

Cholera, John Snow and the 2013 bicentennial meetings at the London School of Hygiene and Tropical Medicine, UK

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The only thing new about the cholera epidemic that struck Haiti in October 2010, nine months after the devastating earthquake in January the same year, was that it was the first in the country's recorded history. It turned out to be the world's largest epidemic in recent decades, with the half a million suspected cases and over 7000 deaths reported by the Haitian government from mid-October 2010 to January 2012 probably an underestimate. Initially suspected by some scientists to be due to climatic changes, recent evidence points more conclusively to human activity. UN peacekeeping troops were deployed into Haiti in 2010 from Nepal where there had just been an outbreak of cholera. A few days after they arrived, cases of cholera appeared in the village next to their camp. It was known that waste pipes from the camp and from a septic pit allowed waste fluids to seep into a nearby river.² Subsequently whole genome sequencing has indicated a close relationship between the Haitian and Nepalese epidemic *Vibrio cholerae* strains.³ Whereas interpretation of this evidence has provoked debate,^{4–6} what is indisputable is the similarity to the outbreak in London in 1854 which was eventually traced back to the seepage of waste fluid from a cess-pit into the water supplied by the Broad Street pump. John Snow, through meticulous observation and record taking, had already worked out that the source of the epidemic was faecal contamination of water from the pump before this discovery was made, and had persuaded the Board of Guardians for the Parish to remove the handle of the pump. Snow's painstaking and dedicated work, in the teeth of fierce opposition from those wedded to the then dominant miasma theory that cholera was caused by foul air, earned him posthumous recognition as the father of modern epidemiology.⁷

John Snow was born, the eldest of nine children, into a labourer's family in York on the 15 March 1813 (Figure 1).

For the whole of 2013 we will have a series of reprints related at least tangentially to Snow and cholera, which we hope will provide background to the genesis, dissemination, debate and legacy of his work. Examples will be from art, literature and engineering.

Chant of the Cholera (selected verses)¹

John Banim (1798–1842 Ireland)

From my proper clime and subjects,
In my hot and swarthy East,
North and Westward I am coming
For a conquest and a feast—
And I come not until challenged,
Through your chilly lands to roam!
As a bride ye march'd to woo me,
And in triumph led me home!

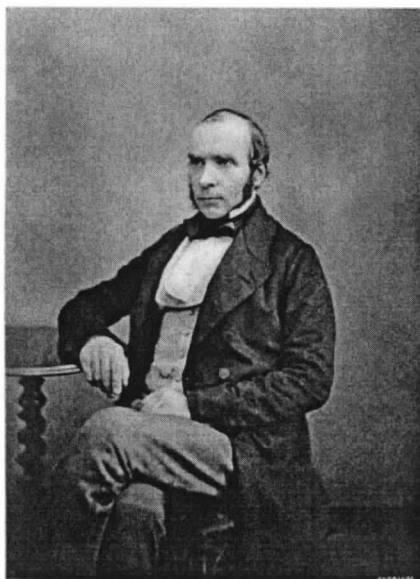
He hears them onward tramping
To the tramp of other feet—
He hears the hostile shouting
Of the armies ere they meet—
Hush!—at one side and the other,
They are silent—and they stop—
An unseen hand hath touch'd them!
Down their weapons drop!

And they reel about like drunkards,
Or infants in their play,
And they fall, convulsed and bloated,
And blind to the bright day—
And in heaps they stir and struggle,
Until at last all lie
Dead, by the noble river
Which lonesomely runs by!

The hour of shrieks! the frantic!
He swells above your head!
Ye feel him! though he spareth
As yet to strike ye dead!
He tortures ye! he blisters!
The blood within your veins
Is boiling! and all verdure
Turns red upon your plains!

And in crowds ye go together—
All ye I may have spared—
The king, uncrown'd—the captain
Ungirded—not unsear'd—
The mean and ragged cripple—
The foolish and the wise—
The strong man, and the weak one
Who did never win a prize—

With lolling tongues ye hoarsely
Cry out, and curse or pray—
Kneel down! kneel down! and wisely
Dream on of such a day!
And what though I should smite ye
Before it come so near—
Ho! were it not in mercy,
To make ye love or fear!



(Autotype from a Presentation Portrait, 1856, and Autograph facsimile—J. W. R.)

Figure 1 John Snow (Autotype from a Presentation Portrait, 1856, and Autograph facsimile—B.W.R) Image located via the John Snow site UCLA and reproduced with permission from the Wellcome Library, London

Further to celebrate the bicentenary, the International Epidemiological Association together with the London School of Hygiene and Tropical Medicine, the Wellcome Trust and the John Snow Society will be

hosting two 2-day meetings and an exhibition — see <http://johnsnowbicentenary.lshtm.ac.uk/> for more information and to make bookings. Scheduled to coincide with Snow's actual birthday, the first meeting (15–16 March 2013) focuses on his work: *Mapping Disease: John Snow and Cholera*; and the second (11–12 April 2013) focuses on his legacy: *Snow's Legacy: Epidemiology Today and Tomorrow*. Running the month between the meetings will be an exhibition of artefacts and artwork relating to John Snow and his contribution to epidemiology (London School of Hygiene and Tropical Medicine, 15 March–12 April 2013).

References

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- ⁵ Hasan NA, Choi SY, Eppinger M *et al.* Genomic diversity of 2010 Haitian cholera outbreak strains. *Proc Natl Acad Sci U S A* 2012;**109**:e2010–17.
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- ⁷ Hempel S. *The Medical Detective – John Snow, Cholera and the Mystery of the Broad Street Pump*. Cambridge: Granta Books, 2006.