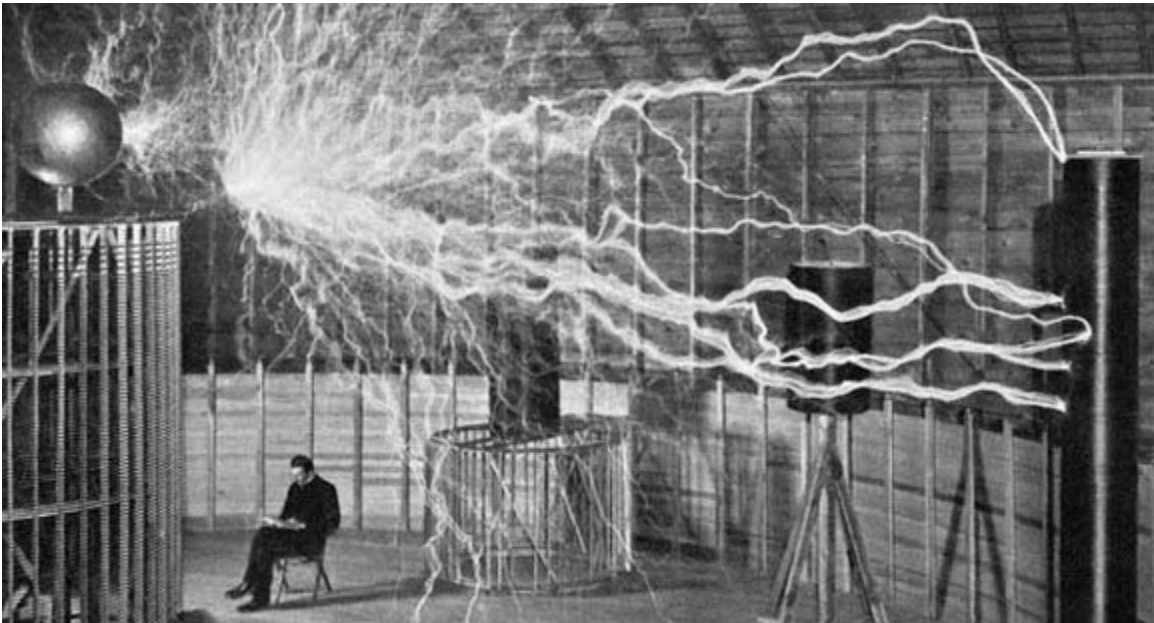


The History of Science, Medicine,
and Public Health

Senior Project Handbook

HSHM 490, 491, and 492
2016–2017



Senior Project Director:
Professor Joanna Radin

Table of Contents

Letter from the History of Science and Medicine Chair	3
Welcome to the Senior Project!	4
What Kind of Project?	5
Senior Project Timelines	Two-Term Projects 7 One-Term Projects 8
Detailed Explanation of Assignments	9
Registration and Grading	11
Final Deadline and Submission	12
Structure and Style of Written Work	13
Sample Bibliographical Essay	14
Prizes	18
Statement of Intention Form	20
Senior Project Title Form	21
Sample Titles of Past Senior Projects	22
Senior Project Evaluation Report	23
Faculty Fields for Advising	25

A Note from the Chair

To Senior History of Science, Medicine, and Public Health Majors:

As your final semesters approach it is customary for the chair of HSMPH to welcome seniors to the senior project. I'm very glad that Professor William Rankin will be serving as Director of Undergraduate Studies this year, and you should also get to know him as he will be very helpful to you in thinking about the major and the future.

The senior project is, potentially, the most rewarding task of your undergraduate career. It is a great intellectual adventure that can seem daunting, but I think you'll find the work intriguing, even exhilarating. As you begin, you may well feel at times uncertain about how to proceed. Along the way, you will discover new evidence that will change some of your original ideas and find new paths to deal with your subject. Your adviser and all of us in the HSMPH Program are eager to talk with you about the project and to help you with resources, conceptualization and organization of what you want to demonstrate.

Do not allow yourself to feel anxious or discouraged. As you gain experience as a researcher, you will become absorbed in your subject and pleased to have the opportunity to explore a topic in depth. You will unearth new material from the past and that will surprise you as well.

Communicating your discoveries and the reasoning that led you to them is the most exciting part of the senior project. Since effective communicating requires clarity and coherence, it will probably require several drafts to achieve effective and graceful prose. Remember that writing is an aspect of thinking, and that even the most distinguished historians have to struggle to make sense of a dense tangle of historical evidence. Take care to allow yourself ample time for this process of revising and refining.

As I remarked earlier, you are not alone on your journey. Your adviser is there to guide and support you. The handbook is intended to brief you about the adventure on which you are embarking. I urge you to read it with care at the outset to return to its wise words frequently. Feel free to discuss any questions that you have with your advisor, and with Professor Joanna Radin, the Senior Project Director. Be sure to get started in the best possible way by seeking advice and information about the project.

I am certain that, by the time you have completed the senior project, you will agree with students of previous years who consider it the most engaging and fulfilling part of their undergraduate years.

Best of luck!

Paul Freedman, Chair, HSHM Program

Welcome to the Senior Project!

The Senior Project is both exciting and daunting. It often provokes the anxiety of a new, unknown, and perhaps vague assignment for which you feel inadequately prepared. This is usual. This is, however, a task that we know you can carry off well!

The usual trajectory of the Senior Project goes something like this. At first you'll worry about a topic; it better be perfect, because you'll spend many months working on it. Impending deadlines will force you to develop a list of key sources. Soon it will seem like the mass of material before you is simply overwhelming. Your advisor will utter reassuring remarks, but it may feel hopeless. You'll think everyone else is on track, has the best topic in the field, and has the project half done. This is only paranoia – it is not true! Then things will get serious. You'll start to make sense of the material you have read. You'll begin analyzing and synthesizing. You'll eventually find some way to limit, focus, and tackle (some part of) your original topic; a preliminary draft takes shape in your mind, and then on paper. A few weeks before the deadline, you'll actually have a rough draft to show your advisor. Then – surprise! – you're finished!

In order to make this process as painless and productive as possible, a few tips:

- Don't worry at the beginning about a precise focus. Historical research is like natural history: field work is needed to know what's out there, and only with a broad view can you begin to see the key questions posed by your observations. Your reading and research can become more focused as you proceed.
- Meet regularly with your advisor, even if your progress is slow or you feel bogged down. She or he can suggest ways to move ahead, help you refine your thinking about your topic, and provide support in many ways. Consider scheduling a series of several meetings with your advisor ahead of time rather than setting up meetings only one by one.
- You'll need to formulate a preliminary argument earlier than might feel comfortable, but resist the temptation to develop a hypothesis and then search for confirming evidence. You should develop your argument iteratively, always going back to your sources. Don't build a case for a preconceived idea by cherry-picking the evidence.
- Take good notes. Clear, complete, documented notes are crucial to producing a good project. No matter how you take notes (by hand or by computer), it is very important to identify material by its source and to be scrupulous about attribution and quotations.
- Keep your computer backed up! Crashes, thefts, and data corruption happen every year, but they are not acceptable excuses for a poor or late project.
- Ask for help! If you have issues or concerns about your project, talk to your advisor. Feel free to consult the Senior Project Director or other faculty as well. Don't wait until the last minute to ask for help if you need it.

Wishing you a great year ahead.

What Kind of Project?

You have the option of choosing between several paths for the senior project. It is important to make these major decisions early and in conversation with your faculty advisor.

Will you pursue a two-term or a one-term project?

For students graduating in May, a two-term project begins in the fall and is due just after spring break. A one-term project is completed in the fall only, and students who complete a one-term project are required to take an additional HSHM course in the spring. (Students who will graduate in December 2016 or who have other major constraints on their schedule should contact the Senior Project Director about alternative arrangements.)

Note! Only seniors who complete a two-term project will be eligible for senior-project prizes or for Distinction in the Major. Likewise, only seniors pursuing two-term projects are eligible for support from the Research Travel Fund administered by the history department (other funding may, however, be available from the Colleges and other sources).

What form will your project take?

Most students' projects will be a written essay. Writing is the only universally accepted form of communication in history, and an essay project will be excellent preparation for future research and a wide range of careers. For two-term projects, this essay will be no more than 12,500 words (roughly 40 pages). One-term projects are limited to 7,500 words (roughly 25 pages). Essay projects will also include notes, a bibliography, and a bibliographic essay – see page 13 for details.

It is also possible to pursue a non-written project. The decision to do a non-written project should be made only after consultation with faculty (see below for formal approval requirements), and you should think carefully about how your project will advance your intellectual and career goals. Here are some possibilities:

- **Website.** You will need to be able to write all necessary code and find space to host the site. Evaluation of the project will be based on both its design and its content.
- **Exhibition.** You'll have to find a suitable place to host the exhibition; you'll also need to locate and mount all materials. Yale libraries, museums, and archives have all expressed interest in hosting student exhibits.
- **Exhibition Catalog.** Preparing a catalog requires a different set of skills from mounting an exhibit, and you can do one without the other. Layout and graphics skills will be important, but again the evaluation will be based on both form and content.
- **Film.** This can be a traditional documentary film (complete with interviews, animations, etc.), or it can be more experimental. Format, length, and possible screening locations should be determined in conversation with your advisor.
- **Historical Map or Atlas.** You will need to undertake primary research and craft a historical argument. Attention to cartographic technique and visual language will also be crucial. Maps can be printed on large-format paper or prepared for the web.
- **Historical Data Reconstruction.** Many scientific fields rely on data from historical sources, including astronomy, epidemiology, meteorology, seismology, ecology, and many others.

Interpreting old data, however, requires precise attention to historical scientific theories, instrumentation, and cultural, institutional, and political context.

The list above is only meant to be suggestive, and you should feel free to propose something else. In all cases, however, the project must be realized – it cannot simply remain a proposal, no matter how well conceived or researched.

All non-written projects must be accompanied by a written analysis of your argument, goals, and methods. This description cannot exceed 3,000 words. Part of this text may resemble a bibliographic essay, but the primary purpose is to explain what you have done – and why. You must also submit a bibliography of primary and secondary sources (see page 13). Expectations for the number, type, and variety of sources are the same for written and non-written projects.

Note! To pursue a non-written project, you must receive formal pre-approval from your advisor; keep in mind that some faculty may not be able to advise a non-written project. You must also receive pre-approval from a *second* faculty member who will agree to evaluate the project once it is completed. At least one of these two faculty members must be from the HSHM program. All non-written projects must also be specially approved by the Senior Project Director.

Senior Project Timeline, 2016–2017

Due indicates something due to the Senior Project Director. Submit this material – in hard copy only! – to Erica Lee in HGS 207 by 5:00 p.m. on the date indicated.

Assignment indicates something due to your advisor.

Two-Term Projects

FALL SEMESTER, 2016

- | | | |
|-----------|----|---|
| August | 31 | <u>Register</u> for HSHM 490a during shopping period |
| September | 1 | <u>MANDATORY</u> senior project meeting: 4:00 p.m. –
Location: HGS 204 (Hall of Graduate Studies) |
| | 8 | Research Travel Fund applications available in HGS 237. |
| | 12 | <u>Due:</u> Statement of Intention, signed by your advisor. Turn in to
Erica Lee in HGS 207 by 5:00 p.m.
<u>Register</u> for a Library Research One-On-One by emailing
melissa.grafe@yale.edu; you must meet by September 29 th |
| | 30 | Research Travel Fund applications due by 4:00 p.m. to HGS
237. |
| October | 17 | <u>Assignment:</u> Research Plan due to advisor. |
| | 31 | <u>Assignment:</u> Three-page Prospectus due to advisor. |
| November | 7 | <u>Assignment:</u> Annotated Bibliography due to advisor. |
| | 28 | <u>Assignment:</u> Ten-page draft or full outline due to advisor. |

SPRING SEMESTER, 2017

- | | | |
|---------|----|---|
| January | 17 | <u>Register</u> for HSHM 491b during shopping period |
|---------|----|---|

- February 20 **Assignment** : Complete draft of project due to your advisor.
Consult with your advisor regarding possible graders.
- 28 **Due:** Senior Project Title Form. Turn in to HGS 207.
Remind your advisor to turn in a list of suggested graders.
- April 3 **Due:** Senior Projects due in **HGS 211** by 5:00 p.m.

One-Term Projects

FALL SEMESTER, 2016

- August 31 **Register** for HSHM 492a during shopping period
- September 1 **MANDATORY** senior project meeting: 4:00 p.m. – location for meeting to be announced
- 6 **Due:** Statement of Intention, signed by your advisor. Turn in to Erica Lee in HGS 207 by 5:00 p.m.
Register for a Library Research One-On-One by emailing melissa.grafe@yale.edu; you must meet by October 1st
- 30 **Assignment:** Research Plan due to advisor.
- October 24 **Assignment:** Three-page Prospectus due to advisor.
Assignment: Annotated Bibliography due to advisor.
Consult with your advisor regarding possible graders.
- November 7 **Due:** Senior Project Title Form. Turn in to HGS 207.
Remind your advisor to turn in a list of suggested graders.
- 21 **Assignment:** Complete draft of project due to your advisor.
- December 5 **Due:** Senior Projects due in **HGS 207** by 5:00 p.m.

Detailed Explanation of Assignments

Statement of Intention

You must have an advisor in order to undertake a senior project. You are responsible for finding an appropriate faculty member for this purpose. We will not select an advisor for you. If your first-choice advisor can take no more advisees, ask that person for his or her advice for someone else who might be a good advisor. Beginning on page 25 you will find a listing of HSHM and History faculty by their fields of interest. The Senior Project Director can also help to suggest appropriate faculty advisors.

In consultation with your advisor, you must decide on a topic for your project as soon as possible. The Statement of Intention form is the place for you to formally propose your project and summarize your preliminary goals. This form must be signed by your advisor and submitted to Erica Lee in HGS 207. Submission of the Statement of Intention is a mandatory requirement for credit in HSHM 490 or 492. If your topic or advisor should change after you begin your research, you must immediately submit a new – signed – form to Erica Lee.

Library Research One-On-One

You must email Melissa Grafe <melissa.grafe@yale.edu>, the librarian for the HSMPH major, to schedule a one-on-one meeting about your project. She will be sure you meet with a librarian who has expertise relevant to your topic; these meetings will help you brainstorm for sources and find what you need, either at Yale or elsewhere. These meetings are mandatory and must be completed before you turn in your Research Plan.

Research Plan

This one- or two-page research plan is due to your advisor. This plan will restate your topic, reflecting the research you have done so far and giving a brief mention of the major secondary works in the field. It must also pose several important questions you will raise about the topic. These questions will shape the direction of your research. You will also need to tell your advisor about the primary sources you will use and where they are located. If you need to travel to archives, you should consider when you can visit them and whether you will be applying for travel grants from your college or the department to visit them.

If you need materials that aren't available at Yale, it is important to request these ASAP from Inter-Library Loan or Borrow Direct.

Prospectus

Your three-page prospectus is a fuller and more developed version of what you included in your Statement of Intention. This prospectus should open with a short description of the topic and present your preliminary thesis statement. The thesis statement is the *argument* you hope to make based on your source materials; it is the *conclusion* that will indicate the significance of what you have written. The prospectus should also indicate what unique contribution you hope to make by describing the major secondary literature that exists on your topic and how your research will augment or modify it. Also include a discussion of the primary sources you will use.

Annotated Bibliography

This preliminary bibliography should include all sources that you have consulted and that you expect to consult, as well as every source cited in your notes. It should be approximately five pages long and should be divided into Primary Sources and Secondary Sources, with Primary Sources first. Your list of secondary sources should include every secondary source that you think is important to your topic. (You should select three or four areas of historical literature on which your project touches and identify the major secondary sources in those areas.) Write a few lines about each book, stating how it relates to your project.

Excerpt or Outline (for Two-Term Projects only)

You will need to choose between submitting a draft of ten pages of prose or a detailed outline of your entire project; make this decision in consultation with your advisor. If you choose to submit a detailed outline, you should provide a timetable describing a possible set of writing deadlines you would like to meet to complete the project on time. Planning a calendar of writing is an excellent way of breaking down a large task into easily manageable smaller ones.

Selection of a Grader

You should discuss ideas for graders with your advisor. The Senior Project Director will assign graders in consultation with your advisor. Since the grading load needs to be distributed relatively evenly over all faculty, no commitments to any particular grader are possible.

Complete Draft of Senior Project

This is very important! Do not plan to finish your project immediately before the deadline. Getting feedback on a *full* and *polished* draft will improve the final product immensely and can help to avoid major blunders. At the end of the process, projects usually divide into two major camps: successful projects that were revised based on the advisor's feedback, and less successful projects that seem undercooked, confused, or incomplete.

You will probably write several drafts before you have a draft you want to submit to your advisor. You may also want to ask your college writing tutor to edit your rough draft to help you repair awkward phrasing, disorganized paragraphs, and grammatical errors before you present the draft to your advisor.

Senior Project Title Form

This form will enable the Senior Project Director to assign the most appropriate grader for your project. Clever, engaging, and provocative titles are fine (and encouraged!), so long as the title clearly indicates the place, time period, and subject matter addressed by the project.

Submission of the Senior Project

Your completed project must be turned in to Erica Lee by 5:00 p.m. This deadline is non-negotiable. For projects with digital or other non-paper components, the burden is on *you* to show your advisor and your grader that you have stopped work by the deadline. For example, you can turn in a USB drive or CD/DVD of any digital content, including web pages, video, or photographs of a finished exhibition. Be sure to make appropriate arrangements well in advance.

Registration and Grading

Registration

For those pursuing a two-term project: Register for HSHM 490a in the fall and HSHM 491b in the spring. You will receive a temporary grade of SAT (satisfactory) or NS (not satisfactory) for the fall term; this grade will eventually be replaced by the final grade you receive on the project. (Students who receive an NS in HSHM 490a must still register for HSHM 491b and complete their projects on schedule.)

For those pursuing a one-term project: Register for HSHM 492a in the fall term. Your grade in this course will be the same as the final grade you receive on your project.

For students who will graduate in December 2016 or who have other major constraints on their schedule: Contact the Senior Project Director.

First-Semester Evaluation (for Two-Term Projects)

The Senior Project Director assigns first-semester grades in consultation with your advisor.

You must have completed all these assignments to receive a grade of SAT:

- Register for HSHM 490a
- Attend mandatory senior-project meeting
- Submit a signed Statement of Intention to Erica Lee
- Register for and attend a Library Research One-On-One
- Submit a research plan to your advisor
- Submit a three-page prospectus to your advisor
- Submit an annotated bibliography to your advisor
- Submit either a ten-page draft or detailed outline of your entire project to your advisor

Students who receive an NS in HSHM 490a must still register for HSHM 491b and complete their projects on schedule. No incompletes will be given in HSHM 490a.

Final Evaluation

Your project will be graded by a member of the History or HSHM faculty who is not your advisor. (Graders from other departments are also possible, with prior approval.) Your grader will consult with your advisor before submitting their final report; see page 22 for a copy of the form that your grader will use. You will receive a completed copy of your grader's report roughly one month after the final deadline.

Prizes

Both your advisor and your grader may nominate your project for prizes. Senior Project Prize Day will be held the Friday afternoon of commencement weekend; families and guests are encouraged to attend. Students nominated for prizes will be notified by e-mail.

Final Deadline and Submission

The final deadline is a REAL deadline!

As stated in the Blue Book: “If the essay is submitted late without an excuse from the student’s Residential College Dean, the penalty is one letter grade for the first day and one-half letter grade for each of the next two days past the deadline. However, no essay that would otherwise pass will be failed simply because it is late. Late essays will not be considered for departmental or Yale College prizes.”

Extensions to the Deadline

Only major, incapacitating illnesses and dire family emergencies will be considered as legitimate cause for an extension of this deadline by your college dean, who must consult with the Senior Project Director prior to issuing the excuse. Students who do not turn in a project by the end of the semester are automatically given a grade of F. This grade of F may be replaced after the end of the semester if the student submits a project to finish his or her degree. Such exceptionally late projects receive no grade deduction penalty, since not graduating on time is considered penalty enough. These late projects will be read and graded within sixty days after the following term begins.

Number of Copies Required

On the date that projects are due you will need to bring *two bound copies* and *one unbound copy* of all written material to Erica Lee in HGS 211. You should, of course, keep a copy for yourself as well. For projects with digital or other non-paper components, the burden is on *you* to show your advisor and your grader that you have stopped work by the deadline. For example, you can turn in a USB drive or CD/DVD of any digital content, including web pages, video, or photographs of a finished exhibition. Be sure to make appropriate arrangements well in advance.

On that same day, you must also forward an electronic copy of your project to Essie Barros, Undergraduate Registrar for the Department of History, at essie.barros@yale.edu. She will be archiving all of the senior projects for History and for History of Science, Medicine, and Public Health. For projects with significant digital content, please keep file sizes reasonable.

Structure and Style of Written Work

All senior projects – even those that don't take the form of an essay – require clear, elegant, and convincing prose. All writing should follow these guidelines.

Structure

Essay projects will consist of at least three parts: the text itself, a bibliography, and a bibliographic essay. Non-written projects will include an analytic essay and a bibliography. You may also choose to include a title page, table of contents, acknowledgements, appendices, or other supplementary material.

Style

When writing, you should use *A Manual for Writers* by Kate Turabian, which is available at the Yale Bookstore. It provides the only styles acceptable for your writing and citations. You will need to consult this manual from the moment you begin to take notes.

Length

For two-term projects, the text portion of your essay is limited to 12,500 words. For one-term projects, the limit is 7,500 words. Non-written projects must be accompanied by an analytic description of no more than 3,000 words. The word count for your text must be included on the last page of text – *before* your bibliography. While there is no minimum word limit, most successful senior projects approach these limits. Appendices, bibliography, notes, and the bibliographical essay do not count towards the word limit.

Footnotes or Endnotes?

You may use either footnotes or endnotes. Complete instructions for both can be found in *A Manual for Writers*. It is critical that your notes be complete and correct, including page numbers for citations from published sources and box and file numbers from manuscript sources.

The Bibliography

The bibliography should include all your sources: everything cited in your notes *and* everything you consulted but did not cite. Divide the sources into Primary Sources and Secondary Sources, with Primary Sources first. Alphabetize all sources within these headings; do not subdivide your sources by format, subject, or date. Your project will be judged incomplete (or late) if it does not include a bibliography.

The Bibliographical Essay

A separate bibliographical essay is required for all essay projects; it should be no more than 2,000 words in length (most are shorter). The bibliographical essay is a set of critical reflections on the most important sources you have used, and it allows you to explain how you developed your ideas as your research progressed. You should identify the strengths, weaknesses and limitations of the research material you have used to write your essay. An example of an excellent bibliographical essay can be found on page 14. Your project will be judged incomplete (or late) if it does not include the bibliographical essay.

Sample Bibliographic Essay

from an HSHM Senior Project, April 2006

The mononucleosis studies carried out at Yale in the 1950s and 1960s lent themselves well to primary source material. Because the setting of my study was so local, and the time so recent, I had access to ample primary documents about the Yale experiments and to the still-living people who could comment on the mononucleosis story. Thus, while general information about the time period and about the developing status of virology depended on secondary sources, the bulk of my paper is based on primary documents, archives, newspaper articles, and personal interviews.

The framework of the mononucleosis story was built on published documents, including scientific papers and newspaper articles. The published works of Alfred Evans on mononucleosis and seroepidemiology, of John Paul on clinical epidemiology and serology, and of James Niederman on mononucleosis at Yale anchored the essay in time and place, and provided a jumping off point for further investigation. Alfred Evans was a prolific writer, with over 230 publications during his career, mostly concentrating on mononucleosis and public health. Paul, also prolific, wrote one book dedicated to his philosophy of clinical epidemiology, edited another containing several articles about serological epidemiology, and also published numerous scientific papers. James Niederman and Bob McCollum were co-authors on various papers about mononucleosis, including the first paper to reveal the connection between Epstein-Barr Virus and mononucleosis. Finally, Gertrude and Werner Henle published their discoveries relating to the Epstein Barr Virus, including its prevalence, significance with respect to Burkitt's Lymphoma, and, of course, its connection to mononucleosis. All of these scientific papers contributed to a factual data set that comprised the "official" scientific record of what happened.

While these formal statements of events provided a skeleton, I turned to the personal archives of the scientists involved to flesh out the details. My first attempt to find a significant primary source, the archives of Alfred S. Evans, proved unsuccessful. Despite his long and fruitful career at Yale, none of Evans' papers seemed to have been kept by the Yale Manuscripts and Archives. Two of his three children also didn't think they had much of use; the third posited that he might have some of his father's material stored away in boxes, but that they would not be available until after this year because he was remodeling his home and all of his possessions were in storage. None of Evans'

former colleagues whom I was able to contact knew where his papers had been stored, and after several weeks of investigation I abandoned the search.

Fortunately, however, I had better luck with the archives of Dr. Paul and Dr. Horstmann, both of which were meticulously preserved in Manuscripts and Archives. Neither archive was able to paint a very clear picture of the relationships among scientists on the Yale faculty, most likely because the communication among them would have been primarily conducted either in person or on the phone and not through letters. However, Paul's Archive was helpful in illustrating how the Department of Epidemiology and Public Health came into existence, as well as how he viewed serology and clinical epidemiology.

The next archives I searched were those of Drs. Werner and Gertrude Henle, which are located in Bethesda, MD. Through the papers of these scientists, I was able to piece together a lot of information about Alfred Evans and his place in the mononucleosis story, as well as exactly how the connection between EBV and mononucleosis had been made in the Henle lab.

Many of the gaps that were left in the mononucleosis story after sifting through these archives were filled by personal interviews. I conducted interviews with the central characters including Dr. James Niederman and Dr. Bob McCollum, as well as with more peripheral but still useful scientists and historians: Dr. Howard Spiro, who conducted the pepsinogen study with Dr. Niederman; Dr. William Summers, who was a former student and friend of Al Evans; Dr. George Miller, who was a former colleague of Evans' and who currently studies Epstein-Barr Virus; Dr. Nancy Ruddle, who was very familiar with the work and life of Dorothy Horstmann and who had also interacted with Niederman and Evans; Dr. Curtis Patton, a professor at the School of Public Health who was a colleague of both Niederman and Evans; Dr. Gerard Burrow, author of *A History of Yale's School of Medicine*; David Hershey, a member of the undergraduate Yale class of 1962 who had been subjected to the mononucleosis experiment in its inaugural year; Dr. Phillip Brachman, who was a colleague and close friend of Evans'; Dr. Nancy Mueller, also a colleague and friend of Evans'; Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases and advisor to the White House on global AIDS issues; Dr. Mark Kaplan, a virologist and infectious disease specialist who has dedicated his career to AIDS treatment and research and who was part of the Gallo team that co-authored the landmark paper published in *Science* identifying HIV as the cause of AIDS; and finally Dr. Daniel S. Rowe, Medical Director of the Department of University Health Services starting in 1971. Each of these people contributed significantly to my research by providing context, personal insight, and memorable details about the story I was trying to tell.

As I continued my research, it became clear that the scientific story in and of itself did not provide a complete picture, and that the historical and social context in which this research took place would offer a lot of insight as to how and why progress was made. To this end, my greatest primary resources were newspapers of the time, which reported on trends in virology and informed consent, as well as the perceived scientific strength of Yale University. The *New York Times* in particular covered developments at Yale well, given Yale's proximity to New York City, while popular magazines like *Life* helped paint a picture of the public perception of mononucleosis at the time. These newspapers confirmed some of the trends and ideas that had been recalled in the personal interviews, which helped solidify some of my conclusions.

In addition to the primary sources discussed above, I also consulted secondary sources to find out if the themes I saw emerging in the mononucleosis situation had more general significance. For example, Heather Munro Prescott's "Using the Student Body: College and University Students as Research Subjects in the United States during the Twentieth Century" confirmed the relevance of student participation in experimentation, and its rise and fall along with the emerging informed consent laws. Similarly, Joshua Lederberg's "Infectious History" and Peter Radetsky's *The Invisible Invaders* both captured the rising prominence of virology in the mid-twentieth century as feared diseases like polio and mumps were conquered one after another. Secondary sources were also essential for context, particularly Gerard Burrow's *A History of Yale's School of Medicine*. This volume gave me a sense of how the mononucleosis story fit into the general trajectory of the Yale Medical School, and highlighted, in particular, the relative importance of Paul's contributions.

Some of the most interesting moments of my research occurred when sources conflicted, leaving me to make my own judgment as to what really happened. How the mono study was conceived and by whom, in particular, became more and more ambiguous with each source; Dr. Niederman himself presented one picture, while Dr. Howard Spiro presented another and Dr. Bob McCollum a third. The archived papers of John Paul provided some official records from the Department of Epidemiology and Public Health that partially clarified the details, but the exact nature and sequence of events, where the memories of the players involved diverge from the written record, remains a mystery. If I had had more time, one of the most valuable additions to this source list would have been the papers of Alfred Evans, which may become at least partially available later this spring. Perhaps an interesting continuation of this paper would use these papers to shed additional light on the study of mononucleosis and serology in the twentieth century.

Prizes

PRIZES AWARDED BY THE HSHM PROGRAM

Martin Klein and George Rosen Prize

Established by the program in the History of Science and Medicine in 2006, the prize honors two distinguished former members of the faculty: Klein, a historian of physics, and Rosen, a historian of medicine and public health. Awarded to the senior who has written the most outstanding senior essay in history of science and/or medicine. Essays submitted by seniors majoring in History and History of Science, Medicine, and Public Health in fulfillment of the respective major requirements are considered as entered in competition.

PRIZES AWARDED BY THE HISTORY DEPARTMENT

Max Bildner Prize

The Bildner Prize is presented for the best senior essay in Latin American history.

Percival W. Clement Prize

Established in 1994 for the best essay by a junior or senior in American studies (embracing history) that supports the U.S. Constitution.

Robert D. Gries Prize

This prize is for the best essay in a field in history other than American or European. Robert Gries established it in 1981.

John Addison Porter American History Prize

Mrs. Porter established the prize in 1901 in memory of her husband, John A. Porter, B.A. 1878. It does to a junior or senior for the best original essay completed during the current academic year on a subject bearing on U.S. political, constitutional, or economic history, or on the condition or future of the United States.

Edwin W. Small Prize

Carmel R. Small established the prize in 1990 in memory of Edwin W. Small, B.A. 1934, for recognition of outstanding work in the field of American History.

Winifred Sturley Prize

Richard A. Sturley '49, M. Eng. '50, and Michael F. Sturley '77, J.D. '81 established the prize in honor of Winifred Sturley, Hon. 55. It is awarded to the student in the History Department who submits the best senior essay on a topic in English history.

Andrew D. White Senior Essay Prize

Established in 1902 and first awarded in 1907, the White prize was the gift of Professor Guy Stanton Ford of the University of Illinois in honor of Andrew D. White, B.A. 1853, and endowed by a bequest from Mr. White for the best essay in English, European, or non-western history.

Howard Roberts Lamar Prize

Named for distinguished History Professor Howard Lamar, the prize is awarded to the best undergraduate essay on a topic in the history or culture of the American West.

David Morris Potter Prize

The Potter Prize is awarded to the best undergraduate essay on a topic in American history or culture.

Walter McClintock Prize

The McClintock Prize is awarded to the best undergraduate essay on a topic in Native American history.

PRIZES AWARDED BY OTHER YALE PROGRAMS**Asian American Studies Prize**

The Asian American Studies Prize is for the best essay in Asian American Studies, given by the American Studies Department.

Canadian Studies Prize

The Canadian Studies Prize is for the best essay on a Canadian topic, awarded by the Canadian Studies Council.

GALA Prize

The Yale Gay and Lesbian Alumni/ae Association established the GALA Prize to be administered through the fund for Lesbian and Gay Studies for the best senior essay in any area of gay and lesbian studies. Submit essays to the office of the Fund for Lesbian and Gay Studies, WLH 315. Call for deadline date.

Library Map Prize

The Map Collection of Sterling Memorial Library awards a prize for the best senior essay making good use of maps. Submit essays to Curator, Map Collection.

Steere Prize in Women's Studies

The Women's, Gender, and Sexuality Studies Program awards a prize for the best essay accentuating women or gender roles or using feminist theory. Submit essays to the Women's, Gender, and Sexuality Studies Program, WLH 315.

Williams Prize in East Asian Studies

Submit essays with a faculty letter of endorsement to the Williams Prize Committee, Council of East Asian Studies, YCIAS, Luce Hall.

Wrexham Prize

The Yale College Dean's Office awards the Wrexham Prize to the best senior essay in the field of the humanities. A committee nominates the History Department's entries.

Senior Project Statement of Intention

History of Science, Medicine, and Public Health

Complete and return this form to Erica Lee – HGS 207

Two-Term Statement due September 12, 2016 by 5:00 p.m.

One-Term Statement due September 6, 2016 by 5:00 pm.

Your Name: _____ College: _____

E-mail: _____ Telephone: _____

Two-Term Project: _____ One-Term Project: _____

Advisor's Name: _____

Type of Project (essay, website, exhibition, etc.): _____

Grader's Name (for non-written projects): _____

Attach a printed, one-page description of your proposed project. State the topic and your focus concisely. Indicate what types of primary sources you might use.

In addition, please summarize your project in one sentence:

List all courses you have taken that are relevant to your topic (including courses in progress):

Do you have the language skills necessary for the project? Explain:

Will this project also be submitted to a program other than HSHM? Yes / No

If so, what is the other program? Who is your advisor in that program?

Have you registered for a Library Research One-On-One? Yes / No

Advisor's Signature: _____

For non-written projects, sign only after consultation with the grader and the Senior Project Director.

Senior Project Title Form

History of Science, Medicine, and Public Health

Complete and return this form to Erica Lee – HGS 207

For one-term projects: due November 7, 2016 at 5:00 p.m.

For two-term projects: due February 28, 2017 at 5:00 p.m.

This form will enable the Senior Project Director to assign the most appropriate grader for your project. Clever, engaging, and provocative titles are fine (and encouraged!), so long as the title clearly indicates the place, time period, and subject matter addressed by the project.

Your Name: _____

College: _____

E-mail: _____

Telephone: _____

Advisor's Name: _____

Project Title: _____

Type of Project (essay, website, exhibition, etc.): _____

Sample Titles of Past Senior Projects

A 'Burning' Issue: Battling Blood Loss in Neurosurgery:
Harvey Cushing's Embrace of Electrosurgery

Building a New Public Health Tradition:
The End of Routine Smallpox Vaccination in the United States

Caffeine's Conquest of America:
Caffeine's Rise to Celebrity in Twentieth-Century America

Let the Dead Teach the Living:
The Rise of Body Bequeathal in Twentieth-Century America

When Heroin Was New:
The Introduction of Heroin into American Medicine

Federal Science and Western Rangelands:
American Entanglements in the Plant Industry, 1890–1910

Science Writing in Modern American Newspapers

Unmasking Autism in Twentieth-Century America

Sweet Stain:
Social Stigma and Type 1 Diabetes in Twentieth-Century America

Maginot Line in the Sky:
Scientists and Statesmen in the Safeguard ABM Debate

"Hail to the Patents!"
The Ethics, Politics, and Economics of the Early Modern Patent

System Rifles in War and Peace:
The American Arms Industry in the Mid-Nineteenth Century

Profiles in Innovation:
ENIAC, Microprocessor, IMP

Senior Project Evaluation Report

History of Science, Medicine, and Public Health

Class of 2017

Senior Project Director: Joanna Radin

Student's name: _____

College: _____

Project Advisor: _____

Grader's Name: _____

Final grade: _____

Grader's Signature: _____

Date: _____

Evaluation of Materials Used:

A. Primary Sources:

B. Secondary Sources:

C. Student's Bibliographical Essay (for essay projects):

Evaluation of Structure and Style:

A. Organization of Project:

B. Style of writing (or other method of presentation):

C. Typographic and scholarly style (spelling, grammar, notes, etc.):

Evaluation of Argument:

A. Is the proposed subject adequately treated?

B. Is the interpretation well substantiated?

C. Does the student weigh the evidence judiciously?

D. General appraisal and criticism:

Have you consulted with the advisor regarding your grade? Yes / No

Have you sent this report to the advisor by email? Yes / No Date sent: _____

Would you recommend this project for publication? Yes / No

Are you recommending this project for the HSHM prize? Yes / No

Are you recommending this project for a non-HSHM prize? Yes / No

Which prize(s)? _____

If you feel this project should be recommended for a prize, please contact Joanna Radin or Erica Lee at your earliest convenience.

Faculty Fields for Advising

If you have questions about a faculty member's availability, contact them directly. It is possible, but rare, to be advised by different faculty in the fall and spring.

HISTORY OF SCIENCE AND MEDICINE

Toby Appel

American medicine in the nineteenth and early twentieth centuries, especially women in medicine and science, Connecticut and Yale medical history, medical and scientific societies and institutions, and health professions including alternative physicians.

Paola Bertucci

Pre-1800 science, technology and medicine; museums and collecting; material culture of science; scientific and industrial travels; scientific and medical instruments; secrecy and science, science and art; history of scientific exhibitions.

Henry Cowles

Human sciences and scientific medicine since 1800; mind and brain; historical and scientific methodology; pragmatism and evolutionary theory; experimentation in science, medicine, and the arts.

Ivano Dal Prete

Earth sciences (ca. 1300-1800): generation in the long eighteenth century; the material culture of astronomy; science, religion and society in early modern Italy.

Jenna Healey

History of American medicine; gender and science; medical technology; history of medicine and capitalism; history of medicine and biomedical technologies in the United States; issues of gender and reproduction.

Joanna Radin

History of biology, medicine, and anthropology since 1945; scientific expeditions, biomedical ethics, human subjects research, collections, and laboratories; history of global health; biomedical technology.

Chitra Ramalingam

On leave Fall 2016

Cultural history of the physical sciences (18th century to the present), science and visual culture, visual studies, material culture studies, history and theory of photography, modern British history.

William Rankin

Physical and earth sciences since the mid-nineteenth century; military, industrial, and governmental science; history of cartography; science and architecture; visual studies; environmental history.

Naomi Rogers

History of twentieth-century medicine and public health in North America including policy, activism, alternative medicine, and gender and medicine; science and feminism; feminist health movements.

William Summers

History of modern biology; geopolitics of disease; Asian science and medicine

John Warner

On leave Spring 2017

Nineteenth- and twentieth-century U.S. medicine and health cultures; comparative history of medicine (U.S., Britain, France); cultural history of science and medicine.

UNITED STATES HISTORY

Jean-Christophe Agnew

American Cultural and Intellectual history; 19th and 20th centuries; Market relations and Consumer culture; Cultural theory

Ned Blackhawk

Native American History and Native American Law

David Blight

Civil War and Reconstruction era, African American history, and American cultural and Intellectual history

George Chauncey

(On Leave Spring 2017)

Twentieth-century U.S. social, cultural, and urban history; lesbian and gay history; history of gender and sexuality

Patrick Cohrs

19th and 20th century U.S. international history; history of the international system; European international history; 19th and 20th century

Yiftah Elazar

17th and 18th Century Anglo-American intellectual history

Crystal Feimster

African American studies; racial and sexual violence

Joanne Freeman

(On Leave Spring 2017)

Revolutionary and Early National American history with special interest in politics and culture, Early American journalism and print culture, regionalism

John Lewis Gaddis

(On Leave Fall 2016)

Cold War history, Historical Methodology, Biography, Grand Strategy

Beverly Gage (On Leave Spring 2017)
U.S. 20th Century and U.S. politics, terrorism, war and society

Glenda Gilmore (On phased retirement)
Twentieth-century U.S. history, African American history since 1865, U.S. women's and gender history since 1865, history of the America south, reform movements, 1890 to the present

Jay Gitlin
U.S. cultural history (esp. music-related and popular culture); Native American and American west; American colonial: Canadian history; social history (esp. urban/suburban history)

Jonathan Holloway (Limited Advising)
Twentieth-century U.S. History, African American History since 1895, urban studies

Matthew Jacobson (On Leave 2016-2017 Academic Year)
U.S cultural history, 19th and 20th century immigration, ethnicity and race, U.S. expansionism

Jennifer Klein
Twentieth-century U.S. history: urban history, labor history, New Deal and post-World War II politics and policy

Naomi Lamoreaux (Chair of the History Department)
U.S. Economic, Business, and Technological History

George Levesque
History of religious thought in America, History of Education, and History of American Colleges and Universities, 18th & 19th century intellectual history

Mary Lui
Asian American history; U.S. urban history; race and ethnicity; and immigration, gender and sexuality

Joanne Meyerowitz
Twentieth-century, social, cultural, and intellectual history, Gender, and Sexuality

George Miles – Beinecke Library (limited advising)
Native American history, frontier, American West

Nicholas Parrillo
U.S: legal history; history of the administrative state; political development

Stephen Pitti
History of Mexican Americans, U.S. West, Latinos, 19th and 20th Century Immigration, the U.S.-Mexico border, labor history

Bradley Proctor

United States history and Civil War

Ariel Ron

Intersection of economic and political development and the history of capitalism in the nineteenth-century United States

Edward Rugemer

Comparative Slavery and Abolition; Antebellum United States; Atlantic history

Paul Sabin

Environmental Studies

Judith Ann Schiff Manuscripts & Archives – (limited advising)

History of New Haven and Yale, Women in Connecticut; Aviation, Jewish history

Harry Stout - Limited advising

Early America, American Religious history, American civil war

John Witt (Yale University Law School)

American Legal History

Nicholas Wood

Colonial American History, Civil War

LATIN AMERICAN HISTORY

Marcela Echeverri

Latin America: Andes; social and political history; law; race and ethnicity; comparative revolutions, slavery, and abolition; political theory; history of anthropology

Anne Eller

Slavery and emancipation in the Caribbean and Latin America, the Haitian Revolution, pan-Caribbean migration and political movements, Latin American independence, and the African Diaspora

Gilbert Joseph

(On Leave Spring 2017)

Modern Latin American History, Mexican and Central American History; U.S.–Latin American Relationships; social and revolutionary movements in Latin America, sports in Latin America

Stuart Schwartz

Latin America history, Brazil

ANCIENT HISTORY

David Kimel

Ancient Greek and Roman History

Bentley Layton
Ancient Christianity

Joseph Manning (On Leave 2016-2017 Academic Year)
Ancient Egyptian history, and Ancient North Africa history

William Metcalf
Roman history, Latin literature and numismatics

EUROPEAN AND BRITISH HISTORY

Jennifer Allen
Modern German history; cultural history of modern Europe; theories and practices of memory; grassroots activism; the politics of space; Europe after the Cold War

Sarah Brinegar
History of the Soviet Union

Paul Bushkovitch
Russia to 1725; Russian foreign policy; Ukraine

Becky Conekin
British History

Carolyn Dean (On Leave 2016-2017 Academic Year)
Intellectual and cultural historian of modern Europe with a particular interest in France, Germany, and Italy; genocide studies; gender studies

Carlos Eire
Early modern Europe: intellectual, social, cultural, and religious history; Protestant Reformation; Catholic Reformation (Spain, France, Germany)

Paul Freedman
Medieval European history

Bruce Gordon
Early German Reformation and Christianity history

Paul Kennedy (On Leave Spring 2017)
Great power relations, 19th and 20th centuries; Military and Naval history British Foreign and Imperial history; contemporary Global Security issues; United Nations studies

Ivan Marcus
History of the Jews in medieval Europe; History of Jewish culture; Jewish-Christian relations; Jewish mysticism and pietism; the Jews and Islam

John Merriman

Modern France; urban and social history; modern European History since the Renaissance

Isaac Nakhimovsky

On leave Fall 2016

Political thought and intellectual history, primarily in 17-19th century Europe

Steven Pincus

History of Britain, History of the Netherlands, Worldwide Colonial Rivalries of 17th and 18 century

Stuart Semmel

British politics, culture, and thought since 1760, popular culture, politics, and political social thought, European cultural and intellectual history.

Marci Shore

European Cultural and Intellectual history

Frank Snowden

Modern Italian history; fascism; social history; history of medicine

Timothy Snyder

Modern Eastern Europe

David Sorkin

Intersection of Jewish history and European history since the 16th century

Eliyahu Stern

Jewish History

Francesca Trivellato

(On Leave 2016-2017 Academic Year)

Early Modern Italy and Continental Europe, especially social and Economic History

Anders Winroth

Medieval history, Scandinavia, church history, intellectual history; legal history

Keith Wrightson

British History, 1500–1750, especially social, cultural issues; history of the family; local community studies; class and social structure

AFRICA, ASIA, AND MIDDLE EAST

Adel Allouche

Medieval Middle Eastern history; Islamic history

Abbas Amanat

Modern Middle East; and Classical Islam; Iran; Ottoman Empire, the Arab World, Modern Indian subcontinent to the 19th century; history of US-Middle East relations

Amanda Behm

International Security Studies and European British History

Daniel Botsman

Japanese History

Rosie Bsheer

(On Leave 2016-2017 Academic Year)

Social and intellectual history of Ottoman Arabia and the modern Middle East; the Arabian Peninsula; urban studies; historiography; comparative colonialism

Ann-Ping Chin

Chinese intellectual history; Confucianism; pre-modern Chinese history; Chinese cultural history 1500-1800; studies in Chinese classical texts; history of Chinese religion; Taoism; Chinese Buddhism; Chinese political

Rohit De

(On Leave 2016-2017 Academic Year)

Modern South Asia (India, Pakistan, Bangladesh), global legal history, law and society, law and colonialism, British Empire, nationalism and decolonization in Asia and Africa, comparative constitutionalism

Fabian Drixler

Japanese History and Demographic history around the world

Valerie Hansen

(On Leave Fall 2016)

China to 1600; Chinese religious and legal history; history of the Silk Road

Robert Harms

Sub-Saharan Africa

Denise Ho

Modern China, Cultural Revolution, museum studies, material culture

Ben Kiernan

Southeast Asia, early and modern, esp. Cambodia and Vietnam, Indonesia and East Timor: comparative colonialism, nationalism, communism, genocide, and environmental history

Daniel Magaziner

20th Century South and Southern Africa popular culture; intellectual history, religious history, political history and environmental history; South Africa the African Diaspora, East Africa; Africa in the colonial and post-colonial age. Black Nationalism in South Africa, Black visual artists in 20th Century South Africa

Alan Mikhail

Middle East, Early Modern Muslim World, Ottoman Empire, Egypt, environmental history, early modern history, history of medicine

Peter Purdue

(On Leave Spring 2017)

Chinese History

Lamin Sanneh

History of Islam; history of religion in Africa; cross-cultural studies; religion language and society

Jonathan Wyrzten

North Africa and Middle East: Comparative Empire and colonialism, Ethnicity and Nationalism, Morocco, Urban and Rural contentious politics