

**HISTORY OF APPLIED SCIENCE &
TECHNOLOGY**

HISTORY OF APPLIED SCIENCE & TECHNOLOGY

AN OPEN TEXTBOOK

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The Digital Press @ UND

Grand Forks, ND

Contents

Introduction	1
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Part I. Chapter 15

Doing History: Networks and Women Doctors <i>Jennie Brosnan</i>	5
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Part II. References Out of TOC

1. Primary Sources	17
2. What are Doing History segments?	19
3. Blackwell - Nightengale Exchange	21
4. Florence Nightengale May 6th 1871	23
5. Elizabeth Blackwell Letter May 2nd 1849	25
A Brief Biography of Elizabeth Blackwell	27
Appendix	29

Introduction

This is where you can write your introduction.

PART I

Chapter 15

Earth Sciences and Revolution in Biology and Genetics – the Long
19th Century

Doing History: Networks and Women Doctors

Jennie Brosnan

What are Doing History segments?

Women doctors, especially those practicing in the mid to late nineteenth century, played a large role in disseminating information to the public about hygiene and sanitation, as well as being involved in political debate surrounding the female body during the 1860s to 1880s. By examining letters, we can discern much about early networks among women doctors. As you read this Doing History segment, think about how [primary sources](#) shape and reshape our understanding of the past.

The following letter is an example of many that Dr. Elizabeth Blackwell (See below.) sent to her family in Cincinnati after moving to New York in 1849 to establish her own medical practice. (Click on the image to enlarge.) As can be seen from this letter, the writing is small and fills the whole page, including writing in the margins.

6 History of Applied Science & Technology

This indicates that while Blackwell had much to say about her experiences in New York, she was also short of money. Paper was expensive during the nineteenth century and it was common practice to use all the available space on the page.

When researching the topic of female medical networks, a number of different areas of history need to be considered. Not only is this a cross-section of gender history and the history of medicine, but the construction of Victorian society and network theory also have a part. This section will look at the development of the female medical network and the implications this had for modern medicine, including the advent of modern birth control. But first, a basic background on the foundational Elizabeth Blackwell will be useful.

A Brief Biography of Elizabeth Blackwell

Elizabeth Blackwell was the first female doctor to graduate with a medical degree. As such, she is an important figure in the history of medicine, especially since she was influential for the path of women doctors on both sides of the Atlantic.

Blackwell, having graduating in 1849 from Geneva College, New York, gained work experience during 1850 and 1851 at La Maternité in Paris and St. Bartholomew's Hospital in London. There, she reveled in her celebrity as the first female doctor and was welcomed with open arms, principally by the middle and upper classes of London society. One particular group who received Blackwell in London was the



“Langham Place Circle;” there, she cemented a network of supportive, financially secure, independently-minded women –or “Lady Bountifuls” –including Lady Byron, Barbara Leigh Smith and the Comtesse de Noailles, . Although these women were not particularly well-educated, they had access to money and connections both in Britain and abroad.

Upon Blackwell’s return to New York in 1851, however, she found herself alone. While she still enjoyed letters of support and advice from the “Lady Bountifuls,” she also often received hostile letters. She had to fend off unwanted male attention on her walks home from various patients’ houses late at night. She struggled to establish herself in New York as a mainstream doctor, and to dispel rumors that she was an abortionist. She found herself isolated in her profession.

For more on Blackwell, see the [National Library of Medicine: Dr. Elizabeth Blackwell](#)

Female Medical Networks

Elizabeth Blackwell put her medical degree to good use by founding medical schools in both New York and London, becoming the first women to be on the General Medical Register in Britain in 1858 and publishing several books. She was at the heart of many campaigns to educate the public about ‘moral hygiene’ which can be seen as her own brand of sex education, as well as basic hygiene and sanitation. As the first female doctor, Blackwell is the starting point for female medical networks during the nineteenth century as she mentored and taught many of the first women to practice medicine in both Britain and America

Challenges for women trying to break into the medical field were so great that the first generation of female doctors, both in Britain and America, formed networks consisting solely of other women as a means of financial, social and political support. (For example, groups such as the Langham Place Circle, based in London, provided the financial means for Elizabeth Blackwell to establish the New York Infirmary for Women and Children in 1857.) But the relationships within these female medical networks were often fraught and frequently competitive, especially as these women banded together out of necessity: they were in a predominately male environment

8 History of Applied Science & Technology

which was worlds away from the female dominated private sphere they otherwise would have been familiar with, such as the Victorian home and the homes of families they visited.

Biographers of nineteenth-century female doctors have tended to associate these networks with friendship, and, certainly, relationships of a significant length blurred the lines of professionalism and friendship. But the equation of female relationship with friendship is highly gendered and factually incorrect. While it is necessary to highlight that many of the relationships within the female medical network were amicable, many were also strictly professional—just as they would have been with male professionals. Until recently, scholars have belittled these female networks while seeing male networks as legitimate and more tangible.

There were a number of issues the female medical networks faced:

- The relationship that existed within the male-dominated field of medicine and the women who dared to challenge the medical establishment was complex.
- The connections between medical women who struggled to find common ground whilst maintaining a united front was often fraught.
- The groups of respectable middle and upper class women who came together to provide financial support for women in medicine took serious risks by associating themselves with the women who existed on the fringes of the medical establishment.

There are other reasons as to why the female medical network was problematic: the first was competition. Excluded from the standard systems of mentorship and apprenticeship, these women wanted to shine individually—they did not want to share their accomplishments with other women who were also emerging in their field. Nor did they want to share the limelight with others; each had her own agenda. The second reason is that, being first women in their field, these women had no system of mentoring or apprenticeship to avail themselves of; they didn't understand how profession relationships worked. Men who wished to pursue medicine did so under a system of apprenticeship, often 'walking the wards' at hospitals, under the

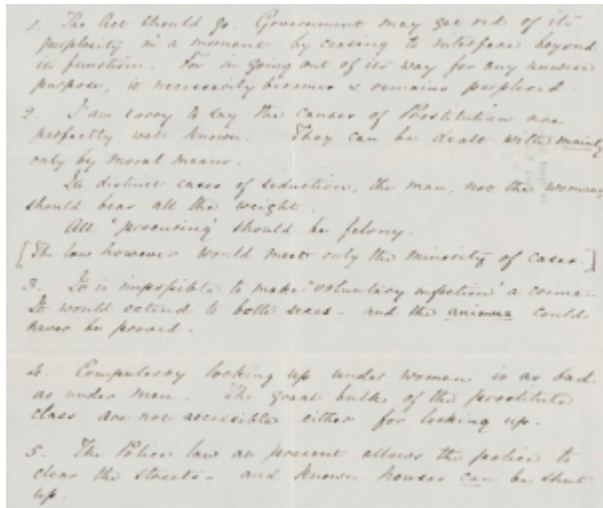
10 History of Applied Science & Technology

For example, Florence Nightingale and Blackwell also discussed the government policy on the Contagious Diseases Acts and agreed as to the implications these laws had for women suspected of being prostitutes. In other correspondence the two medical women discussed the infection rates for soldiers with syphilis and the impact this had on the ability of the British army to carry out their duties. As explored in the following letter, Nightingale and Blackwell contemplated many options as alternatives to the Contagious Diseases Acts, and sought their repeal. (Click on the image to enlarge.)

Medical

Women's Impact on Hygiene and Sanitation

These women doctors were highly involved with developing hygiene and sanitation reform. For example, Elizabeth



Blackwell founded the National Health Society in 1871 as a means of communicating knowledge about sanitation and hygiene to the lower classes through lectures and classes. In America and Britain, the establishment of female-led medical schools for women doctors helped develop further female medical networks and elevated the position of the woman doctor in the medical profession. Medical Women were involved in a series of public health campaigns throughout the late nineteenth and early twentieth centuries. The Contagious Diseases Acts, mentioned earlier, were a prime example of the role female doctors played in shifting public health policy. Elizabeth Blackwell later called on women doctors in the empire to continue their work in

campaigning against the Contagious Diseases Acts, as well as providing excellent medical care to infected women, long after the legislation had been repealed in Britain.

The well-educated, capable female doctors trained by women's medical schools, such as the London School of Medicine for Women, played an important role in the First and Second World Wars, helping to develop and establish the woman doctor's place within medicine.

Advent and Impact of Modern Birth Control

The nineteenth century brought about new advances in the development of modern birth control, as well. The vulcanization of rubber in 1839 during the industrial era brought the condom as a viable method of contraception for men; family limitation and sexual health manuals introduced women to a new world of contraceptive measures. Texts like Richard Carlile's *Every Woman's Book; or What is Love? Containing Most Important Instructions for the Prudent Regulation of the Principle of Love and the Number of the Family* in 1826 described methods of birth prevention including the withdrawal method, the use of the 'sponge' for women and the use of the 'glove' for men.

The Neo-Malthusians, inspired by the economic theorist Thomas Malthus who favored population control, advocated the use of such measures. The beliefs of Neo-Malthusianism in the mid to late nineteenth century were loosely based on Thomas Malthus' *Essay on the Principle of Population* (1798). Malthus, an economic theorist, advocated the use of moral restraint as a means of controlling the population, preventing starvation and unrest. The Neo-Malthusian movement, later called the Malthusian League, was founded in 1877 by C.R. Drysdale. Even though the Neo-Malthusians adapted the name of Malthus, he did not advocate the use of artificial contraception in his writings. Instead, Malthus believed that late marriage and abstinence were the means to population control. Two prominent Neo-Malthusians, Annie Besant and Charles Bradlaugh, were arrested for the publication and distribution of Charles Knowlton's *Fruits of Philosophy* which followed in the same vein as Richard Carlile's text describing methods to avoid conception.

This slow but steady advent of contraception provided women

12 History of Applied Science & Technology

with the opportunity to limit their family size and eventually pursue careers of their own.

Further Reading

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Drury Sherrod, "The Bonds of Men: Problems and Possibilities in Close Male Relationships" in Harry Brod, ed. *The Making of Masculinities: The New Men's Studies* (London, Unwin Hyman Ltd, 1987), pp. 213-240.

PART II

References Out of TOC

Primary Sources

Primary sources are any sources that were created in the era under discussion.

For example, if we are discussing George Washington, anything at all **created during Washington's lifetime** would be primary sources:

- a letter
- an inventory
- a scrap of paper with a list scrawled on it
- a flag
- a shirt
- a comb
- a building

Anything created outside this period would be a secondary or tertiary source. For example, most of the books about Washington or the Revolution at the local bookstore are secondary sources. Secondary sources use, refer to, and quote primary sources.

Textbooks are tertiary sources. They tend to rely more on secondary sources.

Primary: created during the period under study

Secondary: written after the fact, using mostly primary sources

Tertiary: written after the fact, using mostly secondary sources

What are Doing History segments?

Each chapter will have a Doing History segment. These segments are designed to illustrate how historians do the work of writing history, which relies heavily on primary sources, the wellspring of historical research. Click [here](#) for an explanation of [primary sources](#). Doing History segments allow you to see how historians pull from primary sources to answer research questions and deepen our understanding of the past.

Blackwell - Nightengale Exchange

1. The Act should go. Government may get rid of its perplexity in a moment by ceasing to interfere beyond its functions. For in going out of its way for any useless purpose, it necessarily becomes & remains perplexed.
2. I am sorry to say the causes of Prostitution are perfectly well known. They can be dealt with mainly only by moral means.
 In distinct cases of seduction, the man, not the woman, should bear all the weight.
 All 'procuring' should be felony.
 [The law however would meet only the minority of cases.]
3. It is impossible to make 'voluntary infection' a crime. It would extend to both sexes - and the animus could never be proved.
4. Compulsory locking up under women is as bad as under men. The great bulk of the prostitute class are not accessible either for locking up.
5. The Police law at present allows the police to clear the streets - and known houses can be shut up.

Florence Nightengale May 6th 1871

Private. May 6/71 7 a.m.

Dear Miss Blackwell.

In reply, to your note & question, I think, after much consideration, that I hope you will adhere (in your examinations) to the only practical matter: viz the cruelty of forced examinations.

[As a woman ever so vicious, she has inalienable personal rights, which none but such idiots as social legislators would venture to interfere with.]

88 South Street,
F.R.S. 2nd Flr.
Ed.

Elizabeth Blackwell Letter May 2nd 1849

Wednesday May 2^d 1849

My own dear friends all,

I thank God to Heaven I saw on land once more
 & never do I wish again to experience that hideous nightmare voyage across the
 ocean. Anna & I have never been drawn together in such close proximity as when
 amthwithstanding the sea till we almost became sea-sick - & at every body says "What a grand
 voyage you had, my dear days & a help, in rough weather - an accident or unpleasant
 occurrence) of any kind, you were indeed fortunate, travelling in a mere "See, now do"
 for travel, there are too did & every thing, as my friends may well illustrate. We
 left Boston at twelve o'clock, on Wednesday the 15th of April, and arrived in Liverpool
 at five o'clock on Monday the 30th of April & were comfortably seated in my cabin
 parlour at five o'clock the same afternoon, being the thirtieth day. In the morning the
 passengers were highly respectable, the table d'honneur, the steward & waiter very atten-
 tive, the weather most favorable, & the vessel one of the finest in the world. It had one
 side the questions - the aim to be generally taken - then for the other side, the statement
 account my heart - At noon on Wednesday, I stood with Ringon on deck, admiring
 the very beautiful bay of Boston, and watching, with strange, mingled feelings of sorrow
 & hope, the last point within of land, gilded by our glorious Western sun - gradually the water
 which looked as fresh & clear & cool with its blue, white, & green, & brown, & yellow
 impurities, left, the people shouting so merrily, & growing more & more wild, till at last the
 gentle motion of the vessel became a powerful upsurging of waves & troughs, that made me
 feel very queer, & it is a constant ship of bilge-water or similar down from the ship, & it
 very used, I gave myself a little vomit, & the Ringon in a very bad way, that
 had an expectation of being sea-sick - At four o'clock dinner was announced, by a bell
 that I thought would never cease ringing, & I had time to gather some nervous in my body,
 particularly in my stomach, I walked directly in to my place at table, with Ringon,
 though it seemed to me that all the meat smelled burnt, & as down of grime, & shades &
 every thing I particularly delighted was mixed up with the disgusting bilge-water. The dining
 room was a long low saloon on deck, with six great tables covered with purple, & a mirror &
 there was an intolerably vulgar glare of red, mixed up with clouded glasses, & mirrors &
 dappled plates, people were treating upon each other, waters washing about in every
 direction - every one was talking very loud, drinking brandy, & would dash plates
 & spoons, & looking very pale & very red & over all, heard, & heard the scold, roll
 from one side to another, making every timber creak - I leaned back on the sofa, cool
 & unconcerned that we were a herd of pigs come to be fed & waited in philosophical indiffer-
 ence or contempt, till the steward placed a plateful of wash before me. I swallowed one
 spoonful, my stomach instantly, & a violent movement of my digestive organs, & of my
 very feet, made desperate efforts at swallowing, not quickly, & without waiting for Ringon
 to finish - I lay in my berth six days & nights - a small stifling cabin, lighted by a little gas and
 just room for one person to turn in, but it had three - I had with me a little, long
 with a basin beside me, when the door was burst violently open, & my room entered standing
 upon a box, declared she had never been so ill in her life, & believed she was going to die -
 I replied by bolting violently up in bed, & asking my boat neighborly - "What do you
 order, and the old lady at a faint voice, help me, I'm very ill!" but as I had never
 made her appearance, only a gruff voice, in a neighboring stateroom, was
 heard making a tremendous spluttering, with an occasional oath - "What shall I do

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Appendix

This is where you can add appendices or other back matter.