my experience of attending these courses. I found “Using MarcEdit” challenging, but I feel I have acquired the skill to utilise this piece of software on the completion of the course. I have mixed feelings about “Introduction to Cataloging”, however. As I explain below, although the course is a sound introduction, it is not for an absolute beginner. It requires prior knowledge on the part of the learner to make the most of the content, mainly because of the multi-faceted nature of the subject.

2. “Using MarcEdit”

“Using MarcEdit” was the first LJA course I had undertaken. The four-week course was fully booked by the time it started. Every week there was reading material on a Moodle book and an exercise. Participants were required to earn points not only by submitting the exercise by the deadline, but also by participating in the discussion forum. Reading through the Moodle book was the hardest part for me as I needed to understand unfamiliar content. Having completed the reading, the exercise was less daunting and enjoyable. I found the tutorial video helpful, which provided the keys to the exercise questions. The course operates on a pass/fail grading scale with 75% as the pass score. When I reached the fourth week and discovered that the exercise involved coding in a specialist language (“regular expression language”), I thought I would struggle to complete the course. I achieved “pass” with full scores, however, with the aid of the course material. The discussion forum helped me to share learning with the other participants and successfully complete the course. Not surprisingly many of them were librarians from North America who were already engaged in advanced cataloguing in their workplace. It was stimulating to read their experience and interact with them online.

MarcEdit is a metadata editing software suite widely used in the library and information science (LIS) sector to create and manipulate MARC records. Many members may recall that the CIG organised a talk by its developer Terry Reese in June 2019. I had only heard about MarcEdit and had not had a chance to use or practice it in my career to date. By completing the course, I feel confident that I would be able to utilise it in any future role where I had to deal with cataloguing records, which is one of my career goals.

3. “Introduction to Cataloguing”

Since I have no cataloguing experience to date, I thought I would find “Introduction to Cataloging” the more relevant of the two courses. I completed a cataloguing and classification module in the MA Library and Information Studies programme at UCL in 1996-1997, but that was before the advent of Resource Description and Access (RDA). I also attended a one-day course on Functional Requirements for Bibliographic Records (FRBR) in July 2012, organised by the CIG and CILIP in London, but thereafter I have had no opportunity to update myself on RDA. I therefore wanted to fill this gap in my knowledge.

The course format is the same as that of “Using MarcEdit”. It lasts for four weeks and has reading material and an exercise each week. It offers links to relevant websites such as those of the Library of Congress, Online Computer Library Center (OCLC) and RDA Toolkit. Each week participants cover a basic theme of cataloguing (Week 1: MARC 21; Week 2: Anglo-American Cataloguing Rules (AACR) 2 and RDA; Week 3: authority records and FRBR; Week4: subject headings and classification). Although the course is an introduction to cataloguing, as was the case with “Using MarcEdit”, most of the participants were North American practitioners already engaged in advanced cataloguing. As I mentioned above, I had completed a cataloguing and classification module at UCL, which consisted of in-depth tutorials and hands-on practice over several weeks. In addition, the above-mentioned CIG course on FRBR had provided me a good foundation of understanding RDA. Without this prior knowledge and training, I doubt I would have been able to follow the course material as the contents from external resources were inevitably detailed and voluminous.

Both “Using MarcEdit” and “Introduction to Cataloging” are popular, established courses. The complete four-week material was already accessible on the website from the start of these courses. This allowed me to read the material and work on the exercises in advance to ensure that I would be able to meet the deadlines while fulfilling my commitments as a full-time employee. For “Introduction to Cataloging”, I gained a comfortable “pass”, losing only a few marks. Even after the completion of the course, however, I do not feel I have gained enough training on cataloguing.

Cataloguing is not a skill that can be acquired solely by attending a course; it needs to be learned by practice over many years. A beginner must start somewhere, however, and “Introduction to Cataloging” offers a good starting point. If your task is to import cataloguing records and amend them according to your institution’s house style, and you do not need to create a record from a scratch, attending this course may suffice. In contrast to “Using MarcEdit”, the course instructor of “Introduction to Cataloging” did not make participation in the discussion forum compulsory (i.e. by awarding points, for example) and as a result the forum was less lively. This is understandable as most of the participants were full-time workers seeking to juggle work and their own learning. Unfortunately this meant that I could hear less of individuals’ thoughts and experiences.

4. LJA and further CPD

An LJA four-week course earns 1.5 Continuing Education Units (CEUs), but their CEUs are not accredited by the International Association for Continuing Education and Training (IACET). On the LJA website, they cite the financial cost of applying for IACET accreditation as one of the reasons for this. LJA, however, observes the educational requirements for IACET accreditation to provide a degree of assurance to participants of the quality of their curriculum. They also recognise that those who enrol in their courses are interested in gaining knowledge and not purely CEUs. I have already received a librarianship qualification from UCL. When I look for CPD opportunities, LJA is an ideal provider whose courses are robust enough to challenge and improve my knowledge and skills. A four-week course requires 15 hours of work in total (or 3.75 hours per week), which should be manageable for full-time workers. Their offering, which is affordable but not inexpensive, provides good value for money with the quality of training delivered to be taken into consideration. A particular benefit is that even after the completion of courses, you can continue to access the course material and grades online.

The flexibility provided by online learning is ideal for those with many other commitments. LJA is based in Sacramento, California, and, as I have mentioned above, many participants are from the US, but anyone who has internet access can sign up for their courses. Some participants in my classes were from Australia and a few from the UK. It is fascinating to hear that some of the participants work in the “technical services” department, an unfamiliar term in the UK. At the end of April, I received an invitation email to LJA’s garden party that was to take place at their headquarters in Sacramento. I had to decline for obvious reasons, but it would have been a wonderful networking opportunity. Apart from such international aspects, online learning is time-effective and efficient, allowing participants to organise their study schedule around their working life.

LJA offers certificate programmes, which comprise six to eight courses, for example, “Certificate in XML and RDF-Based Systems” (six courses), “Certificate in Digital Curation” (six courses), and “Certificate in Cataloging and Technical Services” (eight courses). The last mentioned is a programme designed to help develop a set of skills in cataloguing and technical services. Learners can choose eight from a range of courses to gain a certificate in the programme. The attractive looking line-up includes “Introduction to Cataloging”, “Using MarcEdit”, “Library of Congress Classification”, “Dewey Decimal Classification”, “Authority Control”, “Controlled Vocabulary and Taxonomy Design”, “Metadata Design”, and “Understanding the BIBFRAME Model and Vocabulary”. As can be seen, the two courses I have completed form part of this programme. The courses in the certificate programmes can be also taken as standalone courses. I am planning to complete another six to acquire the certificate in “Cataloging and Technical Services” and develop my knowledge and skills in cataloguing still further. Beyond that, I may move on to another certificate programme as LJA offers limitless CPD opportunities.

SUNCAT setting: a retrospective

Natasha Aburrow-Jones, former SUNCAT Project Officer

Introduction

SUNCAT was the Serials Union Catalogue for the UK research community, delivered by EDINA on behalf of JISC, from its inception in 2003 until the service was turned off in 2019, as the National Bibliographic Knowledgebase (NBK) took over the role of union catalogue. SUNCAT enabled researchers, students, librarians and others to locate serials held in libraries across the UK. The catalogue contained information on both print and electronic serials (and other formats), including journals, periodicals, and other publications of a continuing nature.

The coverage of SUNCAT steadily increased, finally containing serials information from 120 libraries of the most significant research institutions in the UK. These included national libraries (the British Library, and the National Libraries of Scotland and Wales), the copyright libraries, most of the larger universities, key specialist libraries and the Directory of Open Access Journals (DOAJ). Serials records from CONSER and the ISSN Register were also included for use by Contributing Libraries, and use in the matching processes.

SUNCAT was a physical union catalogue, in that all Contributing Libraries sent copies of their serials records and associated holdings to SUNCAT for data normalisation before loading into the SUNCAT database.

Content

SUNCAT was a union catalogue of serials. Serials differ from monographs (books) in that they are published on a continuing basis, often in the form of regular issues, but may also be produced on an irregular basis. Regular issues may be published daily, weekly, monthly, quarterly, annually, or even less frequently (and in any other form of frequency). SUNCAT accepted any records from libraries which they deemed to be serials. Therefore, SUNCAT contained a wide variety of material, but typical examples included journals, periodicals, newspapers, newsletters, magazines, proceedings, annual reports, and other titles of a continuing nature. SUNCAT contained records for print and electronic serials, and any other type of serial – the title simply had to be classed as a serial. Users had access to full text content of a journal if their home institution had an active subscription. It is important to note that SUNCAT contained information about serials at the title level, although access to article level information could be achieved through the Table of Contents functionality.

In addition to the serials data from Contributing Libraries, SUNCAT contained records from the CONSER database, the ISSN Register, and the Directory of Open Access Journals (DOAJ). CONSER records are generally high quality bibliographic records; the ISSN Register contains details of every serials title that has been assigned an ISSN. Records from all these datasets could be downloaded by SUNCAT Contributing Libraries in MARC21.

Benefits

For researchers, SUNCAT was a freely available discovery tool, designed to aid the location of serials held in the UK. It provided information on the serials data of 120 libraries and as such was the single most comprehensive source of UK serials holdings information. SUNCAT supported searching by title and subject so that it was possible to find out both where a particular title was held in the UK, and also to find which serials existed in a specific subject area. SUNCAT also had the facility to limit a search geographically to a particular region, city, or library, allowing users to tailor their search to meet their needs.

Librarians who used SUNCAT could use it as a discovery / locate resource; they might have wanted to locate serials for inter-library loan requests, and for collection management tools. Cataloguers could consult the MARC records on the web interface, downloading records in XML and SUTRS via a freely available Z39.50 connection. Cataloguers from Contributing Libraries could download records in MARC21 directly to their local catalogues via an authenticated Z39.50 connection. Over the years, SUNCAT garnered a reputation for being a reliable source of serials knowledge, including cataloguing and a source of practical solutions to cataloguing and systems issues.

Currency

One of the main features of a serial is its continuing nature; with that in mind, it was imperative that records in SUNCAT were as current as possible. This was why there were many updates from each library in SUNCAT. To show the currency of the updates, a web page was created, which gave the library name, the date of the last update, and the frequency of updates.

History

In 2001, research was undertaken to examine the feasibility of developing a UK National Union Catalogue for all materials, including monographs and serials.[1] During the project, the researchers met with librarians and academics. One of the main messages which emerged was that there was a real need for improved information about serials held in the UK, including information about the existence and location of serials, and details of the associated serials holdings. Another issue highlighted in the UKNUC report was that of the variable quality of bibliographic and holdings data in library catalogues. Serials cataloguing tends to be seen as an arcane art in the cataloguing arena, so it has been more prone to erratic and poor quality production of records. It was decided not to proceed with a National Union Catalogue for monographs, but it was agreed to fund work to develop a serials union catalogue. Initial funding was secured for a scoping study which was undertaken by Information Power Ltd.[2] Following this, an Invitation to Tender was issued, initially for a 2 year period. Funding was provided by JISC (Joint Information Systems Committee) and RSLP (Research Support Libraries Programme).

The contract was awarded to EDINA, with project partners Ex Libris, who supplied the Library Management System, Aleph, that originally underpinned SUNCAT. In addition, a group of libraries, representing some of the larger serials collections in the UK worked closely with the project team from the start. These libraries acted as early contributors and associate partners, and included:

- The University of Cambridge
- The University of Edinburgh
- The University of Glasgow
- The National Library of Scotland
- The University of Oxford

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[1] *Feasibility Study for a National Union Catalogue* by Peter Stubley, Rob Bull and Tony Kidd. Final report, 25 April 2001. Prepared for the Joint Information Systems Committee of the Higher Education Funding Councils (JISC), the Research Support Libraries Programme (RSLP) and the British Library's Co-operation and Partnership Programme.

[2] The link to this report hosted on the RSLP website is now broken, and unavailable.

Timeline

SUNCAT development was scheduled in three phases:

- Phase One (2003-04): a union catalogue was created from the records supplied by twenty-two leading research libraries, as well as from CONSER[3] and the ISSN Register[4]. Records were held in the MARC21 format and covered a critical mass of titles held in UK research libraries.
- Phase Two (2005-07): coverage was increased to include specialist collections, and older, rarer materials. SUNCAT became the first port of call for information about serials held in UK libraries.
- Phase 3 (2007-19): the service is consolidated to ensure its long-term stability.

The Discovery Layer

The SUNCAT homepage had a simple search box on the left-hand side, offering a search in the first instance on Title Keywords. It was also possible to search Exact Title, ISSN, Keywords and Subject Headings in the basic search. Refine features included location (country, region, city or town), institution name and group. The Group functionality had two pre-defined groups (SALSER: the serials catalogue for Scottish Academic and Research libraries; subsumed into SUNCAT after the cessation of the SALSER service) and SVAG (The Scottish Visual Arts Group). If the user clicked on one or more of these groups, they could search only the libraries within those groups. Other groups could be defined by the user and saved through the My SUNCAT personalisation feature. On the right-hand side was a Google map giving the locations and addresses of all the libraries within the institutions who contributed to SUNCAT.

Other search pages included the Advanced Search and the Browse functionality. Browse allowed the user to search an alphabetical index: they simply started typing at the point in the index that they wanted to start searching. This was useful for those searches in which the start of the title was known, and might be difficult to type out if it was in an unfamiliar language. The Advanced Search allowed searching by phrase, and could include all of the terms, any of the terms, and none of the terms within a wide selection of indexes: Title Keywords; Exact Title; ISBN, ISSN, Keywords, Subject Headings, Subject Headings – LCSH, Subject Headings – MeSH, Author (Organisation or Conference), Publisher, Place of Publication, Series, and SUNCAT Identifier. It was possible to further refine the search by Language, Location, Format (Electronic or Non-Electronic), Library, Group, and Year First Published.

Electronic Journals Results

SUNCAT contained the holdings of many electronic journals, shown with the hyperlink “available online”. If the user’s home institution had access to these journals, then the user should be able to click on the link and be taken through to the appropriate access page. There was a page warning that if the user did not have the appropriate access, then they would not get through to the article, and were recommend an interlibrary loan instead. Some pages linked through to the publisher (this was in the data supplied by the libraries, so SUNCAT had no control over it), which may have given charges for individual access to a journal article.

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[3] https://www.loc.gov/aba/pcc/conser/

[4] https://www.issn.org/understanding-the-issn/the-issn-international-register/

User Tools

There were several tools that were designed for the user of the SUNCAT discovery layer, to help with specific searches, and encouraged users to come back to the SUNCAT service. These were:

- Table of Contents
- My SUNCAT personalisation features
- The SUNCAT Holdings Comparison service

These shall be explained in more detail below.

Table of Contents

The table of contents functionality linked the data held in Zetoc (http://zetoc.jisc.ac.uk/) and JournalTOCs (http://www.journaltocs.hw.ac.uk/) with the records held in SUNCAT, so that the user could see the article level information in individual issues, in journal titles covered by these two services.

Zetoc is the monitoring and search service for global research publications. It gives access to over 35,200 journals and more than 58 million article citations and conference papers through the British Library's electronic table of contents, and over 875,000 Open Access article citations and conference papers from PubMed. Zetoc covers a wide range of subjects in science, technology, medicine, engineering, business, law, finance, the arts and humanities. The database covers the years from 1993 to date, and is updated daily.

JournalTOCs claims to be the largest, free collection of scholarly journal Tables of Contents, supplied by Heriot Watt University. It currently has 33,620 journals, including 15,943 selected Open Access journals, and 11,589 Hybrid journals, from 3475 publishers.

Developers added both these alert services to the SUNCAT discovery layer, visible through the preferred record in the detailed results screen. Clicking on the Table of Contents button at the top of the results list opened up the TOC in a new window, with a list available articles. There were limitations to the number of articles that could be reached, due to a combination of what was available through the two TOC services, and if the user had appropriate access to the said articles.

My SUNCAT personalisation features

My SUNCAT allowed for some personalisation features that could be saved across sessions, once the user had logged in. Accessible functionality included:

- Saving favourite searches
- Building and saving lists of records
- Creating custom groups of libraries and locations to use in searches
- The Serials Holdings Comparison service

In order to create a My SUNCAT account, the user used the "Sign in" button at the right hand side of the upper banner; this gave the option of signing in via the user's institutional Shibboleth account, or creating an individual account using the EDINA SelfReg functionality. Once a user had created their login, they could come back time and time again to their saved searches, adding to searches, deleting saved searches, etc.

The Serials Holdings Comparison Service

The Holdings Comparison service was originally designed on the back of a script used for determining the scarcity of titles held by UKRR libraries. It was expected to be used by collection managers, but it was a free tool available for use by any SUNCAT user through the My SUNCAT personalisation log in. The purpose of the Holdings Comparison service was to assist libraries with collection management decisions, providing an overview of journal holdings across the United Kingdom. The data held in SUNCAT could be used to discover rare or unique titles held by one library, or, conversely, which titles were held by many libraries. This could help decide which titles were open for weeding, or which titles should be kept in long term preservation.

The Holdings Comparison service had a simple interface, with clear instructions to guide the user through the process. A file of ISSNs had to be submitted and uploaded, along with choosing whether to run the comparison against all of the SUNCAT libraries, or a selection determined by the user. Once the file had been processed, the user was notified by email; on returning to the interface, the user could access different output options for the submitted data. These included a list view of submitted ISSNs and the libraries holding those items, or a more graphical table view which was useful for an overview of the data. The resulting data could be downloaded in a CSV file, giving detailed holdings information from each library selected. Creating a data set in the final form of the Holdings Comparison service was defined: it included a list of ISSNs, which could not contain any other data in the same column. Other columns could be included (e.g., titles, to determine the correct identification of the ISSN without looking it up), but the comparison was only run on the ISSN. Each ISSN had to appear on a separate row, and multiple ISSNs had to be entered on separate rows. The whole file needed to be saved as a CSV file before uploading.

The SUNCAT Back End

When SUNCAT was first built, it was based on the Aleph union view functionality. Aleph is a long-established, widely used Library Management System provided by Ex Libris (who are now part of ProQuest, and are based in Israel). Aleph was chosen for SUNCAT as it had a particular view onto the catalogue which was appropriate for union catalogues.

Most of the SUNCAT back end processes were based on the experiences learnt using Aleph. SUNCAT always used Aleph in a slightly non-conformist way, which suited SUNCAT data but could cause a few issues with the Aleph software. For example, Aleph was best used through a GUI (Graphical User Interface), but it was found very quickly that SUNCAT could be more efficient and effective querying the data through a command line interface, using a system such as Secure Shell and Unix commands. This carried over into the new back end, which was designed in-house, purely for SUNCAT use.

The processes that underpinned SUNCAT remained similar over the years. The underlying databases changed: under Aleph, the database was Oracle-based; in the new system, there was a Solr database for the discovery layer, and a Zebra database for the Z39.50 connection for downloading records.

Ingest Process

Data from the Contributing Libraries came in all formats and flavours, with many local variants of cataloguing rules. This means that data from each library needed to be normalised, so that like data can be loaded into SUNCAT. This was done by creating data specifications based on the data supplied, tweaking as necessary with future updates. Serials are items of a continuing nature; this means that they had to be updated, as they ceased, new titles took their place, merge with other titles – all of these changes and many others needed to be reflected in SUNCAT. This was done by creating an efficient work-flow along these patterns:

- Initial load: Data specification written, based on data received via ftp (or other method – SUNCAT pick up; send as email attachment in Word, Excel, csv, Access database, etc.). There may have been more than one file received, e.g., one for bib. data, one for holdings; one for electronic journals, one for print; one for new journals, one for changed / deleted journals, etc. All formats (content and carrier) were catered for. Normalisation routines concentrated on ensuring that holdings were taken from the appropriate places within the incoming record, and put into a 852 tag for SUNCAT, with holdings being in an 852$3 rather than an 866 tag, to ensure that holdings and locations remained linked (a non-standard use of the $3 subfield). Files that were not supplied in MARC had a cross-walk written to put them into MARC21, following an RDA-like standard. Records that were supplied in MARC21 were essentially left as they were, with most normalisation work being done on the holdings.
- Reports: Reports detailing rejected records were sent to the library so that they could be worked upon as appropriate. Records could be rejected if they did not reach the minimum entry standard, which stated that records had to be coded as serials, have a title, have holdings, and a local control number. Some library conversions did not meet these criteria, so the only essential criterion was to have a title (work-arounds could be arranged for these other criteria in exceptional circumstances).
- Matching: files were then matched, using a serials matching algorithm. This was initially developed for the California Digital Library, but was adapted by EDINA to suit British data (such as allowing matching on serials records with a start date from before 1900; removing weighting on author keywords (which matched together many official papers), etc. Matching incoming records with the existing records in the databases creates sets of (ideally) one preferred record per title, with many holdings attached. This will be gone into more detail in a separate section.
- Loading: Once records have been matched, they were then loaded into the SUNCAT database. In Aleph, the matching took a short period of time, and the loading a long time. Some larger files would take many hours to complete, and, in some examples, over a full day. In Aleph, the files had to be matched and loaded sequentially on an individual basis. In the new, in-house system, the whole process was speeded up so that matching multiple files would take a matter of hours, and loading could occur at any time.
- And repeat for subsequent updates. At the end of the service, SUNCAT was receiving between 60 and 70 updates a month – and it could have been more, if more libraries had been added.

Updates

Updating is an essential part of maintaining the currency of the SUNCAT database, to show the changes in new, changed and deleted records from each library. It was originally expected that all libraries would be able to export files that only picked out the new, changed and deleted records and the associated holdings since the previous update (a partial update file). However, those assumptions were rapidly smashed, when more libraries said that they were not able to do this than were. So, an alternative workflow was suggested: the libraries would send all their serials records (a full file update). SUNCAT would then compare the incoming file with the previous file loaded, and pick out the new, changed and deleted records, and load these. Records which were in the new file but not the old file were new records; records which were in the old file but not in the new file had been deleted. Deleted records were pulled into the new file and the LDR character position 5 was changed to a “d” – these would then over-write the records already in the database, and delete them.

Matching

SUNCAT was a union catalogue with a deduplicated view of serials records. A union catalogue shows all records from varying sources combined into a single database. The SUNCAT deduplicated view showed a single, preferred record for one title, with all associated holdings displaying, rather than showing every record that has been contributed to SUNCAT individually. All the records in the set were available for view behind the preferred record. The most recent matching algorithm was not perfect; but this was more to do with the paucity of some of the incoming records supplied, or due to inconsistent, non-standard cataloguing, or out-dated legacy practices.

The preferred record was the best bibliographic record in a set, in that it is the most complete record, shown by the presence of certain fields (e.g., multiple subject headings, title, main / added entries). Each occurrence of certain fields was awarded a point; the record with the most points was the preferred record. The preferred record could change as other records in the set were upgraded, or new records added, but always ensuring that the fullest record was the preferred record.

The matching algorithm itself was based on that developed for Melvyl, the Union Catalogue for the California Digital Library. Changes to the original CDL algorithm were implemented to reflect UK data variations, such as the inclusion of the BNB, and added entries (to use AACR2 parlance).

The most recent SUNCAT collection matching was based on an API call in the SUNCAT service. SUNCAT used a SOLR core and postgres database to index and store information; the matching added a new matching core under a new tablespace reserved for matching. The schema added to postgres was simple: two new tables, collection and collection_member. It was a one to many relationship (one collection has many members), along with the appropriate keys, constraints and a sequence. There were several steps to the collection matching process, involving the selection of search terms from the record that needed to be matched, the building of candidate pools, a quick match and a full match before the record was added to an existing set. This method might have seemed complicated, but it covered all the appropriate matching elements that should have been the same from one record to another, but was not so complicated that it fell over with too many conditions.

The result of each step was assigned a score (+ for a match; - for a failed match; 0 if the step was skipped). If the total score at the end of the attempted match was over 800 points, then the match was deemed to be successful, and the record added to the collection. If the score was less than 800 points, then the match was not successful, and the record was not added to the collection. If the record did not match against any existing collection, it was assigned as a new singleton collection.

As well as using the contents of the record for matching, there was one final refine: SUNCAT had a list of common titles used in the matching process. This list contained titles which many different journals might possess, such as “Annual report”. If the matching title appeared in the List of Common Titles, then it was given 135 points (full title match) or 125 points (short title match), as opposed to the 600 points normally given. This ensured that a full match had to occur for a title to match, lessening the risk of a mismatch.

Overall, the algorithm was as effective as it could be: there were few mismatches, and many records matched together that should have matched. Some records did not match in, but that was normally due to paucity of incoming data points to match on. It was decided early on in creating the matching algorithm that it would be better to have more singleton records that did not match in together than to have more mismatches, as this would ensure that there was as little lost information as possible.

Z39.50 Downloading

SUNCAT offered a free and a password protected download facility, using Z39.50 functionality. The two services offered slightly different record sets and forms in which to download them. The SUNCAT free Z39.50 service allowed searching of the preferred records in SUNCAT, and the ability to download them in XML and SUTRS (Simple Unstructured Text Record Syntax). Both XML and SUTRS formats here used a Dublin Core scheme. It was possible to search Title, ISBN, ISSN, System / Local number, Subject Heading, Year first published / date – publication, language, library / code – institution, author (organisation or conference), keywords, and publisher, and could be sorted by title, year first published and author.

SUNCAT also offered a Z39.50 service for Contributing Libraries, which lay behind an authentication layer. It was possible to download records in SUTRS, XML, and MARC21 through this service. There were several different SUNCAT databases available for use for the authenticated downloading: CONSER records only; CONSER and ISSN records; CONSER, ISSN, DOAJ and the records of 17 SUNCAT Contributing Libraries (De-duplicated); CONSER, ISSN, DOAJ and the records of 17 SUNCAT Contributing Libraries (non-de-duplicated). Records could be downloaded in Unicode UTF-8 or MARC-8 character encoding.

UKRR

The UKRR is the UK Research Reserve, a “collaborative distributed national research collection managed by a partnership between the Higher Education sector and the British Library”, and has been running since 2007. The UKRR is a service that allows HE libraries to de-select low use print journals, as long as two other HE libraries (who are also members of the UKRR) and the British Library hold the same run. This allows for space to be freed up for other library use.

It was noted from the start of the UKRR that there would be synergy between SUNCAT and the UKRR. In Phase One of the UKRR, SUNCAT was used for manual checking of holdings of other member libraries. This was time-consuming, and heavy on the use of resources.

In Phase Two, EDINA was approached for assistance by the University of Edinburgh, as a shortage of staff meant that the University faced challenges in carrying out the checking of holdings. It was felt that the SUNCAT team might be able to develop processes to assist in the checking workflow. EDINA agreed to experiment with the Edinburgh data, with the clear understanding that it would be the intention to develop a process that would be generic, and could be applied to the data from all the UKRR libraries.

The work carried out on the University of Edinburgh data was successful; it was agreed to test out the script with data from other member libraries. This was also successful, and was the first step in creating a time-saving workflow to check the scarcity of a title. The UKRR scripts became a regular part of the UKRR and SUNCAT workflows, with the SUNCAT team aiming to turn around the UKRR requests in two working days.

An off-shoot of the UKRR work was the creation of the UKRR flag. This was a way to recognise a serial belonging to a UKRR library, and, in particular, those holdings associated with UKRR retention policies. Originally, there was no standardisation in marking this information, so it was seen as useful if there was some consistency; SUNCAT was approached to come up with any suggestions. SUNCAT would be able to manipulate the UKRR flag to display in the holdings, so that it would be clear which title was being retained or under consideration. It was decided that the UKRR flag should be put into the 583 MARC21 tag (Action Note), with the text, “UKRR retained title”. SUNCAT would normalise these tags to appear in the last 852$3, so that they would display in the notes field in the holdings area. All the UKRR libraries adopted the main text of the note, if not the location; this was easy for the SUNCAT normalisation processes to include.

The UKRR scripts were further developed into the SUNCAT Holdings Comparison Tool, which was available to all SUNCAT users.

Conclusion

SUNCAT from the very start was envisaged to be an all-inclusive union catalogue. Originally, it was expected that there would be over 200 Contributing Libraries; the complexity and non-standard data that was received soon put that idea to rest. Serials cataloguing has always been seen as a somewhat arcane branch of bibliographic cataloguing, and, for that reason, seems to vary greatly in quality from record to record. This can be down to legacy practices, such as quick retrospective conversion projects that “wanted the data in the catalogue”, regardless of accessibility of access; practices of minimum level records for serials, etc. SUNCAT took all of those, as well as the good records, and matched records for the same title as well as they could be. The user interface was simple and clear, with many refine features to allow the narrowing of results. The added expertise of the SUNCAT team meant that libraries could come to SUNCAT if they had any cataloguing issues; for example, loss of serials records from a library management system migration. The collection of serials records in SUNCAT was comprehensive; by the end of the service, the database was nearly 11 million records strong, and 87 million records had been processed over the lifetime of the service. SUNCAT was always adapting to new situations, for example, increasing the fields display to take note of tags which were influenced by RDA.

SUNCAT did not stand in isolation: it was part of the research library community, and there were plenty of presentations, webinars and blog posts over the years to inform the community of developments and uses for the service. There was a particular light-hearted section of the blog posts which showed the breadth of titles from the Contributing Libraries: this was the Weird and Wonderful section. If there was a feature for the day (e.g. International Dolphin Day), or a special event (the London Olympics spring to mind), then SUNCAT would scour the titles held for strange and interesting ones that would match the appropriate criteria. It was also a relatively fun way of showing how discoverable data was in SUNCAT.

However, as was noted in the last SUNCAT blog posts, none of the work undertaken by SUNCAT could have happened without the input, data, and support of the Contributing Libraries and their staff. SUNCAT could not have prospered without the support from the Libraries, and for that, SUNCAT shall be forever in their debt.

Time moves on, and it was decided that there needed to be a single union catalogue. Once this decision had been made, it was obvious that SUNCAT would have a finite end, and is now replaced by the JISC Library Hub services, made up of Discover, Compare and Cataloguing. SUNCAT would like to take this opportunity to thank all those involved in the service over the past 16 years, staff, librarians, and users. We hope that SUNCAT has been a useful service for your needs, and that you have found it a wonderful resource. So, farewell SUNCAT… it has been a privilege to be involved with this service since the start.

Review: CILIP Conference 2019

Siobhan Cottam, Systems and Acquisitions Librarian, Nottingham College

I applied for a bursary as I now work in FE and the cost of large conferences is out of reach for my employer. I was really pleased to be selected and joined 100s of delegates in Manchester on 3rd and 4th July.

First up was a keynote from Kriti Sharma asking us 'Can Artificial Intelligence create a fairer world?'. Kriti highlighted many examples where algorithms (i.e. the people who design the algorithm) are biased e.g. facial recognition technologies are far more accurate when identifying white men because teams working on these technologies tend to have a majority of white men. The real examples given by Kriti emphasise the importance of diverse teams designing and implementing technology and she encouraged us to question our suppliers about the diversity of their teams, as well as looking internally at our own teams. Kriti works with AI For Good, an organisation that aims to harness the power of artificial intelligence to create a "better, fairer world". It was really heartening to hear that when working with young people, Kriti finds that they focus on creating positive outcomes from AI. Kriti also raised the important point that her work was taken more seriously on online forums when her avatar was a cat, rather than a picture of herself. There is still a long way to go in tackling sexism and racism.

After coffee and catching up with a few people, I chose the 'Digital innovation' session. Olly Hellis started the session by telling us all about the work of the Glass Box in Taunton, a public library space kitted out with all the newest technology as a way of enticing users in. The footfall allows library staff to 'upsell' the regular library services, to people who may not otherwise use the library (e.g. teenagers). The library's work with small and medium-sized enterprises (SMEs) is particularly interesting; Olly explained how the library has used the 'Digital Taunton' network to promote their services to relevant organisations.

Val Stevenson from Liverpool John Moores University (LJMU) library shared their 'Virtual Library Vision'; this is very relevant to the systems aspect of my role so I have some further reading to do now I'm back at work. Their aim is to smooth out the differences between physical and digital experiences of the library. They consider their digital resources to be their 4th library (in addition to 3 library buildings); I like this mindset as it emphasises the importance of the online experience. Val also mentioned their 'service catalogue' – I'd not heard this phrase before so I need to do some further research into this concept to see how it can shape my library's offer. Finally, Andy Tattersall encouraged us all to ask questions when we invest in new technology, whether we are investing our time or our money. He encouraged us to explore technology and ensure that it is meeting our needs as the temptation can be to jump straight in and then look for a purpose for the technology afterwards.

Before lunch, we heard from Liz Jolly, Chief Librarian at the British Library. Liz spoke about her career and how she has been guided by her own vision and values when making career decisions. She spoke about the need to eliminate the effects of structural privilege, echoing Kriti Sharma's points about the racism and sexism she has experienced. Liz spoke about class-ism in particular, and a debate was sparked about the barriers created by the requirement for a post-graduate education and how this can exclude people from entering librarianship.

The final session of day 1 that I attended was on RDA, ISNIs and linked data. I'd met one of the presenters on the panel, Jenny Wright, at CIG's stand in the exhibition hall and was interested in her talk on RDA. Cataloguing is an important part of my role, and I have responsibility for managing my library's guidelines and training members of the library team in applying those guidelines. Our guidelines are based on AACR, which I didn't know was developed in order to ensure that pertinent information could fit on a catalogue card. Obviously, it no longer makes sense to be so limited in terms of data storage, but many libraries still use this system as a basis (including mine). Jenny gave some examples of how RDA can give more 'access points' to information e.g. AACR is limited to a maximum of 3 authors per record (even if the work has more than 3 authors) whereas RDA includes all authors in the catalogue record. Jenny repeatedly focussed on library users, as they are the reason we are doing this work. Ensuring they can access the treasures held within our libraries must always be the driving force behind cataloguing guidelines, and RDA seems very user-focused.

The first panel session I attended on day 2 was the 'Diversity in the profession' panel, with Binni Brynolf, Natasha Chowdory, Heena Karavadra and Thomas Peach. This was a valuable session, it made me reflect on my own experiences and how easy it is for me to be me at work. All of the experiences shared by the panel, from micro-aggressions to outright abuse, were things that I have not experienced. I am aware of my privilege, and the fact that I do not feel I have to hide/alter any aspects of my identity when I go to work. People do not make assumptions about me, based on my appearance. This is not the case for many people within our profession and if we want to be allies we need to listen to others' lived experiences in order to empathise with them and find ways to make their lives easier too. I was glad that Hong-Anh Nguyen (the chair of the session) asked the panellists what they'd *rather* be talking about, as this is a professional conference and they all have valuable professional experiences to share. Diversity in Libraries of the North (DILON) have a list of conference speakers for those looking to diversify the range of speakers at future conferences.

At lunch, I staffed the CIG stand with Jane Daniels, chair of the group. This was another opportunity to network and catch up with people which I always find very useful and interesting.

The final session I attended was looking at impact and influence. I would really like to see Kay Grieves' slides as her service's annual reports are presented in a very eye-catching way but it was hard to see from where I was sitting. Her reflections on combining qualitative human stories with quantitative data to give a rounded narrative on the impact of the library were really interesting. Also, after 2 days of sitting and listening (which can be surprisingly tiring!), it would be good to have the opportunity to supplement my notes from this session.

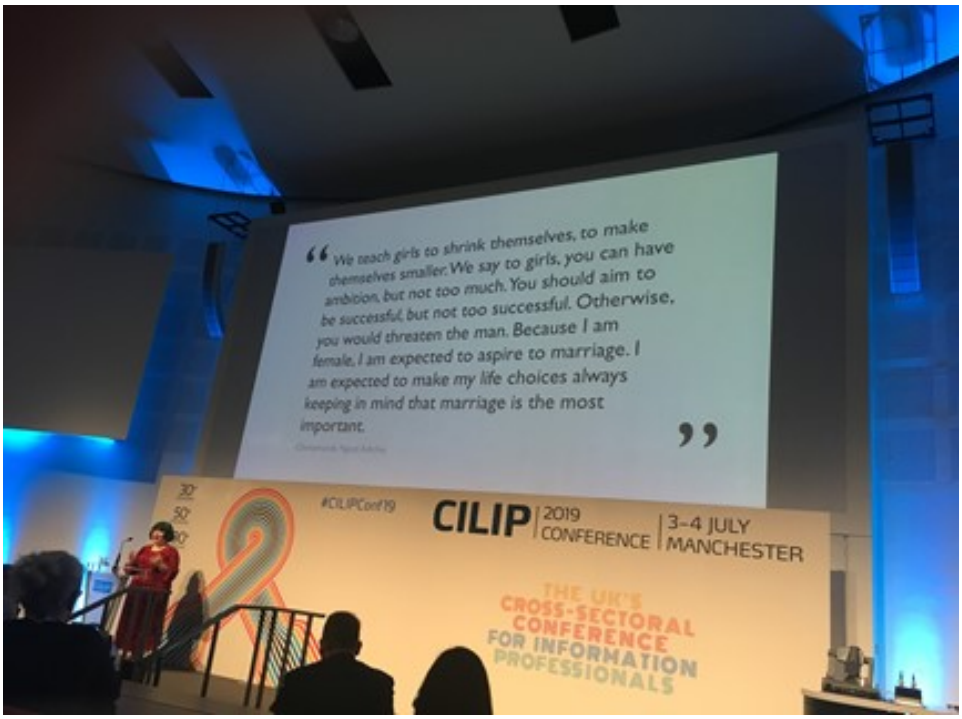
Thanks again to CILIP CIG for the bursary, it was a great opportunity for networking, learning and reflecting on professional practice.

Review: CILIP Conference 2019

Eugenia Fernández Almiron, MA LISM student at the University of Sheffield Information School

A few months ago I was very fortunate to be awarded a bursary by CIG to attend this year's CILIP Conference in Manchester, for which I am still very grateful. I had never attended such an important professional event, so I was thrilled for the opportunity to be there as I had just moved into Europe and knew it would be a wonderful new experience for me. Although at first I was very nervous about attending my first conference at a place I'd never been before by myself, I was very lucky that two other fellow Sheffield students from my course also attended the event, so they helped me feel very comfortable and confident from the very beginning of the event.

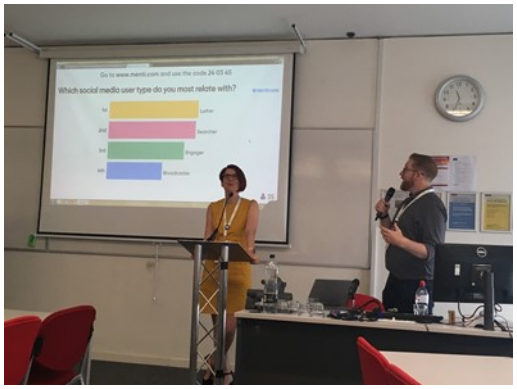
Sessions were plenty and varied, covering topics and issues of current interest that are all very enriching for our professional development. It was very hard to choose which sessions to attend - I wanted to be in all of them at the same time! Key sessions were fantastic and very enjoyable. The two key sessions that I enjoyed the most were both from day two: "Questioning Diversity" by Hong-Anh Nguyen, and "Libraries as place: How public libraries can transform themselves as third places for all", by Aat Vos. The first one opened the door to an extremely important conversation for our current professional environment: the need for diversity, inclusion and representation in the library and information sector. Something that really resonated in me from this session was that: "*We all have the power to change things. We are all responsible for something*". This was an eye-opening session that led all attendees to reflect about our own personal and institutional attitudes towards diversity and inclusion, and what we can all do to, even from our own individual place, to make our profession more inclusive.



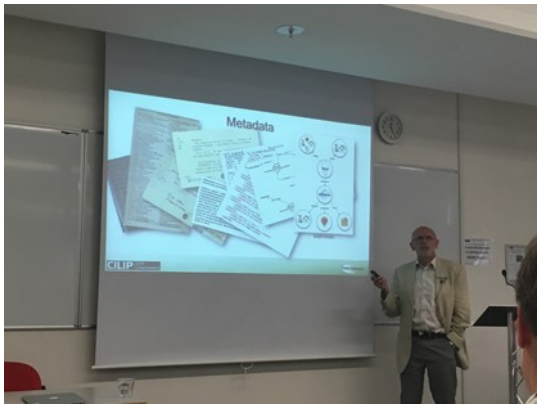
Aat Vos' session was amazing. He introduced the concept of libraries as third places for all members of societies from an architecture and design perspective. In his session (the Conference's closing session), he explained that we all have three spaces in our lives: our homes (first place), our workplace/university (second place), and the public space (third place). He then introduced the creation process of third places, including the key factors that make them third places as such: people, places, experience, programmability, and future. As he said: "*People give meaning to places*", so third places should be unique spaces where people can share, learn, make and transfer information, and where they can create experiences. Public libraries are excellent free and accessible spaces for our current society. Public libraries are *"third places for all" (#3rd4all)*.

From the elective sessions I chose to attend the following: "Don't be afraid of social media", by Mike Jones and Jo Wood; "Innovation in public libraries", by Amy Hearn, Larysa Bolton, Dave Rowe, and Kirstie Wilson (moderated by Jacquie Widdowson); "RDA, ISNIs and Linked Data", by Tim Devenport, Andrew McEwan, Jenny Wright, and Richard Wallis (moderated by Jane Daniels); "Diversity in the profession", by Binni Brynolf, Natasha Chowdory, Heena Karavadra, and Tom Peach (moderated by Hong-Anh Nguyen); and "Diversity, books and reading panel", by Melanie Ramdarshan Bold, Sharmilla Beezmohun, Sita Bramachari, Olivia Danso, Peter Kalu, and Onjali Q Rauf (moderated by Jake Hope).

The "Don't be afraid of social media" session was incredible! The main point of discussion was how to get the most out of our own professional presence online, focusing on the personal-professional use of social media. This session was dynamic, interactive and also a great space for reflection. I really enjoyed it!



Another session that I really enjoyed was “RDA, ISNIs and Linked Data”, by Tim Devenport, Andrew McEwan, Jenny Wright, and Richard Wallis (moderated by Jane Daniels). In this session different key and current topics related to cataloguing and metadata were introduced and discussed, making it a wonderful opportunity to learn about them and being up-to-date about the latest professional trends in the area.



Lastly, the “Diversity in the profession” panel by Binni Brynolf, Natasha Chowdory, Heena Karavadra, and Tom Peach (moderated by Hong-Anh Nguyen) was another session that I really personally enjoyed. Like the keynote by Hong-Anh Nguyen, this was also another mind- and heart-opening session where speakers talked about their personal experiences on diversity, inclusion and representation within the professional library environment, inviting us all attendees to respectfully reflect and share our thoughts about our own feelings and experiences on this. I am really glad I attended this session!

The conference was everything I expected it to be and even more! In there I met many other fellow information professionals from different places and with different backgrounds with whom I had a lovely time speaking to and sharing thoughts and experiences with. I even had the opportunity to meet my Master’s dissertation supervisor face-to-face and had a very interesting talk with her as well! Also, meeting Jane from the CIG was amazing. We got to discuss the importance of cataloguing for our professional practice and how it could be further incorporated into postgraduate LIS courses in the UK. For me, cataloguing is one of the most important skills for library professionals, as the ability to describe information resources directly impacts on the ability to retrieve them afterwards, which is the main focus of a user-oriented library service.

Overall, I had a fantastic time at the conference and I am really looking forward to attending further conferences in the future. Again, thanks to the CIG for the amazing opportunity to be there this year!

Book Review: *Information Resource and Description : Creating and managing metadata, Second edition*, by Philip Hider. London: Facet Publishing, 2018, ISBN 9781783302239 (paperback)

Reviewed by Karen Lodge, Metadata Specialist, Library Services, University of Birmingham

First published in 2012, this second edition of Philip Hider's 'Information Resource and Description : Creating and managing metadata' was revised in 2018, a mere six years after the first edition. As the opening sentence of the preface to the second edition explains, "Information organization may not be the fastest moving field in the world, but neither does it stand still.".

Taking into account developments occurring during the intervening six years, some of the main topics chosen by the author to augment this updated edition include new sections on BIBFRAME, a detailed appraisal and comparison of the conceptual models of FRBR (Functional Requirements for Bibliographic Records) with the 2017 IFLA LRM (The International Federation of Library Associations and Institutions' Library Reference Model), and discussions surrounding recent developments involving linked data and how this could influence the role that it may play in the future of metadata.

The attention paid to newly-created cataloguing resources and developments, and a considered look into the future of metadata and information organisation make this revised text a valuable resource. Explanations of enigmatic protocols such as the catchy 'Z39.50 standard' also help to demystify some of the more obscure jargon and technical features encountered in the cataloguing world, which we may use daily but not always fully understand.

As recognised by Professor Hider, many metadata specialists hold professional qualifications, "but in many cases they will have learnt a lot of the necessary skills and knowledge on the job… A metadata specialist might become an expert only after years of practice." (Chapter 4, p. 77). I am relatively new to the world of information organisation and resource description (being a 'born-RDA' cataloguer who learnt AACR2, or the Anglo-American Cataloguing Rules, 2nd Edition, only as a secondary standard to Resource Description and Access), and whilst I hold an undergraduate degree, it is neither in the field of librarianship nor information management. Although having worked in libraries for nearly 7 years, being a relative newcomer to the role of Metadata Specialist (I've spent less than half my time in libraries in this role), I have not yet gained a breadth of experience sufficient to fill all the gaps in my knowledge, despite the excellent on-the-job training (and patience!) of my experienced colleagues. The title of this book therefore caught my eye as one likely to be useful to someone in my position for helping to fill in some of the background on the history and more basic fundamentals of metadata, and help me to gain a better understanding of where it is now and where it may be headed in future; an objective that I believe it has successfully achieved. Another helpful feature of this text is that it acknowledges and describes the different aspects of practical metadata management that may be found in job roles across the sector and beyond, so there is a wide audience who may find sections of this text useful.

The chapters are clearly and simply titled, and further sub-divided, with headings inserted into the body of the text throughout each chapter, so it is easy to hone in on a particular topic of interest with a quick glance through the contents page. This also serves to break down topics into manageable chunks that can be read and digested in short bursts of CPD (continuing professional development) during the working day (CPD can often be difficult to prioritise on a day-to-day basis when things are extra busy). The list of abbreviations and acronyms (pp xvii-xxi) is a particularly useful quick reference tool that I could see myself keeping on hand at my work desk, bringing together an up-to-date list of relevant terms. Whilst there are comprehensive resources already available out there, both online (OCLC Librarian Toolbox, for example) and in print format (such as Maxwell's in-depth resources on RDA), Hider's book does not require internet access or poring over weighty tomes to find the information you seek, hidden amongst pages of rules and standards.

Instead, the text presents the most salient information on each topic in a concise and contextualised format. The author himself states, in the preface to the second edition, that those seeking more detailed information on the “various tools, practices and standards mentioned” can find “plenty of other resources” that will offer more depth on individual schemas and standards. Indeed, the well-populated reference sections at the end of each chapter often signpost to these for further reading, as well as covering a wide variety of other sources of interest, ranging from conference papers and survey results, to journal articles and monographic sources, and downloadable digital documentation and metadata standards from the websites of well-established organisations such as the Library of Congress and IFLA. The added benefit of having a large number of online resources cited is that future revisions can be monitored closely as online updates can be more easily updated and maintained than print versions dealing with subject matter that is constantly and steadily evolving.

For me, Hider’s book gave me the perspective of stepping back to view the practice of information resource description from a distance, acknowledging but subsequently peeling back the necessary but obfuscating layers of rules and standards to see how these systems and protocols operate in practice, both intrinsically and in conjunction with one another. I felt as if each topic had been covered by a fair and balanced approach, to build up a detailed overall snapshot of metadata practices as they stand today, with sufficient context of the past and indications of possible future directions for the sector to help me gain a better grasp of the state of play of the profession in which I work. If you are a seasoned cataloguer, you may not find this book quite as useful for the historical context of cataloguing standards, as you will likely already be familiar with the context; however, the text deftly links the more recent developments in the field to their historical predecessors, once again helping to increase understanding of the present day status of information organisation, whilst positing several possible trajectories for the future.

I would recommend this book to anyone working in a role that incorporates information organisation and resource description (I think a good case could be made for requesting funds for a copy in many workplaces for the purposes of professional development) and having at least a quick glance through it, especially if you are new to the profession, training, or recently qualified.

This item is available from Facet Publishing : http://www.facetpublishing.co.uk/
E-book version also available.

Book Review: *Information at Work: Information management in the workplace*, edited by Katriina Byström, Jannica Heinström and Ian Ruthven. London: Facet Publishing, 2019, xvii, 179 pages, ISBN 9781783302758 (paperback)
Reviewed by Catherine Chorley, Senior Library Assistant, St Anne's College, Oxford

From GDPR and copyright laws, planned obsolescence of digital storage devices and the use of metrics to inform strategic decision-making, to data security breaches affecting society's financial, communicative and media infrastructures: information is, and always has been, at the heart of daily life and development. Current scholarship supporting each chapter of *Information at Work* addresses established and fundamental concepts in novel applications, each allied to the insipient trends and comparatively recent innovations shaping the workplace information environment today.

In the foreword by UCL social sciences and information studies researcher Professor Annemaree Lloyd, the theoretical foundations supporting contributors' theses are established in relation to myriad preceding interpretations of 'work' as a concept, and the mutability of working environments. These latter, Lloyd states, are increasingly remote, nomadic, mediated by rapidly-evolving technologies and not necessarily defined by financial remuneration, yet continue to depend on information as the "core resource essential to all processes of work" (p. xvi).

Information is thus the 'thread' that connects each article's theoretical and epistemological stances to form a coherent, succinct introductory resource examining "the multiple roles of information in relation to the nature of work, the social and cultural environments in which we work, issues about information management, and identification of artefacts that enable people to work with information" (p. xvii). The framing of these discussions with the complexities of today's working environments will appeal both to new professionals wanting a basic grounding in the forces that will shape their practice and development, and those well-established in their working life, for whom the changeability of the workplace and the encroachment of information scientific terminology on working practices are causes of uncertainty and an undermining of professional confidence.

In chapter two, 'Information activities and tasks', Elaine G. Toms discusses the principles of workplace operations with respect to information and information processing. The acknowledgement of the need for further research is explicit throughout this book, and Toms' chapter articulates the theoretical basis of her sub-field with clear expectation of its application to understanding and operating in response to trends of workplace digital and information literacies.

Toms reports that most research to date has focused on information behaviour in relation to equipment, systems and platforms, and highlights the need for further research examining the interaction with information itself rather than the technologies by which it is accessed. For library professionals it is easy to apply this to the necessity of observing, evaluating and improving patrons' digital and information literacies not only in terms of their familiarity with appropriate resources and search tools, but also their critical evaluation skills.

When we consider patrons' use of search engines, OPACS, and databases, do we consider the methods used in constructing queries and filtering results, or do we also account for the interaction – the evaluation, judgement, critical analysis – subsequently occurring with the information retrieved? Likewise, should prolific users of social media be considered wholly digitally literate, or must more emphasis be placed on the internalization and evaluative processes involved? Toms' examination of information activities was easily relatable not only to the workplace today, but the wider social and personal information contexts of so-called 'fake news' and information saturation. It also called to my mind the conflicting views regarding so-called 'digital natives', for whom competence with information technology is assumed – possibly erroneously – to be innate.

Discussion of workplace information culture in chapter three was of particular interest to me, in that it drew attention to the pervasive yet frequently unacknowledged or unchallenged information ethos in a workplace. The impact of this information culture, being “values and attitudes to information...shaping the information practices of an organization” (p. 75) would appear to be almost ideological, with information culture impacting more than individuals’ activities on the overall efficiency of a workplace (p. 75). As such, cultures need to be supportive of workforce development and embracing of new and emerging work environments and technologies. Managers must lead by example in establishing this culture, and ensure its communication is explicit in order for a workplace to be responsive to and accommodating of such evolution and maximise the organizational sustainability in a challenging, changing and uncertain information environment.

Having some experience with special collections and rare books, and having studied Historical Bibliography as part of my professional qualification, I appreciated the theories and models of information artefacts in chapter five, and of information attributes in chapter six. Anyone dealing with cataloguing and metadata - especially of older or rarer or more specialist materials, for which detailed provenance adds intellectual, cultural and often material value – will be familiar with the concept of information attributes, given the imperative of descriptive accuracy in creating bibliographic surrogates directing us to sources of knowledge, history, heritage, cultural and academic value. Chapter six considers also the terminology of information attributes familiar in everyday language, such as quality, bias, timeliness, relevance, genre, and so on, and explicates the challenges myriad attributes pose to establishing a meaningful and established definition of what ‘information’ is.

Material objects are readily discussed in terms of physical qualities which imbue artefactual value as understood more generally. Antiquarian cataloguers and historical bibliographers especially appreciate that the role of information in human existence massively predates the advent of present-day technological innovations. It is now that the means of accessing, storing, sharing, delivering and acquiring it have become so numerous, so ubiquitous, so pervasive and so rapidly evolving that a framework for working with it in this ‘messy’ context becomes necessary.

In this effort, Katriina Byström and Nils Pharo explore these ideas in relation to applications perhaps less familiar and indeed comfortable to those who may not immediately identify themselves as information practitioners. Therein lies for me the value of this book more generally: ideas both transparently relating to information management (case in point: chapter four: Information Management) and those less overtly so are given new meaning by being addressed from angles recognisable to the gamut of library and Information sectors. Reading the term ‘information artefacts’, my mind sprang immediately to the historical bibliographers’ appreciation of the book as a physical object, but authors Byström and Pharo examine the myriad other forms of information artefact, which incorporate both the carriers of information and the means to access them (p. 103), and so defamiliarize the term as it might be understood in general parlance. This chapter gives a comprehensible, structured overview of the factors ultimately determining efficiency at work regarding access to, evaluation of, storage and retrieval of, and individuals’ behaviours concerning information and knowledge in the workplace while signalling the relative dearth of existing research into the relationship between information artefacts and information-related activities.

The final chapter discusses the fundamental role of information in shaping our identities, and in doing shows how the way we understand and interact with information in the workplace pervades well beyond this immediate environment. The interface between our professional and personal lives is today increasingly fluid as it is: electronic communication, smart technology and pressure on physical office space combine with competing personal commitments and expectations to swell the numbers of ‘nomadic’ employees, freelancers, and those who insist on scheduling that important business meeting over breakfast…in Starbucks. In chapter seven, Byström, Heinström and Ruthven discuss how, since our sense of identity, purpose and social status are largely constructed through our work, the essential requirement for information to enable this work – a model explored more thoroughly in chapter two – leads to our working information interactions and behaviours to extend to the personal domain.

They state, “The work we do creates a specific filter for recognising important information for that work even during our leisure time and it creates information-related habits and awareness” (p. 147). Though in leisure this process is often automatic and unintentional, the authors, in returning the focus to the workplace, stipulate that in our professional contexts “these processes need to be made implicit and managed” (p. 148). This, they state, is the role of Information Science, and this final chapter shows that the workplace is a ripe and worthy focus for further research into the challenges of present-day information environments.

This book is valuable to all but especially to those like me who feel wary of information management. This discomfort risks a tendency (subconscious or otherwise) to silo oneself in one’s profession when potentially relevant theory is shrouded by seemingly-impenetrable jargon. As this book, with its inspection of the modern workplace and its messiness, implies: the boundary between the personal and the profession is, as far as our dealings with information are concerned, an arbitrary and blurred one - if indeed there is one at all. Many are aware of this and utilise it adeptly to maximise professional output or curate personal data more efficiently, but to those unfamiliar with the more formal theory and how it supports working practice this book is a welcome guide.

Overall, Information at Work is a thought-provoking and highly accessible overview of core principles governing the information landscape and our interactions with and within it. Each chapter provides a different angle from which we can appreciate the challenges and dividends associated with dealings with information in practice; the range of angles ensures that practitioners across the fields of library and information professions will find applications to their professional (and personal) lives.

Each chapter is succinct enough to allow the reader to encounter a comprehensive range of theories in a digestible format. Indeed, as a primer for the major concepts the book functions optimally as a coherent whole, rather than a quick-reference work. For those requiring or subsequently interested in even greater depth, bibliographical references at each chapter’s end give plenty of avenues for further enquiry.
The collection remains cohesive, bound as it is by that same ‘thread’ of information introduced in its foreword. The complex and mutable nature of the information landscape is paralleled by that of the science of its study. This collection of articles provides a structured introduction for anyone interested in the area but needing a starting point from which to explore and harness the role of information in professional life.

(This book is available from http://www.facetpublishing.co.uk/ Price: £69.95. CILIP members price: £55.95. It is also available as an eBook, ISBN 9781783302772)

Book Review: *Exploring Research Data Management* by Andrew Fox and Eddy Verbaan. London: Facet Publishing, 2018. lx, 196 pages, ISBN 9781783302789 (paperback)

Reviewed by Concetta La Spada, Senior Metadata Librarian, Cambridge University Press

Exploring Research Data Management, written by Andrew Cox and Eddy Verbaan, is a book that anyone interested in Research Data Management (RDM) should read. Its aim is to give an introduction and guide to RDM together with engaging tasks that will help readers to understand practically the various procedures involved.

It is divided into twenty chapters, which can be divided into four groups:

Chapters 1-6

The first three chapters introduce readers to the word of RDM, what the role of librarians can be within the research process, and what the various procedures are in order for researchers to collect and make their data Findable, Accessible, Interoperable, and Reusable (FAIR) in the long-term. Chapter four is a case study. Professor Steven Banwar, Professor of Environmental Engineering Science at the University of Sheffield, was interviewed to give a practical example on the challenges and complexity that a research project present to the management of active data and their presentation. I found this chapter very useful. After a solid introduction, it was good to see how theories are put into practice. Chapters five and six deal with challenges such as crisis in reproducibility, government and funding policies, and the complexity of dealing with various research methods and people. There is no space for individuality, people have to work together, from the librarian to the researcher to the funding body, and all of them have to work towards better policies and practices.

Chapters 7-10

Chapters seven, eight and nine introduce Research Data Services (RDS). RDS are created within higher education institutions to give support, advice and training to researchers. Their main agenda will be to create and help to implement policies that will benefit the sharing and archiving of data. Agreeing on a vision and mission for the RDS implies bringing together key stakeholders to agree a strategy and review process (p. 71): the ones involved will be researchers, university leadership and support services such as librarians, IT people and research administrators. RDS will have to be staffed with professionals from all of these categories. This will bring success to their endeavours since different professional perspectives will give unique contributions and promote knowledge sharing. New roles can be created and new skills developed. For these purposes it will be fundamental to gather and analyse data about the institution the RDS serves, what its research aims are, and who the people are working within it. Chapter ten explores further how RDS should develop their policy, what it should contain and how to update it.

Chapters 11-16

These chapters deal with the most practical aspect of RDM, giving insightful tips and suggestions. Chapter eleven shows how since one of the aims of RDS is to give support it makes sense that visibility and marketing of what is on offer will be essential. Use of social media is actively encouraged. Chapters twelve and thirteen give instructions on how to develop RDM development plans that look not only at the current data management policies but to future ones as well. Chapters fourteen and fifteen show which ones are the better strategies to convince researchers of the importance of RDM and how to train them so that the metadata they produce to describe their data is correct and reusable. Chapter sixteen is an insightful chapter about the structure that a repository should have and which data has to be preserved among all the data produced within research projects. In this case, the creation of proper metadata will be fundamental since full metadata will ensure the best discoverability of the data. Metadata and documentation describing data are therefore vital for any repository that aims to preserve and share research data in the long term (p. 152).

Chapters 17-20

Chapters seventeen and eighteen delve further into two fundamental topics: evaluation and ethics within RDS. It is important within research support services that results be evaluated in order to see how effective or ineffective practices have been and if there is a need to modify them. It is not surprising that when we talk about research we talk about ethics. Research data is in many case sensitive data, so it is fundamental to ensure, through a good RDM plan, that anonymity is guaranteed and rights protected. Chapter nineteen shows a day in the life of a RDS, giving a summary of all the readers have learned in the previous chapters. The last chapter gives a complete list of all the skills people involved in RDM should have and good points on how to include these in the readers' personal development.

After reading this book, I felt a lot of respect for my colleagues who work with researchers and deal with the challenges of RDM every day. This book would be of interest for Library Science students to show them how RDM is becoming more and more important and what librarians can do to contribute to research processes and scholarly communication. If there is one thing this book has made me sure of, it is that librarians have a lot to learn in this new field, but this is part of the challenge that makes our careers interesting, isn't it?

This book is available from: http://libraryjuicepress.com/

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