CrossMark

Nineteenth-Century Music Review, 18 (2021), pp 109–120 © Cambridge University Press, 2020
doi:10.1017/S1479409819000685
First published online 02 March 2020

Seeing More Clearly

Sarah Fuchs
Syracuse University
E-mail: sefuchss@syr.edu

The spate of sharply critical think-pieces published over the past few years might seem to suggest that the digital humanities are in crisis, but the discipline continues to thrive: public and private funding bodies remain robustly supportive of digital humanities initiatives, laying the groundwork for research that is orientated towards the capacity for communication beyond traditional readerships. The digital humanities glow with such promise that some of us – among whom I must include myself – have quietly set aside our misgivings, instead finding ways of incorporating digital technologies and methodologies into our work. But mute complicity is not the only alternative to vocal censure, as is made clear by the many accounts of experiments and other personal experiences posted on blogs and, increasingly, published in peer-reviewed journals. Grounded in self-reflective practices, this sort of autoethnography offers a productive means of coming to terms with our complex and sometimes contradictory motivations for engaging with the digital humanities. In this essay, I reflect on a digital network visualization and analysis project I have pursued over the past five years, the final iteration of which – entitled 'Visualizing the French Voice' – attempted to use algorithms to make sense of the relationships between professors and pupils active at the Paris Conservatoire around the turn of the nineteenth century. I try to understand my motives at each turn, which are clearly bound up with that seductive promise of a broader readership, but also, albeit much less clearly, of 'impact'.

The spate of sharply critical think-pieces published over the past few years might seem to suggest that the digital humanities are in something of a crisis, but the discipline – if, indeed, it can be described as such – continues to thrive.[1] As even a cursory glance through the schemes announced and projects subsidized by (among

I would like to thank the editors of this journal and the anonymous reviewers of this article, as well as Amanda Eubanks Winkler, Jonathan Hicks, Eric Lubarsky, Darren Mueller, and Cormac Newark for their many helpful suggestions.

[1] Among the most cited of these are Daniel Allington, Sarah Brouillette and David Golumbia, 'Neoliberal Tools (and Archives): A Political History of Digital Humanities', *Los Angeles Review of Books*, 1 May 2016, https://lareviewofbooks.org/article/neoliberal-tools-archives-political-history-digital-humanities/ (accessed 8 September 2019); Timothy Brennan, 'The Digital-Humanities Bust: After a Decade of Investment and Hype, What Has the Field Accomplished? Not Much', *The Chronicle of Higher Education*, 20 October 2017, www.chronicle.com/article/The-Digital-Humanities-Bust/241424 (accessed 21 August 2019); Adam Kirsch, 'Technology Is Taking Over English Departments: The False Promise of the Digital Humanities', *The New Republic*, 2 May 2014, https://newrepublic.com/article/117428/limits-digital-humanities-adam-kirsch (accessed 8 September 2019); Sanjena Sathian, 'The Humanities Need an Ally: Could It Be Computer Code?' *Ozy*, 9 April 2014, www.ozy.com/opinion/the-humanities-need-an-ally-could-it-be-computer-code/30301 (accessed 8 September 2019); Rebecca Schuman, 'Will Digital Humanities #Disrupt the University? First I Have to Figure Out What It Is', *Slate*, 16 April 2014, https://slate.com/technology/2014/04/digital-humanities-and-the-future-of-technology-in-higher-ed.html (accessed 8 September 2019).

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

others) the American Council of Learned Societies and the National Endowment for the Humanities, the Canadian Social Sciences and Humanities Research Council, the British Academy, the Leverhulme Trust, and the Arts and Humanities Research Council, and the European Research Council makes apparent, public and private funding bodies across North America and Western Europe remain robustly supportive of digital humanities initiatives, facilitating cross-disciplinary and cross-sector collaborations and laying the groundwork for research that – in many cases, at least – is orientated towards the capacity for communication beyond traditional readerships. The digital humanities glow with such promise that some of us – among whom I must include myself – have quietly set aside any misgivings we might have, instead finding ways of incorporating digital technologies and methodologies into our work. But mute complicity is not the only alternative to vocal censure, as is made clear by the many accounts of systematic experiments and other personal experiences in the digital humanities posted on blogs – of course! – and, increasingly, published in peer-reviewed journals.[2] Grounded in self-reflective practices, this sort of autoethnography offers a productive way forward, I suggest, prompting us to consider our complex and sometimes contradictory motivations for engaging with the digital humanities; to think through our research processes; and to contemplate other paths our projects could have taken or, indeed, may yet take. In this essay, I reflect on a digital network visualization and analysis project I have pursued over the past five years, entitled (in its final iteration) 'Visualizing the French Voice'. I try to understand my motives at each turn, which are clearly bound up with that seductive promise of a broader readership (if, indeed, 'readership' is quite the right word for a visualization), but also, albeit much less clearly, of 'impact' – a word with particular valence in the United Kingdom, where (since the 2014 Research Excellence Framework) research has been assessed for its academic, economic, and societal impact, but one that remains all too relevant for those of us active in other academic settings as well.

Exactly why I thought the French voice needed to be visualized is a longer story than I have space for here, but it had to do with precisely the sort of interdisciplinary nexus on which the digital humanities are founded. I sketched my first network diagram on a piece of A4 paper at the Bibliothèque Nationale de France, in an attempt, through an initially chaotic web of nodes and edges, to make sense of the relationships between the French physicians, pedagogues, and performers whose names appeared in the vocal treatises, singing methods, and other archival materials I had recently uncovered. I returned often to this piece of paper following my return to the United States, fleshing out my diagram whenever I ran across new names or affiliations that seemed significant in some way to the scientific study of the singing voice in late nineteenth- and early twentieth-century France. I soon found myself overwhelmed not only by the amount of data I had amassed, but also by the haphazardness of my methodology, which seemed to depend far too much on my limited, though rapidly expanding, knowledge of vocal science and singing pedagogy. I was confident, for example, that

[2] Among the latter are Francesca Giannetti's 'A Review of Network Approaches in Music Studies', *Music Reference Services Quarterly* 19/2 (2016): 156–63; Moya Bailey's '#transform(ing) DH Writing and Research: An Autoethnography of Digital Humanities and Feminist Ethics', *Digital Humanities Quarterly* 9/2 (2015), www.digitalhumanities.org/dhq/vol/9/2/000209/000209.html (accessed 9 October 2019); and Amy E. Earhart's 'Digital Humanities Futures: Conflict, Power, and Public Knowledge', *Digital Studies/Le champ numérique* 9 (2016), http://doi.org/10.16995/dscn.1 (accessed 9 October 2019).

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

Manuel Garcia, Jr, belonged in my diagram – many pedagogues and physicians identified him as one of the founders of modern vocal medicine, due in large part to his supposed invention of the laryngoscope – but less certain of the significance of a figure who was, if anything, more compelling: Léon Melchissédec, a renowned operatic bass-baritone turned Paris Conservatoire professor.[3] Melchissédec's method drew on the latest advances in vocal science – including, for example, the use of photographic technologies to analyse singers' diction – but garnered far less (and far less complimentary) attention than did Garcia's.[4] I was less sure still of whether to include scientifically minded pedagogues who taught privately rather than at the Paris Conservatoire, such as Victor Maurel, or medical professionals employed by other Parisian institutions, such as Pierre Bonnier, consulting laryngologist for the Comédie-Française and the Opéra-Comique around the turn of the century.[5] How did such pedagogues and physicians situate their methods in relation to those of others? What role did institutions play in the circulation and reception of their theories among the wider musical and medical fields? Who trained with or sought treatment from these figures? The answers to these and other such questions would emerge from the primary sources, I expected, if only I could find a way of comprehending – at a global as well as a granular level – the connections between them.

In the days before the digital humanities, I might simply have settled in for the hours of reading that lay ahead, perhaps refining my research questions along the way – if for no other reason than to limit the potentially infinite bibliography. And that is surely what I would have done, had not a colleague introduced me to digital network visualization and analysis. I was persuaded to try this new technique on the basis of its supposed ability to render data according to complex algorithms, thereby revealing previously unknown – and, crucially, otherwise unknowable – aspects of the relationships I had charted.[6] I began experimenting with Gephi, then apparently one of the most robust open-source network visualization and analysis platforms available – and one of the most user-friendly, given the array of tutorials, several of which are authored by humanists, accessible online.[7]

[3] Garcia advocated for the use of the laryngoscope to examine otherwise hidden vocal organs – such as the glottis, pharynx, and larynx – in his *Traité complet de l'art du chant*, Part 1, 2nd ed. (Paris: chez l'auteur, 1847).

[4] Melchissédec published two method books over the course of his career, *Pour chanter, ce qu'il faut savoir …: Ma méthode* (Paris: Editions Nilsson, [1913]) and *Le Chant: La Déclamation lyrique, le mécanisme et l'émission de la voix* (Paris: Editions Nilsson, [1925]).

[5] Both Maurel and Bonnier contributed to the turn-of-the-century literature on vocal science. See, for example, Maurel's *Le Chant rénové par la science*, Conférence sur l'enseignement de l'art du chant à Milan en 1892 (Paris: A. Quinzard, 1892) and Bonnier's *La Voix, sa culture physiologique: Théorie nouvelle de la phonation. Conférences faites au Conservatoire de Musique de Paris en 1906* (Paris: Alcan, 1907).

[6] Scott Weingart provides a nuanced overview of some of the possibilities – and problems – associated with applying algorithm-based analysis to humanistic research in his 'Demystifying Networks', www.scottbot.net/HIAL/index.html@p=6279.html (accessed 9 October 2019).

[7] See Gephi's 'Learn' page for several official tutorials, as well as links to community-generated tutorials, https://gephi.org/users/ (accessed 29 November 2019). Other tutorials I found useful include Martin Grandjean's 'GEPHI – Introduction to Network Analysis and Visualization', www.martingrandjean.ch/gephi-introduction/ (accessed 9 October 2019), Miriam Posner's 'Creating a Network Graph with Gephi', http://miriamposner.com/dh101f15/index.php/creating-a-network-graph-with-gephi/ (accessed 9 October 2019),

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

I dutifully entered the names of physicians, professors, private teachers, and performers (as well as that of a single institution, the Paris Conservatoire) into one Microsoft Excel spreadsheet, then recorded the relationships between them – and described their nature, which I defined according to activity, e.g. 'taught', 'collaborated with', 'cited', and so on – in another. When I finally imported my spreadsheets into Gephi, however, I discovered that applying algorithm-driven layouts (such as 'ForceAtlas 2', a force-directed layout in which 'nodes repulse each other like charged particles, while edges attract their nodes, like springs') did not unearth anything unexpected – or, indeed, much of anything at all.[8] The digitizing process made me feel as if I had mastered my data, as did the crisp lines of the digital visualization, but my network diagram remained stubbornly chaotic, reflecting not only the limits of my knowledge but also those of the software.

At this point, I could easily have admitted that digital network visualization and analysis had not proved productive for my purposes, but instead I decided to offer the software a more substantial – and also, I thought, less subjective – dataset, culled from the pages of the Paris Conservatoire's *tableaux annuels des classes* (annual class lists/tables).[9] Meticulously maintained by hand, the *tableaux* record the surnames of the students who enrolled in (or withdrew from) each professor's studio over the course of a given academic year, as well as other details deemed pertinent by the record-keeper – and thus reported only inconsistently – such as students' awards, physical ailments, and regional or national identities. With the help of a research assistant, I copied the *chant*, *grand opéra* and *opéra-comique* records (that is, for 'singing', 'all-sung opera', and 'opera with spoken dialogue') from 1870 until 1914 into a series of spreadsheets, from which I then extracted the data needed to create the network diagram: the names of professors and pupils, which became my nodes, as well as the topic taught by each professor (*chant*, *grand opéra* or *opéra-comique*), which differentiated the directed edges I drew from pedagogues to their protégés.[10] When I imported this dataset into Gephi, however, I was disappointed to find that the software's algorithms brought nothing of significance to the surface: the nodes and edges did not suddenly snap into meaningful configurations, as some part of me had hoped that they would do.

Once again, I reasoned that the problem had more to do with my data – or, perhaps, my software – than with network visualization and analysis as a methodology. I mined the *tableaux* for additional attributes that Gephi could parse, such as the gender of each student (identified as 'Monsieur', 'Mademoiselle', or 'Madame' in the Conservatoire's records) and the approximate starting and ending date of

---

and Brian Sarnacki's 'The Complete n00b's Guide to Gephi', www.briansarnacki.com/gephi-tutorial/ (accessed 9 October 2019).

[8] As Johanna Drucker reminds us, after all, such algorithms tend to 'optimize legibility within the limits of screen real estate, organising their nodes and neighbourhoods for efficiency rather than for semantic or meaning-driven origins within the original materials'. Drucker, 'Graphical Approaches to the Digital Humanities', in *A New Companion to Digital Humanities*, 2nd edition, ed. Susan Schreibman, Ray Siemens and John Unsworth (Hoboken, NJ: Wiley-Blackwell, 2016), 241.

[9] AJ 37, 118–37, Fonds Conservatoire National de Musique, Archives Nationales de France, Pierrefitte-sur-Seine, France.

[10] I am grateful to Alexandria Turner (MM in Vocal Pedagogy, Syracuse University, 2018) for her assistance with the initial phases of digitising the Conservatoire's *tableaux annuels des classes.*

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

each relationship, and when I eventually encountered Gephi's limits – or, rather, the limits of my patience with Gephi, which made manual (as opposed to algorithm-driven) manipulation of the data into a laborious process – I switched to a web-based relationship mapping platform, Kumu, which promised to visualize and analyse attributes in a more flexible fashion.[11] After importing my spreadsheets and applying Kumu's force-based layout to the data, I began to experiment with the platform's categorization and customization tools. I tagged students based on their gender, which I decided to represent with coloured nodes (pale pink for female students and pale blue for male – perhaps in itself a measure of how the effort required by digital data manipulation impoverishes everything else). I tagged professors according to the type of class each of them taught, then 'decorated' – to use Kumu's terminology – each node with a corresponding 'bullseye', the colour of which radiated through the directed edges extending from professors to their pupils (green for *chant*, blue for *grand opéra*, orange for *opéra-comique*). Using the approximate starting and ending dates of each relationship, as well as other information scrawled in the margins of the *tableaux* (such as students' resignations, transfers and dismissals), I further customized the appearance of the edges, using the relative width of each line to reflect the length of time a professor spent working with a student and the style of the line (solid or broken) to suggest something of the nature of their working relationship, with solid lines implying seemingly stable connections, broken lines tenuous, even volatile relationships. Finally, I created an interactive timeline (also based on the starting and ending dates of working relationships), which allowed me to explore how relationships between the Conservatoire's professors and students evolved from year to year. As may well be apparent, I was enchanted with Kumu's aestheticization of my data (notwithstanding the pink and blue), and expectant of its analytical abilities, perhaps more so than my earlier experiences with network analysis should have warranted (see Fig. 1).

By way of a case study, I decided to focus my attention on Melchissédec, whose harsh critiques of the Conservatoire's singing curriculum – not to mention his brusque manner – polarized professors and pupils over the first two decades of his teaching career (1894–1914), as I had discovered while pursuing archival research for a monograph, which examines how emerging sound technologies such as the *théâtrophone* (a subscription telephone service connected to various theatres), phonograph and synchronized-sound film shaped operatic culture in Paris and the provinces around the turn of the nineteenth century.[12] Exploring Melchissédec's relationships with his students by means of Kumu's filters, I (at last!) made two findings: a large number of broken lines overall, with a sharp increase in wide, solid lines over the second decade of Melchissédec's career. As the many broken lines suggest, Melchissédec's students vacated his studio at a high rate: indeed,

[11] For an overview of Kumu's capabilities, see the 'Tour' page of Kumu's website, https://kumu.io/tour (accessed 29 November 2019).

[12] In 1907, perhaps in retaliation for being passed over for a position as singing professor, Melchissédec launched a print campaign against the Conservatoire's singing curriculum – which, he claimed, had produced 'résultats déplorables' ('deplorable results') for more than half a century – in *Comoedia*, a new daily newspaper devoted to discussions of the arts, especially musical and theatrical culture. Melchissédec's 'La Voix – Le Chant' series ran for nearly a year before *Comoedia* cancelled it, with instalments published in the following issues: 17 Dec. 1907; 9 Jan. 1908; 22 Jan. 1908; 4 March 1908; 16 April 1908; 9 June 1908; 3 July 1908; 30 July 1908; 13 Nov. 1908; 15 Nov. 1908; 18 Nov. 1908; and 24 Nov. 1908.

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

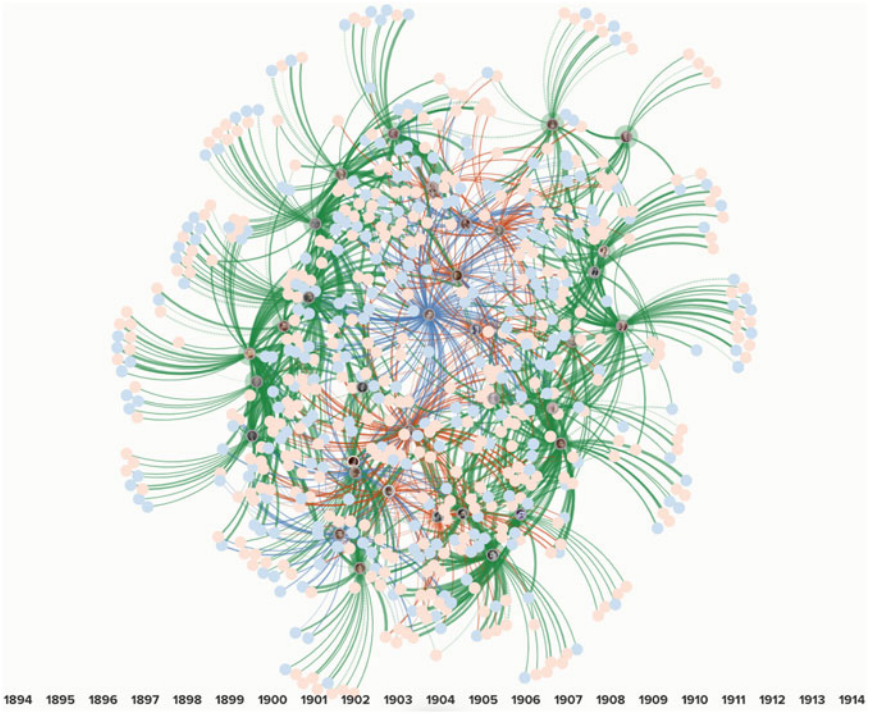


Fig. 1 Network visualisation of professors and students of *chant*, *grand opéra* and *opéra-comique* active at the Paris Conservatoire between 1894 and 1914, created using Kumu's 'relationship mapping' platform. In this figure and all subsequent figures, the colours of the 'bullseyes' and corresponding lines – visible in the online version of this essay – indicate the topics taught by professors, with green for *chant*, blue for *grand opéra*, and orange for *opéra-comique*. The relative width of each line reflects the length of time a professor and student worked together, and the style of the line hints at the nature of their working relationship, with solid lines suggesting stable connections, broken lines unstable relationships (as indicated by resignations, moves, and dismissals requested by students).

just over 11 per cent of all resignations, transfers and dismissals (whether at the administration's request or that of the student) recorded between 1894 and 1914 were from Melchissédec's studio (see Figs. 2a and 2b).[13] Of the 23 students who

[13] Of the 625 students enrolled in *chant*, *grand opéra*, and *opéra-comique* classes between 1894 and 1914, 156 resigned, transferred or were dismissed (whether involuntarily or at the student's request) from individual studios on 208 counts; put more simply, nearly 25 per cent of students vacated at least one studio over the course of their careers at the Conservatoire, and several vacated more than one. In part, the high rate of attrition from Melchissédec's studio can be attributed to the sheer number of students with whom he worked: whereas professors of *chant* instructed no more than ten students each year, per the Conservatoire's regulations, professors of *déclamation lyrique* were under no such restrictions, routinely teaching more than ten students – and sometimes nearly double that number

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

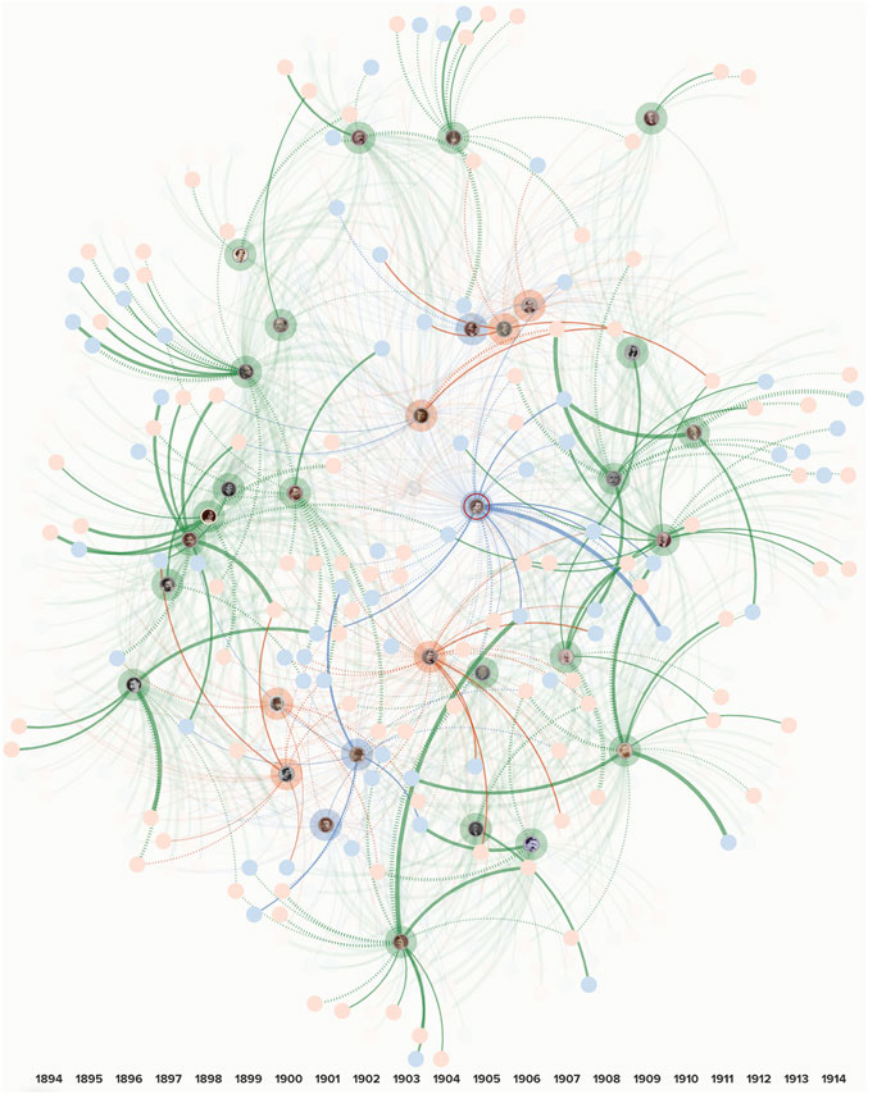


Fig. 2a **Resignations, moves, and dismissals from all studios active between 1894 and 1914.**

left him, only nine did so involuntarily; the remaining 14 elected to resign from Melchissédec's studio, transfer to another studio, or petition to be dismissed or excused from the class, which effectively allowed students to start their studies of *déclamation lyrique* (lyric declamation) anew, without having the time spent in

– in a given year. Documents detailing the Conservatoire's policies are compiled in Constant Pierre, *Le Conservatoire National de Musique et de Déclamation. Documents historiques et administratifs* (Paris: Imprimérie Nationale, 1900) and Anne Bongrain, ed., *Le Conservatoire de Paris: Documents historiques et administratifs (1900–1930)* (Paris: J. Vrin, 2012).

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

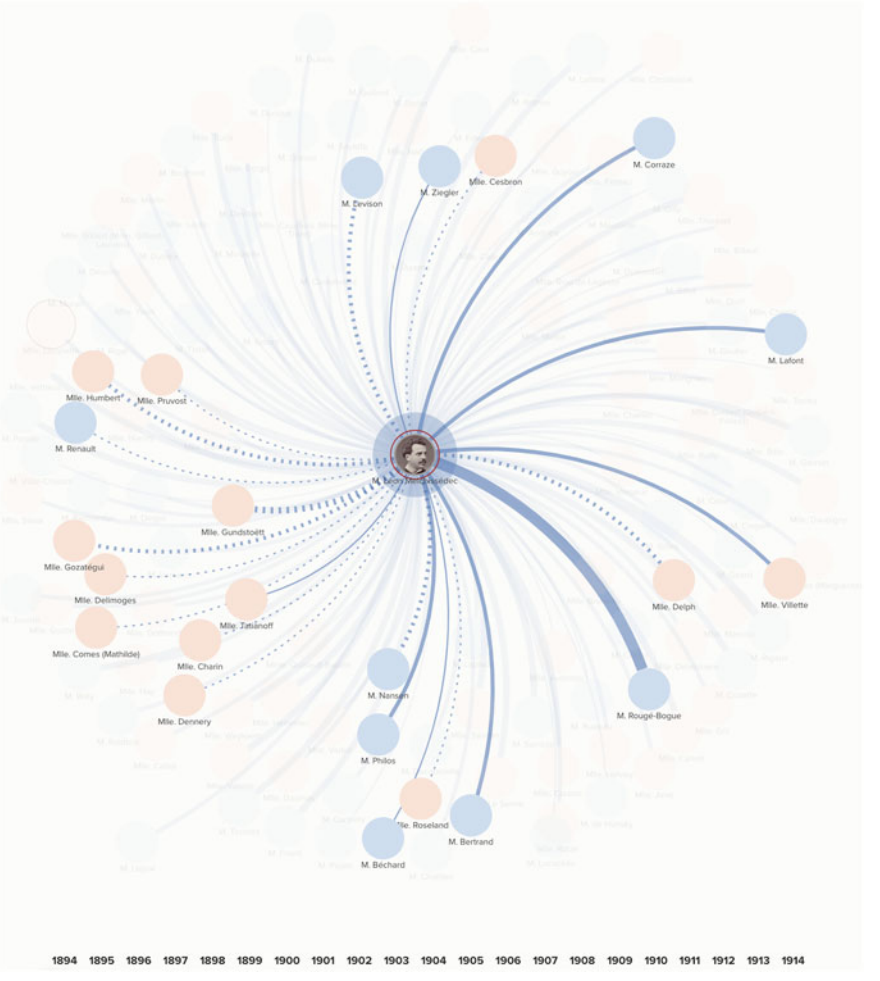


Fig. 2b Resignations, moves, and dismissals from Melchissédec's studio between 1894 and 1914.

Melchissédec's studio counted as one of their semesters of study. The number of students in the latter category is especially striking: between 1894 and 1914, the administration approved only five petitions to be dismissed, three of which were made by Melchissédec's students – M. Levison (in 1903), Mlle. Roseland (in 1909) and Mlle. Pruvost (in 1912) – and only one to be *dispensée* (excused), an exceptional request that came in 1908 from Mlle. Dennery, another of Melchissédec's students. Less striking but still salient, however, is the steady rise in the number of returning students Melchissédec saw over his second decade at the Conservatoire (see Figs. 3a and 3b). Although the majority of Melchissédec's students spent three or fewer semesters in his studio, between 1904 and 1914 an increasing number returned for a fourth or even a fifth semester.

Such findings shed new light on Melchissédec's standing at the Conservatoire over the first two decades of his career, offering a fresh context for the letters,

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

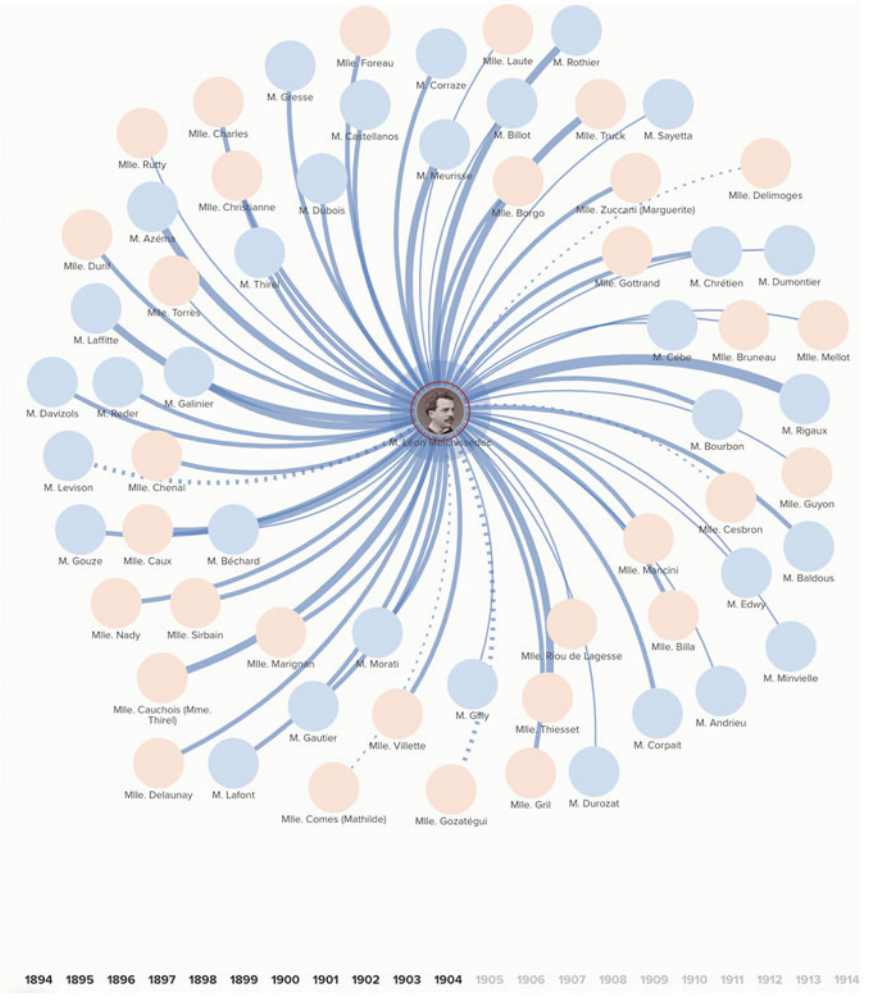


Fig. 3a Enrolment in Melchissédec's studio 1894–1904.

reports, and press clippings preserved in his personnel file.[14] Or that, at least, was what I argued in earlier versions of this essay. Indeed, the piece that I initially proposed to write for this special issue of *Nineteenth-Century Music Review* – and went so far as to submit – argued on the basis of the outcomes outlined above that network visualization and analysis could usefully complement more conventional investigative methods in historical musicology.

But did I unearth anything I would not have stumbled upon in the sources? Or, indeed, anything worth knowing full stop? To be sure, the findings I made by way of network visualization and analysis supported what the archival sources suggested, adding a layer of quantitative certitude to a narrative I might otherwise

[14] AJ 37, 71, Fonds Conservatoire National de Musique, Archives Nationales de France, Pierrefitte-sur-Seine, France.

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

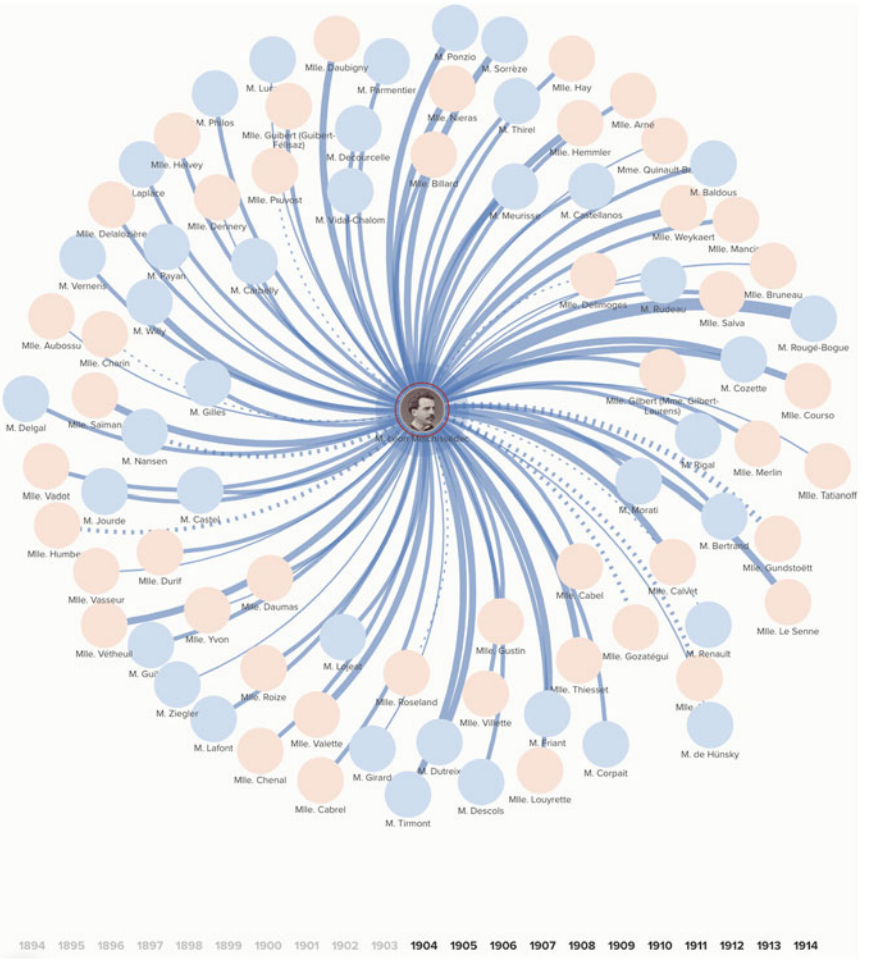


Fig. 3b Enrolment in Melchissédec's studio 1904–1914.

have had to couch with caveats. But after reflecting on my project for the better part of a year, I can finally admit that the answers Kumu afforded were to queries I designed (and carefully circumscribed) with the platform's capabilities in mind, rather than those with which I actually wanted to wrestle – and also, perhaps more importantly, that I set aside these more substantial questions because I believed, at least to some extent, that network visualization and analysis would show me something I had not yet seen, perhaps would never see without technological assistance. Such techno-positivism runs rife in the digital humanities, but of course this ideology is not an invention of the twenty-first century, as I was well aware. Indeed, many of the late nineteenth- and early twentieth-century physicians and pedagogues I have found myself studying over the past few years held similar views, which I have approached with a scholarly air of detachment, not to say scepticism. Why, then, did I have such difficulty doing the same when it came to my own engagement with technology?

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

The answers to this question are many, of course, but the most compelling have to do with how this project – and the digital humanities more broadly – paved the way for what I relatively recently began to think of as my career in academia. The roll-call of funders with which I began tells a very public story of no-doubt well-intentioned falling into line that some will call a principled striving to maximize the dissemination among the general population of knowledge created with the help of government and philanthropic money, and others uncritical jumping on the bandwagon. But what about the private story? I was a fourth-year PhD student when I began dabbling in the digital humanities, the strategic significance of which I came to realize as I searched for employment – to be clear, a tenure-track university position – over the next couple of years.[15] In conversations with potential colleagues and administrators, I found myself discussing the digital technologies I used in my research and teaching in a decidedly enthusiastic fashion, responding to what I perceived as techno-positivism on the part of those interviewing me. After it all came right and I started that tenure-track position at a research-intensive – or R1, to use the Carnegie Classifications of Institutions of Higher Education's terminology – institution, I continued to advocate for the digital humanities: I spoke frequently, both formally and informally, about my experiences with digital network visualization and analysis; I worked with my students to curate online exhibitions of cultural heritage objects, such as *théâtrophonics*, which explores how Parisians used personal and public telephones to listen in real time to musical and theatrical performances taking place across the city from the early 1880s through the mid-1930s; I collaborated with colleagues in my college (what in the United Kingdom might be called a faculty) to develop an Integrated Learning Major in the Digital Humanities; I co-organized regional symposia and working groups to facilitate conversations between students and faculty about the digital humanities, for which I raised funding from departments and centres across campus as well as the Central New York Humanities Corridor.[16] I was not only an initiate, in other words, but an energetic evangelist. The various iterations of my 'Visualizing the French Voice' project eased my entrée into an intellectual community and helped me forge an identity within it; perhaps it is no wonder, then, that I found it difficult to admit that digital network visualization and analysis had foreclosed – rather than facilitated – intellectual inquiry. I also expected that this project would help me to maintain my newfound position within this community, if only I could demonstrate its impact within my discipline (and, I hoped, well beyond it): surely the pressure to do so – I was nearing the mid-point of my tenure-track

[15] Leonard Cassuto, 'The Job-Market Moment of Digital Humanities', *The Chronicle of Higher Education*, 22 January 2017, www.chronicle.com/article/The-Job-Market-Moment-of/238944 (accessed 8 October 2019).

[16] *théâtrophonics* was designed in Spring 2018 by undergraduate students at Syracuse University enrolled in 'Music, Space, and Place', an upper-level seminar that investigated the musical sites and sounds of Paris around the turn of the nineteenth century, http://theatrophonics.org/ (accessed 30 November 2019). I co-organized the Syracuse University Digital Humanities Research Symposia in collaboration with Casarae Gibson (African American Studies, Syracuse University), Darren Mueller (Musicology, Eastman School of Music, University of Rochester), and Meina Yates-Richard (English, Syracuse University; now African American Studies and English, Emory University), with funding from a variety of departments and colleges across Syracuse University and, in 2019, from the Central New York Humanities Corridor.

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press

timeline when I penned the initial version of this piece – made me less able to see that this project had not, alas, fully achieved its intended impact.

As I have written this short piece, I have wondered often whether my project has indeed failed, or whether it is instead – still – incomplete. What, if any, new configurations would take shape on the screen, for example, if I integrated the details inconsistently recorded in the *tableaux* (such as the students' regional and national identities) into the digital visualization? What would become of my neat patterns of pedagogical transmission if I layered professors' and pupils' phonograph recordings over their nodes? What would I learn, in other words, if, instead of adapting my data so that it could be analysed by an algorithm, I approached the digital visualization as itself having the status of an archive: information in need of scholarly – rather than technological – intervention? Such questions have led me to start thinking of my digital network visualization as something akin to that first network diagram I began to sketch now more than six years ago: a determinedly chaotic web of nodes and edges, the haphazardness of which not only reflects that of the scholarly process, but also respects that of the historical record.

As I leave off commenting and go back to my material – now all on my own hard drive rather than inconveniently away in Paris – I can't help but be struck by how many aspects of my digital humanities experience are self-referential. The same techno-positivism in the object of study as in the subject doing the studying, the aestheticization of the visualization matching the neatness of the conclusions it facilitated, the university courses created to give a *raison d'être* to the material: all this often seems circular to me now. Perhaps this is the inevitable result of adopting an autoethnographic attitude. I wonder, though, whether the real impact of this kind of project will turn out to be less on those people 'out there' who might otherwise not have any purchase on large-scale, multi-source academic work – though who could deny the importance of visualizing interrelationships between professors and pupils active at the Paris Conservatoire around the turn of the nineteenth century? – and rather more on the people 'in here' who do that work, whoever our imagined readership happens to be.

https://doi.org/10.1017/S1479409819000685 Published online by Cambridge University Press