

Brucellosis and Psychology: Nightingale’s “depression.”

by Hugh Small

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Summary: *It is sometimes claimed that brucellosis caused Florence Nightingale to suffer from chronic depression from 1857 until 1880. Dr D A B Young's paper, usually quoted as evidence, does not support the theory or make any such claim. Depression has been said to explain and excuse the cold, cruel, heartless, irritable, and tyrannical behaviour of which she has been accused by detractors, but these are not recognized symptoms either of brucellosis or of depression. Recognised symptoms of depression would have reduced Nightingale's ability to think or concentrate, an impairment which is not in evidence in the period.*

For many years after the Crimean War Florence Nightingale spent a lot of her time in bed or on the couch, by her own account suffering a variety of physical illnesses. That's not to say she was inactive, far from it. Even the briefest summary of the wide range of her activities would use up the whole 29 and a half minutes I've got left.

I want to start by showing how competing theories of her illness and mental state have been motivated by a wish to support or oppose an assessment of her achievements. Here I have tabulated four alternative diagnoses:

History of Florence Nightingale Medical Diagnoses

Author	Opposed to	New diagnosis	Subtext
Cook (1913)		Neurasthenia due to overworking	Women not suited to hard work
Pickering (1974)	Overwork	Psychosomatic illness enabling seclusion	Nightingale's neurosis made her more effective
Smith (1982)	Organic or psychosomatic	Feigned illness	Nightingale was a power-mad fantasist and a liar
Young (1995)	Feigned or psycho-Somatic illness	Physical invalidism due to brucellosis	Nightingale was not dishonest or manipulative

Until the mid-1900s it was common to attribute Nightingale's collapse in 1857 and subsequent indisposition to overwork, with a sexist implication that women should not try to work hard. Then in 1974 Pickering, a physician, concluded that Nightingale's illness was largely psychosomatic. He said that her desire to work at full power conflicted with her family's desire to socialize with her, and her symptoms appeared subconsciously and resolved this conflict by giving her an excuse not to see them.

You will see that I have put on this table the previous theory that each authority sought to cast doubt on, and this is usually an important motivation for a new diagnosis. Producing a credible alternative is enough to discount the previous one which the new author dislikes, usually for reasons which have nothing to do with medical science but rather to do with the *subtext* of the previous diagnosis, which I have shown in the right hand column. So there is a sort of dialectic going on in this tabulation: a war of words in which the subtext being debated is usually whether she was a hero or not.

The most negative assessment of Nightingale was that of Smith, a sociologist, in 1982. He wrote that Nightingale faked her symptoms, went for 'surreptitious' walks in the park when

wouldn't *disprove* Smith's theory of faking or Pickering's psychosomatic theory, but it would make it clear that they were pure speculation. Young's analysis, on the other hand, was a bit better than speculation thanks to Nightingale's well-documented attack of fever in the Crimea which he showed to be very much like an attack of brucellosis. Young showed that this infectious disease was common in the Mediterranean basin at that time, being transmitted in goat's milk, which civilians in the Crimea could afford as a substitute for cow's milk. So it's pretty clear that she did have an attack of brucellosis. But an attack of brucellosis only rarely leads to an extended period of chronic symptoms, so it's still only a speculative diagnosis of her later symptoms. That was all Young needed to rebut Smith's allegation that there was no *possible* cause. But, most importantly, Young does not attribute her so-called depression to brucellosis, and this is an aspect of his paper that has been widely misunderstood.

This so-called depression sticks out like a sore thumb, because it is much more continuous and long-lasting than her other symptoms. According to Young, she suffered a continuous 25 year period of what he called 'depression, with feelings of worthlessness and failure'. Although depression is listed in the textbooks as a *possible* symptom of brucellosis, the same textbooks make it clear that most brucellosis patients don't have depression. So although, as Young wrote, depression was 'consistent' with brucellosis, *absence of depression is even more consistent with brucellosis*. 'Consistent with brucellosis' means in this context that brucellosis is not characterized by a continuous hypomanic state. Even if present, depression may be caused by something else, and so the medical authorities cited in Young's paper warn practitioners not to assume that depression in a brucellosis sufferer is caused by the infection. This, and the fact that her feelings of worthlessness went on for a decade after physical symptoms had stopped, must be the reason why Young deliberately avoided diagnosing her mental state as being due to brucellosis. His guarded conclusion was that it was possible that 'chronic brucellosis condemned Florence to a lifetime of confinement and pain', conspicuously excluding what he called her depression from the symptoms explained. This limitation has not been taken on board by authors who believe that Young's paper claims that brucellosis caused Nightingale to suffer from depression^{1,2}.

Did Young even mean to diagnose depression in the clinical sense – a seriously debilitating condition which was irrelevant to his argument? He cites only one specific continuous symptom (feelings of worthlessness) from the nine officially associated with the condition, of which at least five are needed to justify a diagnosis of major depression³. His paper did refer to cold and heartless personal relationships and a cruel, tyrannical and reproachful attitude, but regardless of the fact that his source (Woodham-Smith) exaggerated these traits they are not symptoms either of depression or of brucellosis. In fact, biographical studies have shown that *before* the war Nightingale had a more complete set of symptoms of depression than afterwards^{4,5}. It seems that if she ever suffered from depression, leaving home cured it. This would not be surprising given the torture she was released from by achieving her independence and a mission in life.

A diagnosis of depression is also incompatible with the productivity which Nightingale displayed during the post-war years. Even if you assume, like Smith, that her work was all irrational the sheer weight of paper input and output makes it an unbelievable feat from someone suffering from continuous depression. This productivity aspect was one motivation for the essays by Mackowiak and others in 2005 and 2007 diagnosing her as suffering from bipolar disorder, also known as manic depression^{5,6}. The manic aspect, they say, could explain her high productivity. But Mackowiak's evidence for depression and mania is all from before the war, including his sole evidence to support his claim that Nightingale was

subject to the irrational elation characteristic of the manic stage, which was her 1853 statement ‘I am now in the hey-day of my power’. Mackowiak must be mistaken in construing this statement as irrational because at the time she was chief executive of a hospital and one of the most powerful independent women in Britain.

So in this slide I have added the manic depressive diagnosis, which as far as I can see is aimed not so much at Nightingale as to support a general theory that all heroes are bipolar!

Florence Nightingale’s Medical Diagnoses (updated)

Author	Opposed to	New diagnosis	Subtext
Cook (1913)		Neurasthenia due to overworking	Women not suited to hard work
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Mackowiak (2007)	Brucellosis as cause of depression (can’t explain high productivity)	Bipolar disorder led to high productivity; PTSD caused guilt	Bipolar disorder is a common affliction of the great

Non-medical explanations

The medical explanations having largely failed or omitted to explain her feelings of worthlessness and failure, much less the personality change that Dr. Young remarks on, what else could have caused them? We could start with the observations of Mark Bostridge in his 2008 biography. He says that it was during her post-war researches into mortality statistics that the first evidence of feelings of worthlessness and failure appeared: ‘Oh my poor men who endured so patiently, I feel I have been such a bad mother to you, to come home and leave you lying in your Crimean graves, 73 per cent in eight regiments during six months from disease alone.’ Bostridge dates this first evidence to December 1856, six months after she returned to England⁷. Talking about her official enquiry, for which she was gathering these statistics, he says: ‘What must have come as a considerable shock to her was the discovery that the death rate at her hospital had been higher than at any other⁸.’ This information that she experienced this shock was not available to Dr. Young when he wrote about her post-war feelings of worthlessness and failure. As far as he knew she was a national heroine who had dramatically reduced the death rate at Scutari. He might not have been surprised that she should have some feelings of worthlessness and failure after such a shock.

The narrative purpose of “depression”

I have argued that competing diagnoses have a *subtext*, which is another way of saying that they have a purpose in a proposed narrative of Nightingale’s life. What narrative purpose is served by speculation that she suffered from a 25-year-long chronic depression caused by brucellosis? It appears that depression has been seen by some as an explanation for alleged cold, cruel, heartless, irritable, and tyrannical behaviour towards those closest to her. This is unjustified because the symptoms of depression do not include these alleged faults; they do include ‘reduced ability to think or concentrate nearly every day’³ which is not in evidence.

Why did her feelings of worthlessness and failure stop in 1880?

Enough of Nightingale's negative feelings. She died happy. Why? To answer this we need to look at her life's work. In 1858 Nightingale began her battle with England's Chief Medical Officer after he claimed publicly that practical sanitary measures could not prevent epidemic disease. This crucial battle, a turning point in history, is not discussed in the literature on her, even where it is admitted that sanitation was her top priority. I have already published on this subject but there is something to be added to what I wrote in 1998 and I suggest that her triumphant success in this long struggle relieved her feelings of worthlessness and failure.

Slide: John Simon portrait

Nightingale's sanitary opponent John Simon was appointed Chief Medical Officer during the 1850s, responsible for all National public health matters, and he lobbied against public expenditure on flushed sewers, clean water, and reduction in overcrowding. This expenditure was unpopular with the rich. Nightingale knew that Simon was mistaken in saying that sanitation could not reduce premature deaths from the three fevers that were killing half of all urban children before their fifth birthday. She attacked him and his argument in her 1859 book *A Contribution to the Sanitary History of the British Army*, in which she first published her famous 'coxcomb' diagram and, less famously, criticized John Simon and claimed publicly that the disaster at Scutari showed how millions of lives could be saved in England by public expenditure on sanitation:

The lesson of Scutari (1859)

'Let us now ask, how was it that our noble army all but perished in the East? And we shall at the same time learn how it has happened that so many hundreds of millions of the human race have by pestilence perished before their time.'

Was she saying that the hygiene measures that had been implemented in the Crimea too late to save 16,000 soldiers' lives could now be implemented in Britain to save *millions*? And was she saying that the nation's Chief Medical Officer was publicly *opposing* those measures? Yes, that was what she was saying.

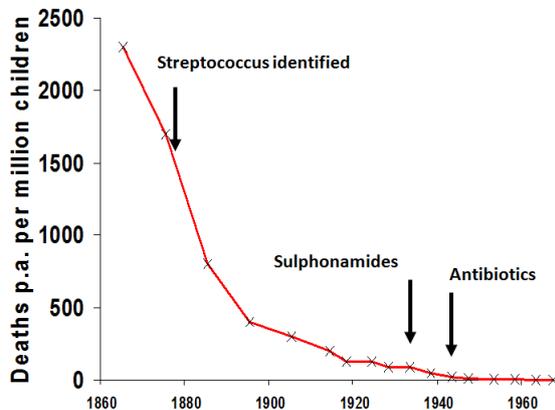
This was the start of her leadership of the sanitarian campaign which took up much of her energy over the next quarter century and which has received less than its due share of attention from historians. She provided the leadership and inspiration for the sanitary revolution, working together with Edwin Chadwick, who had founded it but had been driven from office by political interests because he wanted to spend public money. The two of them shadowed John Simon for thirteen years, preventing him from exercising his nominal authority by rebutting his pronouncements in print and by lobbying politicians. Nightingale let Simon take the knighthood, the fame, the honorary degrees, the salary (£2000 p.a., the same as a Cabinet Minister), while she did his job her way, working directly with the Cabinet and with a legion of practical sanitation experts. She finally stripped Simon of his nominal responsibilities in 1871, inviting the responsible Cabinet Minister to visit her couchside to learn why Simon's job was now unnecessary⁹. Simon later admitted that he had been wrong and she had been right, and he died a disappointed man.

This the woman who is described in the new *Oxford Dictionary of National Biography* only as 'reformer of Army Medical Services and of nursing organisation'! Don't think I am trying to steal her away from the nurses: in her evidence to the 1857 Royal Commission she was

obviously proud of having trained as a nurse, and that training and practical experience inspired all that followed.

I said I had an explanation for the disappearance of Nightingale's feelings of worthlessness and failure around 1880. Here it is:

Sanitation tamed scarlet fever



Source: Thomas McKeown: *The Modern Rise of Population*

This graph shows that deaths from scarlet fever almost disappeared before any medical treatment or vaccination became available. Similar graphs can be drawn for whooping cough and measles. At least half of the decline was due to practical sanitary engineering¹⁰. These were the cause of death of half of all urban children that John Simon said in 1858 could not be reduced by sanitary measures. The decline in infant mortality had a dramatic impact on overall life expectancy in Britain.

UK Life expectancy rose by 40% between 1858 and 1910

Nightingale was an avid reader of government statistics and by 1880 I surmise that the decline in mortality was already evident from them, and she would have attributed it to the sanitary reforms which she inspired. That may be why she lightened up at last and her worried reclusiveness changed to chummy sociability. The lesson of Scutari had been put to good use. Life expectancy rose from 39 to 55 years – 40 per cent – between the time she returned from the Crimean War and her death in 1910.

Here is a picture of her aged 71. Benign, alert, impeccably dressed as always, patiently waiting for the photographer to finish even though she's dying to get to work on those letters. Thank you all for giving me this opportunity to talk about her.

¹ *Florence Nightingale, The Woman and her Legend*. Bostridge, 2008 pp. 281-2, 326

² *Florence Nightingale at First Hand*. McDonald, 2010 p. 16

³ American Psychiatric Association Diagnostic and Statistical Manual, 4th Edition

⁴ Bostridge, *Op. Cit.* pp 108, 140, 151, 155

⁵ *A Case of Glimmering Gloom*. Wisner, Bostridge and Mackowiak in *The Pharos*, Autumn 2005.

⁶ *Post Mortem*. Mackowiak, 2007 p. 291

⁷ Bostridge, *Op. Cit.* p. 593 note to p. 298

⁸ Bostridge, *Op. Cit.* p. 319

⁹ *Sir John Simon*. Lambert, 1963 p. 522

¹⁰ *The Passion of Florence Nightingale*, Small, 2010 pp 112-120