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Geoffrey Cannon on Rudolf Virchow

The political determinants of health



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Geoffrey Cannon writes: The pictures immediately above are of and about Rudolf Virchow (1821-1902), the German physician, pathologist, biologist, anthropologist, pre-historian, writer, editor and politician (1). He is a founder of modern public health as a political activity, sometimes known as 'social medicine'. On the left and right he is young and old. He joined the workers on the Berlin barricades in the 1848 revolution. The publication above has the title *The Freedom of Science*, in the sense of the word that conveys natural philosophy as well as knowledge. The cover picture of him with a skull refers to his work as a pathologist and also as a seeker of wisdom. Rudolf Virchow remains an inspiration for leaders of society in Latin America, as shown in the top row of pictures. These include the two public health physicians who have been and now are president of Chile, Salvador Allende and Michelle Bachelet (second, fourth from left). They also include leaders of the public health movement in Brazil a century ago and now, Oswaldo Cruz and Carlos Monteiro (left and right). Virchow's championing of the common people is n influence on Brazilian liberation theology as represented by Leonardo Boff (second from right). Other active public health nutritionists (larger picture) are infused with the example of Rudolf Virchow.

Box 1
Virchow on public health nutrition

Our struggle is a social one. Our job is not to write instructions to upset the consumers of melons and salmon, of cakes and ice cream, in short, the comfortable bourgeoisie. It is to create institutions to protect the poor, who have no soft bread, no good meat, no warm clothing, and no bed, and who through their work cannot subsist on rice soup and camomile tea… May the rich remember during the winter, when they sit in front of their hot stoves and give Christmas apples to their little ones, that the ship-hands who brought the coal and the apples died from cholera. It is so sad that thousands always must die in misery, so that a few hundred may live well (2).

Rudolf Virchow (1819-1902), judged as a pathologist, biologist and physician, is one of the giant European scientists of the 19th century, with the Englishmen William Herschel and Charles Lyell; the Frenchmen Louis Pasteur and Claude Bernard; and his German colleagues and pupils Paul Ehrlich, Ernst Haeckel and Franz Boas. He originated cellular pathology. As an anatomist he contradicted prevailing theories of the racial superiority of the Nordic or the European races. He said: 'If different races would recognise one another as independent co-labourers in the great field of humanity… much of the strife now agitating the world would disappear'.

If he is less well-known than English and French scientists of that time, the reason surely can only be the relegation of German thinking and the German language as a result of the two world wars. For Virchow was also more than a laboratory scientist with attitude. He is in a group that includes the older genius Alexander Humboldt (1769-1859). He was a pre-historian who investigated Troy with Heinrich Schliemann, and a prodigious teacher, writer, editor and publisher. He was a politician, leader of what would now be called the democratic socialist party in the Prussian parliament. As a politician committed to public health, in the 1870s he masterminded Berlin's sewage system. Aged 80 he jumped off a moving street-car, fell and broke a thigh-bone, and predicted correctly that the enforced rest would kill him. He had a lot of style, and knew how to turn phrases that would change minds.

His message to all those working in nutrition, is that good diet and health is a consequence of adequate social conditions, and that without these, nutrition cannot improve sustainably.

Editor's note. In *Inspiration* our preference is to link to documents that give more information. In the case of Rudolf Virchow this is readily done. Howard Waitzkin, founder-editor of the journal *Social Medicine*, in 2006 devoted its entire first issue to *an appreciation of Virchow,* and also to the entire text of Virchow's 1848 *Report on the Epidemic of Typhus in Upper Silesia* (3), For the story of this report, see below.

Box 2

Rudolf Virchow and public health nutrition now



In Virchow's spirit. Four advocates of public health and nutrition, shaping the Giessen Declaration in 2005. Left to right, Claus Leitzmann, Tim Lang, Colin Tudge, Mark Wahlqvist

The vision of Rudolf Virchow lives on. As a founder of public health nutrition, his concept of social medicine now influences professionals of all generations. Four of the group who met in 2005 at the Justus-Liebig University, Giessen, to draft and agree the *Giessen Declaration* (4) were Claus Leitzmann (left), an advocate of ecological nutrition; Tim Lang and Mark Wahlqvist (second from left; right) who advocate eco-nutrition; and Colin Tudge (presiding), whose life's work is Enlightened Agriculture. All four and others who met at Giessen are committed to nourishment, sustenance and welfare of the people, which Rudolf Virchow saw as a prime responsibility of government and all concerned with public policy.

The bratwurst duel

The emblematic story about Rudolf Virchow concerns him and Otto von Bismarck (1815-1898). It is a story about nutrition, in its microbiological aspect. Virchow was co-founder and leader of the Radical or Progressive party, as such a member of the Prussian parliament, and later of the Reichstag. In 1861-1862 the Progressives formed the largest parliamentary party. In speeches and writing he constantly confronted von Bismarck, then president of Prussia, and later chancellor of united Germany and as such the most powerful statesman in Europe. The topic of Virchow's vehement criticism was von Bismarck's autocratic leadership and his policy of 'blood and iron' military and political expansionism, which Virchow and his party saw as expensive, provocative, and wrong. Infuriated, in 1865 Bismarck sent his seconds to challenge Virchow to a duel. Here is what Virchow did. He said: 'As the challenged party I have the choice of weapons, and I choose pork sausages. One of these is good to eat. The other will be equally tasty, but is infected with deadly germs. Tell His Excellency that he may choose which one to eat, and I will eat the other'. The message back from von Bismarck said that he enjoyed the joke and that the duel was cancelled. Whether or not Virchow was joking is not known.

Box 3

Rudolf Virchow and public health now



In Virchow's spirit. Brazilian public health leaders Oswaldo Cruz, Carlos Monteiro (left, right); Chilean presidents Salvador Allende, Michelle Bachelet; liberation theologian Leonardo Boff

Many Germans emigrated to Chile, and followers of Virchow established schools of social medicine. One student, later minister of health and then president, was Salvador Allende (second left, above). He identified causes of disease as including poverty, foreign debt and appalling work conditions. He advocated income redistribution, state regulation of food and clothing supplies, a national housing programme, industrial reforms, and a national health service. Another previous president of Chile, re-elected in 2013, is Michelle Bachelet (next picture), who is also a qualified public health physician in the same tradition. In Brazil liberation theology, influenced by Virchow, is exemplified by Leonardo Boff (second to right). The great public health leader in Brazil was Oswaldo Cruz (left) whose institute is now a department of the federal government. An outstanding public health nutrition leader now is Carlos Monteiro (right). With colleagues he shows that the key factors that have alleviated malnutrition in Brazil are raised income; education especially of girls; primary health care provision; and sanitation including clean water (5). Then nutrition status reliably improves.

The Upper Silesia typhus epidemic

At the age of 27 Virchow, already a leading pathologist, was asked by the Prussian government to investigate an epidemic of typhus ravaging Upper Silesia. He was expected to give medical reasons. Instead, he concluded that a year of hard rain and bitter cold had tipped impoverished communities into starvation. Huddled together in their huts, they incubated the contagion that then, as an epidemiological nemesis, had spread to the wealthier classes. He said the basic cause was appalling social conditions. He condemned the system by which absentee landlords controlled the land and its production.

He concluded that 'the government had done nothing for Upper Silesia'. What was needed, he insisted, was land reform, decent schooling, better incomes, clean water, orphanages, and a welfare system. He delivered the report to the authorities in Berlin. Shocked, they dismissed him abruptly. A few weeks later the 1848 revolution broke out in Berlin, and he joined the workers on the street barricades. The revolutionary flag waved is now that of united modern Germany. He came to see epidemics as 'disturbances of culture, warning signs against which the progress of states and civilisations can be judged'.

Box 4
Virchow on public health

Taken from Howard Waitzkin's introduction to the founding issue of Social Medicine (2).

Virchow's stress on prevention again derived mostly from his observation of epidemics, which he believed could be prevented by fairly simple measures. He found a major cause of epidemics in poor potato harvests: government officials could have prevented malnutrition by distributing foodstuffs from other parts of the country. Prevention was largely a political problem: 'Our politics were those of prophylaxis; our opponents preferred those of palliation' It was foolish to think that health workers could accomplish prevention solely by activities within the medical sphere. Material security also was essential. The state's responsibilities, Virchow argued, included providing work for able-bodied citizens. Only by guaranteed employment could workers obtain the economic security necessary for good health. Likewise, the physically disabled should have the right of public compensation.

Virchow's vision of the origins of illness pointed out the wide scope of the medical task. To the extent that illness derived from such conditions, the medical scientist must study those conditions as a part of clinical research, and the health worker must engage in political action. This is the sense of the connections Virchow frequently drew among medicine, social science, and politics: 'Medicine is a social science, and politics is nothing more than medicine on a larger scale'.

References

1 Ackerknecht E. *Rudolf Virchow – doctor, statesman, anthropologist*. Madison, WI: University of Wisconsin Press, 1953

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3 Virchow R. Report on the Typhus Epidemic in Upper Silesia. Reprinted in *Social Medicine* 2006, **1**, 1, 11-98.

4 The Giessen Declaration. *Public Health Nutrition* 2005, **8**, 6A: 783-786.

5 de Lima A, da Silva A, Konno S, Conde W, Benicio M, Monteiro C. Causes of the accelerated decline in child undernutrition in Northeastern Brazil)1986-1996-1006. *Revista Saúde Pública* 2010, **44**, 1, 1-10.

Editor's note
Contributors are invited to choose and write about the document that has most impressed and moved them in their life and work. The choice can be from this year, or ten or a hundred or thousands of years ago. It need not be explicitly about nutrition or public health, but it should be offered as inspiration to *WN* readers in their own thinking vision and work. The document should be available in pdf form. Please send suggestions for *Inspiration* to wn.network@gmail.com.