

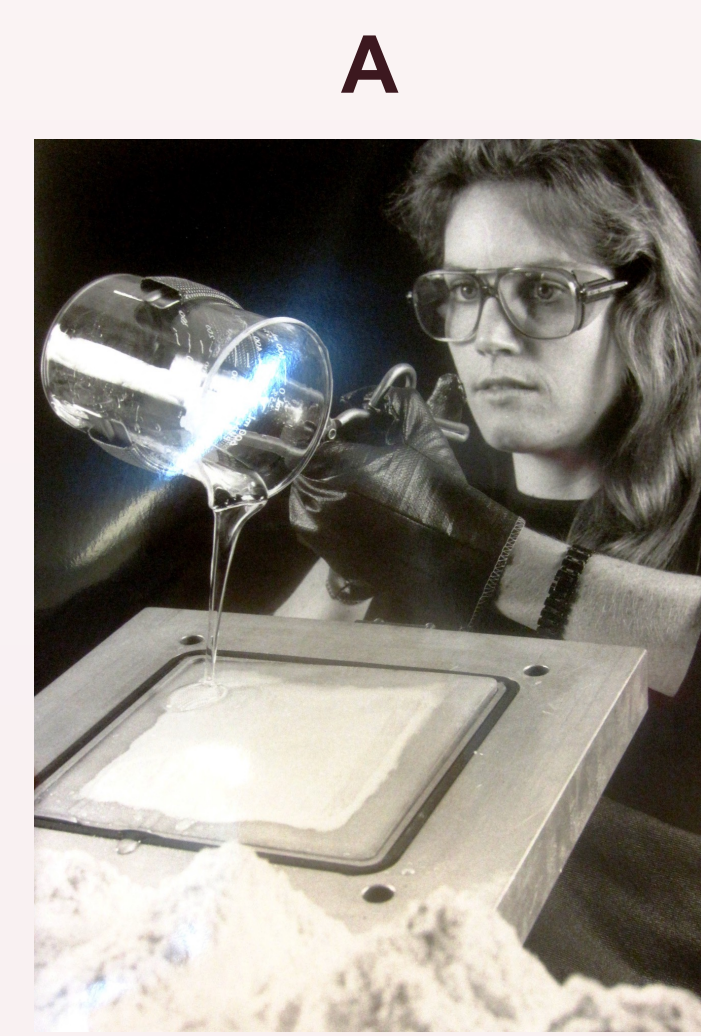
# The Empire of American Science: Photographic Narratives and Visual Evidence



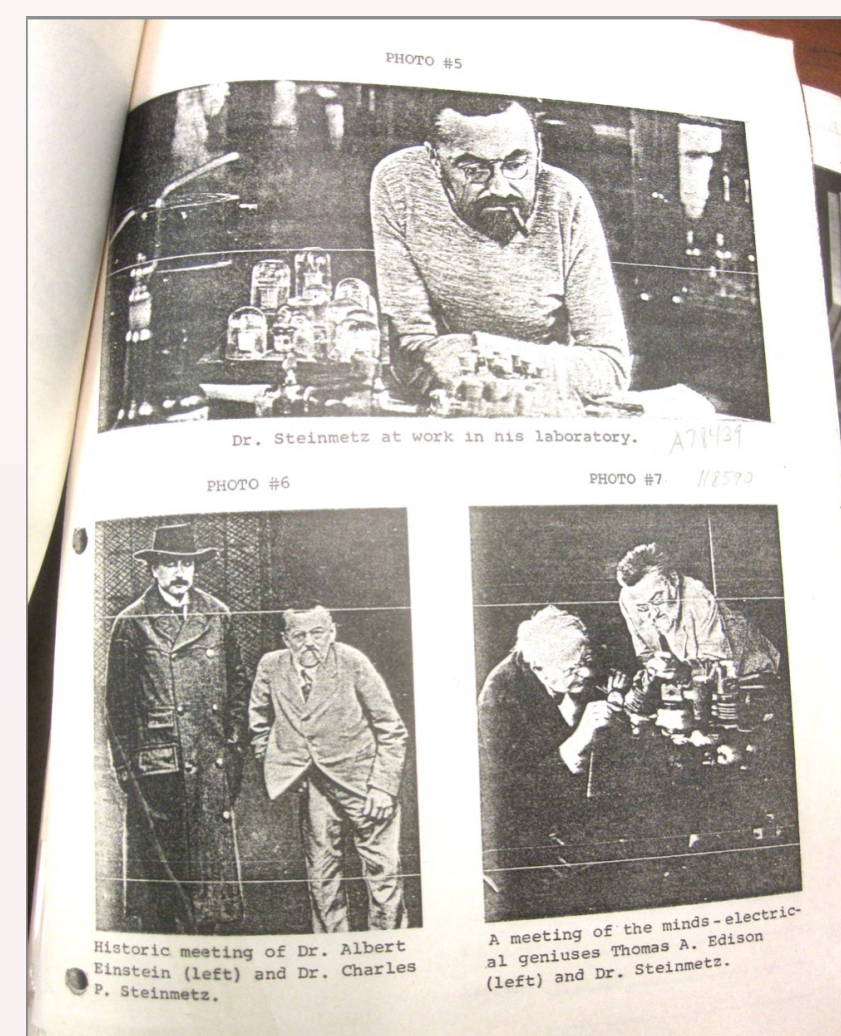
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## ABSTRACT

During the Cold War, photographers and journalists in the United States sought to document the accomplishments of the scientific community in order to publicize positive narratives that would help garner public support while also offering reassurance during a period of crisis. Certain themes of diversity, inclusion, and exploration have emerged as a result of researching and recording numerous archive collections from museums across the country. This research specifically investigated photographs from the extensive collections of the US Information Agency, including the Life and Look Collections and General Electric Files (GE), which contained hundreds of stories that they intended to distribute to the American people.



G.E. Files, unidentified woman developing new polymerization technique (1989)



G.E. Files, Dr. Charles Steinmetz, Dr. Albert Einstein, and Dr. Thomas Edison meeting credited (early 1900s)

## INTRODUCTION

- Research mentor Dr. Ron Doel is currently in the process of writing a history book with Dr. Pamela Henson of the Smithsonian Institution. The book will focus on the portrayal of scientists in photographs from the end of the nineteenth century to the beginning of the twenty-first. Data gathered through this research will aid in the information collected for this book.
- This research project aims to evaluate how women were being portrayed through photographs in comparison to male scientists, throughout the Cold War period. It also aims to discover what kinds of stories and photographs were published compared to those that were left out.
- This project was conducted along with a research mentor and 4 other UROP students. In order to collaborate, the team had weekly virtual meetings and contacted each other via email. The group began working on this project in October of 2021 and are still in the process of gathering information.
- Studies of the US Information Agency collections guided me to the notion that the narratives of science's progress throughout the 20th century can be attributed to a diverse group of people including not only white men, but also women all races and backgrounds (Bernal, 1971).

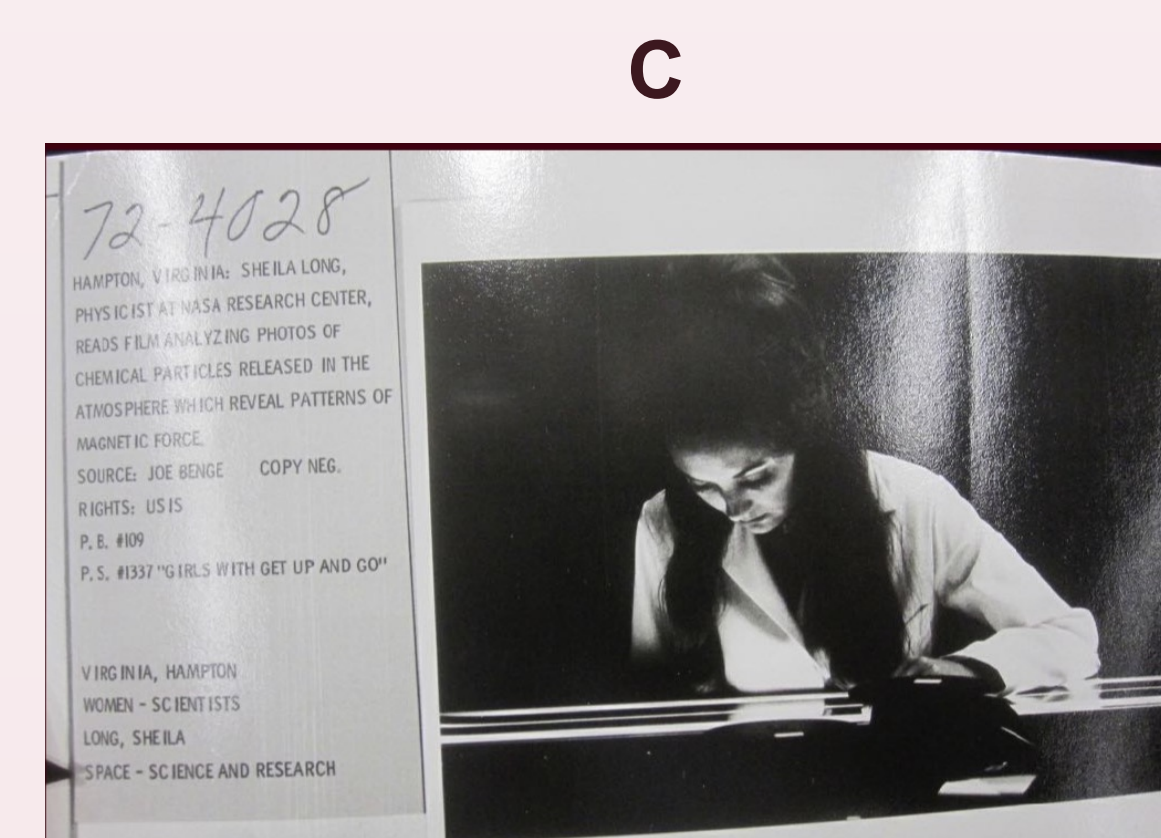
## METHODS

The historical photographs examined throughout this project were compiled from complete collections, including those from the United States Information Agency and archival documents from repositories across the country, courtesy of Ronald E. Doel. Most photographs included captions and credits on the back. Quantitative methods were used to record investigations and patterns found in the ways that U.S. scientists were documented. This included the development of a 182-page image index (see figure D), which was referenced heavily in this research, that contains citational information, photograph backgrounds, and information on the specific files that the collections came from. Observations were recorded on a data sheet compiling the date, photo number, photographer or author (if applicable), location, caption or article details, what appeared in the photographs, and what was found to be interesting or surprising about each photograph or article. This included photographs or articles showing diversity or inclusion (or lack thereof) and scientific exploration or progress. After all information for each compiled document was recorded, a narrative was to be extracted, created by the synthesis of these photographs and articles and by threading common themes together. Together, this research's "Empires Team" also developed a centralized Canvas site containing the virtual archives for this project. This project focused on attempting to answer the following research questions:

*How can one explore the interplay that women have in photography along with the second-wave feminism that grew as a critique for the established visual conventions? Specifically, how are these concepts shown through which gender and sexuality identities have been constructed?*

*How is this information readily available in the changing scientific community through an analysis of newspaper articles or photographs, and how is this research a positive contribution to this community?*

*What are the similarities and differences in these documents with relation to the pre-established mentalities during that time period?*



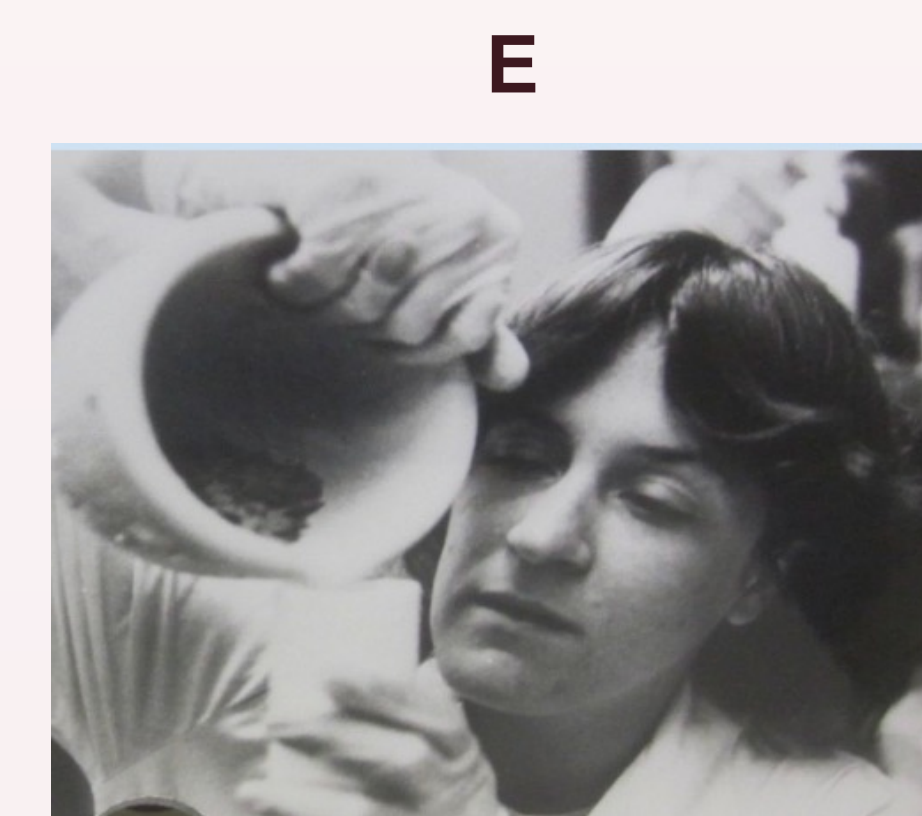
The photo description designates Sheila Long in the category "Women-Scientists" whereas the photos of male scientists had no such distinction. (circa 1972).



D

## RESULTS

- While looking through the photographs, this research identified particular trends, such as the lack of women and people of color highlighted in the 1940s through the 1960s. It was found that the majority of them focused on the research and accomplishments of white men (see figure B).
- There were photographs of women, but they were rarely named or given credit. Oftentimes, they would be referred to as "scientist" or "lab technician" and left nameless (see figures A, C, E, F).
- However, in this analysis, a progressional shift was noted that occurred in the 1970s. By the 1970s there were some women that were more formally recognized for their research and contribution.



Unnamed female scientist labeled as "laboratory assistant"



Three unnamed female professionals assisting a disabled man to communicate through electronic system



Katharine Blodgett: only woman featured in the 1948 LIFE spread on GE researchers

G

- In a 1948 LIFE magazine story about American productivity that celebrated GE research achievements, for instance, nine GE researchers were highlighted (all white males except for one woman, the celebrated chemist and physicist Katharine Blodgett) (see figure G).
- Blodgett's contributions were heavily promoted in press releases in the early Cold War period, but not until the 1980s did GE publicists highlight an African American researcher who had helped create the liquid crystal display.
- Just one year later, the GE Research Lab promoted another story featuring a woman who developed a technique to advance the plastics industry.

## CONCLUSION

Before starting this project, it was hypothesized that the archival collections would tell a different narrative than what was initially found. Previously, it was believed that women did not have much of a place in science during these times and much of their work was left undocumented. An analysis of the image index, Life and Look Collections, and GE files helped this research project better piece together certain themes in history to come up with a cohesive story about the changes that have occurred. Additionally, note was taken of the physical actions that these people were doing when photographed. Through this, it was discovered how most collections contained nearly equal numbers of men and women, and that, in contrast to local newspaper reporting, women and people of color were actively working in the field. Their representation, however, was only recognized as time progressed into the 1970s.

Gaining an accurate story of what happened in the past is important for understanding scientific progress over time. While these photographs do not alone tell us how GE Research Lab practices changed over the course of the Cold War, they do reveal that scientific research groups were more diverse and inclusive than many standard narrative accounts suggest. By highlighting more accurate narratives of large scientific groups, individuals can identify systemic issues and begin advocating for more diverse representation.

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