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Lab and Slack. Situated Research Practices in Digital Humanities - Introduction to the DHQ Special Issue.

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Abstract

Although the concept of *digital* comes with an assumption of placelessness and detachment from physical space and geographical location, these matters still play a significant role in the way the digital humanities research is practiced today, and also in the future. The location, the surroundings and infrastructure open the questions of accessibility and equality: space shapes the opportunities for doing digital humanities research, both enables and hinders collaboration, and both unifies and divides scholars.

The purpose of this special issue is to examine the different aspects of **situated research practices** of the digital humanities covering two perspectives: **physical and virtual**. The physical places of research refer to the various digital humanities sites (laboratories, centers, departments) all over the world and more widely to the surroundings a location in a particular city, country, cultural sphere or continent affecting research practices. As virtual environments of digital humanities scholarship, we define the digital internet-based platforms, services, and tools that enable research and scholarly collaboration. The aspects that determine digital humanities research in both physical and virtual places are infrastructure (material and non-material), social interaction (communication and collaboration), and context (social, cultural, and political situatedness). The aspects influence each other and changes in one of them can affect the others. They have also impact on what is studied, the ways research can be done, and, in the end the results of our knowledge, what kind of knowledge digital humanities research can provide.

Digital Humanities Places and Spaces

Although working in the same university and being interested in similar issues, we, the editors of this special issue, had never met until recently. As it often goes, sitting in different buildings belonging to different departments at the Otaniemi campus of the Aalto University, we were separated by the physical space and organizational structures of the university. Only the lucky coincidence that one of us had a short presentation at the “Aalto HELDIG DH pizza” event, and the other came to listen to that talk took us to the same room to talk to each other. Meeting on the same physical premises enabled us to see how close our interests and thoughts were, not only regarding pizza, but also in scholarly terms.

Our story is not unique. Exploring the digital humanities (DH) matters, one cannot avoid noticing how the establishment of various DH places and their organizational changes influences how, where, and with whom we do DH research. Place plays a role in all academic disciplines, affecting the way we construct knowledge. In the DH field, which comes with a promise of utilization of “nonmaterial” and ubiquitous digital resources, there is a threat that we will forget how the place is also entangled in the digital. DH scholars work together in a physical place — a center and a laboratory — in which an infrastructure, facilities, and equipment determine the knowledge creation practices. DH researchers also collaborate in virtual space — online platforms and virtual research environments — in which an infrastructure, connection, and operation affect the work and research communication. The algorithms and designs of digital analysis and collaboration tools direct the way we work and what kinds of practices are not doable. Further, DH scholars also practice and collaborate in temporary places like hackathons and summer schools established around particular topics and people. Temporariness is one aspect that forms knowledge creation practices. In addition, the prerequisites for doing DH research vary greatly based on the wider social and cultural surroundings.

Examination of the research practices and structures in their cultural contexts and the temporal dimensions guiding the DH from the perspective of situatedness is a relevant topic with great intellectual importance. It reveals the fundamental prerequisites and unnamed assumptions directing and influencing the research and, through that, the research findings. Although the concept of digital comes with an assumption of placelessness and detachment from geography

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or physical spaces, these matters still play a significant role in the way DH research is practiced today and in the future. Geography, location, and organizational structures open the questions of accessibility and equality: spatiality shapes the opportunities for doing DH research, and both divides and unifies scholars. Organizational and algorithmic structures are political because they construct the prerequisites of research by pushing toward one kind of collaboration and make other kinds of DH work difficult to pursue. The approach of looking at DH from spatial angles provides interesting views of the field's present-day situation and where it is potentially going in the future. Therefore, it is particularly important to look at DH as a field entangled with the concepts of *place* and *space* that entail issues of the workplace, social interactions, and research communication.

Notions of *place* and *space* have popped up across various academic fields and been investigated in different contexts from socially constructed physical places to virtual spaces involving geospatial technologies, platforms, and services. Significantly, the development of spatial technologies and digital research, which would seem to detach work from a physical location, has led to the growing interest in the concepts of *place* and *space* that are key elements in defining the research culture. Based on essential studies on place and space by Relph [1976], Lefebvre [1991], Soja [1996], and Harrison and Dourish [1996], we identify place as a physical location that involves structure, materiality, connectedness, interaction, cultural representation, and social behavior. In contrast to place as the reality, space is seen as the physical and social landscape that emerges through processes operating over varying spatial and temporal scales [Saar and Palang 2009]. Space is thus considered in nonphysical categories including cyberspace, digital infrastructure, geographical space, digital platforms and software. Therefore, space, as Harrison and Dourish aptly summarized, is the opportunity to build a place framed as the understood reality.

The juxtaposition of these two concepts is a starting point to investigate **digital humanities research practices** determined by the aspects of infrastructure (material and nonmaterial), social interaction (communication and collaboration), and context (regional, social, and cultural). Our perspective on DH research practices stems from the observation of three significant changes in the field's development, entangled with physical and virtual dimensions: institutionalization, globalization, and collaboration.

The first challenges are related to the **institutionalization** of DH, infrastructural transformations, and the location of DH activities at the university campus. Over the recent years, DH has been rapidly developing, moving from a "set of practices" toward an independent field [Klein and Gold 2016] through the establishment of DH centers [Flanders and Unsworth 2002] [Zorich 2008] [Fraistat 2012] and laboratories. Some research centers have been converted into departments offering a number of different programs at the postgraduate level (e.g., the Centre for Computing in the Humanities was renamed the King's College Department of Digital Humanities in 2011), while some have launched separate laboratories like King's Digital Lab, formed as an independent unit in 2015 and closely affiliated with the Department of Digital Humanities at King's College London. Thus, DH, in a certain sense, has been transformed from practice *space* to a physical *place* operating as center, department, and laboratory.

The function of the infrastructural turn that has occurred in the DH area is to be an "agent of change," as Neil Fraistat rightly called it in the context of the DH center [Fraistat 2012]. The growing number of humanities labs thus raises the questions of the role of new physical places in the humanities and new research practices formed by a laboratory structure. In contrast to early versions of DH places, the laboratory model can function both as a physical working place (e.g., the Franke Family Digital Humanities Laboratory at Yale University Library) and a virtual research environment (e.g., HuNI — Humanities Networked Infrastructure — a virtual laboratory of the Australian government's NeCTAR — National e-Research Collaboration Tools and Resources — program). This multifunctionality of laboratories affects DH, which is seen as both a discipline located in a physical place (center, department, and lab) and a set of practices used in various areas (virtual labs, lab courses, and collaboratories).

The topics of infrastructural changes and the "laboratorization" of the humanities have been gradually undertaken by researchers in academic [Emerson et al. n.d.] [Earhart 2015] [Svensson 2010] [Foka et al. 2017] [Kitch 2017] [Lane 2017] [Pawlicka 2017] [Smithies et al. 2017] [Pask 2018] and nonacademic publications [Hiatt 2005] [Joselow 2016] [Breithaupt 2017]. Furthermore, it is worth noting conferences and workshops devoted to institutional transformations in the humanities, such as "Building the Humanities Lab: Scholarly Practices in Virtual Research Environments," the panel session in the Digital Humanities Conference held at King's College London in 2010; the "Theories and Practices of the Literary Lab" roundtable at the Modern Language Association National Meeting in Boston in 2013; "The Hum Lab: A Consortial Workshop" organized by the Hurford Center for the Arts and Humanities at Haverford College in 2014; "The Humanities Laboratory: Discussions of New Campus Models" conference organized by Arizona State University's Institute for Humanities Research at the National Endowment for the Humanities in 2016; "Digital Humanities Forum: Places, Spaces, Sites: Mapping Critical Intersections in Digital Humanities," which took place at the Institute for Digital Research in the Humanities at the University of Kansas in 2016; "Reimagining the Humanities Lab," the panel

discussion at the ADHO Conference in 2018; “Making Change through the Humanities: Institutes, Ideas and Infrastructures” workshop at the Royal Institute of Technology in Stockholm in 2018; “What Is a Feminist Lab?” symposium at the University of Colorado, Boulder in 2019; “Humanities Laboratories: Critical Infrastructures and Knowledge Experiments” workshop at King’s College London in 2019; “Rebuilding Laboratories” workshop at the Institute of Advanced Studies of the University of Birmingham in 2019, and “The Architecture of Science and the Humanities” workshop held at Netherlands Institute for Advanced Study in 2019. These activities show that the issues of place and space for DH research practices are becoming more and more significant in the face of DH’s institutional changes and the emergence of new research environments like virtual labs. Physical and virtual spaces entail particular research practices, the form of collaboration, and the manner of knowledge production.

The second noticeable change in the DH area is a turn toward internationalization and the **global development** of the field. DH has been established all over the world through research centers [centerNet n.d.] and laboratories, increasingly extending beyond Western countries. The issue of global DH is garnering more attention, and it suffices to mention the annual international conference of the Alliance of Digital Humanities Organizations (ADHO) with the special theme of Global Digital Humanities held at the University of Western Sydney in 2015, the annual Global Digital Humanities Symposium held at Michigan State University since 2016, the Global Outlook::Digital Humanities (GO::DH) Special Interest Group at the ADHO, and the call for papers for a book entitled *Global Debates in the Digital Humanities* [Fiormonte et al. n.d.], a part of the Debates in the Digital Humanities Series published by the University of Minnesota Press. The process of DH globalization involves a number of research inquiries entangled with the concepts of place and space such as global DH infrastructure, global virtual collaboration and networks, and a local physical place immersed in the regional, social, and cultural environment. DH research practices are thus both globalized and determined by the local situatedness.

The last observation that drives us to study the DH research practices related to the concepts of space is the creation of new forms of **collaboration and communication** through platforms (Slack, Zoom, Github, Trello, or Google Drive), social media (Twitter), and virtual research environments (TextGridLab). These tools have given rise to the development of a new model of cooperation and dissemination of research, taking place in physical and virtual environments (e.g. “Making Connections” was the first Humanities Commons Twitter conference in 2019). The collaboration processes have both spatial and temporal dimensions; therefore, we suggest examining research practices occurring in temporary events, the durability of established collaboration, the opportunity for creating global collaboration, and the research ethics related to virtual cooperation, and more. The various digital research tools that DH scholars use and develop can be seen as spaces requiring a certain type of data organization, working methods, language skills, and cultural understanding to function properly. Simultaneously, particularly those analysis programs that are easy to use or that facilitate easy learning can become widely used only because of the access and not necessarily because of the high-quality analysis.

The above changes and observations, related to the concepts of *place* and *space*, present the **digital humanities research as situated practices**. The development of infrastructure in the humanities and the establishment of laboratory places have led to the transformation of the humanities toward a situated field [Emerson et al. n.d.] [Svensson 2015] [Purdy and DeVoss 2017] entangled with physical and virtual environments. The research process occurring in a particular place becomes as significant as the outcome of a study. A laboratory draws attention to the place where work is constructed, focusing on research practices, structures, devices, and workplace design. The shift toward situated practices is the vital context for the investigation of place in DH since it opens up the discussion on the issue of research practices in a specific environment, employing tools and materials in space, design space, research collaboration, and the spatial representation of practice. Hence, contributors to this special issue discuss different forms of situatedness: institutional, local, regional, national, geographical, socio-cultural, and virtual.

As more scholars become engaged with DH research all over the world, and the organizational structures of the sites of digital humanities is developing fast, we need to look at the concepts of *place* and *space* that significantly affect the research culture. Therefore, this special issue brings these scattered discussions together and examines the situatedness of DH research practices in wider terms.

Situated Research Practices in Digital Humanities

The articles in this special issue examine the different aspects of the **situated research practices** of the DH, covering two perspectives, respectively referring to the title of *Lab and Slack*: physical and virtual places of DH research. The **physical** places of research refer to the various DH laboratories and centers all over the world and more widely to the surroundings that a location in a particular city, country, or continent gives to DH research. As for the **virtual** environments of DH research, we define the digital internet-based collaboration platforms that enable research and

scholarly collaboration. We propose thinking through the location-based research practices and digital collaboration forms of the DH research to explore the role of spatiality in locating the field, facilitating digital practices, changing the nature of research, and fostering collaboration. The issue explores spatial transformations and the architecture of the DH to examine how the organization of DH research, the materiality, and social practices are bound with a place where researchers interact, material devices are collected, and knowledge is constructed. It also seeks to respond to the question of how the spatiality and organization of space can prevent or complicate high-quality DH research.

The aspects that influence DH research in both physical and virtual places are (1) infrastructures, (2) the research and collaboration practices the places facilitate, (3) the social and cultural contexts relevant in that place, and (4) the temporality. These aspects influence one another, and changes in one can affect the others. All these aspects affect what is studied, the ways research can be done and, in the end, the results of our knowledge, what kind of knowledge DH research can provide.

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The infrastructures (1) set, for example, the position of a lab in the university organization, its funding, collaboration premises, the material devices, and digital resources it can offer. Further, in virtual platforms, there are material infrastructures, such as the capacity of the used devices, the strength of the internet connection, and the setting conditions. In addition, in virtual platforms, the algorithmic design defines what kinds of collaboration and research practices are possible in that place, how all the used platforms communicate with one another, and how easy it is to organize the used data and identify the significant discussions as the project proceeds.

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The research and collaboration practices (2) are less-tangible aspects of the situated DH research. Both in a laboratory setting and on a virtual collaboration platform certain research methods are favored over the others, the division of labor and collaboration is designed following a certain logic, and the meetings are structured in a certain way. The research and collaboration practices influence the ways information processing and filtering proceeds and potentially what ideas become crystallized, and which are left aside.

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Additionally, the social and cultural context (3) plays a significant role both in the DH centers and in virtual platforms. Location of a lab in a particular city and, for example, proximity or distance to other DH institutions or the IT industry, the accessibility, quantity and quality of digital data on local issues, or legislation all influence the functions of a DH lab. The virtual collaboration platforms enable global collaboration and encounters between scholars with diverse backgrounds. To avoid misunderstandings, the communication in a virtual platform must be very explicit in the cases where there is no, or very limited, physical contact. The social and cultural context also raises the important questions of accessibility: who feels welcomed and socially accepted in a DH space and who does not, and what kinds of disciplinary backgrounds or research topics are favored over the others?

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The temporal (4) dimension also matters: to meet people, you need to be in the right place at the right moment. Virtual collaboration is also bound to time, both in projects collaborating across time zones and in more mundane questions of the virtual collaborators' preferred working rhythms.

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The special issue divides the situated research practices into physical and virtual for the sake of analysis, but we acknowledge that, in reality, these aspects often overlap. Several articles in this special issue point out that the physical and digital actually overlap, and it is often practically impossible to separate them from each other [see, for example, El Khatib et al.]. The underlying assumption of this special issue is that DH research is very much a collaborative effort. Although we acknowledge that there is also excellent DH research done by individual scholars, they are often associated with a physical or virtual DH environment and the discussions there.

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The articles in this special issue are grouped into two main clusters that represent a unified set of themes: Cluster 1: "Physical Situatedness, Digital/Humanities Labs, and Infrastructure" with a subcluster "Digital Humanities Lab: Case Studies" and Cluster 2: "Virtual Situatedness, Digital Practices, and Collaboration".

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Cluster 1: Physical Situatedness, Digital/Humanities Labs, and Infrastructure

A discussion of the mutual relations between situatedness, infrastructure, and digital/humanities practices has been largely unexplored so far. We rarely think about DH in the context of physical place; however, this material aspect of work has a strong influence on the way the research is conducted and produced. A physical place involves affiliation, architecture, design, organization, policy, and equipment. It is located in a particular environment (local, regional, and national) that affects its development and operation. All these features shape the condition, possibilities, and constraints of doing scholarly works. They can both stimulate and disturb the research work and drive and limit interdisciplinarity and collaboration, as well as facilitate and hinder the transfer of knowledge. Hence, this cluster opens a number of interesting perspectives on the complexities of situated research practices. Contributors offer intellectual

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engagement with critical thoughts on the role of socio-material infrastructure in the humanities practices. The purpose of this section is to provide a theoretical framework for the discussion and understanding of the impact of situatedness on the production and transmission of scholarly knowledge. Authors use a wide range of theoretical tools to present various approaches to undertaking this research inquiry. The analyses lie at the intersections of infrastructure studies (see Guldi; Pawlicka-Deger; Kil; Shanmugapriya and Menon), critical analysis of the infrastructure design (see Guldi), the archaeology of humanities infrastructure (see Kil), digital humanities and science and technology studies (see Malazita, Teboul and Rafeh), laboratory studies (see Malazita, Teboul and Rafeh; Pawlicka-Deger), interdisciplinary studies (see Oiva), and knowledge production and transfer (see Oiva; Shanmugapriya and Menon). This broad theoretical perspective shows how digital/humanities practices become conditioned by a university's organizational structure, infrastructure, and digital technologies.

Here, the authors discuss the complexities and the agency of infrastructure, which organization and design are socially constructed and embedded within the larger culture of critical thinking about technology and culture (see Guldi). The contributors argue that the infrastructure is engaged with existing thought about power, represents a form of scholarly argumentation (see Guldi), and produces epistemic objects through the boundaries drawn around what makes an object knowable (see Malazita, Teboul and Rafeh). They show how the infrastructure, the laboratory apparatus, the socio-material assemblages, and the virtual are in a co-constitutive relationship; they all produce one another, participating in one another's existence (see Malazita, Teboul and Rafeh). Further, the authors demonstrate how the location, design, and facilities are significant components of the infrastructure models that are differentiated by operation and function. Each model for laboratory structure entails different research practices, methods, and actions, and consequently, produces a specific knowledge (see Pawlicka-Deger). The mechanisms of knowledge production and transfer are particularly dependent on the infrastructure that facilitates and shapes these processes. The authors show how DH centers enable interdisciplinary knowledge transfer, foster research practices, and maintain interdisciplinary networks (see Oiva). Next, the contributors demonstrate the relationships between the physical situatedness (a location, city, and country) and the knowledge creation and dissemination. The authors present how the location in a prominent city and the proximity to other universities and DH places are essential factors in manufacturing knowledge, facilitating collaboration and driving competition (see Oiva; Shanmugapriya and Menon; Kil). At the same time, the distance from leading institutions and the lack of infrastructure hinder research practices, the transfer of knowledge, and scholarly communication (see Shanmugapriya and Menon). The authors claim that the infrastructure plays a critical role in the humanities practices, not only in the DH based on collaborative and interdisciplinary initiatives and access to digital tools and resources, but also in the "analog humanities" that are rarely considered in terms of infrastructure. The authors reveal that the analog files and repositories also affect the research methods and, consequently, they can influence theoretical framework and development (see Kil). To summarize, contributors to the first cluster present various perspectives and theoretical tools for the discussion on the entanglement of the infrastructure and situatedness in the digital/humanities work.

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Jo Guldi's essay, "Scholarly Infrastructure as Critical Argument," presents critical reflections on the design of infrastructure. Guldi argues that the infrastructure designers are engaging in critical argumentation with their tools, and proposes the principles of critical thinking about the infrastructure that define the "culture of infrastructure". The criteria show evidence of critical thinking about humanities practice and active imagination of how digital infrastructure can mirror or enhance the traditional values of the humanities — that is, transparency, replicability, and public discourse. The article draws from an autobiographical narrative of the author's own initiative in the design and building of a piece of infrastructure called Paper Machines. Based on personal experience, the author determines a set of "critical" principles of infrastructure that constitute the kind of interventions that render the invisible visible and stimulates the public purposes and intellectual orientation intended in the building of infrastructure, and the extent to which humanities and social science critiques of the flow of information and power in society have resulted in the creation of alternative or transformative flows.

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Urszula Pawlicka-Deger, in the article "The Laboratory Turn: Exploring Discourses, Landscapes, and Models of Humanities Labs," reflects on a laboratory boom that has occurred in the humanities area over the past years. With the multiplication and diversification of laboratories at university campuses, in city spaces, and in cultural institutions, it is essential to analyze the stimulus of the laboratories' emergence and understand their conditions, meanings, and functions. The paper begins with the investigation of three discourses that gave rise to the formation of a laboratory in the humanities: the transformation of the humanities infrastructure within the university, the paradigm shifts in the social sciences, and the expansion of cultural categories (innovation, the maker movement, and the idea of community). Further, Pawlicka-Deger reflects on the definition of the humanities lab and presents a history of the laboratory in the humanities. Next, the author analyzes five models for humanities labs (the center-type lab, the techno-science lab, the work station-type lab, the social challenges-centric lab, and virtual lab) and shows how their situatedness, structure, and function entail different ways of knowledge production. The essay indicates the role of digital humanities as the

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driving force behind building a laboratory space, which promotes a culture of experimentation and collaboration. The author shows that the humanities lab does not imitate the science lab but adapts this new infrastructure for its own purposes and needs.

James W. Malazita, Ezra J. Teboul, and Hined Rafeh's article "Digital Humanities as Epistemic Cultures: How DH Labs Make Knowledge, Objects, and Subjects" examines a DH lab from the perspective of science and technology studies and laboratory studies. The central thesis of this essay is that the concept of the "situatedness" of DH labs extends beyond physical/institutional space and also includes epistemic, political, sociological, and disciplinary issues. The authors outline the constructivist model of laboratory knowledge practices developed through feminist laboratory studies, and how that model's focus on the laboratory as a producer of research subjects, rather than a container for them, runs counter to narratives about laboratories in DH. The authors argue for the construction of DH laboratories as epistemic cultures that produce epistemic objects and subjects — objects of inquiry and the practitioners who study those objects — as well as provide the conditions and infrastructures that make legitimate DH research. The analysis is based on a case study of the Tactical Humanities Lab at Rensselaer, an innovative DH lab established in a seemingly nonhumanities environment that is Rensselaer Polytechnic Institute. The essay thus presents the DH lab situated within the area of science and technology studies and addresses the issues of its identity, location, and the social construction of laboratory work boundaries.

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Mila Oiva in her article "The Chili and Honey of Digital Humanities Research" examines DH centers from the perspective of an interdisciplinary knowledge transfer, which she argues as being one of the core elements of DH research. Based on interviews of the directors, researchers, and administrators of established DH centers, she explores how these DH professionals describe the facilitation of interdisciplinary knowledge transfer in DH centers. The article discusses the way knowledge transfer facilitates and influences the knowledge production in the field. The article points out that the transfer of knowledge in DH centers is based on overlapping layers of organic networks and stable organizational structures that support various kinds of knowledge-sharing practices. Knowledge transfer in DH centers combines an exchange of ideas in the same place physically and online communication at various network layers, ranging from outside academia to internal communication between a research group. The factors that enable information flows also have the capability of restricting potentially meaningful information from entering to the field.

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Aleksandra Kil in the article "Excavating Infrastructure in the Analog Humanities' Lab" investigates Claude Lévi-Strauss's *Laboratoire d'anthropologie sociale* as a case study of the archaeology of the humanities laboratory. The author provides an in-depth analysis of the Laboratory of Social Anthropology (LAS) established in the Collège de France in 1960, linking DH with structuralism and structural anthropology. Kil discusses the physical situatedness of the LAS, the pragmatic and entrepreneurial side of its workings, and how this lab was initially organized around its prominent research apparatus, the Human Relations Area Files, a vast pre-electronic ethnographical database produced at Yale. Kil situates the LAS in the framework of the analog humanities and in the discussion on the infrastructure in the humanities. The article thus examines the infrastructural features of the analog humanities lab, which are not recognized as easily as in the case of contemporary digital labs. Kil excavates the origins of the research infrastructure as we know it: a lab, repository, catalog, and database. Drawing on theories of media archaeology and critical infrastructure studies, the article opens new research inquiries in the scope of the archaeology of the humanities infrastructure.

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Shanmugapriya T. and Nirmala Menon discuss in "Infrastructure and Social Interaction: Situated Research Practices in Digital Humanities in India" the present state of DH in India. The authors address the challenges related to DH infrastructure and interdisciplinary research collaboration in India by mapping the latest Indian DH hot spots in interviews and a survey. The unevenly distributed access to physical infrastructures and structural obstacles to interdisciplinary and interorganizational collaboration create challenges for DH research. The authors also demonstrate how the narrow integration of humanists and computer scientists is still a challenge. The diverging career expectations and interests of the potential collaborators, as well as the lack of technical know-how among the humanists, create obstacles in a country with "millions of software engineers." Further, digital infrastructures still do not always support, for example, the computational analysis of several Indian languages. This absorbing and needed essay provides an important opportunity to advance the understanding of how geographical, cultural, and physical situatedness affect the advancement of DH. It also makes an important contribution to the field of global DH.

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Digital Humanities Lab: Case Studies

Building a DH space requires a proper infrastructure, facilities, institutional regulations, funding, policy, community, and many more components that direct the development strategy, form a research environment, and shape the identity of the place. These components also construct and constitute the borders of the space, which raises the questions of

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inclusion and exclusion and affects the way of establishing a local DH community and people's sense of belonging to the space. Place attachment made by policy, representation, and symbolic gestures is accompanied by a negative side of place identity that is exclusion. The question is whether a DH venue creates a mechanism to exclude people from that place and, thereby, from the field. This investigation takes us back to a long-lasting discussion regarding belonging to the DH area; now, we return to this debate to pose the question about the role of place in building a sense of attachment and exclusion. Further, the DH venue is embodied in the surrounding environment, which has a strong impact on its operation, function, and practices. In light of the ongoing discussions on the locality of DH, the time is ripe to consider the conditions of establishing a site and the aspects of making a unique place reflecting the local flavor. Therefore, this cluster offers deep insight into the mechanism of creating and sustaining a DH space.

The articles fit squarely into the "Building a DH Center" genre; however, they do more than simply summarize the ways of establishing a local DH place: the contributors, who are the core and engine of the DH — scholars, practitioners, and students — share their personal experience and memories related to building and maintaining a DH place. These workpieces present absorbing stories of successes and failures, opportunities and obstacles, affections and frustrations. The authors reveal critical issues related to the sustainability of a DH place controlled by the local administrative decisions, budgetary priorities, the nature of the industry, and higher education (see Cummings, Roh and Callaway; Berens, Gaterud and Noorda). They pose crucial questions of how the place's location and institutional affiliations can both drive and hinder interdisciplinary collaboration (see Fickers and Heijden). They also disclose significant problems of accessibility and physical constraints arising from the design and size of a place (see Phillips et al.). Further, the authors demonstrate how the architecture of space plays a crucial role in driving the research process, stimulating creativity and engagement, and also ensuring security and transparency (see DeRose and Leonard). Hence, the authors discuss how the physical and virtual situatedness define and delimit ways of conducting research, establishing a community, and interacting with people (see Cummings, Roh and Callaway; Phillips et al.; Fickers and Heijden). Contributors show how essential it is to shape the identity of a place that resonates with the local and regional environment (see Cummings, Roh and Callaway; Berens, Gaterud and Noorda) and how important it is to create a sense of place and a culture of connectedness for the community situated as a group in one collaborative working space (see Fickers and Heijden). This cluster reveals the ongoing tensions between the vertical structure of the administrative and economic landscape of the university in which a place is situated and the horizontal structure of the community that is the place's soul and engine. Even though DH spaces struggle with funding, facilities, and proper location, the most significant aspect is the community that fulfills a place, measures its functionality, and brings the place to life. Similarly, if a center does not engage the community and draw a critical mass of scholars and students, administrative and technological supports alone are not enough to make the place successful. The sense of belonging to the community is thus one of the key elements of creating a place, and it can ensure its sustainability, enjoyment, and success. Therefore, given the growth of DH institutions, centers, and labs, it is important that we discuss such issues now, collect experience, and provide recommendations that can guide and support the future attempts to build a DH place.

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Catherine DeRose and Peter Leonard in the essay "Digital Humanities on Reserve: From Reading Room to Laboratory at Yale University Library" present the history of space in the Sterling Memorial Library of Yale University from 1931 to 2019 and its transformation along with the development of DH. The history of the newest scholarly support environments at Yale, namely the Franke Family Digital Humanities Laboratory, renovated in 2019, dates back to 1931 when a Reserve Book Reading Room was designed in an elaborate Early English Renaissance style. The authors describe the structural, aesthetic, and programmatic transformations of a space that aimed to facilitate, drive, and mirror DH practices. The article examines the role of the design library, architecture, and policy interventions in building and fostering the DH field. The transformation of the space in Sterling Memorial Library involved new ways of thinking about location, materiality, transparency, security, and collaboration. DeRose and Leonard present the efforts of designing a suitable place for DH practices as well as the challenges of an adaptive reuse of a historic (and historicizing) space, which is undoubtedly different from the process of renovating a newer, less decorative facility or constructing a completely new room.

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Rebekah Cummings, David S. Roh, and Elizabeth Callaway in the article "Organic and Locally Sourced: Growing a Digital Humanities Lab with an Eye Towards Sustainability" present a history and process of building a DH center at the University of Utah. The authors take readers back to 2009, when the first Digital Scholarship Lab was established, aiming at bringing together scholars engaged in digital scholarship practices from different parts of campus. Despite early administrative buy-in, staff enthusiasm, and technological support, the lab failed. After this unsuccessful effort, the second attempt to create a DH center was rooted in skepticism. The authors show the path of the second lab's formation: the Digital Matters Lab launched in 2017. Based on this experience, the authors share lessons of building a DH lab, which can be summarized in three bullet points: 1) a lab is a community that should be reflected in an active, vibrant space; 2) strong relationships with a supportive administration is vital to success; and 3) the lab's mission

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should be driven by local needs. The authors further examine these factors and present how the Digital Matters Lab navigates complex institutional legacies and fosters a formal center with a cross-campus partnership, mission, and identity. The article concludes by looking to the future of the Digital Matters Lab and its goals for the upcoming years, including sustainability, a regional identity, and campus integration.

Andreas Fickers and Tim van der Heijden reflect critically in “Inside the Trading Zone: Thinkering in a Digital History Lab” on the practical and epistemological challenges of doing historical research in the digital age. Their analysis is based on a case study of the Digital History Lab and its Doctoral Training Unit (DTU) on “Digital History and Hermeneutics,” an interdisciplinary research and training program established at the Luxembourg Centre for Contemporary and Digital History (C²DH) of the University of Luxembourg. The article examines the DTU as an interdisciplinary trading zone that applies the method of “thinkering” — the term that merges the tinkering with technology with the critical reflection on the practice of doing digital history. Drawing on this case study, the essay addresses significant questions related to how interdisciplinary trading zones are being constituted in practice, and how they are situated in physical working environments. The authors investigate the role of a physical space in forming a trading zone from the perspectives of the spatial and organizational framework of the DTU, experiences of the DTU doctoral candidates, and the usage of digital methods and tools in situated digital history research. The article constitutes an important contribution to the discussion on “interdisciplining digital humanities.”

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Natalie Phillips, Alexander Babbitt, Soohyun Cho, Jessica Kane, Cody Mejeur, and Craig Pearson’s essay “Creating Spaces for Interdisciplinary Research across Literature, Neuroscience, and DH” gives a deep insight into the meaning of interdisciplinarity in practice and the building of a space for supporting cross-disciplinary works. The reflections are based on a case study of the Digital Humanities and Literary Cognition Lab (DHLC) founded at Michigan State University in 2012. The authors share their experiences, memories, and research projects on “literary neuroscience” lying at the intersection of DH and cognitive studies. The essay aims to reinterpret the interdisciplinarity that is not limited to the discussion of collaboration between different fields but, instead, involves a culture of “chaotic space full of work, odd debates, and fun.” This chaotic place is built by the people who represent divergent disciplines and positions, enjoy different kinds of music, and share common jokes. This case study shows that a laboratory is constituted by people who are ready to take a risk, spend every moment in the lab, and overcome any constraints. The authors summarize the most important lessons they learned along the way, including the importance of the lab’s nonhierarchical structure, serendipitous accidents, and the joy of working in a group. This essay presents how a lab can expand beyond experiments into a unified and unrivaled community.

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Kathi Inman Berens, Abbey Gaterud, and Rachel Noorda’s article “Ooligan Press: Building and Sustaining a Feminist Digital Humanities Lab at a R-2” presents an original model for DH infrastructure that is a lab operating under market conditions. Ooligan Press is a not-for-profit book publishing lab where students of Portland State University collectively own and operate the publishing house. The history of Ooligan Press itself is an atypical example of a DH lab that became a large-scale structured entity through a set of accidental and atypical environments: backdoor founding, little funding, accidental national distribution, and curriculum integration. This atypical environment is part of what made the existence of Ooligan Press possible, what shaped its characteristics, and what makes the press difficult to replicate in a top-down DH lab model as opposed to the grassroots, bottom-up approach that led to Ooligan’s success. The authors pose significant questions, rarely discussed in the context of labs: How to connect the lab’s output holistically to the communities it serves? What’s the role of a lab in helping students achieve learning outcomes they seek when they enroll in a degree program? The essay examines the lab using the M.E.A.L.S. framework developed by Elizabeth Losh and Jacqueline Wernimont, that is, Materiality, Embodiment, Affect, Labor, and Situatedness. The authors show how overwork and passion are intertwined and how significant it is to build a community, a group of people who can work together, support one another in stressful situations, and share both the success and failure.

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Cluster 2: Virtual Situatedness, Digital Practices, and Collaboration

Alongside the physical places, DH research takes place in digital collaboration and analysis platforms. As DH often involves teamwork and the usage of research “materials” in a digitally shareable form (data, code, visualizations), research practices are increasingly performing in a digital manner. The algorithmic choices of the research tools and collaboration platforms create architectural shapes that direct our doings in the digital spaces. We discuss at Zoom and Skype meetings, organize the workflow through Slack and Trello, share materials through Github and Dropbox, and cowrite papers in Google Drive and LaTeX. We also develop new research tools and pipelines and modify their uses to suit our purposes. Being built by humans, the digital collaboration and analysis software contain cultural and spatial structures that enable one kind of activity and constrain another. Utilization of virtual collaborative spaces sets us

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partially free from geographical constraints but simultaneously ties us to other kinds of spatial and cultural dimensions. To communicate effectively in a digital platform, one must learn the internal communication culture of that channel.

The articles in this cluster study virtual situatedness, collaboration, organizational structures and research practices from various perspectives. They address virtual situatedness by exploring how DH community structures are being shaped by the call for openness (El Khatib et al.) and showing how digital collaboration tools can provide spaces for building and maintaining affective networks (see Evalyn et al.). Being nonphysical, digital platforms enable the easy establishment of a multitude of different kinds of “rooms” for different purposes. Although it is easy to start a group in Facebook, Trello, or Slack, to maintain it and make it flourish demands conscious development of research and collaboration practices (see Evalyn et al.). Several articles in this cluster demonstrate that, although the architecture of digital research and collaboration tools push toward certain kinds of usage, the users themselves establish different practices and employ the tools in the ways that best support their needs (see Evalyn et al.; Maryl et al.). Virtually situated research practices are often imagined in a form of a chain of problems and solution choices. This chain can appear either in the creative usage of various tools (see Maryl et al.) or by using the concept of a pipeline, with the possibility to adjust different parts of the pipeline to better fit the purposes of the study (see Lee et al.).

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Research software development is, as Bardiot and Lee et al. demonstrate, a philosophical, technological, and practical evolution process that demands deep knowledge of the domain, the ways data is usually studied, and profound argumentation on how it should be studied (see also Guldi in Cluster 1). The ways in which the scholarly infrastructures are built not only influence the research outcomes but can also either facilitate or complicate sharing detailed information on the methods, peer review, and development of the field (see Lee et al.). The articles address critical questions regarding the quick obsolescence of digital tools and collaborative spaces. DH work takes place in a constantly evolving and changing environment, as research teams fluctuate over time, and software versions continuously change (see Maryl et al.). The digital spaces are constantly changing, and the chat “room” you entered last year might not be there today. What will happen to the conversations that store our ideas and demonstrate valuable collaborative development processes or the research outcomes stored in outdated formats within a few years (see Bardiot)? How will we ensure that we will not forget the old knowledge while we are constantly running after the new?

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Further, the articles reveal different needs of functionalities and research and communication practices in different collaborative settings. An individual researcher can conduct research by adjusting a pipeline developed by another scholar (see Lee et al.), while a research lab — or a “tree” of labs! — hosting several intersecting research projects, must develop a multichannel exchange of ideas and emotions (see El Khatib et al.; Evalyn et al.). A research project that involves nonacademic institutions, like the analysis of performing art with the artists, requires a digital platform that allows documentation of the data when the artists create it and preserves it for the scholar for later studies (see Bardiot). Digital scholarly collaboration also comes in the forms of openness, transparency, sharing protocols and pipelines, ideas for different functions in a tool, and open source and interdisciplinary exchange of ideas and methods (see El Khatib et al.; Maryl et al.; Lee et al.; Bardiot). The increasing amount of data sets new challenges for various fields that need to ponder their approach to vulnerable and heterogenous digital traces (see Bardiot) and develop new practices of digital data use (see Maryl et al.). Through conscious choices in the practices in a research community, it is possible to develop an affective and supportive digital community (see Evalyn et al.), compile information in collaboration, and systematically build on previous findings and comparisons (see El Khatib et al.; Bardiot; Maryl et al.; Lee et al.). The ethical questions of DH are tightly woven together with research practices, for example, in building a research community and collegial support (see Evalyn et al.).

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Randa El Khatib, Alyssa Arbuckle, Lynne Siemens, Ray Siemens and Caroline Winter in “An ‘Open Lab?’ The Electronic Textual Cultures Lab in the Evolving Digital Humanities Landscape” begin the Cluster by analyzing the overlapping physical and virtual space of the Canadian Social Knowledge Institute (C-SKI), a major institution coordinating and supporting the Electronic Textual Cultures Laboratory (ETCL), the Digital Humanities Summer Institute (DHSI), and the Implementing New Knowledge Environments (INKE) Partnership in Canada. Dwelling on the concept of *open social scholarship* and the assumption of a correlation between the developing knowledge landscape and the structure of an intellectual facility, the article explores the functions of the community. It shows how the community has been structured to support open social scholarship and explores what types of lab infrastructure models, tools and user practices facilitate open social scholarship. For example, a digital platform, the Canadian HSS Commons, enables connecting, collaborating and dissemination of research among academic institutions and with the broader public. The article is an important contribution to our understanding on how the structures of physical and virtual lab spaces can shape scholarly openness to the broader society.

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Lawrence Evalyn, C. E. M. Henderson, Julia King, Jessica Lockhart, Laura Mitchell, Suzanne Conklin Akbari in “One Loveheart at a Time: The Language of Emoji and the Building of Affective Community in the Digital Medieval

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Studies Environment” analyze the Slack usage practices of the Old Books, New Science Lab (OBNS) at the University of Toronto. The article shows how the versatile group of faculty, postdoctoral fellows, graduate students, undergraduates, and digital librarians created channels dedicated to various lab tasks and developed Slack usage practices and “languages” to meet their daily needs. For them, Slack is not just a collaborative tool, it serves as a platform for building and maintaining a powerful affective network that brings together the members of the community. Informal language and rich emoji usage culture — some created by the community members — play a crucial role in sustaining the affective digital community. The article addresses the wider questions of work in neoliberal academic settings and the role of the digital community in helping to cope there. The authors state that their Slack channel reflects the lab’s simultaneously horizontal collaborative nature and the vertical structures that come with working in the university settings. They identify the tension between the horizontal and vertical aspects as productive tension, which has helped them create a community that simultaneously supports both professional productivity and wellbeing.

Clarisse Bardiot describes in “Theatre Analytics: Developing Software for Theatre Research” the genesis and the process of developing the free and open source tools *Rekall* and *MemoRekall*. *Rekall* is a digital environment for documenting and analyzing creative digital processes, and *MemoRekall* is a web-based tool that facilitates rich video annotation. The article discusses how the development process of the tools was initially launched to address research needs in the performing arts, the main objectives set for the tools at the beginning of the project, and how collaboration with various user groups helped deepen and shape the tools’ functionalities. In her article, Bardiot raises crucial questions regarding the preservation and obsolescence of digital traces and the technologies we use, and how new ways of thinking about the data and developing new digital tools can push forward, adding new analytical layers, such as “theater analytics,” to traditional research.

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Maciej Maryl, Costis Dallas, Jennifer Edmond, Jessie Labov, Ingrida Kelpšienė, Michelle Doran, Marta Kołodziejska, and Klaudia Grabowska present in “A Case Study Protocol for Meta-Research into Digital Practices in the Humanities” a protocol for the meta-analysis of DH research, based on three pilot studies. In the pilot studies, the Digital Infrastructure for the Arts and Humanities in Europe (DARIAH) and the Digital Methods and Practices Observatory (DiMPO) Working Group identified divergent uses of digital tools and a variety of research practices adjusted to the specific needs of each individual research project. The authors propose a protocol of meta-research that consists of a set of specific methodological guidelines for researchers wishing to study research practices in the humanities. The protocol aims to help the scholars produce comparable research results that will help track and understand novel research practices and assess their impact on scholarly activity. Thus, the article is a step toward establishing a systematic reflection on the implication of the combination of various digital platforms and their using practices to humanities research.

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Ashley S. Lee, Poom Chiarawongse, Jo Guldi, and Andras Zsom in “The Role of Critical Thinking in Humanities Infrastructure. The Pipeline Concept with a Study of HaToRI (Hansard Topic Relevance Identifier)” propose the pipeline concept to DH research. Pipeline is a chain of algorithms that processes the selected data using subsequent steps. As each step and used algorithm is documented, usage of the pipeline allows replication of the study, conducting the similar process to another dataset and altering the used algorithms of the process to better suit one’s research. Transparency of the process enables exploring best practices in digital research, where open discussions about tools, their functions and interpretation can turn into informative examples leading to development of the methods. To illustrate how a pipeline works, the authors present the *HaToRI* (Hansard Topic Relevance Identifier), an open-source pipeline-based tool for identifying thematically-linked passages in the nineteenth-century debates of Britain’s Parliament. They show how a series of algorithms move through the steps of cleaning a corpus, organizing them into topics, and selecting particular topics that are used to extract a subcorpus of interest in HaToRI. The article also gives an example of how the pipeline can be used in studying debates on property in the nineteenth-century British Parliament.

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