

AN INCLUSIVE COURSE ON THE HISTORY OF PHONETICS

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ABSTRACT

This paper describes a 10-week seminar-style course on the history of phonetics that was designed and implemented with the goal of promoting social justice, diversity, equity, and inclusion in the discipline. Advanced planning for the seminar involved coordination between the instructor and the academic department, the linguistics librarian, and the university pedagogical resource center. In this paper we provide the motivation for the framework and the topics covered and link to the materials from the seminar. Overall, this paper shows how a course on the history of phonetics can be modeled and taught in such a way as to shed light on the ways in which our field has marginalized and discriminated against certain communities, but also to highlight the diversity in our discipline and among its practitioners, as well as past and present efforts at creating a more just and inclusive discipline.

Keywords: Phonetic pedagogy, History of phonetics, Antiracist linguistics, JEDI in linguistics

1. INTRODUCTION

There are many reasons for studying the history of a discipline; learning about our field's history provides entertainment value, satisfies our curiosity, and helps us gain new perspectives [1]. Studying our history informs instructors and students alike about how and why we arrived at the current state of our discipline, and where we might go from here.

It was partly for these reasons that a coauthor of this paper, Marc Garellek, a phonetician who knew little history of the field, decided to teach a seminar on the history of phonetics. Yet there are also moral and philosophical (as well as scientific) lessons to be derived from the history of the phonetic sciences. With regards to the moral and philosophical lessons in studying the history of phonetics, Ohala et. al [1] focus on the potential for inspiration from our field's early leaders and on rethinking common assumptions. In designing this seminar, we considered both those questions, as well as others like: How was modern phonetic inquiry able to develop in the ways that it did?

Whose voices were suppressed in the process of these inquiries? In the present and future, how can we be more moral practitioners of phonetics? In other words, we designed the course so as to study the discipline's history, while at the same time – and with equal focus – studying its history with an eye towards promoting the values of social justice, equity, diversity, and inclusion (henceforth 'JEDI') within and beyond our discipline.

Courses designed within antiracist and inclusive pedagogical frameworks (e.g. [2, 3]) challenge both instructors and students to consider how we can center the lives and experiences of people of various backgrounds, particularly those who are marginalized and whose lives and experiences have gone under-appreciated or outright ignored. Discussions about racial justice and equity have lately intensified, both in society in general and in linguistics specifically (e.g. [4, 5, 6]). Learning from those discussions inspired Garellek to develop a course on the history of phonetics that was designed within these frameworks. This paper thus describes the planning and implementation of a seminar-style course on the history of phonetics, with a focus on the period between the mid-1800s to mid-1900s. We hope that this paper and its accompanying course materials may serve as one possible model for other instructors who are considering teaching a course on the history of our discipline.

2. PREPARING THE SEMINAR

The course was taught in Winter quarter of 2022, with planning beginning in the previous Fall quarter. While Garellek had spent time over the previous summer reading about the philosophy behind and tools used in antiracist pedagogy, he also knew it was important to engage with departmental and university resources for more guidance and support. To do so, he coordinated with various people and groups at the university: (a) the Department of Linguistics' Curriculum Committee, (b) the departmental Graduate Student DEI committee, (c) the linguistics librarian, and (d) the university's pedagogical resource center. Coordination with these individuals or groups is described below.

2.1. The departmental Curriculum Committee and Graduate Student DEI committee

The Department of Linguistics at UC San Diego has a Curriculum Committee (including several faculty members and a graduate student) that advises on linguistic pedagogy and changes to the curriculum. During the term before the seminar was scheduled, Garellek involved the Curriculum Committee, as well as the recently-formed Graduate Student DEI committee, so as to get feedback and brainstorm ideas for topics and for the implementation of the course. Moreover, two members of these committees, coauthors Shai Nielson (graduate student) and Emily Clem (faculty member) were part of a campus-wide Anti-Racist Pedagogy Learning Community and thus had deeper familiarity with the literature on inclusive pedagogical practices. Nielson is a hearing researcher of sign language phonetics and phonology, and ensuing discussions between her and Garellek were instrumental for considering how phonetics engages with, and can engage better with, deaf communities, as well as how phonetics courses can better recognize and incorporate sign languages.

2.2. The linguistics librarian

During the planning of the seminar, Garellek wanted to assemble the materials into a collection of readings about JEDI issues and pedagogy in linguistics more broadly, so that the materials could be searchable in the future, and moreover would apply to linguistics more broadly, rather than being specific to phonetics and speech research. This intersected well with coauthors Nielson and Clem's plans to build a repository of antiracist teaching materials and guides for the department. (Creation of the general repository is still ongoing but is expected to be made publicly available in the near future.) To facilitate material curation and design of the repository, Garellek approached the linguistics librarian (and coauthor of this paper) Tamara L. Rhodes. Garellek and Rhodes initially met to discuss the project and its motivation, and review the outline for the class and some best practices in antiracist pedagogy, such as the inclusion of clear learning outcomes, writing of positionality statements at the start of the term, and structuring weekly meetings such that JEDI issues are treated as integral to the covered topics. As a librarian, Rhodes was able to offer not only expertise on resources, but also course design. Additionally, it is important to note that as a Black woman, her lived experience and experience with JEDI issues and

pedagogy helped shape this work. After their initial discussion, the two also met with other members of the departmental committees mentioned above to discuss the design and implementation of the resource devoted to antiracist pedagogy in a wide range of linguistics classes.

2.3. The university's pedagogical resource center

The final person whom Garellek met with when planning the course was an advisor from the university's pedagogical resource center, which works with instructors to better integrate evidence-based practices that support teaching and building of effective learning environments. Together they reviewed all materials for the start of the course: the syllabus design, course introduction surveys and ethics approval (so that enrolled students' feedback could be used for eventual publication on the experience of teaching this course), and final project ideas. The advisor suggested use of a "Universal Design for Learning" approach [7], which encourages educators to think of accessible course design and student flexibility and choice. Garellek then shifted from a required final paper to a project that allowed more flexibility for students who wished to create work like as a website, podcast, or annotated bibliography. Most students opted to write a final research paper in the end.

Thus, discussion with multiple people with differing expertise was instrumental in Garellek's designing the class with inclusive pedagogical best practices, broadened his perspectives about topics that could be discussed when it comes to teaching about phonetics in a more inclusive way, and helped him and the Linguistics Department build a repository of course materials with a focus on JEDI perspectives.

3. COURSE COMPOSITION

3.1. Participants

In total 8 students enrolled in the course: 6 undergraduate students in their final year of the 4-year undergraduate B.A. degree in Linguistics, and 2 graduate students in Linguistics in their 2nd and 4th year in the 5-year Ph.D. program. Two additional graduate students (in their 5th and 7th year) audited the course and attended roughly half of the lectures; moreover, one faculty member specializing in phonology attended most lectures, and another faculty member specializing in phonetics attended roughly half of the lectures. To promote participation, Garellek made clear that

he was a fellow learner, as he was new to both the history of phonetics and antiracist pedagogy.

3.2. Structure of the course

The course included one weekly lecture over a 10-week quarter. The course can be viewed at [8], with relevant links and full citation entries for cited books such that the reader can easily find the cited work.¹

Lectures were held on Wednesdays, during which the participants met in person to discuss assigned readings and work. Garellek had prepared a digital handout for each lecture to help guide the conversation and as a reminder to cover some key points. (On the legacy page viewable to readers [8], copyright-protected material has been stripped from the lecture handouts.) During the first lecture of the term, we spent some time discussing the antiracist pedagogical framework for the course, the learning outcomes, as well as community guidelines (for how we should all interact as a group) and links to student support (as conversations around marginalized communities can have unintended negative effects on student members of those and other marginalized communities). We further discussed how one goes about reading about and researching the history of a discipline using reviews and guidelines by historian-linguists (e.g. [9, 10]).

Prior to each lecture, students were asked to provide short essay-type answers to a handful of questions based on required readings. These ensured that students came prepared to discuss the weekly material. The required readings and question prompts were chosen so as to be as inclusive as possible: readings were often written by scholars of (historically and/or currently) underrepresented groups, and at least some of the reading questions were designed to promote consideration of JEDI issues in phonetics. For example, in Week 5 (devoted to the IPA—both the Association and Alphabet), students prepared for the weekly lecture by reading and comparing the first and last issues of *Le Maître phonétique* (the *mf*) and first and most recent issue of *JIPA* and reflecting on changes in scope, topics, as well as changes in membership of the Phonetic Teachers' Association/IPA and authors of the articles in the Journal; see snapshot from course page in Figure 1. These prompts were accompanied by a quotation from the relevant work to help stimulate students' thinking about the topic. Student answers were graded for completion only; however, the instructor also provided feedback and occasional requests for more detailed responses.

On the course page, each week included a tab for the assigned readings, another that included

As members will know, this is the last number of the *m.f.* in its present form. Our journal was published for the first time in 1889, though previously, from 1886, it had appeared as "The Phonetic Teacher". In 1889, our association had 321 members in 18 countries, the majority coming from Sweden, Germany, and France. Today, we have more than 800 members in over 40 countries, the great majority coming from the United States and Great Britain.

(A. C. Gimson & J. C. Wells, "On last *m.f.* [The last *m.f.*]", 1970: p. 28)

1) Changes within and across the *mf* and *JIPA*

First, read the first and last issues of the *mf*. Describe some of the changes you notice. Changes can be in terms of the scope of the journal, the types of articles and the languages published, size of issue, IPA membership. What do you think is responsible for some of the changes?

Next, compare last issue of the *mf* to the first issue of *JIPA*. Describe some of the changes described, and others you notice. Changes can be in terms of the scope of the journal, the types of articles and the languages published, size of issue.

Then, compare the first and latest issue of *JIPA*. Describe some of the changes described, and others you notice. Changes can be in terms of the scope of the journal, the types of articles and the languages published, the size of issues, and the diversity in authors and topics. What do you think is responsible for some of the changes?

Figure 1: Snapshot of the weekly reading prompt. For the week devoted to the IPA, the class analyzed changes in the *mf* and *JIPA*.

the handout for lectures, and a "Perspectives" tab that further highlighted JEDI-related topics and issues related to the covered topic (and which were discussed during lectures). For example, during the same week devoted to the IPA, the instructor provided a short quotation in the 1904 "Aims and Principles of the IPA" that highlights the choice of Roman letters in the Alphabet due to their use by "the great majority of civilized nations" [11, p.6]. We reflected on the biases intrinsic to the IPA, as well as how the IPA has more recently improved inclusivity through the development of the Braille IPA [12, 13] and extIPA for atypical or "disordered" speech sounds [14] (see snapshot in Figure 2). For each week, the course page also included a "References" tab, with links to all cited work as well as to work that students were encouraged to read more about, and a "Bios" tab devoted to biographies of the figures discussed in a given week, so that we could all learn more about the lives and work of the historical figures discussed.

The system here introduced is one adopted by several thousands of linguists, teachers and students, all over the world. It is based on the *latin alphabet*, which is used by a great majority of civilized nations [...]

(Paul Passy, "Aim and principles of the International Phonetic Association", 1904: p.6.)

Inclusivity and the IPA

A major aim of the IPA (alphabet) is to be able to transcribe all sounds that occur in spoken languages. Some ways that phoneticians have aimed at increasing inclusivity include the creation of Braille IPA, as well as the extIPA for symbols for "disordered" speech. Learn more about these here:

Figure 2: Snapshot the "Perspectives" topic that centered specific JEDI-related issues. For the week devoted to the IPA, the class discussed the Eurocentric origins of the IPA (as highlighted in the quote from Passy at the top) and contemporary measures that aim to improve inclusion.

3.3. Topical coverage

A major challenge to the course was deciding what topics in the history of phonetics to cover. Garellek fairly quickly settled on the time period of the mid-1800s to mid-1900s: around 1850 saw the early development of modern phonetics

through convergence of the biomedical, physical, and linguistic sciences [15] and the development of Bell’s Visible Speech system of notation, and the middle of the 20th century saw the elaboration of acoustic theory of speech production, the early days of generative linguistics, and the development of the spectrograph, a new *Visible Speech* [16].

Week–Topic	Perspectives (sample)
1–Overview	Diverse origins of the field
2–Phonetic notation	Notation of signed languages
3–Pronunciation & dialects	Dialectologists documenting US slavery
4–Experimental phonetics	Phonetics in Japan
5–The IPA	Eurocentrism in the IPA Inclusion & the IPA
6–Acoustic phonetics	Women in speech acoustics
7–The spectrograph	Phonetics & the Deaf community
8–Field phonetics	Colonial & missionary fieldwork
9–Sound change & the phoneme	Chinese phonetic tradition
10–The present & future	A more diverse phonetics

Table 1: Thematic coverage of the seminar, including examples of some of the JEDI perspectives incorporated in each weekly topic.

There are currently many excellent historical reviews of phonetics (e.g. [17, 18, 19, 1, 20, 21, 22, 10]), many of which Garellek assigned readings from and all of which helped inspire him when choosing the thematic topics to be covered. He finally settled on topics shown in Table 1, with some (but not an exhaustive list) of the JEDI perspectives discussed in relation to them. As can be seen in that Table, a couple of weeks were devoted to phonetic notation; instrumental phonetics was covered both in general (in Week 4), and in particular with respect to developments in acoustic theory (Week 6) and the invention of the spectrograph (Week 7). As he was designing the syllabus, Garellek struggled somewhat in deciding *when* during the quarter to cover a given topic. Some topics were clearer than others: discussion of precursors to the IPA (Week 2) had to precede both the week devoted to pronunciation and dialects (Week 3) and the IPA and its Association (Week 5); the

week devoted to acoustic theory (Week 6) had to precede the invention of the spectrograph (Week 7). Additionally, Garellek struggled with coverage during Week 3 (pronunciation and dialects), as he tried to cover the early days of pronunciation training, dialectology, and part of the discussion on atypical speech and the development of the field of speech-language pathology. In the future, he would consider moving dialectology to the week on sound change; over a longer term, he would split up these topics to allot each its own week.

One might worry that finding JEDI perspectives on a given topic in the history of phonetics could prove challenging, but the process proved highly stimulating. For example, for field phonetics and documentation (Week 8), we discussed Daniel Jones and Sol Plaatje’s work on Setswana [23], their collaboration [19, 24, 25], and the historical factors that influenced Plaatje both as a phonetician as well as a politician. The process was also easily tailored to the local context: we further compared the ethics and framing of early fieldwork on Kumeyaay/Kumiai, an Indigenous language of San Diego, to contemporary phonetic research done by members of the department (including a graduate student who was auditing the course). And when discussing the spectrograph and *Visible Speech* [16], we highlighted the role of coauthor Harriet Green Kopp in the development of the local Speech, Language and Hearing Sciences school at San Diego State University [26]. The challenge then was not finding a single perspective to highlight, but which of the many possible perspectives to include.

4. CONCLUSION

We described the planning and structuring of a history of phonetics seminar that was implemented within an inclusive pedagogical framework. This required a team effort, which greatly enriched the experience for the instructor and participants alike. Indeed, undergraduate and graduate student participation was consistently high, and both the class exit survey and official course evaluations included only positive feedback.

We hope that this paper and course materials help our research community consider (1) how phonetics has changed in terms of its engagement with marginalized communities and researchers; (2) how to reckon with the historical exclusion of these communities and researchers, and find ways to more actively include these voices; and (3) how we can teach about our discipline in ways that promote social justice, equity, diversity, and inclusion.

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¹ Readers of this paper are encouraged to contact M. Garellek (mgarellek@ucsd.edu) if they have trouble accessing any of the materials, or if they spot any typos and broken links, on the course page at: <https://pages.ucsd.edu/~mgarellek/History/>.