Preface

When deciding to write a book called “Robots in Academic Libraries” one of the first thoughts that occurred was how the cover would look. While this is a scholarly work doomed to a scholarly cover, two images leaped immediately to mind. One was of a cartoon robot chasing a cartoon librarian. The other, and the one that actually reflects the intention of this book, was a cartoon frog jumping out of a pan of water before it starts to boil.

This is how the library landscape seems to the author and this book is meant to sound warning bells. As these changes take place library workers must adapt or leave. What is needed is not some luddite equivalent of throwing wooden shoes into jacquard looms but an understanding by library workers at all levels that the time to acquire new skills is now. The jobs being done by nearly every facet of library workers can already be automated to some extent. Whether it is shelf ready cataloging or reference chatbots it is foolish to think that the skills that have been needed in the last twenty years will be at a premium in the next twenty. Technologies that look primitive and nascent now will not stay that way for long. Nor can humans really compete with Moore’s Law.

Above all this book is a call to look at the places where humans do have advantages that cannot be easily replicated. Anything that cannot be taught as an algorithm fits in here so logical areas of exploration include community building, education and user experience. Hopefully the chapters in this book will inspire others to not only feel the water getting warmer but to jump. What are we jumping from? Library Automation has had a very established meaning for many years. Usually this phrase refers to Integrated Library Systems that handle Acquisitions, Cataloging, Serials, Circulation and the public interface. Slowly these siloed operations have been outsourced and automated to the point where minimal human interaction is needed. Cataloging departments are largely obsolete for the purposes of copy cataloging. Acquisitions is increasingly the realm of either Patron Driven Acquisitions or elaborately created profiles that are part of approval plans used by book vendors to simply send the books which your library most likely needs. Circulation is increasingly automated with the use of RFID technologies that allow for not only self-service checkouts but for automated workflows in re-shelving items. The back end of the library is becoming overrun with robots whether that means physical machines that do tasks formerly done by humans or software that does the same thing.

At the same time there is an increasing need for skills that move the focus of library talent from inventory control and description to improving user interface design, algorithmic control and management of personnel. Collection Development librarians must make sure that profiles are correct. Patron Driven Acquisitions needs human intervention to tweak parameters. As more items become electronic, discovery platforms must be improved in terms of usability and scale as more and more items the library does now own are accessed.
There is obviously a huge change happening in libraries and much focus has been placed on budgetary cuts, changing roles in reference and the resistance of library staff to change. What has not been covered as much is the tools of this change. This book looks at the library landscape not asking whether some things should change or even if they are changing but from the point of view that this change is happening and it is pointless to debate. The tools of automation have not undergone radical change but have simply evolved to their logical points. What is the goal of software that automates a task if it is not to eliminate the need to have a person doing that task?

The chapters in this book reflect a wide array of viewpoints from all over the United States and even Brazil. Starting with my own chapter on the inevitability of technological change there is a focus on how much is changing and what not to trust as steady. The following chapter focuses on what is now the state of the industry where libraries have to make difficult choices with limited resources. Breeding’s chapter is as far as I know the most complete and up to date overview available.

Annette Bailey was lead author of the next two chapters although they are very different. While Breeding does for an overview of new technologies available Bailey goes in depth and looks at concrete examples of workflows in Technical Services and how they have changed because of recent trends. Her accompanying chapter on LibX is a good example of how a tool can be created in house that does what vendors cannot. LibX is a tool that “helps automate workflows such as finding known items, but the builder tools we created automate the process of creating library software.”

Ruth Bavousett’s chapter on LS migration is an unapologetically technical and brilliantly written piece on how to tackle one of the thorniest problems in library land: ILS migration. Many in the field, including the author, bemoan the antiquated state of our current ILS systems and the exorbitant prices demanded by vendors. Ruth is a leader in the field of Open Source systems which is one of the areas of great hope. Only by completely starting over and abandoning the business models of current vendors can libraries hope to really change. Ruth gives us one of the keys which is data migration.

The chapter on Chatbots by McNeal and Newyear is one of the few that really mention robots in the traditional sense of AIs. The tale of their reference chatbot doing virtual reference at Mentor Public library should sound alarm bells for reference librarians. After all, who cares if it is not as good, if it is good enough and does not need a salary or sleep? The technology is still new, but given a few years of development and patrons are unlikely to know or care if they are talking to a real human.

Carolyn Adams chapter on automated storage is describing what may become “the new normal.” As libraries face the fact that employees are their most expensive resource anything that makes use of automation to replace employees makes sense. In the case of UNR there was a massive undertaking to automate the management and storage of a vast collection. This was a customized system built just for that library funded by “a $10 million joint donation from former Chief Executive Officer Charles N. Mathewson and International Game Technologies” but again this is a glimpse of the future.

Viana’s chapter on library automation in Brazil is a little different but still within the scope of this book. He describes a country that went from a great resistance to automation to “creating an automation culture in higher education.”

“Transforming Technical Services: Maximizing Technology to Minimize Risk” is a real story from the trenches. Hsiung and Wei describe in detail how the University of California Santa Cruz faced major budget cuts by automating everything they could to “maximizing technology in utilizing “robot-like” batch processing tools in house to minimize the risk of becoming ineffective or irrelevant.” The grim statistics show quite eloquently the non stop trend towards replacing employees with technology.