

Uncovering the Works by Early Modern Women Printers

An Experiment with Generative AI

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ABSTRACT

The contributions of women to the printing trade during the hand press era have long been under-documented, leaving significant historical gaps in our understanding of early print culture. This article presents a project that uses ChatGPT-4o, a generative artificial intelligence (AI) chatbot, to help bridge those gaps by identifying, analyzing, and contextualizing the work of women printers represented in the University of Notre Dame's rare book collections.

INTRODUCTION

For centuries, the printing world was perceived and remembered as a man's profession, with historical narratives centered on celebrated male printers and renowned workshops. It was not until the 1980s that scholars began to uncover a lesser-known side of the story: women's roles in the early modern period, ranging from anonymous and unpaid manual tasks to a visible and assumed managerial function.¹ Behind the pages of many books from the hand-press era lie the often invisible labor, skills, and influence of these women who shaped early modern print culture.

Printing wasn't a one-person job. Tasks like setting type, proofreading, operating the press, binding books, and managing distribution required a range of skills and collaborative labor. Women took part in all these roles, often as wives, daughters, widows, or employees in the trade. They were not just helpers but businesswomen and skilled workers, often essential to the success of print businesses. For example, in Renaissance Italy, women could become owners of property and other goods through inheritance, dowries, and commercial transactions, and they could make wills.² About 50% of book trade businesses across Europe in the early modern period were run as family undertakings in which the women worked, with 10% in the hands of women alone, usually widows.³

Although many printing businesses relied on women whose decisions shaped markets and influenced reading habits of their time, the women's names rarely appeared in title pages, guild records, or official documents. Deborah Parker highlights the case of Girolama Cartolari, a 16th-century Italian printer active in Perugia and Rome. Remarkably, Girolama's name appeared on the title page and colophon of several books she printed, though there have been attempts to erase her existence and deny her contributions to the field of printing. In one instance, her name was erroneously transcribed as a male name. In another instance, she was incorrectly designated as a male member of the Cartolari family of printers.⁴ This is largely because women faced legal and social barriers to working or owning businesses in their own name, and were all too frequently hidden in plain sight beneath the names of their male relatives.⁵ Their exclusion from traditional

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histories of literature and publishing not only misrepresents their labor but also distorts our understanding of print culture as a whole.

To better account for women's presence in the history of print, it is important to situate their labor within the broader structures of book circulation and social context. Paula McDowell points out that authorship and print production are part of a broader “communications circuit,” in which writers, printers, sellers, and readers collectively produce meaning and value, and women’s role in printing must be understood within this framework.⁶ Additionally, one also needs to look at the bigger social and political changes happening in the 1700s. In the neighborhoods of Paris, printshops, bookbinder workshops, and bookstores were often family businesses where women and men worked together to spread Enlightenment and revolutionary ideas.⁷

EXPERIMENT AT NOTRE DAME

In 2022, the authors, two librarians at the University of Notre Dame, initiated a project to uncover and spotlight the names and works of women printers from the hand press era. The initial phase of the project included reconciling and structuring personal names data from external sources using linked data tools such as Wikidata.⁸ As the project progressed, we recognized that linking the personal names of women printers to the specific works they produced would significantly enhance the contextual understanding of their contributions. We started by looking at the rare book collections at the University of Notre Dame's Hesburgh Libraries and Kresge Law Library. Collectively, the two libraries house over 150,000 titles in their Rare Books and Special Collections. Of these, we identified 17,942 monograph titles that were printed during the 18th century, the historical period under analysis.

The sheer volume of available resources presents a significant challenge when attempting to identify works printed by women. While researchers may have specific names in mind, the search is complicated by the fact that many women printers were never formally recorded in name authority files. As a result, these women often lack established headings in library catalogs, making it difficult to retrieve records associated with their work using conventional search methods.

In 2020, Boston College Law Library curated an exhibit on women in the lawbook trade and noted a similar challenge:

Many of our findings came from having leads to specific names via existing literature and past exhibits at other institutions. We also combed dictionaries of printers for references to traditionally female names and ran hundreds of catalog searches for variations on known names (for example, Elizabeth Nutt, Eliz. Nutt, and E. Nutt), as well as shot-in-the-dark searches for common English names like Elizabeth, Ann, Jane, Hannah, and Sarah.⁹

Although the “shot-in-the-dark” approach yielded some promising results, it remained largely hit-or-miss. This highlighted the need for a more systematic, comprehensive approach capable of identifying all women printers represented in the collection and linking them to their associated works.

The past two years have seen the emergence and proliferation of large language models (LLMs) such as generative pre-trained transformers (GPTs). These tools are increasingly recognized for their potential to support or automate the creation and enrichment of catalog records.¹⁰ With this

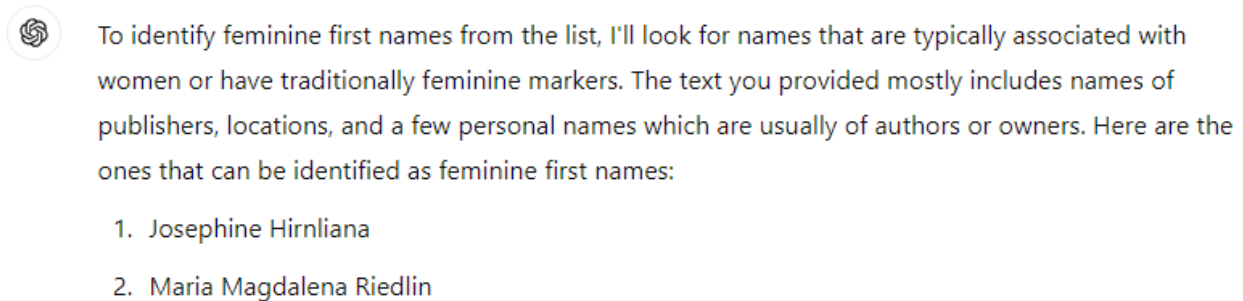
in mind, we began experimenting with generative AI tools, specifically ChatGPT-4o, to assist with curating a digital exhibit on women printers in the 18th century.

To support the identification of women printers, a prompt was constructed to extract likely female first names from name entries of the bibliographic catalog records. We initially used the simple prompt, “Please identify all the feminine first names in the provided list.”

However, we soon realized that many women in the printing trade did not use their full names in imprints; instead, they referred to themselves using terms like “widow of” or equivalents in other languages, such as *veuve de* (French), *vedova di* (Italian), or *viuda de* (Spanish). Therefore, the prompt was also constructed for the identification of potential female printers whose personal names were not directly stated: “Please identify all the feminine first names in the provided list. Please also include words that indicate the presence of a woman, such as ‘widow,’ ‘femme,’ ‘veuve,’ ‘viduae,’ ‘madame,’ ‘filia,’ ‘vidua.’”

Below is an example output responding to one dataset:

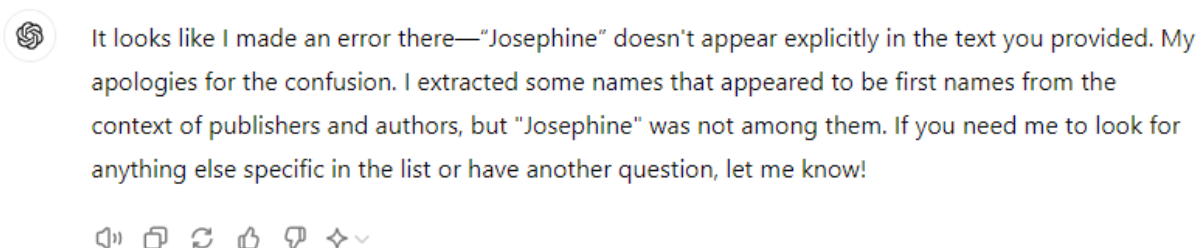
Figure 1. ChatGPT-4o output example



The 17,942 titles were broken down into a few smaller lists that were fed into ChatGPT-4o separately to avoid simultaneous processing confusion.¹¹ For each female name in the output, we verified the name entry in the bibliographic record and retrieved the titles associated with the name.

The process is not without its challenges. A major obstacle is the phenomenon of AI hallucination, in which LLMs generate inaccurate or entirely fabricated information. For instance, one output identified “Josephine” as a woman printer included in the dataset; however, upon verification, no such name could be found. After providing feedback within the chat, ChatGPT-4o acknowledged the error and revised its response accordingly:

Figure 2. ChatGPT-4o output example



Cases like this highlight the critical need for careful evaluation of AI-generated outputs. Human oversight remains essential, especially given the frequent variations in historical name spellings, the use of pseudonyms, and inconsistent attributions. Each AI-generated output must be manually verified through double-checking catalog records, reference works, and historical directories to ensure accuracy.

In total, we identified 298 unique titles held within the Hesburgh Libraries and the Kresge Law Library Special Collections at the University of Notre Dame that include a female name in the publisher field, indicating they were printed by women. These works represent approximately 1.66% of the total dataset, which comprises monographs printed during the 18th century and in the collections of the two institutions. Notably, around 70% of these 298 titles do not include the individual names of the women printers. The breakdown of these anonymously-attributed works is as follows:

Table 1. Anonymously attributed title counts

Term Indicating Female Presence	Title Count
Vidua (Latin)	77
Veuve (French)	77
Viduae (Latin)	31
Viuda (Spanish)	18
Madame (French)	4
Widow	2
Total	209

To create a more focused exhibit, we narrowed our scope to ten women printers with more than one title represented in the two Notre Dame collections. We then curated a digital exhibit to highlight their contributions to the early modern book trade.¹²

In addition to name entity identification, ChatGPT-4o was used to review the printed works of the selected women printers, as well as external sources, to highlight content relevant to the exhibit's thematic focus. By analyzing the range of materials these women helped produce and distribute, ChatGPT-4o revealed that their contributions extended beyond literary works to include scientific and religious texts, political pamphlets, and other printed forms. These publications reached wide audiences and played a significant role in shaping everyday knowledge and public opinion. By highlighting this diversity, the exhibit seeks to broaden our understanding of women printers' roles in public communication and cultural life.

DISCUSSION

Using ChatGPT-4o for name entity identification significantly improved efficiency compared to manual methods or the previously-described "shot-in-the-dark" approach. The ability to scan large volumes of text and identify potential names quickly allowed for a more focused and targeted workflow. However, the results also reaffirm what many scholars of book history already

know: early modern printing was overwhelmingly a male-dominated industry. Women printers, when present, were a marginalized minority, often mentioned only in relation to their male relatives, typically as the widow of a printer, rather than credited by name for their own work. The statistics gathered through this process serve not only as data points but as reminders of how women's identities were systematically obscured in the historical record.

Yet even with the power of AI, human oversight remains indispensable. Differentiating between similarly-named individuals, interpreting ambiguous references, and understanding linguistic nuances, such as recognizing terms like *veuve* or *viuda*, require contextual knowledge and critical judgment. Incorporating these terms into search prompts has highlighted how combining machine learning tools with human expertise is essential to recovering the stories of women whose presence has long been hard to find in historical records.

It is also important to remember that women participated in the printing industry in many different capacities, not just as press owners or publishers, but also as laborers, typesetters, editors, and readers. Existing historical sources offer glimpses into the lives of women who managed presses or continued family businesses, but much remains to be discovered in overlooked records and uncataloged collections.

As we look toward next steps, we are exploring the use of interactive storytelling and data visualization platforms, such as StoryMaps, to illustrate the geographical spread and chronological development of women's contributions to the printing trade. These tools will help present not only the names but also the networks, relationships, and regional dynamics that shaped their work. Although the digital exhibit highlighted only ten women printers with more than one title represented in the two Notre Dame collections, we plan to expand the scope to a larger sample based on anticipated feedback following the exhibit's publication. We also plan to submit names to the Library of Congress authority files and add personal names as access points to catalog records that currently contain only anonymously-attributed names, thereby increasing the discoverability and visibility of these women printers.

As book historian Sarah Werner powerfully reminds us:

It matters that we learn these things. It matters that we understand the past as a variegated and nuanced time in part because it enables us to see our own time that way. It matters that we remember Ada Lovelace and Rosalind Franklin, and Elizabeth Allde because it matters that they contributed to our knowledge of the world and that we can contribute too.¹³

Through the inclusive and ethical use of AI technologies, we—librarians, catalogers, and curators—can help recover and amplify these lesser-known voices. In doing so, we not only deepen our understanding of the historical record but also pave the way for more representative and equitable narratives in the future.

ENDNOTES

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¹³ Sarah Werner, “Early Modern Women Printers: An Ada Lovelace Post,” Wynken de Worde, accessed July 29, 2025, <https://sarahwerner.net/blog/2011/10/early-modern-women-printers-an-ada-lovelace-post>.