Mutant Superheroes, Contained Chaos, and Smelly Pets: Library Innovation through Imaginary Anarchy

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Introduction

Libraries have a history of innovation, from their inception to the advent of open stacks, interlibrary loan, electronic cataloging, learning commons, and maker spaces. The information environment outside of libraries has also changed rapidly, especially in the last two decades. Quality information sources are available to the public instantly and in an à la carte fashion. This has happened at the same time that costs for academic journal subscriptions have increased. In response to these changes, the pressure for the academic library to innovate and redefine itself as valuable resource to the academic community, rather than a cost center, has grown.

Many academic libraries have evolved to operate in a culture of consensus building, detailed organization, and preservation. These values are useful and worthy of continuation, but without other strong values, the typical academic library may not have the cultural structure necessary to encourage the desired innovation to occur rapidly and on a regular basis.

This paper suggests alternative, supplemental values that would foster innovation and creativity within academic library settings, and proposes a way to begin integration of those values into the library.

A model for innovation is proposed by describing a job design that is ideal for encouraging creativity and productivity, and then daring libraries to offer these model jobs to enthusiastic employees. While the job design is meant to be holistic, less adventurous libraries will have an opportunity to implement some of the suggestions independently of others

A Personal Story

This is the revised job description that I sent to my director:

> Digital Technologies Development Librarian
> *100% Works in a primarily independent manner on self-selected projects to benefit the library, the profession of librarianship, and the surrounding community*

I believed that for me, this job was ideal. It allowed me to invest all of my energy into projects that could make a difference. I would choose the projects myself, which meant that my skills and interests would very closely match the task at hand. It was service-oriented, to match the service-oriented nature of Virginia Tech. It was flexible, allowing me to take on any task that might be important.

The description itself was brief, without confusing technical jargon or technology labels that could be misunderstood, outdated, or restrictive. It met the organization's stated requirement for a job-description—it included percentages to indicate the relative amount of time spent on each task—in this case, 100% for a single task. The description was timeless, and could serve for an entire career without revision. As you may have guessed, though, this job descrip-

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tion was not approved. It wasn't long enough; it wasn't specific enough; it wasn't traditional.

In creating this rejected job description, I was perhaps overreacting to a dissonance between the established organizational and professional culture of the library as compared to culture that I had previously been exposed to through open source programming projects, and small groups of developers working in small organizations.

Many of the suggestions in this paper for creating a culture of innovation are taken from direct observation or interaction with software development groups.

Valve—An Example of Innovative Culture

An interesting cultural model for innovative work is demonstrated by Valve, a software company. The Handbook for New Employees describes the organizational culture. At Valve, the organizational chart is completely flat—there is no hierarchy.[1] Here is the explanation from the handbook:

> *Hierarchy is great for maintaining predictability and repeatability. It simplifies planning and makes it easier to control a large group of people from the top down, which is why military organizations rely on it so heavily. But when you're an entertainment company that's spent the last decade going out of its way to recruit the most intelligent, innovative, talented people on Earth, telling them to sit at a desk and do what they're told obliterates 99 percent of their value. We want innovators, and that means maintaining an environment where they'll flourish.*

Employees are expected to pick their own project, instead of having work delegated to them.[2] In support of this, "roles at Valve are fluid. Traditionally at Valve, nobody has an actual title. This is by design, to remove organizational constraints."[3] The employee handbook is itself editable by employees,[4] another indicator of a very democratic work environment.

When people work overtime, it is seen as a "failure in planning or communication"[5] instead of as necessary commitment from a dedicated worker. There are washing machines and dryers on the work premises, as well as free fruit and massages.[6] Employees and their families are treated to a company-paid travel vacation each year.[7]

Not all of these cultural elements from Valve and other innovative companies are easily imported into the library. For example, even though university-paid trips to Hawaii for all library employees would demonstrate appreciation and would be likely to improve retention, they would certainly be seen as some taxpayers as examples of government waste. Yet, there is a set of values here that can be adapted into the academic library culture. These values include job independence, minimal bureaucracy, reduction of distractions, elimination of needless tasks, and employee control of how work is done. These are the values that tend to be appreciated by knowledge workers.

The Call for Cultural Change within Libraries

There's a call for innovation in libraries, yet most academic libraries do not have an optimal culture to support innovation. This problem has not gone unnoticed by staff, librarians, and management.

The University of Saskatchewan Library made use of the Competing Values Framework to assess the organizational culture at the library, and to determine differences from the desired culture.[8] Under this framework, organizational culture is divided up into four competing qualities: hierarchy, clan, adhocracy, and market. It was determined that most of the library employees perceived the environment to be market-centered, or competitive and production-oriented, as well as hierarchy, or control oriented, while most of the employees preferred a shift towards an adhocracy.[9] The adhocracy is flexible, dynamic, and entrepreneurial and likely to support innovation. In order to enact the desired cultural shift, the library created a strategic plan specifically for cultural change that included a communication strategy and new leadership skills.[10]

Many libraries, as service oriented institutions, will have a market-based culture, but will wish to shift to a culture of adhocracy to quickly and flexibly explore new projects while simultaneously responding to the preferences of many of today's knowledge workers.

In the highly discussed "Think Like a Startup" white paper, Brian Mathews states that libraries "don't just need change, we need breakthrough, paradigm-shifting, transformative, disruptive ideas," while noting that many of the traditional, current functions of the library could be handled by other units on campus.[11] He writes that "we can't expect entrepreneurialism to flourish in a tradition-obsessed environment," and then suggests using elements from the Lean Startup method to create a culture of change within the

library.[12] Notably, Mathews calls for more investment in Research and Development as a way to move from incremental improvement to innovative, new services:

> *we need to invest in R&D. We need to infuse the entrepreneurial spirit into our local efforts and into our professional conversations. R&D empowers us to move away from our niche and dabble in new arenas*[13]

There has recently been talk of skunkworks style R&D workgroups within libraries, most notably in Bethany Nowviskie's talk, "A Skunk in the Library", wherein the R&D unit at the University of Virginia Library's Scholars' Lab, was discussed.

Nowviskie described the skunkworks concept thusly:

> *A "skunkworks" (all one word) describes a small and nimble technical team, deliberately and selfconsciously and (yes) quite unfairly freed from much of the surrounding bureaucracy of the larger organization in which it finds itself. This enviable cutting of slack and tolerance of the renegade is offset by placement, on the shoulders of the skunkworks team, of greatly raised expectations of innovation.*

> *A special group like this only endures on acceptance, at the highest levels of the organization funding and protecting the skunks, of a simple management principle: if you want unusual results, you can't expect that they will come from playing by the usual rules. […]*

> *Skunks need patronage, they need protection from distraction, and they need good ambassadors and skillful diplomats*[14]

In essence, Nowviskie is advocating for the same values for knowledge workers that we identified above: job independence, minimal bureaucracy, reduction of distractions, elimination of needless tasks, and employee control of how work is done. Acceptance of these values is expected to encourage and allow innovation.

Though I am advocating incorporating these values into library culture, Nowviskie recognizes that the skunkworks culture stands apart from the current typical library culture.

> *How easily do you imagine skunks are tolerated within an overall library culture that values consensus and teamwork, rightly wants to see innovation blooming everywhere, seems to be moving (if fitfully) toward erasure of privileged status within its own ranks, and which retains a certain lovely—and, (let's admit it) often gendered—selfconception of its members as the handmaidens of scholarship, people with a calling—with a vocation to serve?*[15]

Nowviskie notes that there is a delicate balance between separating the group from the general bureaucracy of the library and making sure that the library as a whole benefits from work that is done within the group. She also mentions the need for a constant campaign to communicate the value of this group with a separate culture to the rest of the library.

Libraries can take advantage of the concept of subcultures to experiment with cultural change. Most library organizational cultures have subcultures present, which often vary significantly from the overall organizational culture.[16] The working style of a particular group is often dependent upon the leadership style of the group manager. With a proper communication strategy, cultural ideas can spread from one library group, such as a skunkworks style group, to another.

In cases where there is no skunkworks style group in the library, it may be helpful to start cultural change by allowing individuals to design their own jobs, as in the example set by Valve.

Job Design Based on Personality

In addition to contrasting highly with the cultural model of small software development teams, the culture of the library can also conflict with common personality traits of knowledge workers.

Let us consider a specific type of person. As knowledge workers are often introverted, let's imagine that the person is introverted. Imagine also a person who likes innovation, and dislikes doing things the way that they have always been done when there are better ways. This person is proficient in using technology, and can assemble or build new applications or software to support ideas or explore new things. This is someone who enjoys learning. The person is not afraid to take chances and thrives on risk.

The person has had a share of failures and successes, loves feeling successful, but learns from failure

and will happily try another risky project if it might be useful. The person has no problem walking away if something doesn't work out, but will happily spend a tremendous amount of time and energy working on and polishing something if it is a beautiful, useful idea that is used by others.

In order to facilitate the best work from this person, it's critical that the work environment have a supportive setup, which in some respects will differ from the typical library environment. In libraries, a great deal of energy has spent emphasizing collaboration. Libraries have made efforts to be better collaborators with other campus departments. Libraries have created learning spaces that allow students to collaborate. This is helpful, because good ideas are often built upon the ideas of others. In the case of our individual, though, it is important that the person have the ability to work very independently, and even have a desire to do so. Insulation from others is an escape from the constant buzz of "no, we can't do it that way because" or "we've always done it this way before" and "are you sure you've thought this through" and so on. Ideally, this person would operate much like his or her own department, but without the added bureaucracy and paperwork of supervising others and long-term, broad organizational planning. A sufficient budget would be provided to the person for travel, training, software, equipment, and other expenses. The person doesn't manage other employees, because this would be a distraction to concentrating deeply and following up on ideas. The person occasionally attends meetings in order to understand the needs of others in the library, but this happens very, very infrequently. Communication overhead in meetings can overwhelm sensory systems and can make certain introverts feel ill, and large committees are death to innovative ideas.

This can seem a bit extreme, but it is an excellent way to allow this person to innovate. This gives the person the freedom to explore new ideas and implement them when appropriate, without being distracted or discouraged by those who have worked in a bureaucracy for a long time, who are used to doing things a certain way and have a hard time adjusting to new ways, or just have a different vision. Even in very forward thinking groups, sometimes creators just work better independently, especially when they are sensitive to the feelings of others, and when their ideas are in the early stages and need some room to grow up and reach the sunlight before they are harvested.

This job must be presented very carefully, or it is likely that library management will respond by thinking that they can't afford to sponsor a job where an individual works on "cool" things that may not be useful to the library. Instead, present the job as a pilot project, a prototype for a library skunkworks operation.

In some libraries it may be difficult to fund an additional position. Not to worry; there are likely many people already working within the library that recognize that they would be most productive in this type of environment. They will readily volunteer for the pilot.

Elements of Innovative Culture

There are specific cultural elements that libraries can cultivate to facilitate and encourage innovative practices. The table displays characteristics typical of library culture observed by the author, along with an alternative value taken from software development culture.

TABLE 1 Alternative Values	
Element of Library Culture	Alternative Value
Several meetings per day	Meeting only Monthly
Collaboration and Consensus	Isolation
Multiple, simultaneous projects	Single-tasking
Avoid Failure	Embrace Failure

Meeting Only Monthly

In libraries, it's not unusual for an employee to have several meetings a week, or even several meetings in a single day. Meetings are encouraged as a way of collaboration.

In software development, once requirements for a deliverable have been determined, meetings are typically avoided as much as possible. They are interruptions, making it difficult to get knowledge work done.

An ideal pattern for meetings on long projects is to have a monthly meeting to discuss any issues or potential changes. If meetings must be held more frequently, base them on the "stand-up meetings" from the Agile development process. Meetings should be approximately 5 minutes in length, short enough that team members can stand up (instead of sitting in a chair) through the length of the meeting.

Isolation

In the library environment, consensus is valued very highly, even to the point where projects are stalled until everyone can agree on a particular approach. In order to create an innovative and highly dynamic environment, it may be better to allow knowledge workers to perform independent tasks whenever possible.

In some libraries, it's also not uncommon for teams to have shared office areas, without quiet, private space for individuals. This tendency, while helpful for certain kinds of work, may not facilitate innovative knowledge work. For example, a study of the best and worst performers in a game for computer programmers based on tasks that would be performed in the normal course of work showed that the programmers in the best performing quartile had more dedicated workspace, less noise, and fewer interruptions than the worst performing quartile.[17] The study reported that those workers in the top quartile, who tended to have the quiet, private space performed 2.6 times better than the workers in the bottom quartile with smaller, noisier workspace. Investments in quiet, private offices are worth it for the productivity increase.

Single-tasking

It's difficult to work on more than one task at a time and do quality work. Yet in libraries, it's not uncommon to see a librarian with more than a dozen tasks on the near-term to do list. In a single week, an academic librarian might teach a class, plan a game night, collect assessment data, write a conference proposal, participate in curriculum mapping, work on a book chapter, attend six meetings, receive 50 emails, some of which require a response, and work at the reference desk. Even though librarians know this is unhealthy, stressful, and leads to poor quality of life and poor quality of work, we still tend to overbook ourselves. The library culture demands that everyone be involved in everything, and this type of hyperactivity pads the length of our activity reports and CVs.

This is too much work for everything to get done well, let alone for innovation to occur. It's not just the enormous amount of time that it takes to complete these tasks that is harmful to innovation and quality, it's the amount of time that it takes to keep track of everything, and the enormous mental effort that it takes to switch back and forth between different types of work.

Contrast this to optimal software development, where a developer is only assigned to one project at a time.[18] In some well-run organizations, providing support for a previously developed project counts as that single project.

Libraries could benefit from focus by individual workers, but the service orientation of the library makes it difficult to say no to assignments. As Nowviskie explains:

> The impulse is to provide a level of self-effacing service—quiet and efficient perfection—with a goal of not distracting the researcher from his work. You start this with the best of intentions, but it can lead to an ad-hoc strategy, in good times and bad, of laying a smooth, professional veneer over increasingly decrepit and under-funded infrastructure—effectively, of hiding the messy innards of the library from your faculty, the very people who would be your strongest allies if the building weren't a black box. And then there's the degree to which an organizational service mentality prevents librarians and library staff from engaging with faculty as true intellectual partners[19]

Libraries need to create a culture where quality is valued over quantity, and where saying no instead of yes is accepted and valued.

Embracing Failures

Libraries do have a value in common with most organizations. They tend to avoid failure. Software developers also try to avoid failure, but they understand that it happens. They report a measurement for critical systems named MTBF, or Mean Time Between Failure. They keep lists of bug reports for software, and understand that any software that is useful and nontrivial will have flaws. Development organizations hire people to seek out and find problems with software.

Libraries can benefit from this attitude that something is worth launching even if it is flawed. As Brian Mathews puts it "Forgiveness has to be built into the experience. We shouldn't look at failure as finality, but rather as a test bed to help ideas evolve."[20] We need to permit ourselves to test out some of our innovative ideas, even when we're not completely sure of them. If a program fails, it can be dropped, or adjusted and launched again in its new form.

The Role of Management

In order to continue the shift from current library

culture to a culture that supports innovation, library management should be involved in the process. Upper management—deans and associate deans—should see to it that funding is available for training should managers request it.

In the typical hierarchical, market based library, managers will typically be skilled at delegating work, controlling work processes, and controlling communication processes. In the new library culture, managers should focus on other tasks. Managers can create opportunities for personal growth of subordinate employees by providing a generous training budget. They can develop a work environment that is conducive to innovation by finding suitable office space and flexible time, and eliminating unnecessary meetings. Managers can implement policies that enable librarians and staff to focus on one project at a time. They can encourage productive use of failures by asking questions about what was learned, and congratulating the initial attempts at innovative services.

Management should also focus on communicating the value of work done within the group to other parts of the library.

Conclusion

In order to encourage library innovation, librarians and staff should be self-directed and self motivated. Employees who are happily working on the set of projects that they wish to work on, in the way that want to work on them, will be more creative and more productive.

Library workers should develop these traits of self-direction and self-motivation, and management should shift from planning, organizing, and controlling functions to advocacy, forecasting, simplifying, and building external relationships.

Libraries should be aware of current cultural practices, such as collaboration and hyperactive multitasking, that may be preventing them from reaching highest potential for innovation.

The resources in this paper may be used as guides to enact a change of culture within the entire library, within a skunkworks-style subgroup, or within a job design customized to a personality type.

Remember that work should be fun.

Notes

1. Valve. "*Valve Handbook for New Employees.*" (2012): 4.
2. Ibid., 8.
3. Ibid., 36.
4. Ibid., viii.
5. Ibid., 17.
6. Ibid., 19.
7. Ibid., 55.
8. Carol Shepstone and Lyn Currie. "Transforming the Academic Library: Creating an Organizational Culture That Fosters Staff Success" *The Journal of Academic Librarianship* 34, no. 4 (7// 2008): 358.
9. Ibid., 363-64.
10. Ibid., 364-65.
11. Brian Mathews. "Think Like a Startup: A White Paper to Encourage Library Entrepreneurialism." (2012): 2.
12. Ibid., 4.
13. Ibid., 8.
14. Bethany Nowviskie. "A Skunk in the Library." (talk given at the University of Nebraska in April 2011). http://nowviskie.org/2011/a-skunk-in-the-library/
15. Ibid.
16. Martin Jason. "Symbols, Sagas, Rites, and Rituals: An Overview of Organizational Culture in Libraries." *College & research libraries news* 73, no. 6 (06/01 2012): 348
17. Tom DeMarco and Timothy Lister. *Peopleware: Productive Projects and Teams* (New York: Dorset House Publishing, 1987), 49.
18. Ibid., 136.
19. Nowviskie. A Skunk in the Library.
20. Mathews. Think Like a Startup. 7.

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