Florence Nigtingale

Diagram of the causes of mortality in the army in the East 1854 - 1856

DIAGRAM OF THE CAUSES OF MORTALITY IN THE ARMY IN THE EAST.

2. APRIL 1855 TO MARCH 1856.

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The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.

The blue wedges measured from the centre of the circle represent area for area the deaths from Preventible or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes.

The black line across the red triangle in Nov.r 1854 marks the boundary of the deaths from all other causes during the month.

In October 1854, & April 1855, the black area coincides with the red, in January & February 1855, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the black lines enclosing them.

Crimean War

The diagram created in 1855 by Florence Nightingale is using the style that she developed and is called the Rose Diagram. Is representing visually the cause of mortality in the army in the East during the Crimean War (1853 - 1856).

The war started from the conflict of great powers in the Middle East and was more directly caused by Russian demands to exercise protection over the Orthodox population in the Ottoman Empire. The Crimean War was managed and commanded very poorly on both sides. Disease accounted for the approximately 250,000 casualties lost by each side.

PRINCIPAL BATTLE SITES OF THE CRIMEAN WAR, 1853–56

RUSSIAN EMPIRE

Sea of Azov

CRIMEA

CRIMEA

Danube

Sevastopol

BLACK SEA

Sinope

Constantinople

OTTOMAN EMPIRE

September 20, 1854

Alma

Sevastopol October 17, 1854– September 11, 1855

Inkerman November 5, 1854

Balaklava October 25, 1854

BLACK SEA

0 50 100 mi
0 50 100 150 km

0 5 10 mi
0 5 10 15 km

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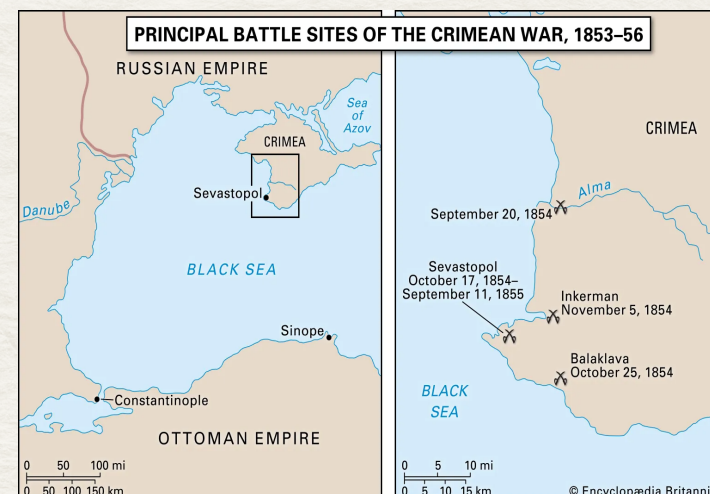
Florence Nightingale

Florence Nightingale was an English social reformer, statistician and the founder of modern nursing. On 21 October 1854, Florence Nightingale and the staff of 38 women volunteer nurses that she trained were sent to the British camp in Scutari. After she arrived, she had to deal with many obstacles - short supply of medicines, neglected hygiene, no equipments to process food for the patients, and many infections that were fatal most of the time. The poor care of the soldiers was a reason for high death rate.

That encourage Florence to do something about it. Her first step was to contact the leaders in England and ask for help. This was done mostly by collecting money from donations. Meanwhile, she was putting her mathematical skills in use by trying to simplify all the data that she was gathering about the reasons of death around.

That's how she came up with the diagram about the mortality of war, witch had historical significance not only in the medical field but also in the statistics and design world.
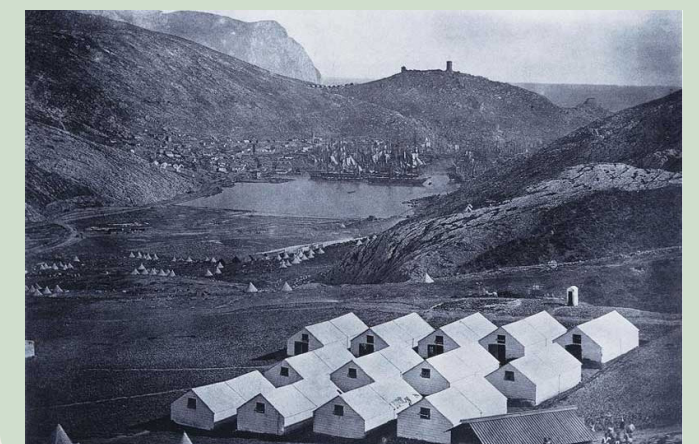
THE DIAGRAM

I like the simplicity of the diagram- looks like pie charts that combine couple types of data in single object.

The title is beautiful - the use of decorative type was typical for that time but here we see it in different sizes and combine with sans serif second line of text that gives a nice balance.
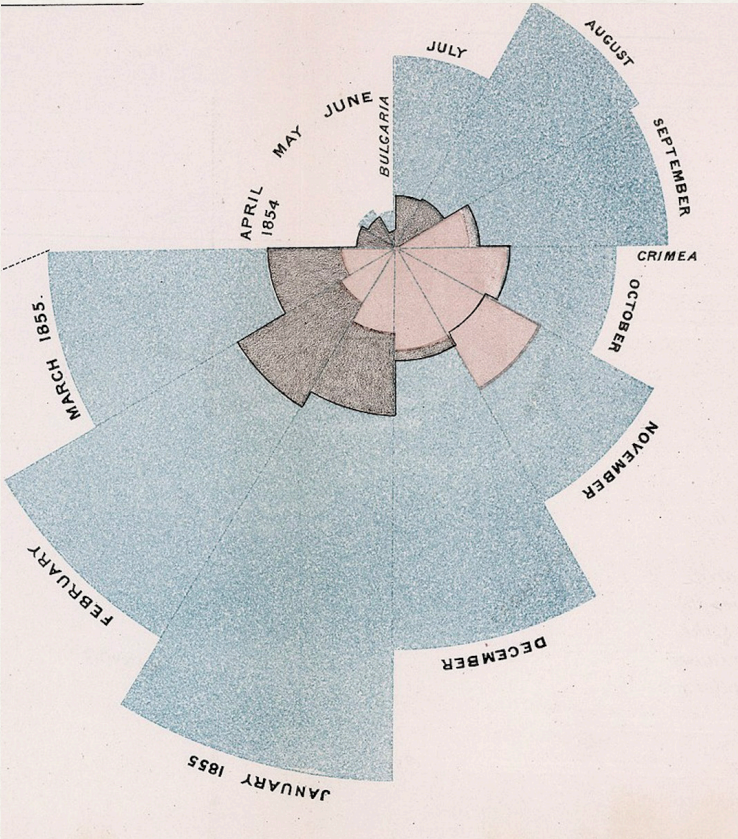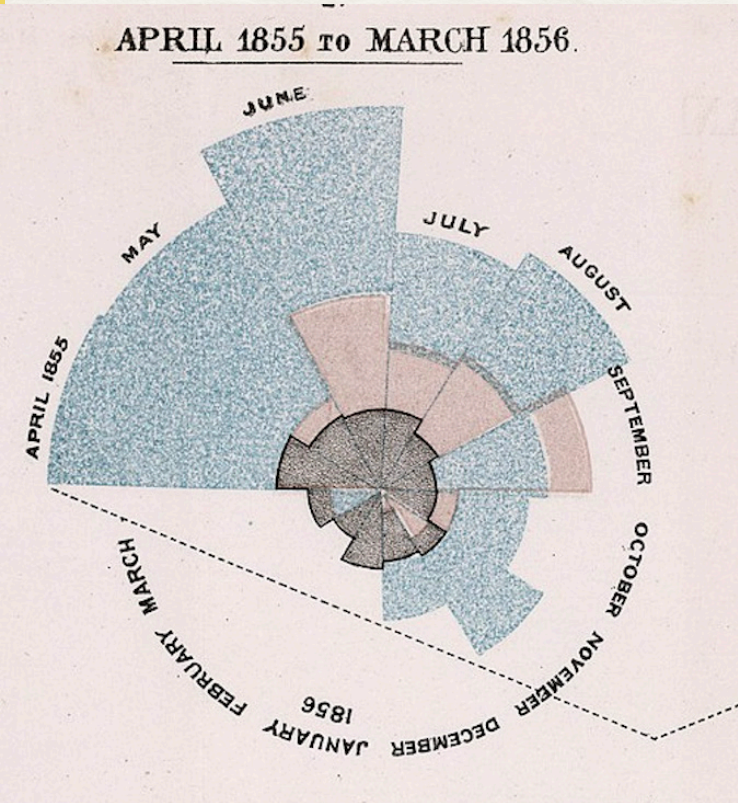
APRIL 1855 TO MARCH 1856.

JUNE
MAY
JULY
APRIL 1855
AUGUST
SEPTEMBER
MARCH
OCTOBER
FEBRUARY JANUARY DECEMBER NOVEMBER
1856

JULY
AUGUST
MAY JUNE
BULGARIA
APRIL 1854
SEPTEMBER
CRIMEA
MARCH 1855
OCTOBER
NOVEMBER
FEBRUARY
DECEMBER
JANUARY 1855

DIAGRAM of the CAUSES of MORTALITY
IN THE ARMY IN THE EAST.

There is also a text in the lower left corner that reads explanation of it:

"The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex. The blue wedges measured from the centre of the circle represent area for area the deaths from Preventable or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes. The black line across the red triangle in Nov. 1854 marks the boundary of the deaths from all other causes during the month. In October 1854, & April 1855, the black area coincides with the red, in January & February 1856, the blue coincides with the black. The entire areas may be compared by following the blue, the red, & the black lines enclosing them."
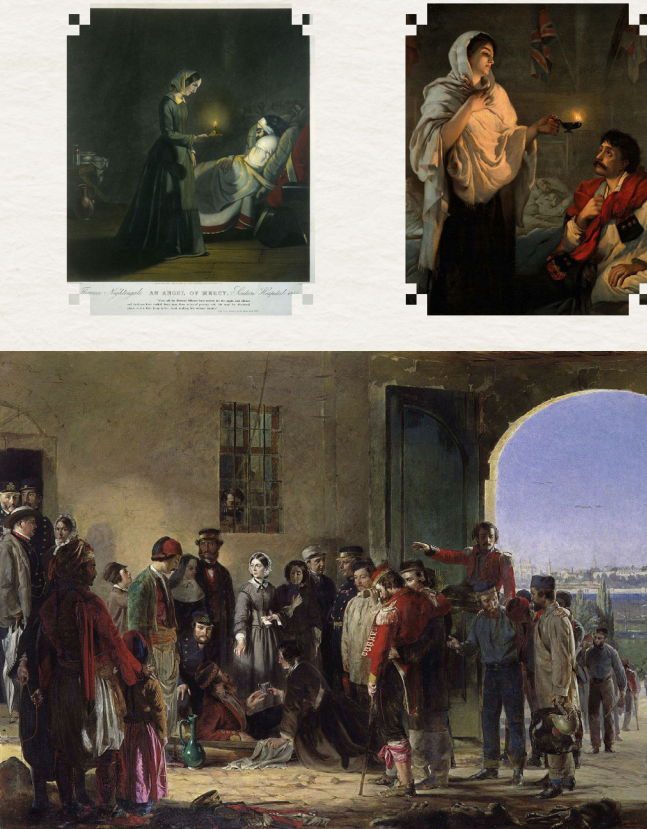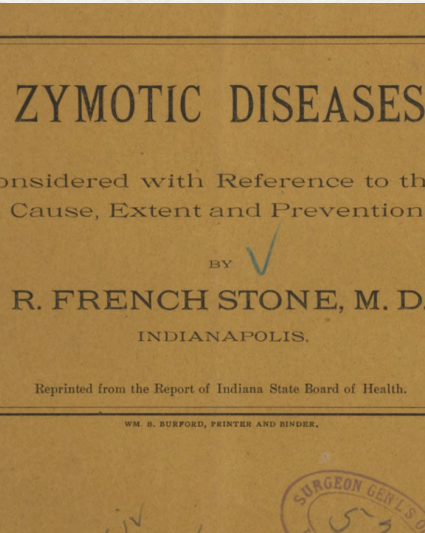
I think is better to have them reversed - the chart for 1854-55 should be on the left (we read from left to right, so the earlier year should be on the left and the second, on the right.)
I just don't understand the marks Bulgaria in July and Crimea in October.
First, I am not sure if that shows the territory of study and second, Bulgaria at that time wasn't independent, was part of Ottoman Empire.

After reading the explanation, I had to do some research and find out what Mitigable Zymotic diseases means.

Consumption . . . . .
Pneumonia . . . . .
Diphtheria . . . . .
Cholera infantum . .
Enteric fever . . . .
Malarial fever . . . .
Croup . . . .
Scarlet fever . . . .
Dysentery . . . . .
Enteritis . . . . . .
Whooping cough . . .
Bronchitis . . . . .
Diarrhœa . . . . . .
Measles . . . .
Septicæmia . . . . .
Scrofula . . . . . .
Erysipelas . . . . .
Rheumatism . . . .
Cerebro-spinal fever .
Cholera morbus . . .
Venereal diseases . .
Small-pox . . . . .

ZYMOTIC DISEASES
onsidered with Reference to th
Cause, Extent and Prevention
BY
R. FRENCH STONE, M. D.
INDIANAPOLIS.
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WM. B. BURFORD, PRINTER AND BINDER.

So, from the diagram we can see that approximately 80 - 90% die from zymotic diseases and not because they get killed in the war (the blue color). That was huge news not only to the medical world back then but also for the military. By bringing prefabricated hospitals and train nurses, they can save many lifes and have better chances to win any war.