Abstract

In this response to Werner Sollors’s article on the use of digital technology in research and teaching scenarios, we ask how some of the observations made by Sollors and his colleagues apply specifically to a German American Studies context. We are particularly interested in further discussing questions of access to and availability of digital material, the impacts of computers on teaching environments and methods of digital pedagogy, the need for increased data literacy in the humanities, and the chances and limitations of transdisciplinary research collaborations that often inform digital scholarship in American Studies.

In recent years, the rise of a wide range of digital tools and methodologies has begun to fundamentally change not only American Studies and many other fields and disciplines in the humanities but the academy as a whole.1 Fueled by a broad array of technological innovations and developments and of new funding lines geared specifically toward advancing the digitization of scholarship, these changes do not simply mark another methodological turn. Instead, they constitute a transformation that is here to stay and that has already begun to permanently alter how we conduct research, publish, and teach.

The contribution “Reckoning by Cyphers, Laughing with Robots: New Technologies in Research and Teaching” offers an insightful overview of recent and current digital practices in American Studies. While the article includes transnational voices on digital scholarship, publishing, and teaching, we recognize a number of significant differences as well as similarities to German American Studies in the willingness and ability to employ new digital technologies in research and teaching contexts. Our response, therefore, aims to highlight central issues raised by Werner Sollors and his colleagues and to review the state of the digital in German American Studies.

One important difference that stands out when reading the answers to Sollors’s call is digital infrastructure. Most German Americanists have spent time at a U.S. university as researchers, teachers, and/or students and have thus witnessed the steady advance of digital technologies in the United States. Even small colleges far removed from Ivy League institutions on the east coast have been using computers to facilitate...
teaching and learning in virtually all fields since the mid-1980s, and in the 1990s modern media technology that catered to the needs of higher education advanced even more rapidly (e.g., the prevalence of CD-ROMs and software such as Microsoft PowerPoint). While German libraries were still clinging to their card catalogues, most U.S. university libraries already allowed for quicker, more elaborate searches and access to material using computers and databases. Today, while there are panel hashtags and Twitter tables in many sessions and workshops at MLA, OAH, AHA, or ASA conferences, only a handful of GAAS members are using social media to communicate scholarly matters at annual meetings or in general. In a similar vein, cultures of public outreach and dissemination of one’s scholarship vary considerably between the United States and Germany/Europe, where scholarly participation through social media or the curation of one’s digital academic profile as a self-promotion strategy is only slowly catching on. Likewise, “innovations in the classroom” (Sollors et al. in this issue) seem to have been implemented in the United States more easily, not least due to the infrastructural head start enjoyed by U.S. institutions of higher education. Here, too, one must take note of the gap between the United States and Germany/Europe in the willingness and ability of researchers and institutions to invest time, money, and energy in blended-learning scenarios or the infamous Massive Open Online Courses (MOOCs). Particularly in the United States, a number of universities have promoted MOOCs as a technology that would transform teaching and learning, promising global democratic access to higher education. As a welcome side effect, they would also curb rising costs in the educational labor sector. While they might have fulfilled the latter, MOOCs have by and large failed to live up to their promises.

Sollors et al. provide ample evidence for one of, if not the most, exciting aspects of digitization in academia and American Studies: the new and increasing availability of previously unavailable cultural materials, which has led to numerous new research possibilities, networks, and questions. As far-reaching as these transformations are, they largely take place invisibly and dispersedly, and they often go unacknowledged. They include the many unsung hero archivists, data cleaners, programmers, and other digital and non-digital contributors who provide the necessary labor to prepare the objects of study that we have the privilege of encountering in special collections, databases, or digital archives. In her response to Sollors’s call for “field reports,” Catherine Keyser describes a central advantage of having ever-growing archives and databases of cultural material relating to the United States at our disposal (and many of us will undoubtedly agree), namely the possibility of conducting full-text searches, which has led to new approaches and insights that would not have emerged by glancing at chapter headings or consulting indices. However, keyword searches can also lead to decontextualized readings in the digital realm. Hence, when Sollors writes about how new tech-
Note that technologies can offer “shortcuts” (Sollors in this issue) to research results, opening new avenues to previously unavailable resources which may be tapped in ways that allow for new questions to be asked, and, potentially “new” knowledge to be generated, he is also hinting at the danger of dilettante scholarship that is lurking in digitized primary and secondary material. Moreover, while we have relatively good digital access to historical newspapers, government records, and other documents from the United States and many countries of the Global North, large numbers of literary and historical sources remain undigitized. While non-digitized sources continue to be used by Americanists, they have become more difficult to access. And we have to acknowledge that the choice of what is digitized influences research, often forcing researchers to resort to materials that are comparatively easier to access and use. Like Sollors and his colleagues, we are thrilled by the abundance of digitized datasets, but we would like to add a word of caution regarding our use of them and also lobby for continued pluralism in terms of what is being digitized—especially when it comes to national libraries, archives, and museums.

Regarding the actual materiality of our objects of study (and the experience of them), Sollors and M. Lynn Weiss also stress the importance of students’ exposure to original manuscripts in archives, museums, or historical sites. While speed and widespread access to digital sources have greatly affected research and teaching, the caveat remains that the privilege of first-hand exposure to manuscripts is reserved for those who work or study at prestigious institutions of higher learning. These are still mostly U.S.- and Europe-based and are often open only to those scholars and students who have secured grants or scholarships to travel to and in the United States for some time or on several occasions. Those who study at community colleges or live in the Global South are mostly barred from enjoying this privilege of access. Instead of calling for more funds for air travel to allow more researchers to experience in person the “aura” of the non-digitized original source, we would suggest that digital copies of primary and secondary material, when accessible freely and openly, have already shown their potential to deepen our understanding of American literature, culture, history, politics, and society. Hence, we might be best served by increasing and extending the digitization of documents and objects while ensuring that access to sources and software is distributed equally among a global community of scholars. To facilitate the broadening of access to hitherto non-digitized or siloed archives and databases, we, too, would call for and invite more collaboration and sharing of access and material.

Sollors et al. rightly raise the point of the increasing importance and potential of transnational, multilingual, and interdisciplinary collaboration. E-mail, Skype, Slack, and other digital forms of communication allow scholars to conduct and maintain “collaborations with colleagues in shared projects” (Sollors in this issue). For many of those colleagues, the digital humanities have become a field of intense (and at times frustrat-
ing) collaborations with IT specialists and with other humanities disciplines. In fact, digital scholarship is, by definition, an interdisciplinary endeavor, and it thus comes naturally to American Studies with its general hospitality to interdisciplinary work and openness to methodologies and tools new to the field. Digital projects now bring together disciplines such as Literary and Cultural Studies, History, Sociology, Area Studies, Human Geography, and Classical Philology with Linguistics, Engineering, Information Technology, and generate dialogue between university libraries, special collections, archives, private companies, and technology providers. In short, digital scholarship facilitates new forms of collaboration across the boundaries of disciplines and nations.

As many of Sollors’s respondents point out, however, having material available digitally does not necessarily mean that everybody has equal access to it. The question of access has indeed become a crucial one and is often perceived as a double-edged sword. On the one hand, digital tools provide access to data for an ever-increasing group of users. On the other hand, such access is often precluded by economic means, geographic location, and/or technological knowledge. Raquel Kennon’s intervention on behalf of mobile phones is worth reiterating here, because smartphones may indeed enable socioeconomically disadvantaged students to participate in class discussions by providing easier access to the assigned readings without additional costs and by familiarizing students with the research process (e.g., finding primary sources online). Smartphones can thus serve as effective pedagogical tools that enhance student engagement in the socioeconomically diverse classroom. It is also crucial to provide free access to the internet to everyone everywhere, so that students, teachers, and researchers as well as the general public are able to read, learn, and interact while using public transportation on their way to and from the still important non-virtual classrooms.

Access to data is, as the smartphone example shows, primarily a question of economic means. While Sollors is correct in highlighting “the issue of cost among the drawbacks” (Sollors in this issue) of the increasing digitization of research and teaching, as, for instance, paywalls or cost-intensive data-cleaning projects attest to, we want to stress the continuing rise of open-access (OA) digital publishing in the humanities. The transition of Amerikastudien / American Studies to an innovative OA online format (the issue that you now are most likely reading on your screen) is a salient example. As such, the journal also strives to expedite the development of new insights, approaches, and questions in American Studies; it is not only a matter of making research and expertise more widely accessible to the public via facilitating open access to American Studies in a “top down” fashion. More succinctly, the digital availability of Amerikastudien / American Studies promotes the gleaning of new research problems, questions, and paradigms by means of a “bottom up” social media strategy (Facebook, Twitter, Instagram) that has the potential to democratize and dynamize the ways in which
we conduct teaching and research. By augmenting the already successful forum format with critical responses, such as the one you are currently perusing, *Amerikastudien / American Studies* will continue to contribute to a newly reinvigorated debate culture.

Education constitutes another realm in which digital technologies and methodologies impact American Studies. Ideally, digital environments can offer students new, interactive, and immersive experiences and allow for different types of learners to study in the ways that work best for them. Blended learning refers to arrangements in which learning scenarios based on information and communication technology are combined with “traditional” teaching methods. Properly used, e-learning platforms such as OLAT, ILIAS, or Moodle can improve teaching and learning: they enable instantaneous and durable scholarly discussion through interactive mechanisms for individual feedback and forum exchanges; they facilitate digital forms of student participation and increase constructive collaboration; and they provide learning paths and social hypertext readers (cf. SHRIMP at the University of Leipzig’s Institute for American Studies), which can enhance knowledge dissemination and help generate the scholarly identity of learners. Being independent of time and place, such platforms are potentially democratic learning and discussion spaces. Blended learning has undoubtedly led to more creativity in teaching, via, for instance, assigning the curation of links, adding playfully digressive associations (Keyser in Sollors et al. in this issue), or introducing annotation and storytelling platforms (Nadell in Sollors et al. in this issue). One might add streaming technologies such as Spotify, iTunes, or YouTube and digital tools such as Google Maps, Wikipedia, and many others to enhance the teaching of American literature and culture.

Furthermore, manifold archival, public, and oral history projects exist, often in the form of websites that have evolved out of the collaboration of students and teachers and that preserve previously silenced experiences and present neglected (hi)stories to a wide audience. Additional successful examples of innovative digital pedagogy are provided by Sollors and his colleagues: they range from gamification (Rubinstein in Sollors et al. in this issue), to pairing archival exploration with documentary film screenings through specific digitally distributed assignments (Schacher in Sollors et al. in this issue), to creating collaborative syllabi via Twitter (Briones in Sollors et al. in this issue), or using cloud-based or university-hosted systems that enable collaborative learning formats (Keyser in Sollors et al. in this issue). All of these showcase the general usability of digital pedagogy, but also some of its limitations. Arguments against digital teaching technologies note that they have not proven to be superior and that they require more time to develop, implement, and evaluate. In fact, the success of teaching and learning digitally depends on careful time-consuming preparation by instructors as well as streamlined assignments and targeted study questions. The
promises of digital pedagogy often seem to outrun its actual uses, and there is an ongoing controversy over the potential for digital technologies to replace human-to-human interactions in the classroom.

The teaching of computational methods in particular often poses significant challenges to teachers who are experts in their discipline but might feel that they lack the technical expertise to steer their students toward digital scholarship. Here, we are thinking about tools that allow students, teachers, and researchers to apply computational approaches and use the results for further research. Online resources for literary and audiovisual media analysis include the visual programming language for music and multimedia, Max (or alternatively, Jitter), which makes possible new sonic experiences in the teaching of literature, such as Ellison’s *Invisible Man* (see L’Official in Sollors et al. in this issue). Mapping tools, such as ArcGIS, offer a more efficient way to organize material by geographic location, and can also be used to discover new connections or patterns in data. Resources that teach coding languages such as Python or R on a step-by-step basis are also freely available online. For American Studies practitioners who have already ventured into this territory of computational methodology, the results have proven well worth the investment (see Siewert and Reiter).

When it comes to digital pedagogy, data literacy is indeed an important issue that comes up repeatedly in the responses to Sollors’s call as well as in our own experiences in teaching and research. Some of the reports claim that many students, though “digital natives,” do not know how to employ databases or use non-proprietary IT tools. Indeed, as Kathryn Roberts claims, the “sheer volume of information” (in Sollors et al. in this issue) needs to be countered by a sustained focus on critical thinking in pedagogy and on teaching critical media and data literacy skills. We concur that there is a distinct need for data literacy and critical digital awareness, but at the same time believe that this is not new to the digital age but rather a continuation of previous learning and research skills and tools (i.e., knowledge about bibliographies and the ability to use them has been taught in American Studies classrooms for a long time). Nevertheless, as digitization continues to shape our scholarship and teaching, data literacy is becoming a foundational and necessary competence, perhaps even a *Kulturtechnik* comparable to reading, writing, and counting. Data literacy refers to the ability to handle digitized information maturely in all (digital) walks of life. It means knowing when and how to trust data in order to draw useful information from it. Data literacy enables those using digital material to ask how the data was collected, analyzed, and presented, what there is to learn from a certain data set, and how reliable the information a certain method of data analysis yields is. Data literacy is foundational not only for work in academia but also increasingly for participation in our data-driven and data-hungry societies. It is hence imperative that students, instructors, and teachers are equipped with proficient critical data skills.
that allow them to handle ever-changing data formats and sources. Data literacy also includes acquiring basic computational skills, to the extent that one understands the functionality of algorithms and the decisions and preconceptions that have informed data selection and processing. This, in turn, requires students and instructors to think about data in interdisciplinary ways and to understand data in various scientific, academic, economic, and private contexts. Here, the university, and the humanities in particular, can play an important role in shaping “data storytellers,” i.e., people who can communicate about data to people lacking data literacy, so that we can have, as Raquel Kennon puts it, “fruitful discussions about academic research methods, digital archives, online databases, and the nature of ‘search’ itself in the age of Google” (in Sollors et al. in this issue).

Already, several programs designed to enhance data literacy for students and staff exist on both sides of the Atlantic. For instance, the Information and Media Literacy (IML) project at the University of Passau is catered toward students, and particularly future secondary school teachers, who attend seminars in which they learn to collect, sort, critically evaluate, and subsequently structure, produce, and distribute information. One of the basic premises of these seminars is that students are not mere consumers but are expected to become producers of data-based knowledge. Students thus conceptualize and lead class sessions and ultimately produce (digital) knowledge in the form of exhibits, podcasts, or videos. Via a critical reflection on the process of data generation, they become literate in the various aspects of knowledge creation and distribution.

Finally, Sollors et al. highlight a number of challenges other than access posed by the digital that students and scholars encounter, including hyperlink death, the ephemerality of sources, “plagiarism wars,” the increasing dependence on Google and other proprietary and non-transparent data factories, and the ever-loomng specter (and reality) of control and censorship. Sollors rightly adds that online conversations often deteriorate into “threads’ of opinion,” without actual engagement or argument (in this issue). Education that stresses critical digital literacy could also be a solution here. Many of us have experienced how technology use in the humanities has grown exponentially in the last decade (data mining, visualization, map-making, modeling, browsing large digitized repositories, etc.), yet also how innovations in teaching often seem to boil down to assigning tweets or blog posts instead of reading response papers (Hsu in Sollors et al. in this issue). This is most likely an effect of increasing time-constraints, as well as of the value that the university fails to place on digital labor provided by students, instructors, and assistants.

An additional area of interest, which deserves further attention, is the study of digital culture itself. American Studies is ideally suited and thus obligated to reflect critically on the impact of computers and digital technology on U.S.-American culture, through, for instance, the grow-
ing ubiquity of social media, video games, hypertexts, cyberculture, virtual reality, AI, or blogs. These have already, and will increasingly, become objects of academic inquiry and analysis, regardless of whether researchers employ traditional or digital humanities methodologies. When conceiving of digital culture as subject matter, one determining characteristic is the digitality of the primary materials, where the interest may lie specifically in the electronic dimension of their production, circulation, and consumption. Other current research projects in American Studies center on the various representations of digital technologies in fiction, film, or other art forms.

In conclusion, digital tools, questions of access to published materials, and the field of digital pedagogy are, in different ways, of obvious importance to the American Studies constituency: knowing the tools that are available can greatly enhance the quality and efficiency of research and teaching, and questions of how we will publish in the future (or how we can access material published by others) have an immediate impact on the work that we do. The turn toward quantitative methods, often coming with biased and/or limited corpora, at times works to impede or even undo a critical interest in the politics of texts, in race, class, and gender, or in cultural work understood more broadly. Digital tools often come with thorny questions of intellectual property rights, when content organized on a presumably “free” online platform ends up belonging to the company operating the platform, when the promises of easy electronic access come at a high price for libraries, or when journals, offering to publish papers under an open access license, take a steep fee from the authors to cover their costs. In digital pedagogy, the MOOC debate has offered a first glance at how the promise to make human teachers expendable is attractive to university administrators, and how scholars and educators need to engage in this debate. Firstly, low course completion rates have barely improved, despite investment in course development and learning research since 2012. Secondly, the majority of MOOC learners do not complete their degree programs, as most participants do not return to classes after their first year. Thirdly, the growth in MOOC participation has been concentrated almost entirely in the world’s highly developed countries (Reich and Ruipérez-Valiente). This shows that it is not new technologies alone that will change a globally unequal educational landscape, but that it is up to universities in affluent countries, their administrations, and political will to open access and affect change. American Studies, with its inherent interdisciplinarity and its rich tradition of critically reflecting on the politics of its own endeavors, is uniquely positioned to critique the transformation of academia in the digital age. Moreover, we are convinced that in this era of post-truth and alternative facts, the role of a critical, future-oriented scholarship and pedagogy that includes data literacy is more important than ever for the survival of democracy.
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