

Digital Humanities at CUNY. Building Communities of Practice in the Public University

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Abstract—In this essay, I reflect on my experience working in the field of Digital Humanities at The Graduate Center (GC) of the City University of New York (CUNY) to refute the misconception that the point of intersection of humanities and computation is dependent on robust technological infrastructure and, therefore, outside of the reach of underfunded public institutions. On the contrary, my tenure as a GC Digital Fellow suggests that the development of DH communities of practice can be an especially valuable asset for public universities, due to the waterfall effect they can produce for both the academic and the local community. Finally, I present evidence of second and third-order effects of the GC's institutional DH culture by briefly introducing two projects developed at CUNY that both rely on and engage critically with technology: the CUNY Distance Learning Archive (CDLA), a GC class project, and QC Voices, a structured initiative established at one of the four-year CUNY colleges. — *Digital humanities, digital praxis, critical university studies, community of practice, American studies.*

Abstract—Il saggio presenta una riflessione sulla mia esperienza nelle Digital Humanities al Graduate Center (GC) della City University of New York (CUNY) al fine di confutare il luogo comune secondo cui il punto di intersezione tra le scienze umanistiche e quelle computazionali richieda una robusta infrastruttura tecnologica e sia, di conseguenza, di difficile applicazione nelle istituzioni pubbliche che operano spesso in regimi di austerità. Al contrario, la mia esperienza suggerisce come lo sviluppo di "Comunità di Pratica" orientate allo studio e all'applicazione delle DH possa costituire una risorsa di valore soprattutto per le università pubbliche, grazie all'effetto a cascata che possono generare sia all'interno della comunità accademica sia di quella locale. A prova di ciò, il saggio analizza due progetti che dipendono dalla tecnologia e che interagiscono con essa in modo critico: il CUNY Distance Learning Archive (CDLA), un progetto sviluppato nell'ambito di un seminario in DH al GC, e QC Voices, un'iniziativa pedagogica sistematica presso uno dei CUNY college. — *Digital humanities, digital praxis, critical university studies, community of practice, American studies*.

INTRODUCTION

A t a recent open house event for the PhD Program in English at The Graduate Center (GC) of the City University of New York (CUNY), a faculty member sketched a parallel between the graduate student experience and the quest of the protagonist of P. D. Eastman's children book *Are You My Mother?* Born in an empty nest, Eastman's hatchling bird embarks on a journey to find his missing genitor. The search brings the baby bird to ask a number of animals and animated objects if they are his mother. The hatchling's quest resonates with that of a graduate student, the then-Deputy Executive Officer of the program noted: bouncing between

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disciplinary homes, methodologies, formal and informal mentors, and para-curricular activities, until they find their figurative nurturers and with them, their academic homes. The metaphor immediately resonated with me. While my commitment to American Studies has been consistent throughout my - yet short - academic career, both the inherently speculative nature of scholarly research and the interdisciplinary anatomy of my work have pulled me in manifold directions during my time as a Ph.D. student. In addition to genuine intellectual curiosity and the need to overcome theoretical or practical research challenges, what further prompts graduate students to pose the proverbial "are you my mother?" question to different actors, methodologies, and disciplines, are the unstable nature of the job market that increasingly requires applicants to be fluent in multiple fields and disciplinary areas, and a desire for community in a context of ever-growing academic alienation.

Since the early stages of one's graduate career at the GC, students, especially those willing to break out of their disciplinary bubbles, are typically exposed to more opportunities than they can chew on. In the fall of 2015, when I began my PhD program, I was introduced to manifold formal and informal resources to its students through a number of orientations that kicked off the academic year. Such initiatives included student and faculty-led cross-departmental research groups, certificate programs, and intra-institutional centers geared towards supporting different approaches to academic research, often through the employment of graduate students. I was first exposed to the field of Digital Humanities (DH) in the kinds of overwhelming circumstances that make new student orientations almost disorienting. Completely oblivious to over fifty years of scholarship in the field and parroting some of my colleagues' impressions, I distinctly remember dismissing what was being demoed at the event (distant reading, data visualization, and mapping projects) as an emphasis of form over content. Besides, because of my slight familiarity with computer programming and my confidence in my own digital literacy, I did not see the point of further investing in learning more digital skills when there was so much theory I had to master in my actual field (as a non-literature major in college and first-generation college student, I was especially affected by impostor syndrome).

Despite my appreciation for the liveliness of the DH community that surrounded me (I had often admired the warm and welcoming environment that characterized their events), it was not until two years later, when I found myself in need of what DH had to offer to my dissertation project that I went back on my steps. In the fall of 2017, I had the opportunity of laying my hands on unearthed archival material documenting the punk scenes and the subcultural formations at the heart of my dissertation. Lawrence Livermore, countercultural figure and co-founder of the Berkeley-based record label Lookout Records, had made his zine collection and a number of artifacts from his days in the East Bay available to me. With an eye to the increasing institutionalization of punk (the acquisition of punk ephemera by academic institutions that often de-facto prevents non-academic subcultural participants from accessing the material), I became intrigued by the idea of making the content of Livermore's archive available to both scholars and subcultural participants through an open access digital archive, mirroring my commitments to work with and for the community and to produce public-facing scholarship.

My first knock on the door of DH - when I first asked myself if it were, indeed, my metaphorical mother was driven by pure utilitarian intentions: I viewed DH as a means (a set of methodologies and tools) to reach an end (curating and publishing Livermore's digital collection). However, what I discovered in the process of developing the East Bay Punk Digital Archive (EBP-DA) and through my further involvement with the DH community are otherwise modes of academic engagement: collaborative, praxis-driven, and public-facing. What follows is an account of my DH history at the GC (CUNY).¹ Rather than producing a self-referential narrative of success, I aim to refute the misconception that the point of intersection of humanities and computation is dependent on robust technological infrastructure and, therefore, outside of the reach of underfunded public institutions. I argue, on the contrary, that DH hubs are not predominantly dependent on vanguard technology. The development of DH communities of practice can be an especially valuable asset for resource-scarce public universities, due to the waterfall effect they can produce for both the academic and the local community.

GCDI AND THE DIGITAL FELLOWS PRO-GRAM

The GC is the principal doctoral-granting institution of the CUNY system, the largest public urban university system in the United States, comprising 25 campuses: eleven senior colleges, seven community colleges, one undergraduate honors college, and seven post-

¹ See East Bay Punk Digital Archive at www.eastbaypunkda.com.

graduate institutions. As of 2019, the CUNY system counted more than 275,000 enrolled students (CUNY 2019). Not unlike other institutions, the GC offers training in DH methods through departmental or crossdepartmental courses (including the Interactive Technology and Pedagogy certificate, a three-course sequence that offers interdisciplinary training in technology and pedagogy), fellowship programs, and para-curricular workshops. Within this constellation, GC Digital Initiatives (GCDI) is an intra-institutional initiative led by Lisa Rhody and Matthew K. Gold that offers opportunities to learn, support, and promote digital scholarship. The program is run by a group of graduate fellows, faculty, and staff and central to its mission is the aim to build and sustain a community around the shared idea of a "digital GC," envisioning and actively devising productive, inclusive, and ethical ways to integrate technology in the curriculum and in the research process. The majority of GCDI's activities are conducted through the Digital Fellows program, "an in-house think-and-do tank for digital projects, connecting Fellows to digital initiatives throughout The Graduate Center" (GC Digital Fellows n.d.). The Digital Fellows team, a diverse group of doctoral students, offers events, workshops, office hours, faculty consultations, week-long institutes, and community-based working groups.

My first practical encounter with DH took place through GCDI's Digital Research Institute (DRI), a free week-long in-house training course usually held and taught the last week of Winter Break by the Digital Fellows to staff, students, and faculty of the GC. Taking a foundational approach, the institute introduces its participants to technical skills and a conceptual vocabulary that serves as a basis for further learning and engagement in the field.² As pointed out by Rhody in a blog post on the Digital Humanities Research Institute (DHRI, a scaled-up version of the DRI aimed at training faculty from US universities with the goal of setting up similar courses in their home institutions), "knowing the underlying technologies will inform that choice and help with troubleshooting problems, asking for help on forums, collaborating with programmers and designers" (Rhody 2019). This pedagogical approach "also leads to second and third-order effects as students teach themselves and others, builds confidence, and flexibility" (Rhody 2019). In other words, by taking a foundational, as opposed to an instrumental approach (i.e., teaching students how to deploy a particular tool for a specific end), the DRI aims to teach its participants a forma mentis, rather than merely a modus operandi. What I found most valuable, aside from being introduced to a number of tools, was indeed the institute's pedagogical model. Instead of relying solely on the expertise of the instructor, the Digital Fellows fostered a kind of learning-in-common by facilitating exchanges, relationship-building, and skill-sharing among learners from across the disciplines. In doing so, the institute put into practice a set of common values that digital humanists aspire to attain in concordance with its goals. In her popular essay in *Debates in Digital Humanities*, Lisa Spiro identified the values that inform DH ethos as openness, collaboration, collegiality and connectedness, diversity, and experimentation (2012, 22).

My positive experience as a DRI participant and the autodidactic efforts that ensued (and eventually led to the development of the EBP-DA, with the support of the New Media Lab, a vital node of the DH ecosystem at the GC that provides access to technology and various forms of support to students and faculty seeking to integrate digital media into traditional academic practice) prompted me, shortly thereafter, to apply for the Digital Fellows program myself. Whereas the majority of DH graduate fellowships in the United States offer either formalized training (whereby individual or group projects are developed, often in response to an artificial prompt) or financial and technical support to bring a project of one's own design to realization,³ being a Digital Fellow is a rather unique employment opportunity that puts graduate students in the position of both receiving from and giving back to their community. Each fellow joins the program with a specific set of skills and, usually, a DH project that they are developing as part of their academic pursuit. While graduate fellows receive training and support towards accomplishing their research goals, the fellowship allows them an extraordinary amount of freedom: in concert with the team they decide what tools, methods, and outputs are most conducive to their professional formation and desirable to different constituencies of the GC, as well as how to

² The curricula for the 2020 edition included: workshops in Command Line, Digital Ethics and Data, Git, Python, Text Analysis, Introduction to R, Data Manipulation, Data Visualization, Mapping, Omeka, HTML and CSS and Platforms, and Twitter/API. See https://gcdri.commons.gc.cuny.edu/ for further information.

³ As of 2020, some of the distinguished centers that focus primarily on supporting and developing faculty projects include the Maryland Institute for Technology in the Humanities (MITH) at the University of Maryland, the Roy Rosenzweig Center for History and New Media (RRCHNM) at George Mason University, and the Center for Digital Humanities and Social Sciences (MA-TRIX).

learn them, and how to disseminate the knowledge they produce. In other words, the program offers fellows an opportunity to learn while producing output for use of the community (rather than an artificial final product), in the form of workshops, working groups, events, and collaborative projects. Faculty and student consultations, usually hosted in the Digital Scholarship Lab, are further opportunities for the Digital Fellows to work with, rather than for the GC population. Through their collaborative approach, the Digital Fellows foster sustainable training on anything from theoretical concerns to more practical issues and technical obstacles with the ultimate goal of putting scholars in the best position possible to be the expert of their own projects. If the majority of funding schemes reproduce the empirical experience of institutions with generous funding models and extraordinary infrastructural capacity (especially in the form of well equipped digital labs and dedicated personnel assisting individual projects), the Digital Fellows program aims to replicate an organic learning-by-doing process that prepares early career scholars for real-life scenarios likely to be found in public universities, community colleges, and even small liberal art colleges.

While the development of the EBP-DA offered me the opportunity to put into practice and expand on some of the foundational skills I had learned as a DRI participant - the command line, HTML and CSS, and Git, among others - developing an expertise in Omeka and digital archiving led to my becoming an instructor at the following iteration of the institute. Omeka is a free Content Management System (CMS) and a web publishing system built by the Roy Rosenzweig Center for History and New Media (RRCHNM) at George Mason University (GMU) to create searchable online databases and scholarly online interpretations of digital collections. In addition to being used by archives, historical societies, libraries, and museums, Omeka is also employed by individual researchers and teachers to describe primary sources according to archival standards and publish online digital collections, as well as to curate interpretive online exhibits from those items. My workshop, built upon an open-access tutorial developed by DH scholar Amanda French, engaged with some of the conceptual challenges of digital archives before introducing participants to the nuts and bolts of the platform. By the end of two 75-minute sessions, participants had created a small digital collection, a short exhibit, and had been introduced to the resources available at the GC for those interested in pursuing such projects. Reflecting the increasing implementation of digital archives in both the classroom and in scholarly research (whereas a platform such as Omeka offers an invaluable opportunity for cultural preservation with little to no institutional funding),⁴ the workshop has since transcended the DRI setting and has become a staple of the Digital Fellows offerings, along with "Getting Started with TEI," "Intro to Python," "Building Websites with Wordpress," "Data Privacy and Ethics," and "Introduction to Mapping." Held in the fall and spring semester, GCDI's workshops are typically accompanied by material distributed in open access (e.g., web tutorials, PowerPoint slides, and GitHub repositories), allowing for the scope of the Fellows' work to extend beyond the workshop setting and the GC. As Kathleen Fitzpatrick has suggested, open access work entails "free access not just in the sense of gratis, but also in the sense of libre work that, subject to appropriate scholarly standards of citation, is free to be built upon" (2019, 142). Many of GCDI's workshops live in open access GitHub repositories, allowing future Digital Fellows and DH practitioners to update them, build upon them, or adapt them to their learning settings. As per Fitzpatrick's understanding of free access, GCDI's approach to knowledge dissemination is informed by the same ethos of openness: knowledge is produced to be distributed to the community and to influence more knowledge production at both an intra and extra-institutional level.

As DH practitioners, rather than using the Do-It-Yourself (DIY) affordances of technology to replace other professional figures, we are interested in working with them to imagine and develop new and better methodologies. Aside from building a set of technical skills, developing the EBP-DA also involved familiarizing with archival theory and practice. I engaged in conversation with archivists, librarians, faculty, and fellow grad students to learn from their experience on matters such as metadata, file format standards, informational architecture (especially its relationship with discoverability and accessibility), rights and permissions, and sustainability. Through this process, I realized the extraordinary amount of work in and around digital archives at the GC as well as the need for a platform to put different constituencies in conversation.⁵ After

⁴ See especially projects that seek to preserve the cultural heritage of marginalized communities, such as "New Roots: Voices from Carolina del Norte!" (https://newroots.lib.unc.edu/), "Dawnland Voices: Writing of Indigenous New England" (https:// dawnlandvoices.org/collections/), and "Wearing Gay History" (http://wearinggayhistory.com/).

⁵ Among these are projects completed by the American Social History Project, developed at the New Media Lab, and in the context

further surveying the community about its needs and desires, as part of my Digital Fellows duties, I spearheaded the Digital Archive Research Collective (DARC). In the Fall 2019 semester, the working group, co-lead by Filipa Calado and supported by Param Ajmera and Di Yoong, created a Wiki that contains information about various institutional resources, featured projects by students and faculty, and overviews of several digital archival methods, approaches, and tools.⁶

The WikiMedia platform allows for the repository to be developed collaboratively by the community, allowing any user to add and edit content. In parallel with other working groups - such as the Python User Group (PUG), the R User's Group (RUG), and the GIS/Mapping Working Group - DARC also holds monthly meetings open to all members of the community of all skill levels, disciplines, and backgrounds. During working groups meetings, Digital Fellows do not cast themselves as the only experts in the room, but rather invite those with an interest in specific methodologies to congregate to work and learn together. Finally, in the spring of 2020, DARC held an event series that included talks by experts in the field and workshops on tools and platforms such as TEI, Tropy, Audacity, and HathiTrust.⁷ By developing awareness around digital archival work and facilitating access to technical and academic support, DARC's goal, in accordance with GCDI's mission, is to foster the birth and development of a self-sustained community of practice. As defined by Lave and Wenger, communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (1991). By emphasizing human relationships and common interests, communities of practice have the capacity to bring constituencies from across the disciplines together and to bridge frozen dialectics among different fields. Furthermore, according to Etienne and Beverly Wenger-Trayner, fostering two complementary forms of participation, competence and knowledgeability, allow higher education to foster a kind of knowing-in-practice (2016: vi). Especially in settings with a rapid turnover (of either students or contingent faculty) communities of practice, born and developed through the very acts of learning and doing together, have the potential of producing a lasting impact, whereas expertise tends to be a shared asset and its divulgation a shared responsibility. This allows for GCDI to extend the longevity of its communities of practice beyond the tenure of Digital Fellows with specific skills as well as institutional investment in specific technologies or methodologies.

Tagging the Tower, the blog used by the Digital Fellows to share resources and reflect on their experiences, abounds with accounts that resonate with mine and especially emphasize the desire not only to build community around technology-based scholarship, but also to further build bridges across communities and disciplines. As early as 2012, former Digital Fellow Laura Keane wrote:

The Digital Fellowship program has sharpened my programming and web development skills, and has given me a new venue to employ such skills. [...] I've found that my work in the Digital Fellows program has been based on collaboration and building a community around technology at the Graduate Center – this is exciting! [...] I'd like to see the Fellows working together with representatives from other programs at the Graduate Center to build an infrastructure for communication across disciplines – a 'Digital GC' – and I think technology plays a crucial role in realizing that goal. (Keane 2012)

As illustrated through the examples in edited volumes such as *Debates in Digital Humanities* and *Digital Pedagogy in the Humanities*, as well as in journals like *Journal of Digital Humanities* (JDH) and *Journal of Interactive Technology and Pedagogy* (JITP), DH has often proved to foster successful interdisciplinary work, produce new types of knowledge production, and devise curricular innovation. I thus urge the skeptical reader not to think of technology in higher education solely through a Marxist lens, i.e., as a means to relegate the intellectual worker as an appendage to both the machine and the neoliberal university, as part of a perpetual effort to extract her fullest productive capacity. On the contrary, as Brian Greenspan has recently argued,

the digital humanities involve a close scrutiny of the affordances and constraints that govern most scholarly work today, whether they are technical (relating to media, networks, platforms, interfaces, codes, and databases), social (involving collaboration, authorial capital, copyright and IP, censorship and firewalls, viral memes, the idea of "the book," audiences, literacies, and competencies), or labor-related (emphasizing the often-hidden work of students, librarians and archivists, programmers, techies, research and teaching assistants, and alt-ac workers). (2019: n.p.)

of the Praxis class of the ITP certificate. For a survey of digital archives developed at the GC, see "Projects – DARC (Digital Archive Research Collective)," https://darc.gcdiprojects.org/ Projects.

⁶ See "Digital Archive Research Collective (DARC) Wiki" https: //darc.gcdiprojects.org/

⁷ See https://darc.gcdiprojects.org/DARC_Event_Series

As DH practitioners, we object to technological essentialism (technology as having an inherently good or bad nature) in favor of a praxis that uses digital means towards building academic practices that are better than the ones we have, more conducive of ethical and collaborative work. In other words, as we think of "the digital" as a catalyst for research in the humanities, our technological praxis can and must be informed by new and better standards of humanity and care. Furthermore, as DH work often enables work geared towards nonacademic publics, communities of practice can have a pivotal role in creating synergetic connections with nonacademic communities and in promoting dialogues and collaborations across boundaries, emphasizing the public research agenda of city and state colleges.⁸

Especially in institutional contexts with limited financial, technological, and human resources, diverse communities of practice can thus be building blocks for a thriving DH hub. Despite its wide range of activities, GCDI can rely on a rather limited budget, the impact of which has been extended through its communityoriented approach. For instance, the initial funding that supported the training materials built for the DRI came from a one-time Strategic Investment Initiative award, a state grant offered to CUNY for particular projects based on strategic infrastructure building. The impact of the grant was scaled up through the Digital Fellows program, sustained through funding from the Provost's Office, often in the context of the overall support packages offered to PhD students. Whereas at many other (especially private) institutions, graduate funding packages often come with lower (or no) work requirements, being a Digital Fellow - as most GC fellowships do - requires a service commitment of 15 hours per week. Furthermore, as argued by Rhody (2019) and demonstrated by and through my personal experience, training provided through a foundational approach and developed through communities of practice often produces second and third-order effects. In the next section, I will provide two examples of such effects by briefly introducing two projects developed at CUNY that rely on and engage critically with technology: the CUNY Distance Learning Archive (CDLA), a GC class projects that outgrew its original scope and OC Voices, a structured initiative

established at one of the four-year CUNY colleges.

ON SECOND- AND THIRD-ORDER EFFECTS

In the spring of 2020, Gold, faculty in the English and Digital Humanities programs, led a graduate seminar on Knowledge Infrastructures that required, as a final project, "an intervention [...] into the knowledge infrastructures at the GC or in CUNY" (Gold 2020). The global COVID-19 pandemic urged the class to make a commitment to a cause much earlier than anticipated. On March 11, the news of CUNY's switch to distance learning to mitigate the health risks posed by the pandemic broke just a few minutes before our last in-person class of the semester. Over the course of two hours, the students in the class unanimously decided that the intervention would have to be related to the unique moment we were experiencing as students and teachers. Over the rest of the semester, under Gold's supervision and through the extraordinary involvement of the students in the class,⁹ the CDLA was developed as

a crowdsourced archive that allows students, faculty, and staff from across the CUNY system's 25 campuses to submit personal narratives about the experience of moving online, emails, and communications related to the decisions to move online, documentation of online learning experiences (e.g., photos, narratives, screenshots), and links to digital media artifacts that capture the event in real time. (CUNY Distance Learning Archive, 2020)

Furthermore, the CDLA also sought to preserve social media posts and reactions (Twitter, Reddit, Facebook, and Instagram) of the CUNY community to both the crisis and the shift to remote learning.

Since the archive's initial conception, the class quickly moved forward, under pressure of the need to capture the moment. Within the first week of CUNY's transition to online instruction, the team developed a website through the CUNY Academic Commons (an academic social network created by and for the CUNY that include a customised installation of WordPress), an online submission system, and a social media presence via major digital platforms. Over the following weeks, Gold's class partnered with the Core Interactive Technology and Pedagogy class of the ITP Program, whose students devised a number of suggested writing prompts for CDLA contributors. While moving

⁸ On extending DH communities of practice beyond academia, see also Joan Fragaszy Troyano and Lisa M. Rhody, "Expanding Communities of Practice" in *Journal of Digital Humanities*, Vol. 2, No. 2 Spring 2013 accessed online http://journalofdigitalhumanities.org/2-2/ expanding-communities-of-practice/

⁹ The founding members of the CDLA team are Matthew K. Gold, Travis Bartley, Nicole Cote, Jean Hyemin Kim, Charlie Markbreiter, Zach Muhlbauer, Michael Gossett, and myself.

the project forward allowed the team to learn-by-doing, students also studied technical, ethical, and theoretical challenges faced by similar 'crisis archives' (such as The September 11 Digital Archive and Our Marathon) and learned from experts in the field (including Jim Mc-Grath, former project director for Our Marathon, Ed Summers, Technical Lead for Documenting the Now, and Johnathan Thayer, assistant professor at the Queens College's Graduate School of Library and Information Studies) invited as (remote) guest speakers in the remaining sessions of Gold's class. As of September 2020, without any funding and relying mostly on its original team's labour, the CDLA has collected dozens of contributions (in the form of personal narratives, correspondence, official email communications, and learning resources) and its social media collection efforts resulted in scraping close to a hundred thousand posts. If the goal of the CDLA is to "document this moment of crisis response from a critical approach to educational technology," collecting different forms of data from a wide range of sources is aimed at producing a multi-perspective narrative that includes both the institutional and the lived experiences of multiple actors occupying different positionalities and identities. Through their juxtaposition, the CDLA team hopes to enable researchers, students, and members of the community to understand, learn from, and engage critically with this moment.

As Travis Bartley, one of the members of the team, noted:

With this archive, we hope to better understand the particular means through which the accommodation of distance learning has in some ways troubled educational instruction. Further, given the possibility that distance learning practices may become instituted as the norm for higher education, we hope to maintain a collection that acknowledges the human cost of such practices, assisting in the development of pedagogy that truly meets student needs through the digital medium. (2020)

Moving forward, the CDLA team hopes to find institutional backing to ensure the longevity of its archiving efforts, either through merging its collection with an established repository or through the provision of funds for the migration of data to a secure storage platform. It is also currently seeking external funding for the next stages of the project, geared towards curation and preservation solutions, metadata standardization, ethical practices to handle social media datasets, as well as creating an archive front-end to ensure accessibility. The case of the CDLA and its ongoing development, from class assignment to public resource, is not only further proof of the indissoluble relationship between DH practice and theory in both research and classroom settings, whereby community-oriented projects offer outstanding opportunities to develop a praxis that acts on the theoretical underpinnings of the field. It also allows me to emphasize the pivotal role of a human infrastructure – the result of a synergetic approach to building DH communities of practice that comprises both curricular and para-curricular activities – that relies on a set of foundational skills to approach, devise, and develop a DH project and contributes, on the one hand, to overcome financial and technological scarcity, and on the other hand, to the development of a "digital GC."

QC VOICES: A COLLABORATIVE WRITING PLATFORM

Third order effects of the presence of a community committed to integrating technology in their scholarship also percolate beyond the R1 settings of the GC and into undergraduate pedagogy. Benefits of the GC's digital knowledge infrastructure also extend to other CUNY campuses and their population, where funding of digital initiatives is not as robust. For once, as graduate students and alumni develop a sensibility to DH tools and methods during their graduate career, they often carry it with them to the CUNY community and fouryear colleges, where many of them find employment as faculty, teaching fellows, adjunct teachers, and staff. If the use of course sites and blogs has become somewhat widespread, digital tools such as digital archives or data visualization software are also making their way in undergraduate's teaching pedagogies.

As an example of this growing tendency, I want to bring to your attention some initiatives promoted at Queens College (QC), to which I have been affiliated for several years in different capacities. Over the past three years, as part of its efforts to further integrate technology in English courses, Writing at Queens (the program that supports and administers the college's writing curriculum) has run several faculty development workshops to encourage writing instructors to further implement multimodal assignments in their courses. As posited by Cynthia Selfe, "multimodal writing" extends traditional classroom composition work into "visual, audio, gestural, spatial, or linguistic means of creating meaning" beyond what is traditionally considered literature and allows teachers to foster their students' multiliteracies (Selfe 2007, 195). A number of para-curricular activities also rely on the affordances of technology to promote otherwise pedagogies and modes of engagement with writing. A particularly interesting case is that of QC Voices, a program that uses a local installation of WordPress (QWriting) as a platform for a collective blog featuring student writers. Currently on hiatus due to the budget cuts that resulted from the COVID-19 emergency, QC Voices was spearheaded in 2009 by GC alumni Jason Tougaw (faculty in the QC English department) and Boone Gorges (QC's Educational Technologist and PhD Candidate in Philosophy at the GC, at the time).

The project's generative questions were: first, since the domains of writing and information technology are increasingly intertwined, how is the former influencing the purposes of writing, the genres of written communication, and the nature of audience and author? Second, at a time when citizens are bombarded by media messages and information is delivered mostly through digital platforms, how can we further develop and channel digital writing fluency towards critical thinking, effective communication, and active citizenship? (Tougaw 2018). Rather than achieving proficiency with specific software packages and technological devices, the goal of the program was to effectively collaborate, asynchronously and synchronously, across spatial barriers, to produce, analyze, and share information on a digital platform. Every semester, with these pedagogical goals in mind, QC Voices hired a diverse cohort of a dozen graduate and undergraduate students, selected from a large pool of applicants from across the disciplines, to each publish six non-fictional thematic columns. In addition to a stipend of \$600 per semester, student participation was driven by the opportunity of being part of a program run like a professional public publication, with the support of Tougaw, in the role of faculty mentor, and two remunerated editors (usually an adjunct professor with experience as a professional content editor and an early career DH scholar in the role of multimedia editor). As explained by Tougaw in a recent interview:

We try to structure it like a literary-magazine editing experience [...] We do all the steps that I would go through if I was publishing something. They submit the first draft, we give them notes, it usually takes them another week or so to revise, and then we do a round of more sentence level, detailoriented editing. In the meantime, one of the technology fellows works with them on assembling the visual elements and doing layout. ("Sharing Student Perspectives" 2020)

Through writing workshops, a professional editorial process, and one-on-one mentoring, writers learn about the distinctive elements of writing online, including visual rhetoric, savvy linking, and media integration. The workshops are hosted every few weeks during free hour, when classes aren't in session, in the Digital Writing Studio, a lab built through a grant earned by Kevin Ferguson (GC alumnus and faculty in English at QC and in MA program in Digital Humanities at the GC), equipped with five round-tables with dedicated screens and a laptop cart, primarily used to promote multimodal writing in composition courses. Workshop topics included podcasting, digital editorial practices, visual rhetoric, online pitching, developing an online presence, online collaboration, and building a community of writers. The investment in technology of the program is thus especially geared towards learning outcomes such as cooperation, discussion, and community-building. As per the collaborative ethos that informs the program, while writers benefit from one-on-one mentoring, peer networks were also often born out of the workshops. The QC Voices website still gets thousands of visits each month, making it both a public forum for members of the QC community and a highly visible online representation of some of the college's most outstanding students, speaking their minds through a range of styles (from poetic prose to journalism, from creative non-fiction to a digital exhibits) on a plethora of topics (recent columns have focused on environmental activism, prison reform, nerd culture, immigrant life, local food culture, Afrocentricity, theater, hip hop, and Muslim-American identity). The initiative can thus be framed as laying at the intersection of digital and public humanities, whereas students produce public content pertinent to their lived experience and their community. In addition, it also operated as a kind of professional development, with alumni of the program working as professional writers, or using the digital literacy, communication skills, and collaborative approach to writing they developed through QC Voices in their professional work. In light of the CUNY-wide mass budget cuts under the COVID-19 crisis, Queens College has deemed QC Voices too expensive to run. The emphasis college administrators put on the cost of the editing fellows is further proof of a peculiar kind of shortsightedness in sustaining digital infrastructures (and computational humanities) through massive investments in technology - including million dollar contracts to purchase licenses for platforms developed with little regards to ethics by for-profit corporations, including CUNYFirst, Blackboard, G Suite for Education, and the like – rather than in human capital.

CONCLUSION

Even within public universities, I am aware of the GC's privileged position in terms of human and intellectual capital, as well as resources available to its affiliates through the ecosystem to which it belongs. Despite its pathological austerity blues - to quote Michael Fabricant and Stephen Brier (2016) - CUNY is the largest public urban university system in the nation, located in one of the largest urban technology hubs in the world. However, scaling up training in DH research methods is a desirable goal for both public institutions and the DH community itself. On the one hand, a true diverse DH community - to this day still extremely white and male-dominated - can only coalesce when training in the field reaches higher education's largest pools of diverse resources: community colleges and public university systems. On the other hand, public institutions can benefit from DH's ability to promote horizontal collaborative research practices that foster mentorship and nonhierarchical relationships among diverse perspectives, training, and fields of expertise to de silo knowledge creation and public impact.

In an institutional context steeped in DH, such as that of the GC, the Digital Fellows program represents a sustainable funding scheme aimed to employ and train graduate students, while also producing output for the community in the form of support for DH scholarship. Initiatives like the DRI and DHRI, aimed at teaching not only computational foundational skills, but also at scaling up the pedagogical philosophy that informs GCDI's work, are another example of sustainable professional development that can produce a waterfall effect for the community. If DH practitioners at better funded universities are more likely to have access to the newest technology and to professional assistance than those who are not, public universities can and must promote an institutional culture that aims at nurturing graduate students, staff, and faculty computational skills and devise opportunities for them to join forces across disciplines and hierarchies. Whereas communities of practice coalesce by doing together, they do not necessarily come nor stay together spontaneously. Public institutions need to actively stimulate, facilitate, or formalize such initiatives. Investing in human, rather than merely technological, infrastructure is essential to build communities of practice and spark a virtuous circle that can lead to further infrastructural development, larger scope of operations, an institutional DH culture, and eventually to formal and informal inter-institutional networks of practice.

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