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Skunks in the Library: A Path to Production for Scholarly R&D

BETHANY NOWVISKIE

University of Virginia, Charlottesville, VA, USA

ABSTRACT. *Library-based digital humanities "skunkworks" are semi-independent research-and-development labs staffed with librarians who act as scholar-practitioners. Their creation is an uncommon, yet uncommonly potent, organizational response to opportunities opened up by digital scholarship. This article describes the Scholars' Lab at the University of Virginia Library and asserts a critical role for library-embedded digital centers in forging new paths for knowledge work in the humanities.*

KEYWORDS digital humanities, research-and-development, libraries, skunkworks, experimentation

Library-based *skunkworks*—or semi-independent, research-oriented software prototyping and makerspace labs—are an uncommon, yet uncommonly *potent*, response to opportunities that open up when we pay increased organizational attention to digital tools, methods, and cultures across the humanities.[1] And the skunk is an oddly appropriate image for scholar-practitioners of humanities research & development (R&D) in a library setting. Wrinkled noses can result from an airing of skunkworks concepts, swirling as they do past territorial lines drawn (sometimes unwittingly) by librarians, software developers, and scholars engaged in the digital transformation of our archives and institutions. This essay describes one such skunkworks operation—the Scholars' Lab at the University of Virginia Library—and asserts a critical, but not uncontroversial, role for libraries and library-embedded digital centers in forging pathways for new kinds of knowledge work in the humanities. We can think of these as "paths to production" for scholarly R&D—offering ways forward not only for the *works* of innovative digital scholarship, but for the technical and social *frameworks* necessary to support and sustain them.

Address correspondence to Bethany Nowviskie, Director of Digital Research & Scholarship, University of Virginia, Scholar's Lab, P.O. Box 400219, Charlottesville, VA 22904, USA. E-mail: bethany@virginia.edu

WALKING THE PATHS

To readers versed in Web application design and deployment, the phrase *path to production* speaks immediately to a set of well-established software release practices. These practices define a workflow that moves a developer's code in predictable ways from areas of activity specifically carved out for mess-making, idiosyncrasy, and flux to those that have been progressively tamed. The latter include technological (hardware and software) spaces as well as conceptual (policy and strategy) spaces, both engineered for greater stability and endurance than is required in a development environment. In this sense, a *path to production* is a steady migration of new features and systems from invention into practice. Code is walked from experimental environments that remain in the full control of their creators, to separate, communal spaces for dedicated testing and pre-release Web site staging.

The transition from development to testing- or staging-environments happens so that other stakeholders—like librarians, systems administrators, and scholarly end users—can contribute to the advancement of the system in a number of ways. These include banging on it, identifying bugs, defining additional needs, assessing the usability and general success of existing functions, and (more abstractly and administratively) by helping to forge agreements about what form a public release will take and how its affordances will be communicated and supported. Through this process, variables, errors, or irregularities are sufficiently resolved that the product of the software developers' labor can ascend to a promised land: production.

Production is, ideally, a place where code, content, *and* expectations have been managed, and where the development team's product is put into real-world use. Ideally, the quotidian care and feeding of this product becomes the direct responsibility *not* of its original developers, but rather of its long-term stewards. These stewards may include caretakers of content (in a library or any other organization), but *always* include systems administrators, or sysadmins. This well-established and commonly adhered-to development/test/production cycle is all about sanity. It ensures that end users are well served, that other stakeholders are satisfied, and that systems administrators are not blindsided by a midnight phone call about something they did not realize they were supporting. On the other end of the equation, it ensures that the system's developers have been freed from the burden of its ongoing support and can move on to new projects. It also allows them to circle cleanly back to private sandbox environments to work on updates and future releases of the current tool. These developers have done their jobs and adhered to their most fundamental social contract: by following established best practices of the *path to production*, they have given managers, sysadmins, and colleagues an acceptable level of assurance that the work created is maintainable. They have basically put their product on a shelf.[2]

Now just swap out "scholars" for every time I have written "developers," and "librarians" for "sysadmins," and my direction will be clear.

Until fairly recently, the path to *publication* for the fixed products of humanities interpretation (traditionally, articles and monographs)—leading to their conventional apotheosis in library preservation—was relatively clear. Everyone involved knew his or her job, and centuries of experience in scholarly communication had helped work out the kinks in expected hand-offs, from author to editor to publisher to librarian or archivist. Now, the products of multi-modal digital scholarship complicate the identification of discrete roles, and disrupt that supposedly-terminal condition of preservation and good stewardship into something we must figure as "digital curation." Digital humanities (or DH) practitioners see no *Last stop! Everybody off!* on our present track. If there exists an end-of-the-line, where key players in scholarly communication can mostly disengage, we have not reached it yet. And although they have demanded most of our attention in libraries over the past two decades, this essay does not concern itself with paths that seek clear end-points in digital humanities preservation and access.

Instead, let us entertain a seriously non-teleological conception of the phrase, "path to production." Forget the end-point. A deeper understanding of digital humanities *as method*, and of library engagement *as scholarly R&D,* can help us view the path itself as a brand of way-finding for the academy—a valued intellectual experience to position within the library, the forging of which is a critical contribution in its own right.

Paths like these will not necessarily lead to the objective many librarians have seen as our first and unique responsibility—that is, to promoting stability, and to creating libraries as manifestations or architectures of expert information management. We can no longer view our spaces (physical or digital) as sites for crystallizing the products of humanities scholarship, for making them reasonably tidy. Instead (or, in truth, *additionally*), we should recognize that walking any path is as much about the act as the destination. This one, in particular, requires that we engage as partners in messy, ongoing, and unpredictable scholarly processes. It will involve—in true collaboration with the sixty-year-old community of practice now called the digital humanities—motion along diametrical and simultaneous courses of:

- creative, iterative, unfettered, informal, (even gonzo?) development of digital scholarly interfaces and content, deeply informed by humanities research and teaching;
- mature, responsible, formal, and well-articulated *continuous integration* of new tools and methods into the existing social and technical systems of scholarly communication;
- and, above all, a collective imagination of the work of the modern research library as we would see it operate *on its very best day*.

This is the most soaring skunk you are ever likely to meet. Let us interrogate it.

SKUNKWORKS, A NATURAL HISTORY

"Skunkworks" is a term that emerged at the Lockheed Martin aeronautics corporation in the 1940s. It stems from an inside joke, tied (it is said) to a *L'il Abner* cartoon and the facility's location near a foul-smelling plastics factory, and was self-applied by a small team of research-and-development engineers. As Lockheed Martin's skunkworks R&D became a recognized success, the company eventually trademarked the phrase in its form as two capitalized words, not invoked here. But because people who gravitate toward skunkworks operations far and wide rarely give a fig for restrictions on language, the name has spread, and has come to signal a special kind of organizational form worthy of examination by libraries and library-based DH centers.[3]

A skunkworks is a small and nimble technical team, deliberately, self-consciously, and (yes) quite *unfairly* freed from much of the surrounding bureaucracy of the larger organization in which it locates itself. This cutting of slack and administrative tolerance of the renegade is offset by square placement, on the shoulders of the skunks, of greatly raised expectations for innovation. In other words, a special group like a skunkworks only endures on the acceptance, at the highest levels of the organization funding and protecting it, of a simple management principle: *if you seek unusual results, you cannot expect that they will come from playing by the usual rules*. That said, a skunkworks operation is not about pure research, or innovation for innovation's sake. Good work is meant to come from this team, and to be available for application by others. An enviable measure of liberty in scope and freedom from day-to-day distraction is *earned* by the skunks, through meaningful innovations that can be folded into wider operations and larger communities within and beyond their host organization. It is in *other areas* of the organization that continued project development, testing, and refinement will happen, and where deployment processes are expected to be re-shaped, if necessary, to fit the general paradigms and practices governing the skunkworks' less skunky peers.

The primary tension in managing and enabling skunkworks developers lies in keeping them disconnected enough to do good work—and connected enough that their work can *do good*. In other words, the goal in setting up a group like this is to avoid distracting its developers and (as much as possible) their immediate supervisors with *almost everything that constitutes a path to production* for the stuff they are building. These can include policies, conventions, why-we-can't pronouncements, petty annoyances of production systems, and the thousand social and administrative hurdles that Libraryland

is heir to. On the other hand, administrators fostering and protecting skunkworks operations will need and rightly expect the experimental work of these teams to migrate quickly toward paths to production. Seeking areas of promise and match; inspiring and enabling the skunkworks team to explore them; negotiating, fitting and reworking its innovations into the larger organization; and loudly communicating the value of the group: all of this is the job of the manager or director working at one level of hierarchy above the skunk boss, or immediate supervisor of the development group. Skunks need patronage, they need protection from distraction, and they need ambassadors and especially skillful diplomats. They are, after all, skunks.

There is no denying that *skunkworks* is an evocative name for a group so organized and protected—and a slightly dangerous one to apply in a library. These librarians and technologists will never be the snuggly bunnies of your organization. How easily, after all, are skunks to be tolerated within a broad library culture that values consensus and teamwork—a culture that rightly wants to see innovation blooming *everywhere* and which seems to be moving, if fitfully, toward erasure of marks of privileged status within its own ranks? How easily are they to be tolerated within a culture that retains a certain lovely (and, let's admit it, often gendered) self-conception of its members as the handmaidens of scholarship, people with a calling—a *vocation*—to serve?

A DIGRESSION ON SERVICE

My own path has been that of an alternative or new-model academic, working in what the Twitter-hashtag neologism drives us to term an "alt-ac" career (Nowviskie, 2011). In fact, what is termed "new-model" in higher-education discourse was once a well-trodden path for bibliographers, curators, and other librarians. Like many from that earlier generation, I trained and was acculturated as a humanities scholar before moving into a role I more deeply desired and greatly enjoy—in my case, in library-based digital humanities administration. As librarian positions are defined at my institution, I am encouraged to continue to practice as a scholar, a teacher, a leader in academic professional associations, and as an advisor to students, although I am neither a member of the tenure-eligible faculty nor employed as a full-time, professional researcher. In fact, it was my desire to work in ways skewed toward meaningful but largely un-rewarded public humanities and higher-ed "service"—that least-valued corner of a scholar's typical research-teaching-service triad—that kept me from pursuing typical academic appointments.

Increasing numbers of alt-ac scholar-practitioners are newly positioned in libraries and in the digital humanities across a variety of cultural heritage institutions. They come not only as the result of the contraction of the market for tenure-track academics and an explosion in alt-ac job postings, meant to

support digital scholarship, the management of data, and the digitization of our humanities archives—but also because a DH-driven methodological turn in graduate training, rippling slowly since the late 1990s across the humanities disciplines, has awakened in some people an undeniable attraction toward *building things* and collaborating in concrete and non-discursive ways in the context of a blossoming information economy (Ramsay, 2012). This brand of "building" in the digital humanities encompasses not just tools and archives, but new social and institutional systems as well.

But for credentialed librarians, (as we were reminded last year by bitterly contentious commentary after a talk by former McMaster University Librarian Jeffrey Trzeciak at Penn State) this shift arrives not without a great deal of justified anxiety about the future of the profession.[4] Do we face an erosion or devaluation of professional standards in librarianship? Does the incursion of differently-trained librarians herald lasting change, or is it the result of a temporary job-market fluctuation? Is the conceptual divide between scholars-as-patrons and librarians-as-personnel too deeply ingrained, either in humanities study or in library school, to be overcome in the workplace? We can perhaps all agree on one thing: PhD-holding librarians and alt-ac digital scholarship staff come at their work from a certain useful vantage. They have performed scholarship and experienced our humanities collections, interfaces, and services as students, as researchers, and as teachers—in a word, as library users. They are our new colleagues, who have taken a long look at librarians from the other side of the reference desk.

I have written a bit, from that helpful if uncomfortable vantage point, about what I see as a fundamental misunderstanding or misplaced impulse that we librarians inculcate in one another, in our dealings with faculty. It stems from one of the most lovely and crucial qualities of library culture—its strong service ethic—but poses a distinct danger to our participation in scholarly R&D. The impulse is to provide self-effacing service, projecting quiet and efficient perfection, with the abiding goal of *not distracting the researcher from his or her work*. A library may start this stratagem with the best of intentions, but it can lead to an ad-hoc practice of laying a smooth, professional veneer over increasingly decrepit and under-funded infrastructure—effectively, of hiding the messy innards of an organization from one's faculty, the very people who might become a library's strongest allies if the building in which they operate were not a kind of black box.

And then there is the degree to which the ingraining of an organizational service mentality can prevent librarians and library staff from engaging with faculty as true intellectual partners—from developing the kind of peer-to-peer relationships that foster frankness, fellow-feeling, and respect. These relationships are essential, for any given digital humanities project may benefit from a diversity of expertise, but absolutely requires unanimity of purpose in collaborative R&D. Both the voluntary impulse toward a smooth veneer and the grinding excoriations of the academic caste system blunt our notions

of "good" service. And our most naturalized assumptions about how libraries best serve scholars are relevant to the core idea of the skunkworks, because a true DH research-and-development team is one library department that will never appear conventionally service-oriented.

PRESERVE US (A SECOND DIGRESSION)

We might therefore consider a digital humanities skunkworks operation not only as a site for research innovation, but as an organizational experiment in breaking away from shop-worn service relationships. Clearly, not every institution is at the same stage of preparation for digital humanities engagement, and we do not all experience the same level of need in these matters. What I suggest will never present itself as a straight and narrow path, or be the right one for all occasions.

However, cultural heritage institutions tend to share one common direction, and thanks to a new emphasis by funders on data management, even independent digital labs and centers—those not administratively part of a library, archive, or museum—are waking up to it. The library world is deeply and rightly concerned with digital preservation. The most proactive among us have established metadata and digitization consultancy programs for affiliated scholars' projects. These are informed by and feed directly into libraries' digital preservation services.

Data preservation and curation are critical work, and if I am critical about them in tone, I do not wish to give the impression that they should be de-emphasized. (In fact, many libraries without intimate and longstanding relationships with the digital humanities actually need to *start* programs of this kind.) Preservation and curation programs are responsible and frankly necessary. But libraries launch them as our signature efforts in the digital humanities and then wonder why we sometimes feel kept at arm's length from the intellectual excitement of the scholarly projects we mean to benefit—or why the experts who staff digital services units are seen by faculty as service providers more often than as research partners.

Perhaps we should listen to ourselves. We broach subjects like digital curation in somber tones, "for the full life-cycle of the scholarly project." We propose the creation of virtual research environments (or VREs) as an unquestioned good: scholars' workbenches, forming end-to-end systems that permit digital objects to be most easily collected and preserved by the library—often without realizing that these environments appear to scholars as hermetically-sealed boxes, *Matrix*-like battery farms, into which digital projects are born and from which they are never allowed to escape. We must learn to regard our professionally-designed prophylactic, advisory, and end-stage services from the scholar's point of view: "metadata requirements for digital preservation." It is as if your nutritionist were your undertaker!

This kind of goal-oriented thinking, similar to the dev/test/production cycle in its stolid pragmatism, would be hard and not at all healthy for libraries to escape. And in fact, our native tendency to think teleologically and plan pragmatic paths can lead us to something better than a PR problem. Our tendency to *operationalize* represents the library community's best opportunity, at the present juncture, to make a meaningful *organizational* contribution to digital humanities scholarship.

THE SCHOLARS' LAB

What if part of our obligation—part of the *operational service* libraries provided to the digital humanities world—were: to experiment; to iterate; to assert our *own* intellectual agendas as part of the DH research landscape; to be just as "bad" at service (conventionally conceived) as some of our scholarly partners are at being served? What if we were to advocate for embracing the salutary ephemerality of digital resources in cases where "dev/test/*discard*" is an approach that best gets scholars where they want to go—cases where we may only be *assuming* our partners care about preservation as much as experimentation, remediation, and intervention in a *current, contemporary* discourse field? What if our obligation were to play? To play *in public*? To make the things we want to see made? To collaborate like mad, with local scholars, other librarians, and the wider, public open source and open access community that encompasses them both? What if we were to enable sectors of our own organizations to demonstrate a path to production not just for stable content, but for *deliberately unstable* scholarly R&D?—to demonstrate many possible paths, that is, by walking them, and by sharing narratives of failure, success, and ongoing experimentation?

All of this is to ask: what would happen if we saw our libraries' obligation to the DH community as being less about the provision of smooth and reliable services leading to the *continuation* of smooth and reliable services, and more about building on our own organizational and operational knowledge to model the digital humanities *being done well*? What examples of multiple paths to production might we set for traditionally educated humanities faculty, for graduate students at a moment of great transition, and for present and future generations of DH practitioners and alt-ac professionals?

The required components for doing DH well (that is, as a clearing of paths) in a library environment are simple: we need greater investment in digital humanities R&D groups that are fundamentally scholarly in staffing and inclination, and liberated enough to be skunky—in other words, groups that can pursue their own research agendas in a way recognizable as academic to fellow scholars—but which are nonetheless well integrated into the larger organizations around them. This kind of deep integration will allow

the personnel of library-based DH skunkworks—and their protectors or ambassadors, library administrators—regularly to demonstrate high-profile examples of collaborative work, "in production" and fitted in various ways to the contemporary scholarly communications ecosystem. Regular, public demonstration in both the library and scholarly communities is key, because, in the schema I present, the primary function of a digital humanities skunkworks is educative: to make sure that others learn alongside it, both when the team succeeds and when it fails.

Models for this work therefore become essential. My own department at the University of Virginia Library (Digital Research and Scholarship, commonly known as the "Scholars' Lab" or "SLab") is one. It sits at the nexus of two large, internal divisions we have worked hard over the past few years to dismantle, merge, and blur. These common library divisions were at one time called "Public Services" and "Production and Technology Services" at UVa—and no entity like the Scholars' Lab can be launched without either balancing or obliterating the distinctions between them.

The UVa Library Scholars' Lab was opened in 2006 in a beautifully-renovated, sunny space—the West Wing of the main floor of our flagship building, a humanities and social-sciences research library. It includes a suite of open offices, with a layout that keeps Digital Research and Scholarship staff close to the faculty, students, and community members who use our 4000-square-foot public lab. The SLab itself is set up for individual and group work at well-equipped workstations, "collaboration cubicles," and around coffee-tables and moveable work-tables. We hold lectures, luncheons, and workshops in the Common Room of the SLab and in a large, adjacent classroom. There's a little "ThinkTank" for small-group discussions, a seminar room, and a big lounge and workspace just off our offices, reserved for graduate students working in one of two signature initiatives: our individual Grad Fellowships in Digital Humanities and the collaborative internships of our Praxis Program.[5]

Organizationally, the SLab was a combination of three existing centers at UVa. Two were long-standing services of the Library: the Electronic Text Center (or Etext) and GeoStat, a Geospatial and Statistical Data Center—both of which had been in operation since the mid-1990s. Employees from a third center, for research computing support (ResComp), come to our department not from the Library but from UVa's central IT division. ResComp supports everything from statistical software licensing, distribution, and use, to hardware access and consultation for high-performance computing.

The combined staff of Etext, GeoStat, and ResComp knew their mission: they were dedicated to content production and walk-in or by-appointment consultation on digital tools and methods, whether these related to teaching and research with geospatial and statistical data or to the analysis and production of electronic texts and other media. They were the highly-educated

service personnel of the Scholars' Lab, and—at the point I joined the Library in 2007—despite holding higher degrees in the disciplines they supported, they all occupied staff or para-professional positions. In fact, the whole space of the SLab had been subtly designed to point patrons to a gigantic, always-on service desk, which had sometimes been described as "your one-stop shop" for help with digital scholarship in the humanities and social sciences.

But that was not the whole complexion of the department. We also included a little rag-tag crew lacking a name, a few developers who had migrated to Digital Research and Scholarship from elsewhere in the Library, and who had been in something of a holding pattern, waiting for the arrival of a new director. To date, they had not really considered themselves part of the SLab. Interestingly, this—rather than our public services staffing—became the group that, to an avid digital humanities audience beyond UVa, is most prominently and visibly identifiable as the "Scholars' Lab." They are our little skunkworks R&D, a team of three to four developers, first ably managed by Bess Sadler and now by Wayne Graham.

Scholars' Lab R&D is a skunkworks operation by virtue of its protected position and the contrapuntal mandate we have developed for it within the Library. It is not a technical group regularly charged with supporting mission-critical systems like the catalog or our digital repositories, or with developing *only* those things that can be clearly specified and whose utility and desirability is well agreed-upon. That said, the team does a great deal of immediately useful work—helping to solve problems and prototype and improve services both within the Scholars' Lab and in the larger Library. Recent projects along these lines have included design and deployment of a discovery portal and Web-services delivery system for GIS data and scanned historical maps, and the implementation of Omeka (together with plugins we have created for Fedora objects, Solr indices, and TEI) as a more stable and maintainable way for our Special Collections curators to offer online exhibits. They also undertake teaching (serving as key faculty for our Praxis Program, advising Grad Fellows, and offering a popular series on software development for humanists), collaborate on a number of specific discipline- or content-focused projects with UVa faculty, and are the home base for a funded R&D effort called Neatline, a digital humanities project centered around geo-temporal visualizations of archival collections.

Much of this activity falls under the rubric of a basic principle to which we have held in the Scholars' Lab, since it became evident that—although we are organizationally a department of the Library—we are resourced and staffed adequately and granted enough latitude to constitute a major digital humanities center in our own right. The principle is that we never forget to make our library-embeddedness meaningful. Primarily, however, Scholars' Lab R&D is a laboratory for speculative computing (Nowviskie, 2004;

Drucker, 2009). A quintessential skunkworks, on a daily basis it undertakes an exercise the pioneering digital humanities scholar Jerome McGann called "imagining what you don't know" (McGann, 2004).

The difference between Scholars' Lab R&D and the purely academic, faculty-driven digital humanities teams with which I have been involved in the past is simple: our library faculty and staff have a deep appreciation of best practices in software development and deployment, and a first-hand understanding of technical aspects of the path to production. Furthermore, they understand the way that open source communities are cultivated and the benefits of investing in them. The digital humanities community pays a good deal of lip service to open source, but not many scholarly projects do it well. Most "open source" DH is only nominally so, in the sense that project owners may zip up and share their code on request, often with a degree of hemming and hawing about how it really should be "generalized out" from the idiosyncrasies of their particular content or domain. This hesitation surely stems from the training of scholars in traditional humanities disciplines to work almost in secret, only sharing findings when they have polished them to perfection. Library technologists—accustomed to co-operation, to releasing code iteratively, and to working to deadlines and for broader audiences—more easily do open source well, and can thereby demonstrate its value.

For a group that collaborates closely with faculty and graduate students and responds to research agendas of its own collective making, those understandings (how collaboration functions in open source, and how a team moves projects from conception to production) can *themselves* make library-embeddedness meaningful. Scholars' Lab R&D serves for us as a conscious experiment in modeling effective relationships of research-and-development work by librarians and library IT, both to the digital humanities as an exciting community of practice, and to our own future—the future of libraries within a scholarly communications ecosystem experiencing rapid reconfiguration.

Our primary challenge lies in talking about what we do with a library audience. Running part of one's department as a skunkworks within a library setting can be uncomfortable. It helps that (as with the case of Blacklight, the open source OPAC we developed, which later catalyzed the multi-institutional Hydra collaboration)[6] the Scholars' Lab wins a Good Citizenship Award from our colleagues frequently enough to keep us out of trouble. We are also much beloved of our grad and faculty collaborators, who often credit us for a re-blossoming of digital humanities culture at UVa. We win some grants; we launch nice projects; we get good press. But we are not lulled into thinking that this makes the subversive side of what we do undetectable to our peers.

If there is one thing you already know about skunks, it's that there's no mistaking them.

COME WITH ME TO ZE CASBAH

It takes a constant internal and external public relations campaign to run a skunkworks within a larger library department. Inside Digital Research and Scholarship, we constantly assess shared priorities and take the pulse of our collaborative spirit. Our own Outreach and Consulting staff are not at all out of line to ask R&D, "What have you done for me lately?" Beyond our own department, resource disparities come into play, with time itself—time spent on proactive experimentation as opposed to reactive or responsive service—emerging as everyone's greatest resource. In the context of the larger library, one valid question is: "What makes you so special?"

The primary management practice I use to keep things fair among Scholars' Lab personnel likely just pushes unfairness out to our borders—although here, too, models of operations done differently are useful. All faculty and staff in my department are granted 20% of their time to pursue self-directed (often, as it happens, collaborative) research and development projects. For software developers, who can command a higher salary outside the academy, this is a compelling benefit. For alt-ac staff, trained and acculturated as academics, time allotted for independent R&D is almost a psychological necessity.

Caveats are few: staff must share the outcomes of their R&D work in appropriate publication venues (relevant journals and conference proceedings, talks and workshops, informal blogs, code posted to open repositories, etc.), and they must be prepared, at the drop of a hat, to articulate how the work they are undertaking relates, even in oblique ways, to the larger mission of the department. Eligibility for "20% time" is extended to developers in our formal R&D unit as well as to GIS and statistics consultants, outreach and public services staff, and our departmental administrative assistant. This is a philosophical decision I stand behind: egalitarian awarding of research leave makes it evident that the Scholars' Lab promotes a culture of enquiry and experimentation, top to bottom. But a director cannot expect to put practices like this in place without other departments taking notice, and without hard questions being asked about differences in management styles and job descriptions across his or her organization. Which brings me to a second truism: no one is especially excited to have a nest of skunks as neighbors.

I have observed library-based groups that operate like Scholars' Lab R&D—but almost in secret. The value of a skunkworks to its encompassing, more traditionally organized institution evaporates if it remains covert. Mid-level library administrators should acknowledge that, if they hide units like these too securely (possibly even with good intentions, in order to protect them), they might not be operating a true skunkworks at all. There are fine lines between skunkworks operations and disconnected, wasteful, private empires—empires which are easily and rightly overthrown.

Although conversations can be difficult with colleagues who desire to run their neighboring departments without the perceived perks of R&D time and some non-operational mandates (or who must do so, simply because they do radically different kinds of work), transparency is essential. In the long run, we work on the theory that openness about the strategy behind our formal skunkworks, and frequent conversations about how skunky attitudes permeate everything we do, will create more spaces for innovation throughout the library and more opportunities for staff to collaborate and learn from faculty, students, and peers. If nothing else, it will help us, together, interrogate our ingrained notions of effective service and operate in a more mindful way across all library units. Likewise, we hope it will foster conversation about how *all projects* can walk their varied paths to production—no matter where they come from and regardless of whether they constitute technical innovations or changes in operations, originating with librarians or with our (increasingly blended or hybrid) digital humanities scholars.

Many of us sense that we are moving into a kind of alternative academic universe where long-held stereotypes of faculty and librarian personalities, research interests, devotions, inclinations, and native capacities break down. If that is true, it might be because there are always more skunks than you think.

It profits higher education little to protect or maintain sharp professional distinctions between the ranks of its own researchers and service providers. That said, formidable organizational and management challenges remain to fostering digital humanities R&D in a library environment. R&D "done well" is well-informed and well-integrated into the larger stream of digital humanities inquiry. It is legible to scholars not only as something that promises to meet a need, but that constitutes a research contribution in its own right: matching a scholarly mindset, scratching a disciplinary itch, or speaking to the academy's commonly-held and deeply valued explorative ethos. Well-done R&D, in the terms in which I have presented it here, is also—despite the temptation it faces to hunker down and hide—frankly brazen about what it does, and why. It is also thoughtful in prompting its innovations to engage with both the scholarly community and their many publics, and surfacing the manner in which it drives all of these (research products and processes alike) toward solid, well-supported cycles of test and production.

For library-based R&D to play a meaningful role in the exploding arena of the digital humanities, this last piece is key. As the DH community grows, it desperately needs well-managed projects and teams that can serve as role models in demonstrating healthy paths to production. It needs spaces and practitioners that are capable of staging open, well-informed, and honest conversations about how any particular scholarly path should wend. Of all sectors of the academy, libraries and library-based centers are uniquely positioned to meet these needs—if we can embrace both teleological and non-teleological notions of our *own* paths. To waste the opportunity to

foster digital humanities skunkworks at the moment they are most possible and most looked-for in the academy would, frankly—sorry!—stink.

NOTES

1. I'd like to thank the University of Nebraska Library for a 2011 invitation that afforded me the opportunity to introduce the Scholars' Lab at the University of Virginia as a practical and philosophical skunkworks. This article stems from that talk.

2. For an example of this "social contract," see Sadler, 2010.

3. The most condensed accounting of the origin of the term "skunkworks" or "skunk works" can be found on Lockheed Martin's Web site and at Wikipedia: http://www.lockheedmartin.com/us/ aeronautics/skunkworks.html http://en.wikipedia.org/wiki/Skunk_Works

4. See this round-up of responses, compiled by John Dupuis: http://scienceblogs.com/confessions/ 2011/05/17/mcmastergate-in-chronological/. Trzeciak's talk itself is available here: http://live.libraries.psu. edu/Mediasite/Play/c16bf3c92af14d76a316a5acb5faa0af

5. See http://praxis.scholarslab.org/ and https://www.scholarslab.org/graduate-fellowships/

6. See http://projectblacklight.org and http://projecthydra.org

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