

The APS officially launched the <u>Center for the History of Science</u> (CHS) on July 1, 2024 following a unanimous vote by APS Council. Following the model set by the Library & Museum's other research centers, the mission of the CHS is to increase the visibility and use of its holdings related to the history of science, technology, and medicine through dedicated fellowships, programming, special projects, and new acquisitions.

What's in this Newsletter:

- Introducing the Mendel+ Newsletter
- Meet the CHS Staff
- Introducing the 2025-2026 John C. Slater Fellow
- Collection Updates Project Highlights
- Programs & Events
- CHS Blog Highlights

Introducing Mendel+: A New Newsletter

April 1968 saw the publication of Issue 1 of the American Philosophical Society's <u>The</u> <u>Mendel Newsletter: Archival Resources for the History of Genetics & Allied Sciences</u>, named, of course, after the famed pea plant experimenter Gregor Mendel. Brought into being via the efforts of geneticist L.C. Dunn, historian of science William Coleman, APS Librarian Whitfield Bell, and others, this initial iteration of the <u>Mendel Newsletter</u> was meant to elevate the profile of genetics history, underscore the importance of curating archival material connected to this subject, and keep readers up to date on the subject matter represented in and status of new and existing genetics-related manuscript collections housed at the American Philosophical Society and other repositories.

By 1991, historians of biology Garland Allen and Frederick B. Churchill, along with APS Librarian Edward Carter and others, sought to reinvent the *Mendel Newsletter* with a more scholarly focus, establishing it as a venue for longer-form articles that often gestured to the social, cultural, and political conditions/contexts surrounding archival collections of interest. And while the original *Mendel Newsletter* of the late 1960s had already welcomed pieces on collections in the "allied sciences," the 1990s version took an even more capacious view of "genetics" as a discipline.

With the July 2024 establishment of the APS's new Center for the History of Science, we seek once again to reimagine the Mendel Newsletter and adopt an even broader vision for its content. While a recent manuscripts survey conducted by the Center (see below) determined that at least 49% of the APS's history of science manuscript collections could be classified primarily as "life sciences" in terms of subject matter, it also revealed that the APS is home to substantial numbers of collections relating to the history of other scientific fields. In an effort to reflect this topical diversity and to more closely align with emerging acquisition goals, we have decided to rebrand the Mendel Newsletter as Mendel+.



Taking all of the APS's history of science collections (i.e., not only those dealing with genetics and associated fields) as its purview, Mendel+ will continue to uphold many of the initial directives of the *Mendel Newsletter*. But, in an important pivot from prior versions, Mendel+ will now take on a completely internal focus, offering a comprehensive look at the history of science goings-on at the APS, including highlights of new acquisitions and recently-processed materials, updates on recent projects and collaborations, and news about upcoming programs and initiatives. We are excited to introduce you to Mendel+ and encourage you to visit our website for more updates and to share this newsletter with your networks.

Meet the CHS Team

<u>Adrianna Link</u> (left) – Curator for History of Science

<u>Gina Surita</u> (right) – History of Science Project Specialist



Introducing the 2025-2026 John C. Slater Predoctoral Fellow

"Project for a Cybernetic Psychology: A History of Learning and Language Processing, 1840 to the present"

Won Jeon is a historian and theorist of science and technology whose work investigates the enduring influence of metaphysical and psychological assumptions in the design of contemporary generative artificial intelligence (AI). She is currently a Ph.D. candidate in the History of Consciousness department at University of California, Santa Cruz.



Combining archival research with interdisciplinary theory, her research offers a critical genealogy of machine learning by tracing its intellectual foundations in 19th-century scientific and philosophical traditions, early psychoanalysis, and mid-20th-century cybernetics. Won holds a BA Honors in Critical and Visual Studies at the Ontario College of Art and Design and an MA from the Center for the Study of Theory and Criticism at Western University.

Collection Updates

History of Science Collections Survey

In fall 2024, we completed the first step in surveying the APS's history of science manuscripts. During this process, we surveyed nearly 500 individual collections in order to better understand the scope of our holdings and to ascertain future opportunities for processing and acquisitions. Read more about this work on our <u>blog.</u>



Recently-Processed and In-Progress Materials

Charles W. Cotterman Papers, Annemarie Weber Papers, and Rosemary and Peter Grant Papers (Gina Surita, History of Science Project Specialist)

Two recently processed history of biology collections are now accessible to researchers at the APS: the papers of geneticist <u>Charles W. Cotterman</u> (Mss.Ms.Coll.157) and those of muscle physiologist <u>Annemarie Weber</u> (Mss.SMs.Coll.165).

Containing research notes, draft writings, correspondence, and published material, the Cotterman papers hold much potential to help researchers answer questions relating to the intersections of eugenic, mathematical/statistical, and medical approaches to genetics around the middle of the 20th century.

Though a small collection, the Annemarie Weber Papers shine a light on various phases of research into the inner physiological and molecular workings of muscle tissue in Germany and America. Mainly composed of correspondence, published works, and photographs, this collection provides information on the contours of Annemarie Weber's scientific trajectory in the muscle field, as well as that of her father, Hans H. Weber.

The correspondence series of the **Rosemary and Peter Grant Papers** (Mss.Ms.Coll.263) is currently being processed! While in attendance at the APS Spring 2025 meeting, the Grants met with Gina Surita to help identify unknown correspondents within their papers.

Peter & Rosemary Grant with Gina Surita in April 2025.



John M. Opitz Papers (Jessica Hutchison, Project Archivist)

The <u>John M. Opitz Papers</u> (Mss.Ms.Coll.159) contain nearly 250 linear feet of materials accumulated and produced throughout Opitz's career as a medical geneticist. This collection provides a robust understanding of the diverse interests and projects that Opitz immersed himself in over a 60 year period, including materials ranging from research and teaching on genetic anomalies, writings on evolutionary development, and musings on the role of spirituality in medicine <u>(which you can read a bit about here)</u>. This collection will be available to researchers by this fall.

Richard Garwin Papers (Melanie Rinehart, Archivist)

After five years, 438 Hollinger boxes, and 13 archival series, the manuscript collection of American physicist <u>Richard Garwin</u> (Mss.Ms.Coll.168) is now available to researchers. Materials cover: Garwin's 41-year career at IBM's Watson Laboratory; his publications; his correspondence; his reporter's notebooks; his speeches and media appearances; and his involvement with organizations both governmental and non-governmental such as elite scientific consulting group JASON and anti-nuclear proliferation group Pugwash. There is a significant collection of travel and family-related photo slides taken by Garwin's father Robert.

A physicist, researcher, inventor, and engineer, Richard Garwin might be best known as the physicist credited with finalizing the engineering design of the first thermonuclear bomb, but he was also involved in the development of touch-input screens, eye tracking technology, and the organic photoconducting film which was eventually used in IBM's laser printers, amongst many other things. He was a vocal opponent of the Strategic Defense Initiative (SDI, also known as Reagan's Star Wars) and assisted in investigating Fleischmann and Pons's cold fusion claims. Notably, this is one of the first APS archival collections with a digital archive in addition to manuscripts; Kat Antonelli, Martine A. and Bina Aspen Rothblatt Digital Archivist, processed these materials, which includes a vast email archive. Researchers interested in 20th-century history of science and technology will find a wealth of materials in this significant manuscript collection.



Photo taken during Richard Garwin's televised 1970 Congressional testimony on the development of Supersonic Transport (SST) aircrafts. Garwin served as Chairman of the White House's SST Committee and was instrumental in the project's cancellation. This photo is one of many slides created by Garwin's father, Robert—an avid photographer—now housed with other family materials included in the Richard Garwin Papers at APS.

Freeman Dyson Papers (Charles Greifenstein, Manuscript Processor and Curator of Manuscripts Emeritus)

The papers of mathematical physicist <u>Freeman Dyson</u> (Mss.Ms.Coll.238) have been processed. A full online finding aid to the collection will be made available soon.

From 1953 on Dyson was a professor at the Institute for Advanced Study in Princeton, having been hired by then-director Robert Oppenheimer. A wide-ranging intellect and

excellent writer, Dyson could compose ground-breaking mathematical papers as well as articles for the *New York Review of Books*. Weapons and Hope won the National Book Critics Circle Award. Researchers will find the huge amount of correspondence a great resource; the originals to the letters edited in his book Maker of Patterns are in the collection.

The papers cover his long life: work at RAF Bomber Command in World War II; working with Hans Bethe and Richard Feynman at Cornell University; his many contributions to mathematics, developing unusual concepts (astrochicken, an organic/electronic, self-replicating spacecraft); Project Orion and atomic-powered space flight; his work as a member of the JASON group of scientific advisors. Late in life he became a "heretic" in his ideas about climate change (the science was not wrong but evaluation of the data and proposed remedies were, according to Dyson).

Born-Digital Updates (Elias Larralde, MarBina Rothblatt Assistant Digital Archivist)



The Center for Digital Scholarship has been working to ingest born-digital materials from several collections in the history of science to get them onto our system. Collections include the papers of **Bruce Wallace**, **Luna Leopold**, **Horace Judson Neel**, **Ruth Schwartz Cowan**, **Baruch Blumberg**, **Britton Chance**, **Martine Rothblatt**, **David Perkins**, **Luna Leopold**, **Loren Graham**, **Floyd Lounsbury**, and **Arno Motulsky**. The next step is to start processing these materials to make them accessible for researchers.

Highlights include:

- Powerpoint slides of presentations Monto Ho gave to the Taiwan Legislature regarding antibiotic resistance.
- A collection of newsletters from the Russian Academy of Science and High School from Loren Graham.
- Database of Chinese Medical Ethnobotanical data, found in the Blumberg papers.

• Working chapters and audio files used for Luna Leopold's *A View of the River*.

Above: Usual desk setup for ingesting born-digital material. Read more <u>here</u>.

New Acquisitions (Adrianna Link, Curator of History of Science)

In March 2025, Adrianna traveled to Shilton in the quaint Cotswolds region in South Central England to oversee the shipment of nearly 50 boxes of material documenting the work and life of historian of science **John L. Heilbron**. Heilbron was a Professor of History at the University of California, Berkeley, as well as a visiting professor at Yale and the California Institute of Technology. He wrote extensively on topics in the history of science and especially in the history of physics and astronomy. His papers—which include meticulously kept bibliographic citations and research notes—convey the breadth of his expertise—as well as his personal library.

Below: A small sampling of Heilbron's publications in multiple languages.

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Other new additions to the APS's holdings from historians of science include the personal papers of two experts on Soviet science, **Mark B. Adams** and **Loren Graham**, as well as the papers of historian of nuclear weapons **Martin J. Sherwin**, whose Pulitzer Prize winning book, *American Prometheus* (co-authored with Kai Bird) served as the basis of Christopher Nolan's 2023 film *Oppenheimer*.

The Center has also recently acquired some stunning printed and object materials. In December 2024, Adrianna and Associate Director of Collections David Gary picked up more than 700 books donated by the estate of cell biologist **Joseph Gall**, whose papers arrived at the APS in 2023. These texts, most published between the 17th and 19th centuries, include a large number of illustrated books as well as works by Hooke, Mendel, Purkinje, Topsell, Roesel, and others. Other texts document both popular and practical approaches to the making and use of microscope lenses. Along with the books, the APS also accepted several objects, including a 7" reflecting telescope lens ground by Joseph Gall and his brother, John, in 1942, a replica of Antonie van Leeuwenhoek's microscope previously owned by Barbara McClintock, and a uranium glass cube, also owned by McClintock and gifted to Gall in 1976.



Other notable new acquisitions include the purchase of half a dozen scientific notebooks kept by Lillian M. Lyons. The notebooks date from 1903 to 1907 and contain a series of class exercises, notes, and illustrations prepared by Lyons as part of her education at the Philadelphia High School for Girls. They are a wonderful example of scientific curriculum at the time and welcome addition to manuscript materials documenting the work of women in science.

Above: Two example pages from Lillian Lyons' biology coursebook.

Project Highlights

"America's Scientific Revolutionaries"

On the heels of its July 2024 launch, the Center for the History of Science received a \$399,300 grant from the Richard Lounsbery Foundation to support the development of "America's Scientific Revolutionaries," a two-year project dedicated to profiling lesserknown scientists and physicians active during the Revolutionary Era. This project complements other APS efforts leading up to the semiquincentennial anniversary of the Declaration of Independence, and will serve as the Center's signature initiative for the next two years.

The Center has assembled a team of researchers to help support the production of a set of interrelated deliverables for this project, including a public lecture and podcast series featuring APS Members hosted around the country, and the production of six short-form educational videos with the company Makematic, and blog posts. We hope to highlight the crucial early chapter of the history of science during the Age of Revolutions and raise awareness of individuals who have helped inform what we know about the world.

Meet the Lounsbery Project Team:



Jeff Appelhans (left, Richard Lounsbery Postdoctoral Fellow) specializes in the political and religious culture of colonial, Revolutionary, and early America, as well as book history and bibliography. He earned his Ph.D. in history from the University of Delaware. Beyond his work at the APS, he is revising his book manuscript, "The Creation of American Catholicism: From the Revolution to the Early Republic."

Christopher Roy (middle, Lounsbery Research Assistant) earned a B.A. from University of Vermont and a Ph.D. from Princeton before spending 10 years teaching anthropology at Temple University. He is working on a number of publications grounded in over 25 years of research with the Abenaki of Odanak, an Indigenous people with a long history of residence on- and off-reserve, north and south of the U.S.-Canadian border.

Vincent L. Femia (right, Lounsbery Research Assistant) is a Postgraduate Research Associate at Princeton University and a Research Associate at the Smithsonian Institution. His work focuses on science, governance, and urban America in the 19th and 20th centuries. He received an MPhil in the history and philosophy of science from the University of Cambridge and a Ph.D. in the history of science from Princeton University.



Recent and Upcoming Programs

Save the Date: Science and Society in the Age of Revolutions

Inspired by work on "America's Scientific Revolutionaries" and by the APS's 2025 exhibition, *Philadelphia: The Revolutionary City*, the APS will host a two-day conference on "Science and Society in the Age of Revolutions." The conference is co-sponsored by the Science Institute and the College of Physicians, and will be held on September 25-26,

2025. More details about the event, including a full program and registration, will be available on the <u>conference website</u> in the coming weeks.



Kevin Donnelly, "What is the 'Human Level'? A Deep Dive into the Ideas that Shaped Modern AI"

In December 2024, Kevin Donnelly, Associate Professor of History and Professor of Political Science at Alvernia University, presented on his new book, *The Descent of Artificial Intelligence: A Deep History of an Idea 400 years in the Making*, as part of the Society's "Lunch at the Library" series. Portions of his book were researched using the John W. Tukey and Warren S. McCulloch Papers held at the APS.

Check out the recording from his presentation <u>here.</u>

Catch up on other past programs related to the history of science via the <u>APS's</u> <u>YouTube channel.</u>

Curious to know more about the history of science at the APS? Read more on the APS Blog:

- <u>Richard Shryock's Vision for the History of Science at the APS</u> Adrianna Link
- <u>A History of the History of Eugenics</u> Michael Ortiz-Castro
- Radioactive Archives? The Case of the Curie Correspondence Renée Wolcott
- Helen Abbott Michael, Phytochemical Pioneer Marian Christ
- <u>New to the Digital Library: John Wheeler's Relativity Notebooks</u> Joseph DiLullo



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