Editor's Column

Experimental Humanities

In a recent essay, "Form and Explanation," Jonathan Kramnick and Anahid Nersessian ask what "interdisciplinarity" means in the university's division of knowledge. Against the lip service routinely paid to the term and against those who, proceeding on the assumption that there is a common ground among disciplines, "have turned to the sciences to search for a compelling isomorphism," Kramnick and Nersessian urge us to recognize the fact that each field of knowledge is vocabulary-dependent and therefore "inquiry relative." Quoting the cognitive scientist Zenon Pylyshyn, they argue that literary study is "fundamentally tied to a class of terms which in part define the phenomena it tries to explain" (651). Instead of struggling to square these terms with those in other disciplines, literary scholars need to be up front about the "field-specific" nature of what we do, embracing a "literary disciplinarity without apology or compromise" (652).

Given the crisis facing the humanities and the unprecedented assault on science today, thinking outside the box is indeed key. Without engaging the full range of issues revolving around disciplinarity and interdisciplinarity, I'd like to use one particular term—*experimental*—to test the extent of isomorphism among different fields of knowledge, in the hope that this case study might help clarify the heuristic benefits as well as the limits of this form of inquiry. What does *experimental* mean when practiced among the sciences? Is there room for analogous practices within literary study? And what is to be gained by bringing these disparate fields into relation?

Rudolf Carnap, the eminent philosopher of science, began his 1946 lectures on the "experimental method" with the startling remark that experiments are neither necessary for nor universally meaningful to all sciences.[1] "While all sciences rest on observations,"

Carnap said, "these observations can be obtained in two essentially different ways. In the non-experimental way, we play a passive role." We observe phenomena already in the world, predating us and in place without input from us. For Carnap, this "passive" observation of what is given is integral to science, though clearly not the only option. An alternative, more active method tries to do more. Taking things into their own hands, investigators here go beyond the given, designing projects to create what is not available or observable in nature: "Instead of being onlookers, we *do* something. . . . Instead of waiting until nature provides situations for us to observe, we try to create such situations. In short, we make experiments" (40).

For Carnap, *active* and *passive* are procedural terms, correlating with different protocols in different fields of knowledge, requiring different infrastructures and resulting in maximum or minimum investigative input. According to him, physics is an active science because it grants maximum latitude to the investigator: it doesn't stop with data supplied by nature but tries to generate data on its own, in experiments designed specifically for that purpose. Labs are therefore central to physics. Experiments would not happen, and the field would not exist, without these enabling infrastructures. Astronomy, by contrast, is passive because its practitioners only look at data supplied by nature—stars and galaxies created billions of years before we arrived on the scene. No human input is possible into this cosmic given, and no experiments or labs are needed. Telescopes are all it takes for these scientific "onlookers" to do their work.

Lecturing in 1946, Carnap did not foresee astronomers of a different stripe, like those working at the National Aeronautics and Space Administration (NASA). Since its founding in 1958, this agency has turned astronomy into a science overflowing with human input, featuring practitioners working with far more than telescopes.[2] Ten operating centers have sprung up from coast to coast, including mission control in Pasadena, California, and the Kennedy Space Center launch site in Cape Canaveral, Florida.[3] Powered by these infrastructures, and supported by a collaborative team, one space mission after another has gone out, captivating everyone with the data collected, from images sent back by the *Mars Pathfinder* in 1997 to the latest dispatch from Saturn by *Cassini*, an unmanned spacecraft launched in 2004 and now reaching its grand finale. Those who designed and implemented these missions would be surprised to hear that astronomy isn't an experimental science. With a new sense of purpose and fueled by NASA's outreach ambitions, this former science of onlookers has turned into a science of builders and makers, up front in its use of human means to get better data, not shy about the size of its budget, and—in the case of the privately funded aerospace manufacturer SpaceX—not shy about its commercial potential. Thanks to well-publicized launch dates and dates of missions accomplished, the world is held captive throughout the entire process, one of the few instances when a technical undertaking manages to make itself accessible to those who might understand neither its fine points nor its full implications.

Crucial to this new accessibility is the sense that astronomy is doing something, experimenting with something that could succeed or fail in the here and now. Astronomers using only telescopes limit themselves to cosmic faits accomplis, stars and galaxies safely preexisting and hermetically meaningful only to the scientific community. Astronomers building infrastructures, however, become part of a mass-circulated work in progress, much more public and much riskier: open to a wide audience and open to continual updates. The scientists here put themselves partly under the jurisdiction of the unknown, the testing ground for their collective endeavor. Now squarely in the foreground is the fallible work of engineering: the countless hours spent in

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labs looking for the most energy-efficient fuel, the most accurate instruments for alien environments, and the least combustible material for those dangerous takeoffs and reentries.[4] Not surprisingly, an institute of technology is leading the way in these efforts: the Jet Propulsion Lab at the California Institute of Technology. Responsible for many of NASA's missions, this lab dramatizes astronomy as a science of making: tool-dependent, collaboration-based, and field-tested.

The phenomenal success of most missions should not blind us to the phenomenal failures of others, such as the explosion of the space shuttle *Challenger*, vividly recounted by Ben Lerner in *10:04* (110–14). A science that is tool-dependent, collaboration-based, and field-tested is also open to failure and familiar with it. Such a science proceeds by trial and error, instructed, chastened, and propelled at every turn by the mistakes it makes.[5] The consequences of those mistakes are as public as can be—impossible to overlook and impossible to hide. Pathos, humiliation, heartbreak, not to say loss of lives, are built into astronomy as an experimental science. These repeated blows to the psyche inversely affirm what is at stake. When a mission's announced goals are not met, self-analysis is called for, and any path forward must be based on this self-analysis and on attendant efforts to rectify missteps. An experimental science is also a reparative science.[6] Constantly running into difficulties and constantly coming up short, it is duty-bound to address these disappointing outcomes. Among the things that it does are the repairs necessitated by its failures. The space shuttle program was halted for two and a half years, for instance, after the *Challenger* disaster. Error is both constraint and catalyst for an experimental science: one way by which a revised trajectory is built on a prior one—even an erroneous one—a cumulative effort extending steadfastly from the past into the future.

The evolution of astronomy from a low-profile, observational science into one that incorporates failure while exercising maximum agency is especially interesting for literary scholars, shedding light on what currently exists in our field and what seems imminent. While significant funding and collaborative teamwork have been integral to editorial projects since at least the late nineteenth and early twentieth centuries—the volumes published by the Early English Text Society and by Harvard University Press in the series Loeb Classical Library come to mind—the intensely tool-dependent infrastructure building of the sciences and the generative role given to failure have not been part of our research protocol. Experimental humanities is not currently recognized as a subfield in our discipline. There are no job descriptions giving it institutional status, no financial support backing it up, no journals exploring its terrain, no practitioners staking out claims on its behalf. Most of us still tend to be nonexperimentalists. We stick with what already exists, seeing our objects of study as finished products, faits accomplis, if not quite stars and galaxies created billions of years ago, then works of literature created three hundred years, thirty years, or three years before we turn our attention to them. Completed before our arrival and summoned now only to be observed and critiqued, these antecedent objects stand at an input-discouraging distance. We use our critical lenses, the equivalent of telescopes, to bring them into our fields of vision, but they remain closed chapters and done deals. We don't dream of collaborating with these texts, nor do we design experiments to test their behavior under altered circumstances.

But things are changing: even an anecdotal survey reveals scores of "labs" headed by literary scholars. These come in different shapes and sizes and receive different levels of support, but all are determined to add to existing knowledge, to build collaboratively, and to face the likelihood of failure. Some labs, especially those serving local communities, have been as successful in their

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experimental outcomes as in their grant applications. The Game Changer Chicago Design Lab, cofounded by Patrick Jagoda and Melissa Gilliam to promote reproductive health among South Side minority youths, has received significant funding from the MacArthur Foundation and the National Institutes of Health (Jagoda). But even the Price Lab for Digital Humanities at the University of Pennsylvania, forging ahead in its partnerships with the Penn Libraries and the University of Pennsylvania Museum of Archaeology and Anthropology on the strength of two exceptionally large grants (a 2015 gift of $7 million from Michael and Vikki Price and a $2 million grant from the Mellon Foundation), is careful to state its mission in the conditional: "if the humanities are to survive and thrive, digital research tools for the imagined future of our various fields must be developed by scholars who possess expertise in both humanistic inquiry and digital technology" ("What").

Hybrid scholarship of this sort is "still a pretty fragile enterprise," said James English, director of the Price Lab, at the 2016 conference Humanities Laboratory, convened by the National Endowment for the Humanities and attended by practitioners from Arizona State University, the University of Chicago, Michigan State University, the University of Michigan, the New School, and Stanford University (qtd. in Joselow). Some experimental projects have trouble getting off the ground at all. "One of the hardest things for humanists to understand is that when you apply for a grant and you fail, that's only the first step," added Dean Rehberger, from Michigan State. "We have to fail a lot. With one project, we applied for a grant four times" (qtd. in Joselow).

FIG. 1
Sharon Marcus and Caitlin Zaloom. Photograph by Liz Maynes-Aminzade.

Perseverance and resilience do not necessarily follow, but they often do. Second tries are almost second nature to these field-tested veterans, thick-skinned from their close acquaintance with failure. Meanwhile, many scholars who do not identify themselves as experimentalists or call their projects labs also exhibit this second nature, suggesting that the updates-needed, repairs-needed rhythm of infrastructures might help engineer the psyches of those responsible for their operations, fostering the ability to persist and rebound in the face of adversities. If "our survival" as a species indeed depends on "an act of engineering greater and more extensive than any ever before undertaken, one that encompasses all aspects of social, political, economic, and psychological life," as Steven Connor has argued in the context of climate change (285), there is no better preparation than the experimental method as a reparative practice. The survival of the humanities might well depend on it.

In what follows, I report on one such reparative practice, growing out of a project that most of us would consider successful but committed, almost on principle, to self-mandated efforts for internal review and repairs. Launched in 2012, *Public Books* has emerged as a key player among online literary magazines. It is a place where scholarly books are showcased and where a variety of genres and media, including film, TV, art exhibits, sci-fi, comics, and graphics, are given full and respectful attention, often through book reviews and interviews with authors, direc-

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tors, and artists. Between 15 November and 15 December 2016, the site had 79,000 unique visitors and 149,000 page views.[7] The most popular piece to appear on the site, "Trump 2.0 Syllabus" (Connolly and Blain), published in June 2016, went viral after the 2016 presidential election, prompting a *New York* magazine write-up (Baer).[8] In December 2016, *Bustle* named *Public Books* one of twelve sites every reader needs to bookmark, calling the magazine "unique, edgy, timely, risky" (Ce Miller). Between 1 March and 1 April 2017, the site had over 163,000 page views.

Public Books was cofounded by Sharon Marcus and Caitlin Zaloom (fig. 1). Marcus is an English professor and the dean of humanities at Columbia University; Zaloom is an anthropologist and associate professor in the Department of Social and Cultural Analysis at New York University. Longtime observers of the digital media, they came to the joint realization that the Internet had fundamentally transformed the role of the public scholar once epitomized by *The New York Review of Books*. That exclusive review used to define the limits of what a public scholar could do; now it no longer does. The relatively swift turnaround time of digital publishing allows more scholars to weigh in on current events, while remaining committed to rigorous research, careful editing, and a breadth of argument going beyond the topical. *Public Books* aims to host this broad-based, experimental work: the work of hybrid scholars, still bookish but not giving up on the world, who can code-switch between environments and bring what is generative or imperative in one to bear on the other.

Marcus and Zaloom's partnership is itself experimental: a rare collaboration between the humanities and the social sciences. To this venture, Marcus brought knowledge of the public humanities; Zaloom brought knowledge of scientific collaborations. Their shared analysis of the Internet's power made both keen to forge ties with like-minded sites around the world. From 2015 to 2016, they were members of the transatlantic Guardian Books Network; their membership led to several *Public Books* pieces being reprinted on the *Guardian*'s Web site, such as Fredrik Albritton Jonsson's "The Holocene Hangover." A similar arrangement was worked out around the same time with *Caravan*, a top English-language news magazine in India. A collaboration with *La vie des idées*, an online journal based at the Collège de France, debuted in November 2014 and featured the two-part series "The Piketty Effect," examining the bicontinental significance of Thomas Piketty's best-selling book *Capital in the Twenty-First Century*.

Locally, *Public Books* partnered with the inaugural meeting of the Gracie Book Club, a project started by New York City's first lady, Chirlane McCray, who invited New Yorkers to discuss books together at Gracie Mansion and by livestream (*Gracie Mansion Conservancy*). With Rinku Sen, the president of Race Forward, a national racial-justice organization, *Public Books* produced a reading guide to the featured novel, Tanwi Nandini Islam's *Bright Lines*. McCray shared that guide from her *Twitter* account, New York City librarians retweeted it, and the Gracie Book Club moderator used it to plan his book discussion (fig. 2). On the heels of that new visibility, *Public Books* hosted the conference Global

FIG. 2
Gracie Book Club. Photograph by Liz Maynes-Aminzade.

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Book Review in October 2016 (fig. 3), gathering editors and critics from South Africa, Mexico, India, France, Italy, and the United States to discuss the impact of the Internet on cross-cultural literary exchange.

It's an exciting time for online infrastructure building. The *Los Angeles Review of Books* (*LARB*), founded by Tom Lutz around the same time as *Public Books*, has a parallel story. Debuting on *Tumblr* in April 2011 and launching its Web site the following year, the *LARB*, like *Public Books*, set out to "revive and reinvent the book review for the Internet age," promising its readers "intelligent, long-form writing on recent publications of every genre" ("About *LARB*"). Within six months it was hailed in *The New Yorker* as "one of the instant jewels of the Internet" (Brody). Since then the *LARB* has grown into a multiplatform behemoth, producing podcasts and documentaries and hosting many sister publications, the *LARB* channels and affiliates. The site draws 500,000 unique visitors each month. It offers college credits for interns year round, and—with the University of Southern California—runs the *LARB* / USC Publishing Workshop for students of all ages. It also organizes the *LARB* Luminary Evening, a literary salon that gives patrons a chance to mingle with authors, like Lena Dunham and Norman Lear, in the comfort of hillside homes around Los Angeles. Its annual winter fund drive features auction items donated by celebrities, including vintage typewriters from Tom Hanks each of the past three years. In January 2016, *The Chronicle of Higher Education* announced that the *LARB* "beckons a new model of a literary review, not tied to a newspaper or based in a university" (Williams). In April the *Hollywood Reporter* raved about the site as "the juicy new read of L.A.'s intellectuals" (Baum).

Inevitably, though, venturing online also means contending with a blinding pace of change. Many online projects become out of date in a couple of years if not months. When Marcus and Zaloom founded *Public Books*, they were just ahead of the curve as an online scholarly publisher for a general audience. A mere three years later, as more people got into the habit of reading on tablets and phones, Marcus and Zaloom saw that they would need to adapt to social-media dissemination platforms, such as *Twitter* and *Facebook*, and content-management systems, such as *WordPress*, all of which had become increasingly important since the magazine's launch. Most of us would not have thought of applying for a grant to address this problem, but Marcus and Zaloom have an unusual partnership. Drawing on Zaloom's previous success with the National Science Foundation, *Public Books* contacted major funders, eventually submit-

Fig. 3
The conference Global Book Review. Photograph by Lauren Goldenberg.

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ting a proposal to the Mellon Foundation and receiving a $76,500 strategic-planning grant in July 2015. That grant allowed Marcus and Zaloom to work with consultants at Matter Unlimited to create a five-year plan for revamping their site.

The consultants began by conducting a survey. Respondents commended *Public Books* for its accessibility, its "mixture of academic depth with smart, snappy prose," and, above all, the "eclectic, non-partisan, egalitarian, non-commercial, non-didactic, isms-free, low-fat, sugar-lite" content. But there were also worrisome findings. The survey made clear that "*Public Books* is not a destination on [the readers'] radar unless [the readers are] reminded via the newsletter or social media." One respondent said bluntly that "I rarely go to *Public Books* just to see what's happening." The site was a "very pretty, beautiful version of the last generation of websites," another respondent added. "The modularity of the site lends itself to . . . people reading one article at a time, rather than the whole site as a site," a third noted. The result was a high bounce rate (the percentage of visitors who leave after viewing only one page), low session duration, and a low number of pages read during these sessions. Readers came to the site to read particular essays, often prompted by social media or aggregators such as *Arts and Letters Daily*, but rarely stayed to look at others. The low session duration and high bounce rate were especially noticeable among readers viewing the magazine on mobile devices, a group representing one-third of the readership, suggesting that the site was not optimized for phones and tablets.

The findings convinced Marcus and Zaloom that nothing short of a complete makeover would do. Having just received a grant from the Public Fellows program of the American Council of Learned Societies—a program that pairs recent PhDs with organizations that prepare them for nonacademic careers—*Public Books* decided to create a new position: a digital director responsible for site redesign. Liz Maynes-Aminzade (fig. 4), a public fellow with a PhD in English from Harvard University, shortly assumed that role and helped select a Web developer to oversee the transition to a *WordPress* platform.

The new site, optimized for iPhones and iPads, is more visually arresting but also more standardized. It displays all the recent posts side by side in an orderly grid. Each post is enhanced by eye-catching graphics, and many pieces are linked thematically. Also, the rotation of content is more frequent: previously, *Public Books* was published twice a month; now one new piece appears each day, five days a week, on topics ranging from the Supreme Court to global black history to comics, reflecting the expertise of the fifteen section editors and six contributing editors on the expanded masthead. In the two months after the relaunch on 23 January 2017, compared with the same period in 2016, average session duration went up by 14%, the

Fig. 4
Liz Maynes-Aminzade. Photograph by Ben Platt.

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number of unique visitors by 26%, and page views by a whopping 44%; meanwhile the bounce rate went down by 7%. More readers are discovering *Public Books*, sticking around to read it, and coming back for more.

The relaunched Web site is a wager, a manifesto, a promise to build something new, and a commitment to fulfilling that promise in the years ahead. The jury is still out on this experiment, needless to say, but that's what experiments are: long-term efforts that require continual tinkering and updating, flourishing on a collaborative input network, and nurturing in all concerned an acquired aptitude for repairs should things not work out. Sharon Marcus and Caitlyn Zaloom look as though they will be around for a long time.

Wai Chee Dimock

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1. Edited versions of the lectures were printed in Carnap's *An Introduction to the Philosophy of Science*, which Martin Gardner compiled from the notes he took in a seminar with Carnap at the University of Chicago in the fall of 1946.

2. Telescopes are mini-infrastructures, requiring complex engineering, monitoring, and servicing. Some of the most famous—such as the *Hubble Space Telescope*—are no longer ground-based. For the evolution of astronomy, see Djorgovski.

3. For these and other key operating sites in NASA's infrastructure, see "NASA Centers."

4. The danger of those missions, especially at the point of reentry, is dramatized in *Hidden Figures*, the recent film about African American women working as human computers for NASA.

5. The centrality of mistakes in experimental science might be understood as a dramatized version of the "falsifiability" that Popper sees as central to scientific discovery in general (40–42).

6. Latour highlights the connection between assembling and repairing (475), echoing Sedgwick's argument that the reparative is linked to the desire to "assemble and confer plenitude" (149).

7. All data pertaining to *Public Books*, as well as survey information from Matter Unlimited, were provided by Sharon Marcus and Caitlin Zaloom, founders of the magazine, in phone conversations and e-mail correspondence.

8. A sequel to "Trump Syllabus 2.0," focused more on Trump's supporters, appeared in January 2017 (Crawford and Wray).

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