The Future of Library Cataloging

Mischa Johns
April 25, 2024

LIS6711: Organization of Knowledge I
Assignment 7: Research Paper

Library cataloging has come a long way from carefully-penned entries in ledgers, but at its core the goal has always been the same: record what's there, help it be discovered by those looking for it, and ensure that it's retrievable. Today's cataloger faces a future with a rapidly-shifting landscape of technology designed to make the job more precise and less labor-intensive, though with a wide range of options and tools at one's disposal it could be overwhelming.

One of the greatest tools for the cataloger since the MARC format in the 1970s is certainly BIBFRAME. MARC has always been an excellent tool for recording and ensuring availability, evolving over time to include discoverability and a sort of extension that gave values to even more metadata options with the MARC AMC format (Sweetser, 2019). BIBFRAME has taken that metadata and surged it into new heights of discoverability with its hierarchical system that allows for a broader scope of recording which includes varying models, rules, and even entirely new methods of data entry (Frank, 2024). With BIBFRAME, librarians and archivists can use a more flexible framework to describe their collections, expanding it into more than just books and magazines - there is almost no limit to what can be recorded, accessed, and discovered through BIBFRAME's relationship system.

Of course, even the most extensive framework cannot function without its rules. For decades rules on recording were cultivated and pruned starting with Anthony Panizzi's "91 Rules" in the 1830s and followed by Charles Ammi Cutter's "Rules for a Printed Dictionary Catalog," the latter of which was the launching point of the concept of controlled vocabularies (Tillet, 2003). Today, controlled vocabularies are more important than ever, but their integration into a solid hierarchical framework is integral to the future of cataloging where computers and humans intersect on a whole new level with artificial intelligence. Tillet even imagines an entire packet of information represented completely by numbers, allowing better integration across international systems (Tillet, 2003). Such a system would streamline many things, but would make artificial intelligence a must-have

which – fortunately enough – seems to be becoming the norm. As AI integrates deeper into our cataloging systems, shortcuts like numbers representing entire BIBFRAME hierarchies could become the norm, ferried between systems and translated instantly by AI at the receiving end.

As AI and machine-readable metadata becomes more of the norm across the board – and across the world – catalogers would find Semantic Web technologies indispensable as they facilitate seamless integration with data sources support more flexible cataloging workflows. The Semantic Web, a way designed to enable data on the web to be interpreted and processed by machines instead of by the humans that it was originally built for, would allow for a greater expansion of meaning and context (Coyle, 2014). Once insular and even competing in their field, libraries are becoming more integrated with one another, and the Semantic Web would bring this era of machine-learning to new heights as accessibility and discoverability would skyrocket…but only within the scaffolding built for it.

Enter the concept of linked data. Conceived by the creator of the internet himself, Tim Berners-Lee, linked data represents a "network of data (not necessarily intended to be read by humans)" (Bromage, 2016). With this we find the idea of library catalogers building a database not to cater to the inquiring minds of humans, but to the learning 'minds' of machines. While this can seem like machines are 'putting us out of work,' it will always be important to remember that machines act by logic alone and that a human's ingenuity will be necessary to link subjects that are not obviously related but would make sense together. Moreover, as stated previously, a standard format must be decided upon (Heath and Bizer, 2022). Once more we see where rules and controlled vocabularies will become dominant factors in a cataloger's job description, but to cater to the global landscape of library collections as we come together it will also be necessary to have an international standard of those rules and controlled vocabularies – something that can harken back to Tillet's system of numbered packets of information.

So where does this leave the humble library cataloger? The future seems bleak: an eternity of converting carefully-crafted modules of information into strings of numbers for machines to convey. This seems to simple a view. The machines are and always will be a tool in the hands of an artist as they exercise bibliographic control – "the skill or art of organizing knowledge for retrieval" (Szkirpan, 2020). With the implementation of Resource Description and Access system in 2013 and subsequent redevelopment into the RDA Toolkit Restructure and Redesign Project, libraries will become even more globalized. This new era of linked data across a Semantic Web implemented by artificial intelligence with a full framework crafted by human ingenuity puts the cataloger at the heart of information organization as an intricate lacework of their own combined design. This redesigned RDA centered on the International Federation of Library Associations and Institutions' Library Reference Model (IFLA-LRM) puts the catalogers of the world in control of what is visible by machines, and therefore findable and accessible by humans.

From small rooms lit by a single candle scribing a carefully-penned catalog for use by a single reading room, to the weaver on a loom that encompasses the combined knowledge of the entire world, the new technology emerging at the forefront of cataloging methods will put libraries at the center of the World Wide Web and all of information technology. There is no doubt that it will be trying, as much of the functionality of these tools requires a vast degree of agreements and compromise across libraries of every kind and every size across the world. In the end, however, these tools can be put to use to ensure that knowledge is discoverable by anyone with access to the internet or a library. Catalogers will be the stewards of the key to locating anything humanity has invented or discovered.

References

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