

## AFTERWORD

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# DEMANDS OF DURATION

## The Futures of Digital Sound Scholarship

JONATHAN STERNE, WITH MARY CATON LINGOLD,  
DARREN MUELLER, AND WHITNEY TRETTIEN

**DARREN MUELLER** We first started our conversation with you at the early onset of our project. At that time, I remember that our conversation went back and forth quite a bit about the possibilities of technological innovation and what consequences it might have for sound studies. What do you think has changed in the field since then [2012]? Where are digital humanities and sound studies overlapping?

**JONATHAN STERNE** That's a really long time in the computer industry and it's a really short time in the academy. I don't know that there has been any giant leap forward. It's more like conversations that have been going on for many years have continued. Movements like digital humanities have had a few more years to gain a foothold in the academy. It has become more normal to want to put audiovisual material inside humanities work across all fields, and so people are more comfortable with the idea of using digital technologies in their research and scholarship more generally. The equipment has gotten older, been replaced, been upgraded, and been broken. It's an endless cycle.

One of the things that's really struck me, as I looked at the *Provoke!* website and read the book, is that a lot of the best digital humanities work in sound studies is pretty low-tech. When people want to found a digital humanities lab, they try to get a million-dollar grant or a few hundred thousand dollars, they buy a bunch of computers, get all of these servers, video stuff, high-res scanner, etc. But you don't need to. If you want to start doing digital humanities in an undergrad sound class, almost all of your students, even if they're fairly disadvantaged, have a recording device in their pockets. The software to edit those recordings on a computer can be found for free, software like Audacity, and there are lots of places on the web where you can upload this work, annotate it, and share it. *Sounding Out!* is a great example of this kind of work—they just use the WordPress platform, SoundCloud, and YouTube. It's not that those things are perfect by any means, but in terms of barriers to entry, they are very, very low. The main issue is that labor that would be compensated in publishing is volunteered in editing the site. They explain their practice as a "labor of pleasure" in their piece, but it does raise a bigger issue around the increasing concentration of tasks in the person of the scholar (which makes us a lot like artists and musicians, who are suddenly also simultaneously publishers, producers, promoters, etc.).

If you want to start doing big data analyses of an author's corpus, and that author's work hasn't already been digitized and you don't have access to a digital humanities lab, then that is a much more expensive proposition. For instance, the work that Tanya Clement is doing with HiPSTAS—that's a much more labor/capital/tech-intensive process that requires more advanced equipment (hardware and software), and technicians to work with it. And yet, as she talks about in her chapter, they are still having to figure out the basic, low-tech stuff, like how do you mark up audio in a way that is useful for scholars, and how do you actually analyze sound or get a computer to do it for you so that you can work at a higher meta level of interpretation? So there are a lot of dimensions to digital sound studies that are low-tech. If we want to follow my music research colleagues and start wiring up musicians to generate huge datasets based on their movements, that's going to be a lot more expensive, but those activities also don't mean much in a humanities context without rich humanistic questions to drive the inquiry.

**WHITNEY TRETTIEN** I would completely agree that a lot of the best work is low-tech. As we began putting together our website, we found ourselves pushing against the idea of using an all-encompassing content management system or developing a big new tool, and instead we kept coming back to

HTML, simple web technologies, and very basic, small-scale projects as a model for digital sound studies work. But then, what has changed? So often we pinpoint technology as the thing that's changing all of this—but here it seems like we're all agreeing that technology is not the primary engine of change in the academy. What is?

**JS** Well, I certainly don't think it's technologically driven at all. I think it's institutionally driven. One of the reasons that digital humanities has burgeoned is that there's money behind it. It's one of the only places in the United States that you can actually apply for and get a large grant to do humanistic work. In the U.S. there have been some interesting crossovers with library and information science and curatorial practice and preservation and things like that, so there are these huge institutional incentives to get into digital humanities.

There's also the logic of academic fashion. Digital humanities is a new thing—I mean, there are arguments about when it was coined and whatever, but the term isn't really in circulation before the twenty-first century—so it gets to be the new hotness. Every generation of scholars has to figure out how to get out of the intellectual mess made by the last generation. Through the eighties and nineties, it was the hermeneutic turn, the spatial turn, the theory moment. And now, instead of everything being about this hermeneutic turn, there seems to be this knee-jerk materialism that has replaced it. You can see it in the turn toward practice, of which digital humanities is a part. In Canada, there is a different-but-related practice called “research creation,” or in parts of Europe it's called “artist research.” It's tied to producing some kind of aesthetic work as the output of scholarship instead of a written piece. Often it comes out of an art school tradition, though, and some of it comes out of the need for artists to earn PhDs where the MFA used to be the terminal degree. But, as with digital humanities, it also represents a turn toward practice, and a very different response to the critiques of scholarly writing that came from our teachers and their teachers.

Any time you have this kind of ferment, it's an opportunity to ask real questions about how we do our work and what might be most useful. When you think about something like the journal article, that is a textual genre that changes about every quarter-century. The codex is much more durable, but the journal article is not a long-term thing that can't be messed with. So the digital humanities moment offers new opportunities to think about other kinds of periodical presentation of our work, especially when it comes to audio. It's child's play to put audio inside a PDF or inside a Kindle book or

something like that; the only reason that it's not done is fear about copyright litigation. Our own unwillingness to fight for our fair-use rights, and bad old habits, are the only things that keep scholarship so silent.

It also remains hard to mark up audio. You can sort of do it with the Scalar video player, but it's inelegant. You can do it on SoundCloud, but of course SoundCloud isn't designed for scholars marking stuff up, and so it has these other dimensions and issues to it. Its social model isn't very good for scholars. It also has yet to turn a profit, which means the platform could change or disappear any day. There's Joanna [Annie] Swafford's Augmented Notes project, which is super cool, but it assumes that you're working with a musical score, and it's only really useful if written music enhances your argument. I'm struggling with this myself right now. I've got a piece on Auto-Tune that I'm almost finished with, and I'd like to publish it digitally. There are a few places that I want to annotate short audio clips and say, "Here's what we're talking about when we're talking about really audible pitch correction"; and "This is why this is Auto-Tune and not a vocoder in this track"; and stuff like that. I mean, I can do it in SoundCloud, I can do it in Scalar, but neither provides the kind of reading experience I want to offer my readers. So, on the one hand we do need better tools, on the other, we're pretty close in a lot of domains to being able to do a lot of stuff already. And most of the resistance as well as the impetus is institutional rather than having the tools.<sup>1</sup>

**MARY CATON LINGOLD** This might be a good moment to follow up on some of those institutional problems that you talked about. We initially tried to find an academic press to publish the web collection and found that presses were concerned about being able to manage the project within their ecosystems. They wanted us to use an existing platform, for example, but we argued that HTML would actually be much simpler and longer-lasting as a technology than most content management systems. In the end, we self-published the project, but now we're facing similar challenges preparing to archive the project so that it can be preserved at Duke Libraries. So it's been really interesting to see how libraries and publishers are thinking about the production of digital scholarship. In terms of archiving, websites are not pieces of paper that you can stick in a box, and there are legitimate institutional concerns about scalability. As a scholar invested in advocating for the value of multimedia scholarship, what do you have to say to the academic publishing world out there and to tenure and promotion committees about fixing this problem before this moment is gone? That's my fear: that there's

money behind digital humanities now, but once this isn't the hot thing, are we going to lose some of that opportunity for innovation?

**JS** No, I don't think so, because there are other pressures. Right now, mathematicians, scientists, and some branches of academic medicine are in open rebellion against the for-profit science publishers, so it's not all on the humanities. It's part of a bigger movement.<sup>2</sup> There are a lot of things to note in your question: there's the whole publication and prestige part, the platforms, and preservation, which are all different things that all begin with P [laughter].

The platform problem is a real one. Just think about print publication and all the different formats that libraries have had to figure out. What do you do with the book that is too big to fit on the shelf? Well, it has to go somewhere else. What do you do with an unbound periodical? Well, it's got to go in a box. These are all things that librarians had to figure out how to catalog and manage. So in one sense we need to ask, "What kinds of digital containers can we legitimately be expected to maintain, and what range of things can exist inside of those?" A bunch of HTML pages that reference one another is probably pretty easy to keep going, but when you get into multimedia stuff or anything that's more heavily coded, it can start to be a problem.

With traditional publishing a lot of this stuff wasn't on the shoulders of the people doing the scholarship. The press had the people who did layout, binding, and shipping. But with your website, you're doing the binding, the layout, and the shipping (though probably someone else is handling the warehouse). That's a fundamentally different proposition. On the one hand it's another case of work that used to be done by others devolving into something that falls on the shoulders of academics who are asked to do it—I wouldn't say for free—but on top of their other jobs.

The preservation of multimedia materials is utterly puzzling. If you want to preserve video games, you've got to preserve the whole ecosystem of which they are a part. It's the same thing with any kind of multimodal scholarship that depends on a certain kind of platform or artwork. One way to think about it is that not everything has to last. Some interventions are of the moment. But so much scholarship doesn't work on that temporality. Timely interventions from a generation ago become influential arguments for reasons that the authors could not have foreseen. So I'm not real happy with the "let it all fade away" solution.

Relatedly, one of the really important questions is whether the author can abandon the project. Because if you look at the life cycles of intellectuals,

there are many different kinds, but in almost every case, the way people advance in their intellectual development is to finish projects and leave them, rather than to have to come back and continuously maintain them. That is why you have librarians and archivists whose job it is to maintain things. So we need a system that allows that kind of intellectual abandonment.

My hunch as someone who studies standards and formats is that we're going to wind up with standardization and official formats. And that's why the publishers wanted to push you into using their platform. But of course their platforms change all the time! So it's not a very reassuring proposition at the moment. Every year I go back to my website and I update it, and there are links to the books that I've edited, coedited, and authored, and almost every year the web pages that I've linked to are no longer there and they've moved somewhere else. Lisa Gitelman says the 404 error is the most common page on the internet.

**WT** I want to ask as a related side note, do you see a viable role for self-publishing in the academy in the future?

**JS** In some ways, all academic publishing is self-publishing in the sense that you have a group of academics that get together as a group and decide to put something out—especially the journals that are curated and edited rather than going through the blind refereed thing. Lots of important humanities journals are edited by collectives. That's not that fundamentally different from a collective on a website deciding what to put up, except perhaps in terms of prestige politics.

I think there's certainly room for it and people do it. Blogging persists in various forms and remains useful to people. But there are limitations to self-publication. While I agree with many of Kathleen Fitzpatrick's critiques of peer review, I also think peer review serves a tremendously useful function.<sup>3</sup> Academics aren't always the best judges of our own work. One of the reasons why so much academic writing is hard to read is because we don't edit each other very well and we don't let ourselves be edited—people get so precious about their prose. For me, the thing that's exciting about something like *Sounding Out!* is that it's heavily edited and curated; it's not blind-refereed but it's certainly a kind of peer review that's prior to dissemination. On one level you could call it self-publishing because it isn't associated with a publisher, unless you call WordPress a publisher, which I guess they are in a certain sense. But, it's also not the same thing as me putting something out there on my blog.

The other problem is in how people are going to find things. Publish-

ers serve an important curatorial role and a promotional one, too. I do my best book shopping every year at conferences, especially in the wake of the collapse of most good academic bookstores. So, I like the idea of nonprofit academic publishing. The thing to remember about university presses is that they exist to lose money, just only a certain amount of money every year. I think they serve a useful purpose. If they suddenly disappeared, we'd have a lot more work to do, and we'd have a much harder time producing and finding our best work. And of course there are all sorts of bad behaviors protected and justified by so-called blind peer review which shouldn't be allowed. Obviously there are many places we can improve, but I see self-publishing as part of a bigger ecology of publishing rather than a solution in itself.

**MCL** Well, I think you got to publishing and a little bit about preservation, what about the other p—prestige? Thanks for editing our questions, by the way in your response. Well done [laughter].

**JS** If you think about what makes publications matter, there's the idealistic version that we all want to believe, at least I hope we do, which is that publications matter when people read them. You want to be read; that's what matters. I feel that this is the real test of digital humanities work. If people produce things that are really useful to other people, they'll go find it. And they'll use it, and they'll cite it, and the fact that it wasn't in the *Journal of Highly Prestigious Things* isn't going to matter because the work will be influential on its own.<sup>4</sup> But of course, there are all sorts of cases where people evaluate your publications without ever having read them or heard them or seen them, depending on what they are, and that's where the whole prestige things comes in. So reviewers ask: "I haven't read this piece, but is that a good journal?" Like that would tell you anything—crap gets into even the "best" journals!

And that's where one of the big blockages is right now with multimodal scholarship. You see it in written tenure requirements—where they exist. You see it in the questions framed in tenure review letters; and you see it when hiring committees look at the cvs of prospective applicants. In a bad job market, I tell DH people to show that they can do a little of both: you show that you can play by the rules and then you do it the way that you want to do it as well, and that's probably the best that you can hope for. My job as someone reviewing a cv for a hire or tenure or whatever is to explain why and how digital work matters. For instance, people who write in TV studies will often publish in *Flow*, which is an online, multimodal periodical, so

when people publish there and I'm reviewing their files, I'll explain that this is actually an important place for their work to come out and it will probably be read and taught more than this other journal article in a more traditional outlet. So part of it is a matter of people who are being called upon to make judgments making the right judgments and explaining stuff to committees. It's far from ideal.

The other way you go is for organizations to specify sets of "best practices," which is what MLA is trying to do right now.<sup>5</sup> That can work if you have enough motivated people who will then take those recommendations on board. In the humanities there's a lot that has to be overcome—the single-authored article or book is still seen as the most basic unit of scholarly production, and if your work suddenly turns collaborative, well, how's that going to be evaluated? Is a hiring or tenure committee going to understand that? Hopefully, people doing collaborative work get hired with the understanding that they are expected to do what they already do. But people also change what they do. And so, we need to work to build institutional structures and traditions that support more kinds of scholarship.

Part of it is just a matter of time and part of it is people citing each other, too. I think that's really important. It's interesting, for instance, to look at what digital projects are referenced in this book. Sharon Daniel and Erik Loyer's "Public Secrets" and Emily Thompson's "Roaring Twenties" are mentioned, although as of yet people are citing these pieces to say, "Hey, look, you can do cool things with sound studies in the digital domain."<sup>6</sup> The next step is for people to cite work because of what it says as opposed to "Hey, now you can . . ." Like any other scholarship, digital humanities work needs to be able to travel beyond its own scholarly community.

**MCL** I want to circle back a little bit to your point that what makes something matter is whether or not it gets read. What about whether or not something gets heard? I think this is a real problem for digital sound studies—and we talk a little about this in the introduction—people's reluctance to spend time listening. There are so many cool things to listen to on our web collection, for example, but when I show them off to people they say, "Oh, cool." But do they actually take the time to hear it? What do we need to do to get people to listen to digital scholarship? Is the burden on the creator to make it utterly compelling, or is it a larger cultural problem that needs to be addressed in a different way?

**JS** It's a huge challenge. Part of the problem is precisely the demand of duration. If you think about how people read scholarly books, there are those

who start on page 1 and finish on page 400. They might do it because they are going to stand up in front of a class and talk about the text, or maybe they are really excited about the book, or it's really close to their area of expertise, or if you are reviewing the book, one hopes anyway, that they read the whole thing. But that's not the way it normally works. Normally, scholars don't read books cover to cover, from beginning to end. We can say that people shouldn't be engaging with scholarship superficially. But the reality is that we do it all the time when we are trying to write an essay and looking for a fact, or a way of talking about something, or a quote. The index at the back of a print book is a tacit acknowledgment that people don't read books from front to back. What would an index for academic soundworks look like? Think of it as a metadata problem. If the audio file were well tagged, you could find the part you need in the same way you can navigate a book. Then people could listen to the whole piece, or find parts as needed. As Jeremy Morris has shown, digital music didn't take off online until the metadata problem was solved—I'm not sure why we would expect anything different for digital scholarship.<sup>7</sup>

I'm also curious about music information retrieval as another way into audio files, but in the short run it probably will be of more use to answer specific questions, like, "Could you train a computer to hear music such that you could actually trace the diffusion of elements of style in popular music?" But we don't know if that's actually possible. One can imagine writing grants to study this sort of thing, studying it for years, and discovering that the answer is "no" [laughter]. But if you could do that, you could give a very different account of stylistic history, influence, and imitation, and other aspects of popular music history. That's classic humanities territory.

**DM** What you were just saying reminded me of something that I've been thinking about recently, which is this idea of close and distant reading, or big data versus microhistory, which we might kind of interpolate into close versus distant listening. It seems like with digital humanities there's always this tension between the big data and the minutiae, and with humanities scholarship, there is the tendency toward looking at small details and expanding outward. I think that has been a central question for us; this tension between the big and the small, the distant versus the close, has been something that's come up again and again and again.

**JS** Well, I mean one of the ironies when you're talking about sound is that both are more possible than they were before. To close-listen to something in 1990 at a university meant that you had to have a record player or a tape

deck in a classroom, which was unlikely. If you wanted your students to listen to something, they had to go to a library to listen to it. You'd have to be pretty motivated if you weren't in the music department.

Close listening is a lot more possible today, and close analysis of audio is a lot more possible than it was even five or six years ago. That's equally exciting to whatever big data possibilities exist. The commercial world, of course, is much more into the corpus question, recommendation engines, and so forth. Look at the new Apple music interface and the way they're constantly trying to figure out how to refer bands and acts to one another.

**DM** Like the music genome project that was the basis for Pandora.

**JS** Yes. All of that is a kind of distant listening. Whether humanists want or need that kind of technology, or whether we can co-opt it for our purposes, I don't know. It depends on how flexible the technology is. Academics did really well at co-opting photocopiers and email, although email has co-opted us back now [laughter]. But sonically, we don't know what it would mean to use it to analyze a corpus. One of the challenges with that stuff is not to ask such conservative questions like, you know, getting a bunch of orchestral music and saying, "Why is this the best music that has ever been made?"

**DM** Yeah, tell me about it! Please, no more of that question.

**JS** Yeah, that's not a real research question, because you've basically said, "I want to use science to justify my aesthetic preferences." It's not going to happen. It rarely works in traditional humanities arguments—or at least I find those kinds of arguments completely beside the point of studying culture. It certainly isn't going to work when you need reproducible results. But the other challenge is that generating data itself is difficult. If you look at the brain science on hearing and music, a lot of it is done around very small sample sizes, because it's expensive to do brain scans. So, I don't know. I think we're actually still a pretty long way away from any real advances in this area, because even though the tech industry thinks in very short time horizons, stuff for us changes really slowly, at the intellectual level. At the blink of an eye an institution can change, obviously, but intellectually I think it takes longer. And so a lot of what we have to do is figure out what questions we can ask with digital tools that actually might be useful to answer. And I think when that happens, that's when these sorts of new methods will really take off.

**WT** A lot of what we've talked about amongst ourselves is that we're trying to bring sound into academic argumentation, and into academic practices of reading and writing—but in fact we need to bring academic practices of reading and writing a little bit more into sound in order to make audio mesh with scholarship.

**JS** Absolutely. Part of the problem is that there are not well-developed academic practices of listening outside of music and linguistics and a few other fields. Poetics is a really interesting example right now, because the field has become so much more sonically attuned in the last ten years—in part because of the online sound archives and in part because of all the digital humanities research around it, and the continued burgeoning of performance studies and its impact on literary studies. Poetry is really a place where, in the space of a generation, scholars have rediscovered the importance of listening and integrated it into their research and pedagogy. So it definitely can happen in other fields.

**DM** It seems like you're saying that the interplay between sound and text constantly finds ways of reinventing itself. People working on sound are always confronting the issue of writing about sound in text. But as we found, even when building a website dedicated to sound, we were constantly being forced to deal with the fact that a digital medium is a visual medium as well. On the one hand, sound studies is very good at critiquing this dichotomy between the linguistic and the aural; but I think at a different level, it's also not so much about a textual bias as it is about recognizing that design has these biases built in. What can we do from there, other than just point to them?

**MCL** For example, we felt frustrated by audio players being the primary mode for interacting with sound in digital spaces. It's kind of an analogue notion, that you have this box and it has a play button, and pressing it is how you hear sound—it disallows a more intuitive, deeply integrated way of experiencing audio. At the same time, if you just have sound bursting out of the speakers without any stimulus, it's really disruptive. Some of the more classic cultural biases a sound studies practitioner might address were very much embedded in the process of trying to design the website.

**JS** The tyranny of the player is a thing. I've been thinking about this too—about what the “intuitive” modes of sonic representation are.<sup>8</sup> There is the wave form, which is amplitude. There is the spectrum, which is pitch versus amplitude, or frequency versus amplitude, which is supposed to represent timbre, but no one seems to be able to figure that out. There's a very lim-

ited vocabulary for representing sound. If you go back fifteen years and you look at some of the really innovative work that was done in Flash by professional companies for band websites (most of it is no longer available)—they found all sorts of ways of representing music. Of course, they conformed to no standard other than the Flash standard, which meant the site had to load; and if we're talking about 2003 that took forever. But there was this moment of experimentation. And then people sort of gave up. There is a lot more power in HTML5 than in previous incarnations of the technology. You can basically build in plugins into your browser. So there is more that can be done. The kinds of vocal effects that are in Paperphone, the project by Umi Hsu and Jonathan Zorn in *Provoke!*—you can probably do that in a browser now.<sup>9</sup>

The player solved a problem, though. When sound became part of the internet, it immediately became annoying, because its first uses were for advertising, right? Annoying things just started to play when going to a site, which is a problem if you are in an office, or if you are in any kind of collective space. It violates the privacy that you imagine exists between you and your screen, even if we know it never does.

I don't have a ready-made, how-to answer for it, but it seems that there are many other ways of representing sound and we might try some. I think the player is useful and works well when the sound is an example in a piece, like a figure or an illustration. And as for the analog tape recorder reference, it's just classic skeuomorphic design combined with international standards. That right-facing triangle on the play button is part of an international standard and somebody somewhere did sit down and say "this means play" in all languages. Engineers and designers use it as a kind of semaphoric language. So I don't want to dismiss it either and say that an avant-garde strategy is automatically better, but it really depends on what you are trying to do.

**WT** Maybe we should turn to this collection more specifically. Are there any particular pieces that resonate with you, or did you notice any overarching themes or trends that you found interesting?

**JS** After reviewing the pieces, the first thing I did was make notes of all the different pedagogical suggestions that people have, because one of the great things about digital humanities work versus other fields is that people talk a lot more openly about pedagogy. I love teaching and I love talking about it, so it was actually really useful to see what others were doing in their classes. For the first time next winter [2016] I'm teaching a one-hundred-student undergraduate lecture course in sound studies. I'm trying to figure out how many

crazy things to do within the timeframe and labor structures. . . . What can I do that will actually work and not force the course to collapse under its own weight? What can the TA and I actually pull off? So the first thing I did when I finished reading the collection was open up my Evernote document that lists all the things I want to try in the class and I just added a bunch of suggestions from people's essays.

Zora Neale Hurston shows up a couple times (in essays by Myron Beasley and Regina Bradley). She's kind of hot right now. Daphne Brooks has written about her, Roshi Kheshti's new book also talks about her, and she keeps coming up at conferences I attend.<sup>10</sup> You always go back and reinvent your traditions, and she's now this really useful figure for a lot of different, newly invented traditions, whether we're talking about a sort of black feminist version of sound studies, or a digital humanities version of sound studies that's more based in practice—you don't just go out and record the songs, you also learn them yourself. And that's how you know tradition. Of course, ethnomusicologists have been doing this for a long time. What's different is that we're imagining it for sonic practices beyond music making or songs. So Hurston is interesting because she's a model of what's possible and also because her relation to her subjects was not the traditional ethnographic relationship of the time.

There's a real emphasis on experience. Steph Ceraso goes furthest in actually talking about body consciousness and the centrality of experience in listening. But there's a ton of that in the book implicitly, where people say, "I was only able to make sense of X because I experienced it in this way." So I think it's a really central-truth claim that's made a lot around multimodal scholarship, around its epistemic promise. But it's tremendously undertheorized. And Steph really went for it. Rich Rath does too. The great thing about Rich's piece is, and this is true of all his work, is this wonderfully tender attention to alterity. He works to think with the other but not by trying to be or inhabit the other. He's got that great line in the piece where he says there's no such thing as absolute slavery, that's a fantasy of the dominator, not the experience of the dominated. (I'm paraphrasing, of course.) That's a pretty powerful argument to draw from your work, and it's an interesting proposition. He sort of throws it out there because he's trying to explain what he was doing in terms of audio production and making music and how that ties into history scholarship. But I think ultimately it's arguments like that that we want to be pushing for in thinking about what digital humanities scholarship can offer a broad audience.

The only other obvious thing to point out is that most of the work dis-

cussed is collaborative—if not officially, then unofficially. You have people developing digital platforms, and even when they do it “by themselves,” they do it with other people. It seems like there is a real emphasis on process and the value of actually doing stuff sonically. I think the challenge is to articulate that for people who don’t already buy the argument, and I don’t think anybody has succeeded yet. It’s a hard thing to do. I’m not exactly sure what I would say to someone who asks, “Well, why should I bother with it?” I’m not sure I could convince you if you weren’t already convinced, at least not without resorting to clichés that aren’t actually true, like claims about sound and duration. But it’s something we ought to think about. This is something I always push with sound studies in general. It isn’t just, “Oh, hey, sound is great, let’s study sound now”; but rather it’s our job to contribute back to the big intellectual, philosophical, empirical, political questions that are challenging scholars across the humanities and social sciences. You guys are just trying to figure out what the hell this digital sound studies thing is, what digital humanities and sound studies might be together, what can we actually get done, what can we do. But the long game of it for me is how will this carry the big conversation forward, and what can we do. You know, how can we transform other people’s minds.

**MCL** That’s a good high watermark to aim for. That’s great.

**JS** Yeah. I like ambitious [laughter].

**MCL** I really like that. So, I think that we take on a smaller task, which is to say, what sound studies brings to digital humanities and what digital humanities brings to sound studies, and why these two fields need to be in an explicit conversation with one another. I think the main thing that we think sound studies brings to digital humanities is an attention to culture, and I think what you were identifying in terms of Steph’s theorization of how and why we learn differently through sonic experiences, and that being integral to all of this work—sound studies has a longer history of tying those kinds of insights to culture and history and really grounding them in, for instance, the history of technology, whereas digital humanities could do more to extend praxis into more deeply rooted humanistic research. And that’s not a criticism so much as just something that sound studies nicely brings. Like you were saying, on the one hand, sound studies isn’t just about, “Oh, sound’s cool, we should study it.” But on the other hand, sound is cool, and we should study it, and digital humanities could do more. There are implications for cultural productions that aren’t text-bound, and you’re reach-

ing more diverse intellectual traditions when you open research up to the sounded world.

**WT** Similarly, along those lines, I think sound puts pressure on every single thing we've talked about, all the Ps: the prestige, publication, production, praxis, all of that. Sound brings something new to the conversation. And I think one of our goals was to try to demonstrate what that is. People are learning by playing with things that they've never played with before, things that they've never even been trained to address, and how do we bring that energy back into a traditional scholarly publishing economy. It's especially true for sound, because this book is silent, it's text-based—which gets back to this whole issue of how we bring listening practices into that, but also how do we bring reading and writing practices that are so well developed for good reasons within the humanities back to sound and sonic practice. I think that's where we see our intervention.

**MCL** So, Jonathan, are you jumping on the digital sound studies bandwagon?

**JS** Well sure, but with an asterisk. You say digital humanities is overwhelmingly visual, and I think absolutely, that's incontrovertible. Although of course there are great examples of sonic work in digital humanities, and people in the field know that it's an issue, too. So, obviously, there's that dimension of it. I think you're right that sound brings in different kinds of traditions, and different kinds of people—sound culture opens out into questions of race, gender, disability, and postcoloniality quite differently than visual culture. It can orient our research questions differently as well. But for me it is really driven by the questions rather than the methods or the tools. I can remember a time not so long ago when I said, "I will start using Powerpoint in my talks when I see five talks in a row with Powerpoint that doesn't fail." It was such a glitchy thing, and laptops were a lot less powerful. We've come a long way. But there's still more to be done. I have had to resort to a tech rider for my talks because, so often, basic audio setups don't work in the places I go, even when they are supposed to. Playing audio off a computer, while seated, while talking, is still a tough demand for many academic settings.

Perhaps unsurprisingly for someone who writes about technology, I am a bit of a gearhead. So it's only reasonable that my own practice has continued in a multimodal direction that started back in my *Bad Subjects* days. In my talks now I often use Ableton Live as a presentation software: I do audio editing, I do video, and I've used it to solve access problems, too. A few years

back at the American Studies Association conference, I was on a sampling roundtable. It didn't seem like they were going to be able to get me the accommodation that I needed, because I have this vocal cord impairment, and it is difficult for me to stand up and deliver a talk. So I just recorded my talk beforehand and performed it using Live and my laptop. Since the talk was on sampling, I made it entirely of samples. I just stood up there and performed without speaking in the moment—I delegated my speech to the device. And it solved the problem. Everybody thought it was this kind of high-concept performance, but actually it was just an elaborate disability accommodation in an environment that otherwise could not accommodate vocal differences of that sort. When I finished it, I didn't know what to do with it. There was no obvious venue for something like that. But now, a revised version of that piece is going to come out as a publication in the online journal *Intermedialities*.<sup>11</sup> I'm happy to be able to "put out the single," as it were, even if it's a bit less fun than the live show.

But I will finish with my asterisk. When you say "digital sound studies bandwagon," which I realize is meant with some humor, it does raise a deeper concern for me. There are a lot of digital humanities bandwagons at the moment. But what we need are deep and multidimensional infrastructures. All the things we discussed in this interview are at their base infrastructural concerns. We need technical infrastructures to support the specific work we want to do, like tagging and marking up an audio file inside an electronic written text. We need institutional infrastructures to keep publications alive and running so their authors can abandon them. And we need cultural infrastructures where people develop and sustain more advanced techniques of listening to scholarship, as well as to the world, and where we better support one another's intellectual forays into sound. Given the choice, I'd rather get on the infrastructure than on the bandwagon.

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## NOTES

- 1 The Auto-Tune piece has been folded into my [JS] book with Mara Mills, *Tuning Time*. This book will include all sorts of historical audio—talking books, experimental time-stretching and time-compression recordings, pitch-shifting demos, snippets of musical works, modern examples, and we are still searching for a decent web audio player with markup for scholars. It does not seem to be anyone's priority.

- 2 For example, see the Cost of Knowledge (accessed November 30, 2017, <http://thecostofknowledge.com>). Resources for humanists to know their rights as authors include “Author Rights: Using the SPARC Author Addendum” (accessed November 30, 2017, [www.sparc.arl.org/resources/authors/addendum](http://www.sparc.arl.org/resources/authors/addendum)). Publisher agreements are often littered with confusing—and sometimes illegal—legalistic language. As Sterne noted sometime after our conversation: “For example, recent contributor contracts from Princeton University Press and Palgrave have asked me to sign noncompete clauses (completely unnecessary), to warrant that no processes in my text could be harmful to readers trying to reproduce them (unnecessary), to give up my moral rights (not legally possible in Canada), and allow them to assign the work to another author for revision and republication (just plain asinine.)” Also see Striphas, “Acknowledged Goods.”
- 3 Fitzpatrick, *Planned Obsolescence*.
- 4 This is not an actual journal—at least not yet.
- 5 See MLA, “Statement on Electronic Publication” (accessed November 30, 2017, [www.mla.org/statement\\_on\\_publica](http://www.mla.org/statement_on_publica)).
- 6 Thompson, “The Roaring Twenties,” and Daniel, “Public Secrets.”
- 7 Morris, *Selling Digital Music*.
- 8 See Sterne, “Player Hater.”
- 9 For more on Paperphone, see <http://soundboxproject.com/project-paperphone.html> (accessed January 15, 2018).
- 10 Brooks, “Sister, Can You Line It Out?,” and Khesti, *Modernity’s Ear*.
- 11 Sterne, “Through the Fog of Sonic Memory.”

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