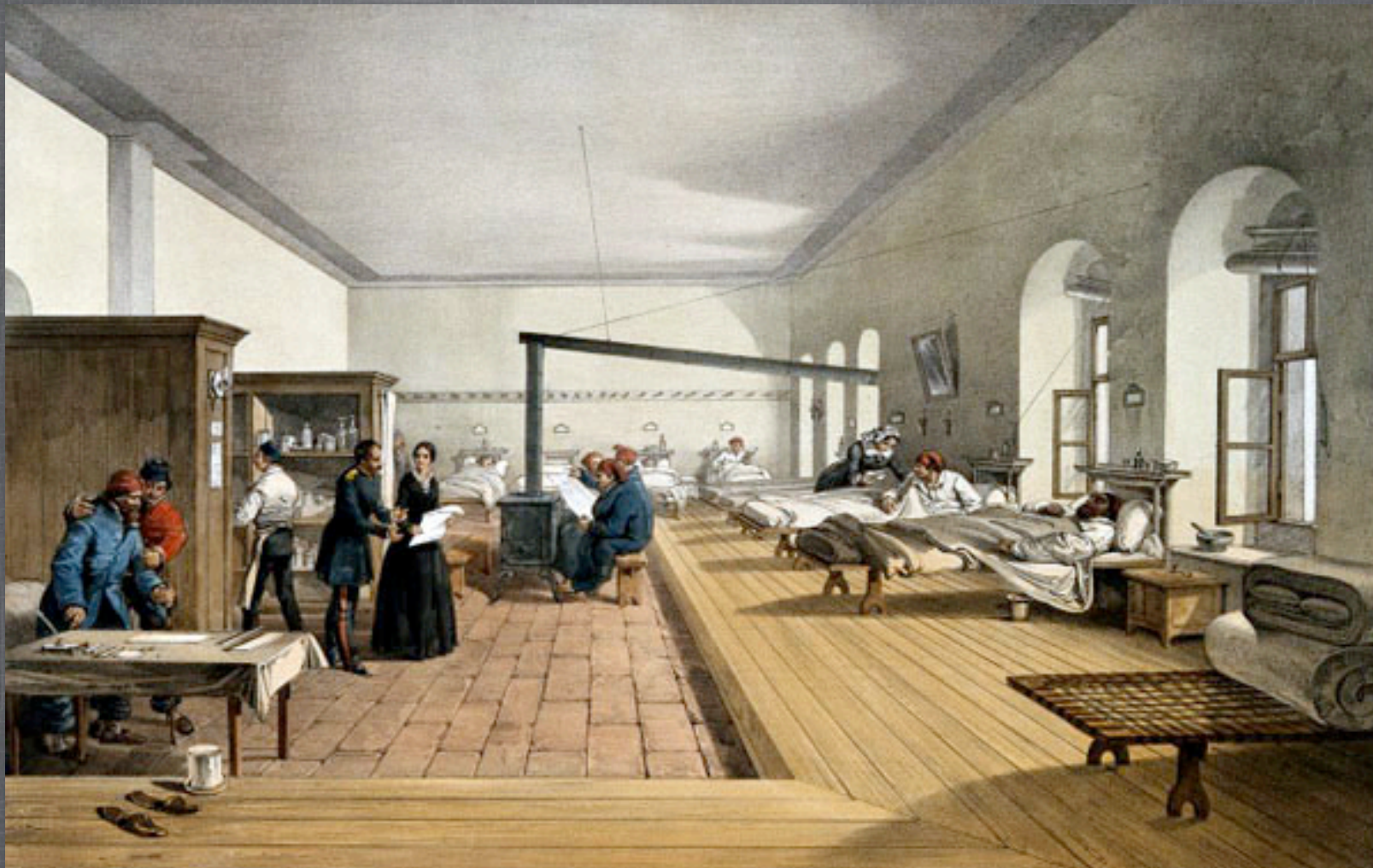


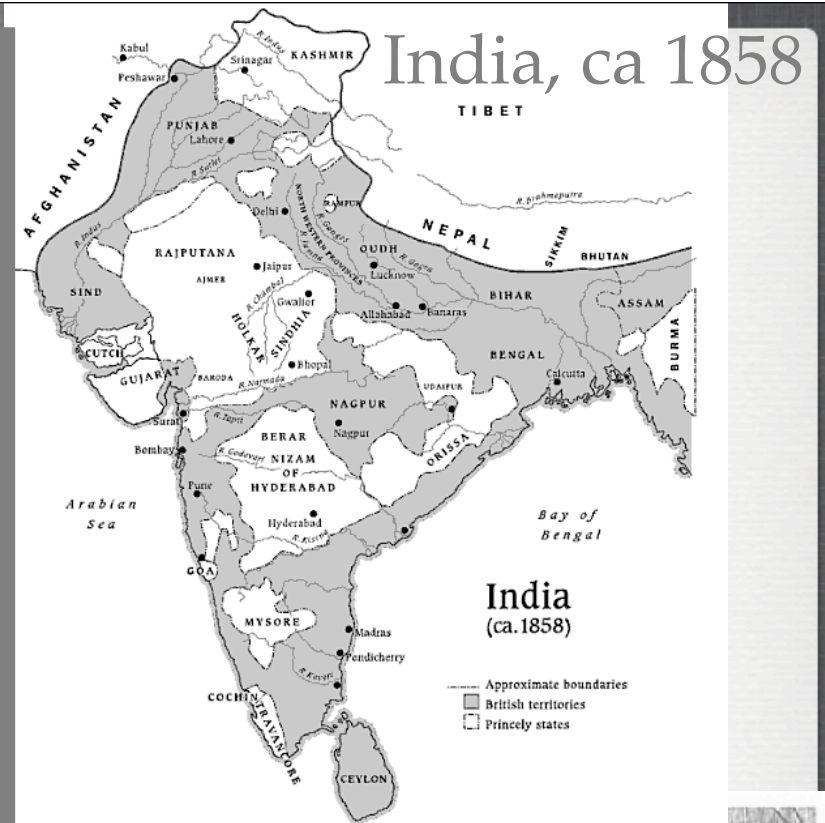
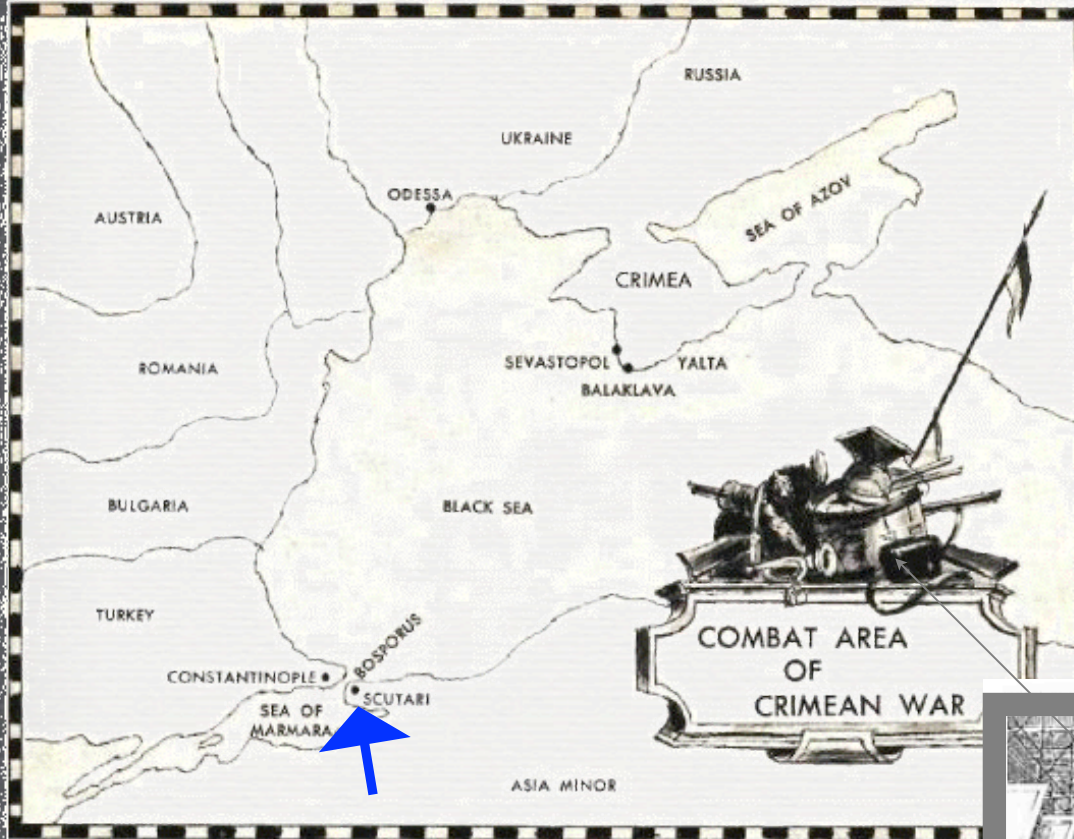
# THE ONE SCIENCE ESSENTIAL TO ALL POLITICAL AND SOCIAL ADMINISTRATION, ALL EDUCATION

JOHN MAINDONALD, AUSTRALIAN NATIONAL UNIVERSITY





# Combat Area of Crimean War



"Daily Means of Occupation and Amusement," woodcut from *Observations by Miss Nightingale on the Exigence... for the Royal Commission on the Sanitary State of the Army in India*, 1863.



# Overview

- FN's interest in statistics addressed her wider concerns
  - Hence, comment on those wider concerns/motivations
- FN became "abbess" of a 1-person religious order that
  - advised on affairs of state
  - investigated, ombudsman-like, as occasion demanded
- Brief comments on FN's interest in graphs
  - Debunk some folklore
- Statistics, statistics, statistics, ...
  - Tell her offhand remarks to today's authority figures (as well as to students, application area data analysts, statisticians, media reporters, ...)

# A Woman with a Mission

Wrote, advised and agitated on:

- religion/mysticism/theology (4 vols in Florence Nightingale's Collected Writings, edited by Lynn McDonald)

–“When very many years ago I planned a future, my one idea was not organizing a hospital, but organizing a religion.”

- society and politics (1 vol)
- women's issues (1 vol)
- public health care (1 vol)
- public health in India (2 vols)
- nursing (3 vols)

A further volume is on 'Life & Family'. Three volumes are still to come.



## Other involvements included

- Helped reform the Poor Law
- Wrote British draft for Geneva convention
- Advised on aboriginal (Australia) and Maori (NZ) health
- Edited Benjamin Jowett's Greek → English Plato translations
- Carried on extensive dialogue with leading intellectuals and public figures:
  - Benjamin Jowett, JS Mill, Edwin Chadwick, Frere Bartle, . . .

# FN's View of Statistics

"In her [FN's] view, God is the Divine Mind who organizes the universe through scientific laws. These laws or organizing principles are discovered through the study of statistical patterns. Statistics is thus a sacred science that allows one to transcend one's narrow, individual experience and read the thoughts of God."

[From Florence Nightingale, *Suggestions for Thought: selections and commentaries*, Michael D. Calabria and Janet A. Macrae eds. (Philadelphia: University of Pennsylvania Press, 1994).]

FN: There will be no heaven for me, nor for anyone else, unless we make it. . . . We are to learn, first, what is heaven, and secondly, how to make it.



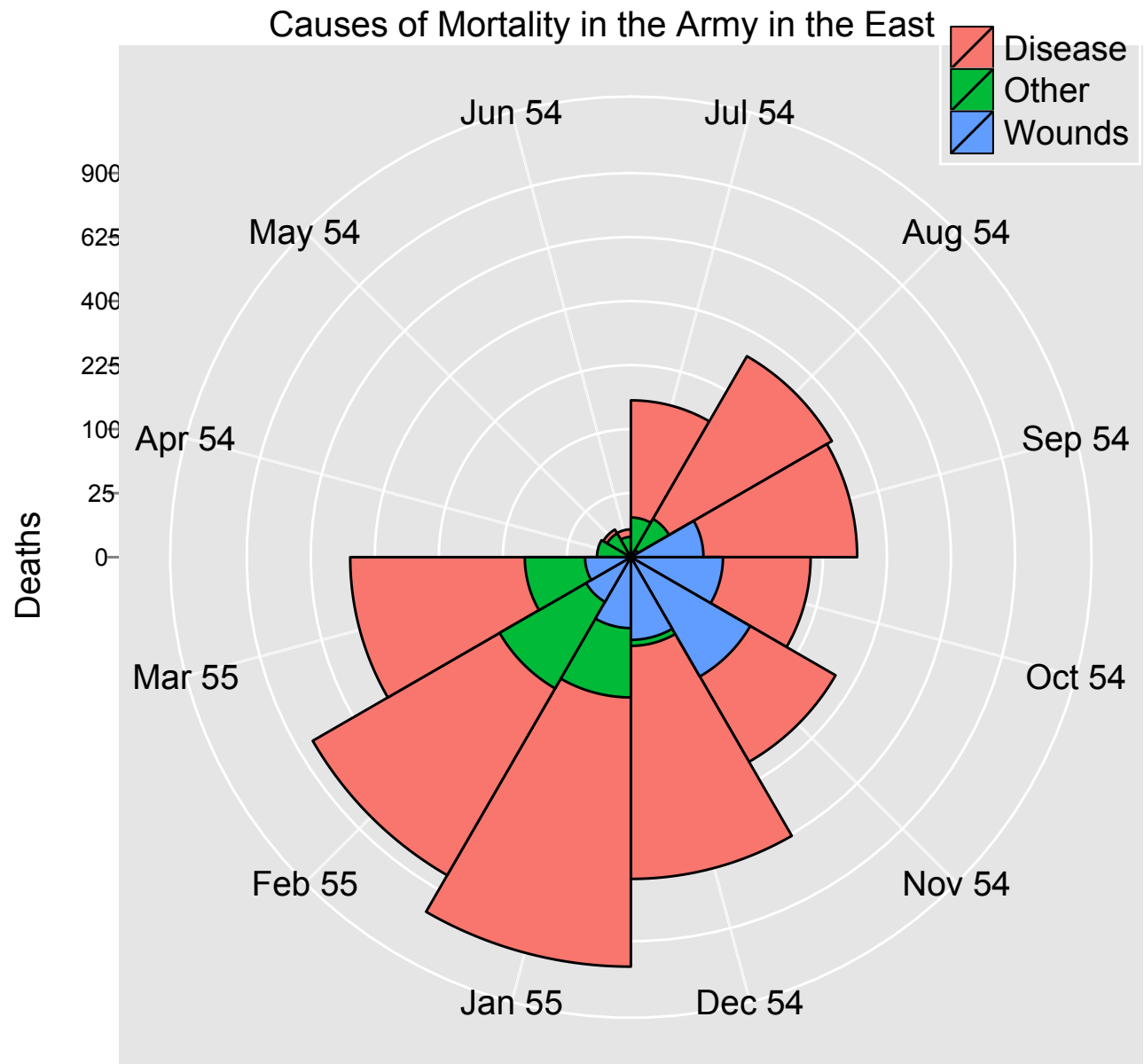
# Why is Statistics thus Important?

FN to Quetelet (Belgian social statistician): I have seen so much of the sufferings and the miseries of humanity, of . . . the stupidity of our political system, of the dark blindness of those who guide our body social that . . . frequently it comes to me like a flash of light across my spirit that the only study worthy of the name is that whose principles you have so clearly put forward.

FN: I collected my figures with . . . the idea that they could be used to argue for change. Of what use are statistics if we do not know what to make of them? What we wanted at that time was not so much an accumulation of facts, as to teach the men who are to govern the country the use of statistical facts.

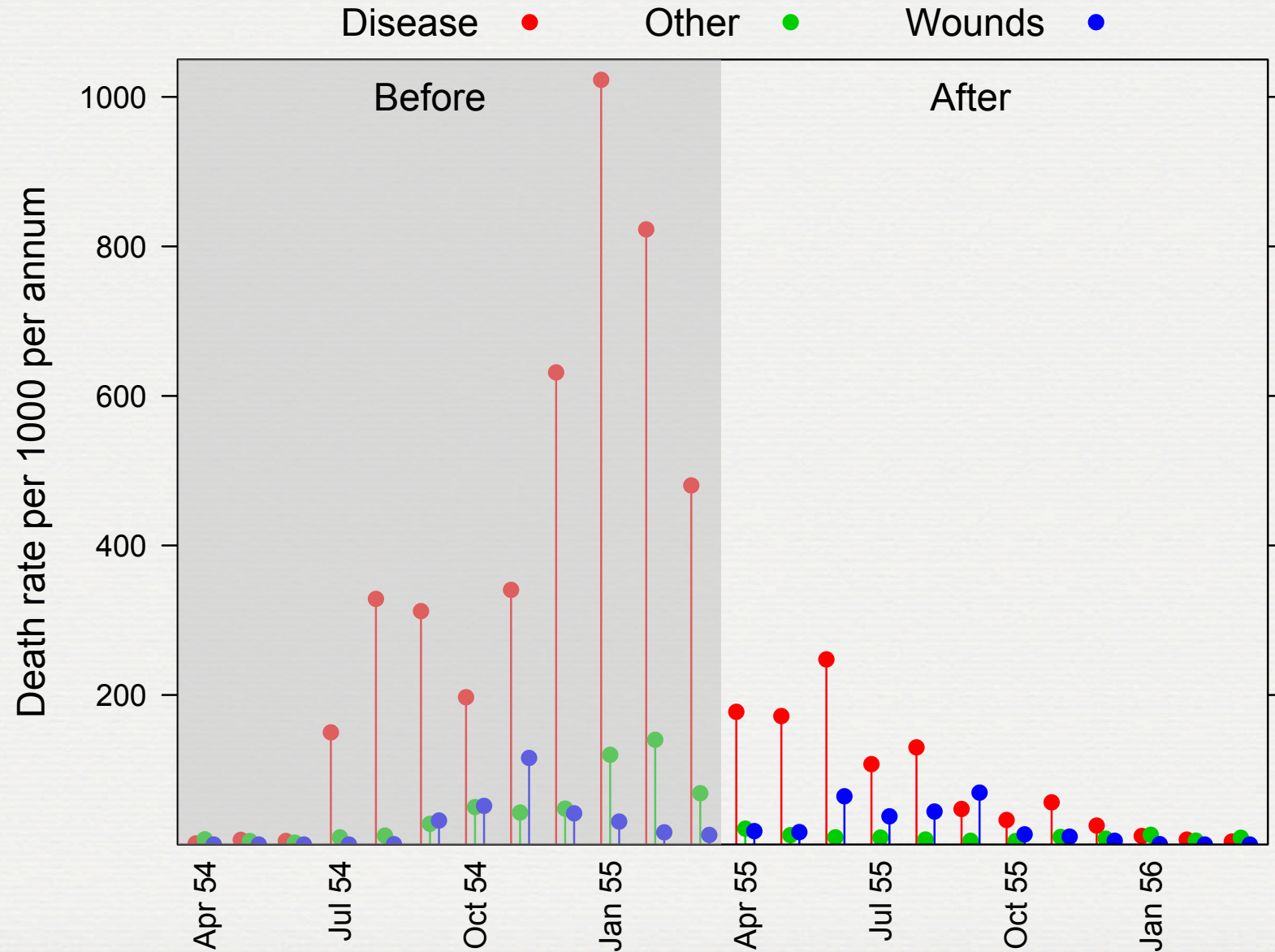
# Graphical Presentation

*“I want everyone to understand – no hiding behind the supposed incomprehensibility of statistics. The figures must be as clear as a picture – they must tell a story as clearly as does a picture of the Crucifixion.”*





# A More Effective Graphic?



# Evidence-Based Reform





# A Principled Use of Data

FN: I made an urgent appeal for adopting [my own] . . . or some uniform system of publishing the statistical records of hospitals.

In comparing the deaths of one hospital with those of another, any statistics are justly considered absolutely valueless which do not give the ages, the sexes and the diseases of all the cases.

. . . data are needed that will enable us to ascertain ... what diseases and ages press most heavily upon the resources. . . . a very large proportion of the resources of one particular hospital was swallowed up by one preventable disease, – rheumatism.

# One who will find the truth & tell it . . .

- The 1857-1858 Royal Commission did not include FN's most damaging material. FN printed and circulated it privately (Notes . . . Affecting the Health of the . . . Army)
  - Also: FN secretly abetted journalist Harriet Martineau in the writing of 'England and Her Soldiers' (1859)
- . . . the army in England, . . . the army in India, . . . public health in India
  - 1859-1863 Sanitary Royal Commission at FN's instigation
  - "Your little red book on India [FN's 'Observations'], which made some of us so savage, did immense good . . ."  
[Letter from Frere Bartle]
  - 1878 letter to FN from Indian Revenue dept official:  
"The official mind is much disturbed . . ."



FN (in 1867): . . . my view you know is that the ultimate destination is the nursing of the sick in their own homes. ... I look to the abolition of all hospitals and workhouse infirmaries. But it is no use to talk about the year 2000.

Maybe, maybe not! However that may be, Florence, we need you now in 2010!

"In her [FN's] view, God is the Divine Mind . . ."

Introduction to: "Florence Nightingale, Suggestions for Thought: selections and commentaries", Michael D. Calabria and Janet A. Macrae eds. (Univ of Pennsylvania Press, 1994)  
[Val Webb supplied this reference]

"There will be no heaven for me . . ., unless we make it" op. cit., p.8

"Your little red book on India [FN's 'Observations'], which made some of us so savage, did immense good to all of us"

Gourlay 2003: "FN and the health of the Raj", p.42  
(Woodham-Smith has a slightly different version.)

"The official mind is much disturbed . . ." Bostridge, p.477

Other quotes: See Maindonald and Richardson 2004 "This passionate study – a dialogue with Florence Nightingale", Journal of Statistics Education

Books:

Mark Bostridge 2008 (now in paperback)

Val Webb 2002