The New Ph.D.

Momentum grows to rewrite the rules of graduate training.

By MARC PARRY

EG BERKOBIEN couldn't do it anymore. She'd finished about three-quarters of a doctoral dissertation in comparative literature. Her advisers at the University of Michigan at Ann Arbor loved her project, which dealt with 19th-century Catalan-language periodicals. She didn't. What excited her was political organizing and mobilizing her translation expertise outside academe.

Last summer she was prepared to quit the program — a scary prospect, since she depended on it for insurance and had no savings.

Berkobien's predicament distilled an urgent question facing the humanities: Many doctoral students will not go on to tenure-track professorships, so why should they devote their grad-school years to producing a traditional dissertation of value mainly inside academe?

"Every time I sit down to write, I'm overwhelmed by a quiet despair - that our world is literally on fire and I'm not doing nearly enough to build a better world," Berkobien wrote in an email to her department chair. "Pair these concerns with a downright awful job market, and I hope it's clear why I think my best option is to leave."

Her department disagreed. Instead of insisting on the usual book-length proto-monograph, Berkobien's advisers permitted her to reimagine her dissertation as a series of essays focused largely on her public-facing work, which included building a translators' collective that prints books and creating translation workshops for immigrant high schoolers learning English. She hopes to place the pieces in broad-audience publications rather than academic journals.

Berkobien's story is part of a wider reconsideration of what counts as scholarship in graduate programs. For years, leaders in fields like literature and history have insisted on the importance of destigmatizing nonacademic careers. Now professors and students are increasingly pushing to rewrite the rules of Ph.D. programs themselves. These reformers hope to better equip graduates for the jobs they're actually likely to get, while showcasing the humanities' social value at a moment of public skepticism about higher education.

There is a growing sense among faculty members about the need to interrogate "the assumptions that we have about what graduate education looks like," says Rita Chin, a historian and associate dean for social sciences at Michigan. "And to consider the fact that it's possible that the model of graduate education that we have been using, which really goes back to the 19th century, may no longer in its entirety be the best model for our current situation."

The reform discussion is happening outside the humanities, too. In life-science fields, production of Ph.D.s outpaces federal research funding available to support their careers, forcing graduates into discouragingly long postdocs. That has spurred a greater emphasis on training students for alternate careers in areas like biotechnology, science communication, and pharmaceuticals.

Last year Michigan began an unusually broad effort to examine graduate programs across all research fields in the hope of figuring out what pressures are bearing down on them and rethinking how they should look in the future. A closer look at how that discussion is playing out illuminates the changes that may be coming to many other campuses, as well as the forces inhibiting change.

RADITIONALLY, humanities students jump through a series of hoops to earn a Ph.D. They take seminars, often framed by a professor's research agenda. They pass comprehensive exams. They earn a degree based on the capstone of their research, a proto-book, written alone. Along the way, the mentorship they receive comes from professors whose career expertise is limited to replicating themselves.

Reformers at Michigan and many other universities, buoyed by millions of dollars in grants from foundations and the federal government, are beginning to reshape every one of those hoops.

Students now practice doing humanities research outside academe in new forms of seminars, fellowships, and internships, which involve projects, often team-based, with partners like theaters and museums. They document their competency in portfolios rather than exams. They get credit, like Berkobien, for a wider range of dissertation projects, such as a podcast, a rap album, a comic book, and an interactive digital version of a novel. They seek counsel from a "complementary adviser" who serves as a sounding board for developing nonacademic career paths.

If much of this sounds familiar, it should. Foundations and scholarly groups have tried for decades to renovate doctoral programs in response to the humanities job crisis and other problems (too little student diversity, too much time required to finish degrees, and so on). The results of previous efforts, says a 2016 report commissioned by the Andrew W. Mellon Foundation, have been "modest and generally disappointing."

To this day, most programs in fields like history, literature, and political science aren't doing anything differently, says one of the report's co-authors, Leonard Cassuto, a professor of English at Fordham University and author of The Graduate School Mess: What Caused It and How We Can Fix It (Harvard University Press, 2015).

It's a common observation that colleges tend to be conservative about change. Cassuto, a Chronicle columnist, adds a corollary: "Graduate school is conservative by academic standards."

Yet he now sees many more examples of institutions' shedding that conservatism to attempt real change. To gauge what's different now, a good place to start is

REPORT 2020

THE TRENDS

the beginning of the last decade. By 2011, the job market for history Ph.D.s had cratered, prompting disciplinary leaders to sound an alarm: Nonacademic careers were no longer "Plan B." That same year, Jacqueline D. Antonovich entered Michigan's Ph.D. program, where she would soon map a new path to grad-school success.

A self-described "misfit historian" from a working-class, first-generation background, Antonovich was an older student who had followed a circuitous trajectory that included having children and working as a waitress and bartender. She didn't know the rules of academe. That freed her to

Antonovich specializes in medical history. During the 2012 election, political candidates were debating concepts like "legitimate rape" and the morality of birth control. She felt those discussions lacked historical context. Spurred by an assignment in her public-scholarship seminar, she started a collaborative, peer-reviewed blog to analyze such health and gender issues through the prism of historical research. She called the blog Nursing Clio.

At the time, she says, Michigan didn't put a high priority on public scholarship. Many people in her department considered her project risky. Fellow graduate students counseled her that it might look bad to be taking time away from her "real" scholarship to publish the blog. They fretted that weighing in on contentious political discussions could come back to haunt her when she went on the job market.

Two things happened next: Antonovich bootstrapped Nursing Clio into a substantial enterprise, with 13 editors and an intellectual influence on both her discipline and mainstream media discussion. And her profession began to take public scholarship seriously - so much so that the blog became her calling card when she went on the job market in 2018. At Michigan, beyond that seminar class, she'd never gotten academic credit for the project that made her reputation. But it helped her land a tenure-track job at Muhlenberg College.

Last November, Antonovich returned to Michigan to keynote a conference devoted to reforming doctoral education to prepare students for public-oriented jobs. The event featured history alumni who work on public scholarship in academe or hold positions in a range of nonacademic institutions, like museums and government agencies. It typified the national scramble by humanities leaders to "reintegrate" nonfaculty alumni, whom they once considered to be the runners-up of academic life.

Antonovich observed a university changing in other ways, too. Consider that first doctoral hoop: classes.

Michigan's history department has long offered a seminar that trains students to write articles based on original research in primary sources. It trains them to do so the old-fashioned way: alone.

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But professionals in the contemporary world, including academe, often work collaboratively. So Chin, the historian and associate dean, joined with a colleague and the U.S. Holocaust Memorial Museum to build a new kind of graduate research course, part of an initiative called His-

> toryLabs. Participants team up to create curated sets of primary sources for the museum's "Experiencing History" teaching tool. They learn how to manage projects, share labor, and resolve conflicts.

> The history department also sponsors a grad-student podcasting platform. New internships in areas like tech and media supplement traditional humanities teaching assistantships. New microcourses teach blogging and grant-writing.

The goal: producing more Jacqueline Antonoviches.

"I'd like to say that all of these changes shifted because people finally realized how valuable it is for historians to be part of the public-square conversations," Antonovich says of her profession's growing attention to nonacademic audiences. "But I actually don't think that's what it was. I

think it's the lack of jobs.'

What's taking place at Michigan is part of a national wave of similar innovation happening within curricula as well as outside them in related fellowships and postdocs. For example, an interdisciplinary public-humanities graduate seminar at Emory University, which began this semester, places students in a range of research collaborations: working with a theater company to stage a play, mounting a library exhibition on the history of public housing in Atlanta, creating an open-access journal about business and society.

For the course's co-creator, Benjamin Reiss, chair of Emory's English department, job training isn't the main goal. Reiss, like other reformers, aspires to revitalize the humanities by going on the offensive. That means changing how the public and grad students themselves perceive what humanists do. First, by getting students out of disciplinary bubbles to ask bigger questions about how their skills can benefit society. And second, by producing tangible public projects that don't require theoretical jargon to explain.

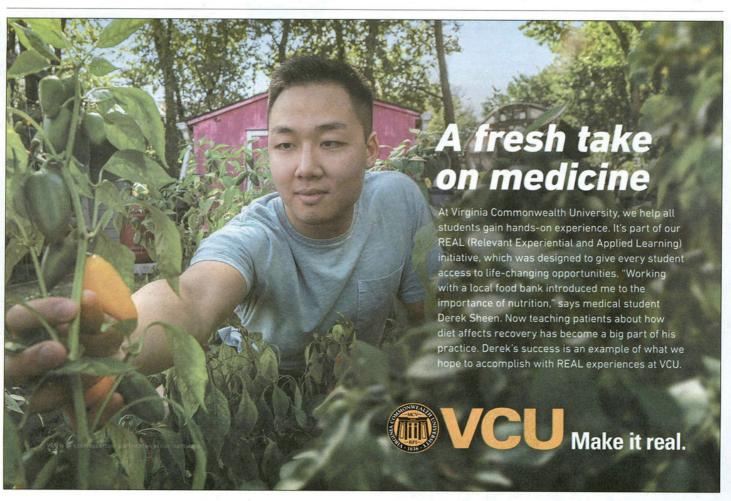
The effort builds on Reiss's experience in a field known as health humanities. In 2017 he published a general-audience book about the cultural history of sleep. He worried at first about discussing his work with sleep scientists. But they reacted with amazement that a humanist had something to say on the subject they'd devoted their lives to studying. They invited Reiss to speak at conferences, to collaborate on research, to serve on the board of a health journal.

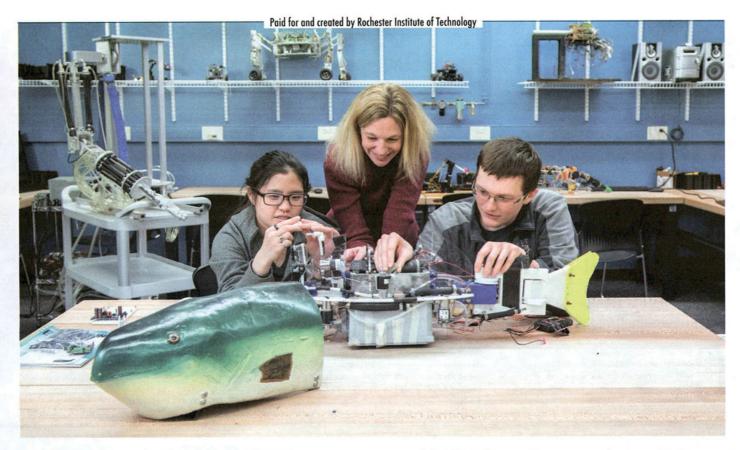
"It really made me feel like humanities people sell themselves short when they think that the world doesn't value what they do," Reiss says. "I think they have to demonstrate what they do - and demonstrate what they can do. And then the interest will follow."

Reiss, noting the long tradition of applied scientific research, describes his new seminar as "applied humanities." Some scholars criticize that approach as a threat to humanists' independence.

Science fields have been dealing with their own struggles over how to reform graduate education in response to job-market pressure.

The main issue is federal research support. Congress essentially doubled the National Institutes of Health's budget Continued on Page B28





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A bat navigating in the dark. A tiger tracking its prey. The migration of a flutter of butterflies.

It's no surprise that nature is the ultimate innovator.

We live in a world where we are surrounded by profound examples of solutions to countless problems. Whether it's a matter of effective locomotion, creative environmental adaptation, or an elegant survival mechanism, nature has it figured out.

So when Kathleen Lamkin-Kennard, associate professor of mechanical engineering, was looking for a fun senior design project to give to her engineering students, inspiration struck. She would have them design a robotic creature that moves as sinuously as a real fish.

While seemingly whimsical, it is serious science where flexible muscles designed today could be part of better functioning assistive technologies for people tomorrow.

Despite some puzzled looks initially, Lamkin-Kennard's students threw themselves and their efforts into the work.

Of course, making a robotic fish means researching and studying how real fish move. Students began collecting observations of the short, powerful—yet simple—muscle movements of the common river trout.

Lamkin-Kennard's students learned to understand motion and to replicate it through technology that might mean mobility for individuals who may not have had that option before.

"There is a big push in the robotics field for taking inspiration from nature. There are some very efficient designs in nature and in the bodies of animals that are just so spectacular. How can we use that?" said Lamkin-Kennard, whose menagerie of robotic animals now includes an ant, otter, trout-like fish, and multi-leg crab—all built using flexible actuators and sensor technology.

Lamkin-Kennard's work builds on her



Part fish. Part machine. All RIT.

experience in industry, where she helped to develop a high-fidelity robotic patient simulator device. She used that experience to create unconventional senior design projects, starting with a robotic hand in response to increased interest in prosthetics and wearable technologies.

That early work proved soft muscle actuators could be used for different types of motion. New projects evolved into robotic systems that walked, jumped, and swam.



INNOVATION NEVER SLEEPS

Each project challenged the students to expand capabilities from movement on

land to motion underwater, from increasing the number of sensors included in a design to ensuring that the mechanical systems were waterproof.

"We made these robotic creatures. But for me, it is really the end goal—how can we adapt this?" said Lamkin-Kennard, who continues to adapt this work, collaborating with peers in RIT's assistive technology group, expanding techniques for exoskeletons and surgical robots, and using newer, stretchy elastomeric materials that are able to hold an electric charge. Using that charge, the material contracts, similar to the way human muscles do after receiving an electrical impulse from the brain.

RIT students are accustomed to exploring those special and unique places where disciplines merge. This approach is one that is intentionally fostered and consistently encouraged by the faculty at RIT. Where engineering meets biology and performance meets technology, that's the area where RIT soars.

What if more assistive devices could be built with this technology?

"That's what we are looking at long

term," said Lamkin-Kennard, whose research focuses on the use of computational and physical models to simulate integrated human physiological systems. Such technological discovery could lead to a new wave of prosthetics that can help those with disabilities regain fine motor skills and even mobility.

This is just one example of the exact type of experience that sets RIT students apart when it comes time to establish themselves in a career. Multidisciplinary exposure, innovative work with real-world applications, and an intrinsic sense of possibility. For engineering students in particular, multiple cooperative education experiences are a requirement. RIT believes in providing exposure early and often to a variety of career paths, industries, and environments.

Successful outcomes are one of RIT's specialties, for our students and for the world.



Contemplate. Collaborate. Create

RIT Rochester Institute of Technology

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between 1998 and 2003, but that largess didn't persist in subsequent years. The result: a drying up of research-staff and faculty positions funded with the so-called "soft money" of external grants, says Robin Garrell, vice provost for graduate education and dean of the Graduate Division at the University of California at Los Angeles. Life-science Ph.D. grads can get stuck in postdocs for five or so years.

Just as in the humanities, the situation is spurring a greater openness to preparing students for alternative research

careers. Ph.D. students might pursue opportunities like an internship in the technology-transfer office or courses in the business of science, where they can learn the nuts and bolts of developing a start-up company. In 2012, the NIH started a formal program to facilitate the transition to nonacademic jobs, called "Broadening Experiences in Scientific Training."

Within some humanities and social-science fields, meanwhile, a growing number of departments are also rethinking the next hoop in a graduate student's trajectory: comprehensive exams.

The Scientific Paper Is Outdated

For the sake of research, their careers, and their mental health, scientists should spend more time developing software.

ONTEMPORARY SCIENCE faces several interrelated crises. Competition for tenure-track jobs is getting stiffer every year, thanks to an ever-increasing supply of talented, young Ph.D. students; not enough is being done to prepare doctoral students for jobs outside of academe; candidates for junior faculty positions must submit so many research papers that journals, editors, and reviewers can't keep up; and too many published results aren't reproducible. All of that is inseparable from the decline in mental health of graduate students, driven largely by feelings of loneliness and isolation.

To deal with those issues, we should look at the axis around which the whole academic enterprise spins - the publication process, specifically of papers, which are the gold standard of scientific productivity. We must unbind the sharing of scientific knowledge from the traditional journal format and explore radically creative new ways to communicate with our colleagues. Software is one obvious solution.

The reality is that the scientific paper is outdated. It first appeared in the 1600s with the rise of scientific journals, and its basic format - a static document with text, figures, and references - has not fundamentally evolved in the intervening centuries. That format was chosen because, given the technology of the time, it was the most efficient way to share scientific knowledge. In 2020, that is no longer the case.

Scientific discoveries are a mix of raw data and inferences made from that data. A major challenge is transforming the data into knowledge. As pointed out 30 years ago by the geologist Jon Claerbout and articulated by the researchers Jonathan B. Buckheit and David L. Donoho, "an article about computational science in a scientific publication is not the scholarship itself, it is merely advertising of the scholarship." They pointed out that computer code, or software, is the scholarship itself. It generates summaries and figures that our brains can digest.

That's why, rather than maximizing their publication output, scientists should spend more time and effort on software development. This could mean contributing to existing open-source projects on which their research depends or developing new software related to their research. In both activities, it's crucial to recognize that "software," as opposed to just "code," includes many additional components, such as documentation, examples, and tests, which provide rich context for the code itself.

For example, an oceanographer who develops a new way to analyze satellite data could share that knowledge with the community via a software package that

includes not only the basic code to perform the calculation but also comprehensive online documentation about the theory and implementation; a gallery of examples, including real-world scientific analyses; and a test suite to verify correctness. That contribution would include all the information contained in a scientific paper, plus so much more. Packaging knowledge in this way renders it immediately usable and extensible by the entire scientific community.

EYOND the actual code and documentation, the open-source software-development world offers many benefits, both technical and cultural, to the general scientific practice.

First and foremost, software development is more collaborative and less competitive than mainstream science. That makes for a healthier work environment. Open-source, community-driven projects often involve dozens of contributors, most of whom have never met in person, working in close collabo-

ration toward a shared goal. The work itself - discussing issues, debugging problems, and writing and reviewing code - involves fast-paced interactions with rapid feedback and progress on time scales of weeks or months.

Success is measured by the level of use and impact of the project as a whole. Scientists who become involved in open-source development often comment that it's simply more gratifying, and less lonely, than writing scientific manuscripts. It becomes the part of their job they enjoy the most.

Second, software development offers a set of practices, broadly termed "continuous integration," that automate many parts of the development process using cloud computing. That can help with replicability. For example, when a scientist proposes a new contribution, tests are automatically run that verify that it meets all of the project's requirements in terms of correctness, documentation, code style, etc. That makes it easier to trust new contributors, expanding the community and enhancing the collaborative at-

Continuous-integration practices could be adapted to scientific research, permitting us to build scientific artifacts that are continuously updated by many different contributors to incorporate the latest data and methods, a stark contrast to the static nature of traditional publications. Rather than a few individuals publishing isolated nuggets of insight, continuous integration could allow us to collaborate on moreambitious, large-scale projects. Using technologies such as Binder, an open-source tool that allows anyone to recreate a researcher's technical environment, we could make reproducibility a built-in property of all our scholarly communications.

Beyond the potential to transform and modernize our scientific-research process, an increased emphasis on software over publication would also help science students pursue alternative careers. Students in many fields, for example astronomy, oceanography, and genomics, are often already proficient in analyzing large, complex data sets. That's an attractive skill to many employers.

But writing scientific papers is a niche skill of limited value outside the academy. Equipping students with better software-engineering skills would help them transition more easily to industry roles in tech and engineering. Students who could show a track record of contributing to open-source projects while still in graduate school would have a great way of

demonstrating their expertise.

There are only 24 hours in a day; if scientists spend more time on software, they will have to spend less time on something else (e.g., writing papers). To use a software-derived phrase, this is a feature, not a bug, of my pro-

posal. However, reducing the value of publication as the currency of scientific productivity and placing a greater emphasis on software would not be an easy transition. We would have to figure out how to evaluate the impact of software. That's a thorny problem, especially given that software isn't created in a bubble it depends strongly on other people's technological

It's also not clear that simply "citing software," as we now do for publications, is the solution. Search committees would have to become more informed about the scientific-software landscape and culture in order to directly assess a candidate's software contributions. Such radical changes in perspective may require generational shifts.

There will be challenges to overcome, but an increased focus on software could be the solution to many of modern science's crises. Besides making our discoveries more robust, it could allow us to have more fun, feel less lonely, and broaden our career

Ryan Abernathey is an associate professor of earth and environmental sciences at Columbia University.



By RYAN ABERNATHEY

For generations, typically in their third year, humanities students have endured what some professors describe as a kind of scholastic "hazing" ritual. These written or oral tests theoretically certify students' ability to teach in a given field, like, say, 19th- and 20th-century American social history.

The problem, critics argue, is a disconnect between the tests' artificial format and the nature of the actual work humanists do. The better approach is a portfolio system, which allows students to document their expertise by producing scholarship aimed at real audiences, says Edward J. Balleisen, a professor of history and public policy and vice provost for interdisciplinary studies at Duke University.

That includes public audiences. Portfolios feature research papers, but they can also encompass other scholarly products, such as websites and podcasts. Balleisen pushes his grad students to write op-eds connecting their scholarly work to contemporary issues of public concern. Duke's history department is on an expanding list of humanities and social-science divisions nationwide that have either abandoned exams or reduced their use.

INKERING with exams and curricula is one thing. But Ph.D. programs face growing pressure to reconsider the end product of their training: the dissertation. What form should it take? Whom should it serve? These are high-stakes questions, because dissertations distinguish doctoral programs from all other degrees. They also determine later academic career success, leading to first books, tenure, and promotion.

At Michigan, prominent historians and literary scholars are making an intellectual and economic case for opening dissertations to experimentation. The debate they've sparked shows the powerful grip of tradition - and why change may be coming regardless.

The one-size-fits-all proto-book structure shackles schol-

arship, argues Sidonie Smith, a professor emerita of English and women's studies at Michigan and a former president of the Modern Language Association. It often yields bloated projects that don't merit such long-form treatment.

Struck by how little doctoral reformers had discussed dissertations. Smith made them a centerpiece of her 2015 open-access book, Manifesto for the Humanities: Transforming Doctoral Education in Good Enough Times (University of Michigan Press). One core innovation she promotes is unbundling dissertations into varied chunks. These might include an 80page essay of original scholarly research, a pedagogical analysis, and a public-scholarship project. Such freedom would motivate students and protect their mental health, she says.

Her Michigan colleague Earl Lewis, a historian and former president of the Mellon Foundation, is pushing to broaden dissertations in the other direction. During his keynote speech at a recent conference at Michigan on rethinking doctoral education, Lewis made a much-discussed suggestion that historians should consider allowing students to pursue co-authored dissertations. This, he says, would enable them to produce better answers to really big scholarly questions.

Both Smith and Lewis also frame their ideas as solutions to financial pressures. Traditional dissertations might not make sense for the many students who end up in jobs outside academe. And flexible dissertation formats could help students finish up faster. That's important for students from lower-income and first-generation backgrounds who may consider it risky to embark on such a long endeavor with an uncertain outcome.

In the humanities, Lewis and Smith's ideas count as provocative. In the sciences and social sciences, some aspects of their proposals are already standard practice. Article-based dissertations have long been common in those areas. In STEM fields, it is increasingly accepted for dis-

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TAKEAWAYS

Minting Ph.D.s for the 21st Century

- · Across many disciplines, reformers are rethinking doctoral training in response to job-market pressures and public skepticism of higher education.
- Humanities leaders have long insisted on the need to destigmatize nonacademic careers. Now there is a growing push to rewrite the rules of Ph.D. programs themselves.
- Much of the innovation involves advising. exams, and new forms of public-facing courses and fellowships. Faculty members have shown the most resistance to rethinking dissertation formats.

Continued From Preceding Page

sertations to include co-authored papers as well as chapters devoted to aspects of teaching, such as educational technology, says Garrell, the UCLA vice provost.

Scientists are wrestling with how to go further toward adapting dissertations to the reality that nearly all science is now generated by "large, interdisciplinary, global, and data-dependent computational teams," says Suzanne T. Ortega, president of the Council of Graduate Schools. On several campuses, she says, deans and faculty members are trying to map out guidelines for completely collaborative, team-based dissertations.

In the humanities, with enrollments falling and professors feeling besieged, many are in no mood to change, Smith says. They resist perceived "neoliberal" reform agendas. They want to stick up for supposed core principles. They defend knowledge for its own sake. They argue for upholding traditional expectations. They oppose the alternative dissertation as "Ph.D. Lite."

Would-be reformers like Smith point to several high-profile examples of students who have succeeded in pulling off alternate dissertations. Nick Sousanis, who earned a doctorate in interdisciplinary studies from Columbia University's Teachers College in 2014, created a comic book about visual thinking. Amanda Visconti, who earned a Ph.D. in literature at the University of Maryland in 2015, created an interactive digital project that enables readers to annotate James Joyce's Ulysses. A.D. Carson, who earned a Ph.D. in rhetorics, communication, and information design at Clemson University in 2017, created a 34track rap album that examines racism and other issues.

All three parlayed their unusual capstones into academic careers. Sousanis did a roughly two-year postdoc before finding a tenure-track job as an assistant professor in the School of Humanities and Liberal Studies at San Francisco State University, where he created a comics-studies program. Visconti got a tenure-track gig as an assistant research professor at Purdue University. She eventually left that to become managing director of an experimental scholarship lab at the University of Virginia. Carson also landed at Virginia, in the music department, as a tenure-track assistant professor of hip-hop and the global South. He created a music-production space known as the Rap Lab.

Meanwhile, some humanities departments, like the English program at the University of Washington, are putting guidelines in place that explicitly lay out a wider range of dissertation formats.

But the new projects remain, as Garrell phrases it, radi-

"The sense that there is any radical change in how the dissertation is becoming more flexible - I'm pretty negative on that," Smith says. "I just don't think it's happening on a scale that I would have hoped."

Historians, who study change for a living, have been particularly reluctant to change the dissertation-as-book format. That includes innovators like Antonovich, the Nursing Clio founder. She defends traditional dissertations as "the backbone of becoming a historian."

The politics are so delicate that Chin, the associate dean helping to organize Michigan's doctoral-reform effort, is reluctant to be quoted expressing her personal views. "In the interest of building support for a rethinking of graduate education," she says, "I don't think that the smart strategy is to go after the dissertation first."

It may be out of her hands. Grad students have already responded to the dismal academic job market by creating what has been trumpeted as a "renaissance in cultural journalism." If no academic jobs await, their thinking goes, better to write for the public than pad their CVs.

That public spirit has made some junior scholars attractive faculty hires, and now they're pressuring the academic-promotion system to reward their off-campus outreach. For example, Averill Earls, a tenure-track assistant professor at Mercyhurst University, developed "Dig: A History Podcast" as a grad student at the University at Buffalo.



Mercyhurst, a small, liberal-arts institution in Erie, Pa., counts that kind of work as scholarship in her tenure review. At larger research universities, she says, digital public history would more likely fall under the less-valued category of professional service.

"There's this tension between what people are looking for," Earls says. "They want public historians who have digital-history skills. But they don't necessarily want to count your digital history, or even your public-history scholarship, as scholarship toward your tenure."

Similar tensions may build around alternate dissertations. The story of Meg Berkobien, the Michigan Ph.D. candidate in comparative literature, exemplifies how. Around her third year, she informed her mentors that she didn't intend to pursue an academic career. By the time she'd decided to abandon her dissertation, her department was willing to accommodate a different approach.

Berkobien sees her new dissertation project, a series of essays, as a way to investigate big concerns facing her field: Why aren't translators more political? How should they respond to the climate crisis? How can they carve out a place in the Green New Deal?

Berkobien's friends, several of whom also hope to do unconventional dissertation projects, have been paying attention to her case.

We are responding to a new generation of students who are coming in with broader interests and new capacities to interact with digital cultures and social media," says Yopie Prins, chair of comparative literature at Michigan.

"Are requirements shifting?" she adds. "Yes." Disserta-tion committees, she says, will need to rethink what they consider to be legitimate criteria for evaluating projects.

"And that may be changing."