



Centre
Virchow-Villermé

www.virchowvillermé.eu



Newsletter

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Editorial

Dear readers,
Almost 200 years ago Louis-René Villermé and Rudolf Virchow did not need extensive scientific studies to understand that the miserable conditions in which people were forced to live and work including poor sanitation were associated with the outbreak of epidemics thus causing high rates of morbidity and mortality.

Since then, research on areas such as disease prevention or health promotion has become much more complex. Fortunately, over the last decades a variety of data has become available in the Western industrialised world, which allows to draw inferences on health or disease determinants. In this issue of the Newsletter Juliane Knop, Stefanie Schütte, Antoine Flahault and the invited Professor Stanley Leshow, from Centre Virchow-Villermé Paris, explain their approach for a ranking of European countries regarding their health determinants.

A cross-national view will not only help to better understand factors influencing our health but may also shed light on the differences of global health strategies in France and Germany. During this year's World Health Summit in Berlin, we are going to work out these differences in two workshops; differences that concern areas such as Global Health priorities, anchoring of Global Health in both ministries, Global Health-structures and strategies, education, and fields of research. The findings of this comprehensive bilateral comparison will be a topic in the next issue of the Virchow-Villermé Newsletter.

In this Newsletter we would like to give you a short presentation of the World Health Summit 2014 and, together with Antoine Flahault, we will explain our views on certain Global Health aspects in an interview.

Compared to the traditional "in-room"-lectures, Massive Open Online Courses represent an alternative approach to knowledge transfer. The research team on Information and Communication Sciences of the Centre, Anneliese Depoux, Célya Gruson-Daniel and Karl-William Sherlaw will introduce their research axis based on how MOOCs are challenging the traditional teaching.

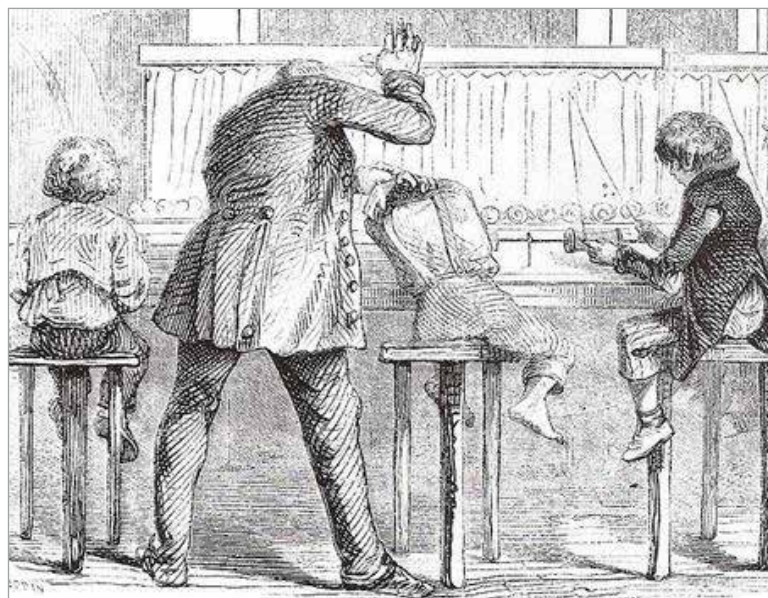
As directors of the Centre, Antoine Flahault and I, as well as the entire team of the Centre we hope you enjoy reading the second edition of our Newsletter.

Yours,
Elke Schäffner

Rudolf Virchow & Louis-René Villermé

Two pioneers of Public Health

By Philippe Meyer, Emeritus professor at Université Paris Descartes, member of the Académies de Sciences, Paris



Child labour in the textile industry

The Centre Virchow-Villermé for Public Health Paris-Berlin has chosen to put its activities in line with those initiated by two founders of the discipline of Public Health. Louis-René Villermé (1782-1863) and Rudolf Virchow (1821-1902) were among the first physicians more concerned about the state of health of the population than about the care for individual patients. They focused their interest on communities rather than on individuals and identified the first principles of hygiene. They introduced measures limiting or preventing collectively the onset and development of disease in order to preserve and improve health. They were the first to demonstrate the need for Public Health and to establish Public Health as an academic topic.

From 1829 to 1831, Villermé demonstrated the importance of community hygiene in the prevention of cholera; he understood its impact on infant mortality in destitute populations of workers from spinning mills in northern France and Alsace.

A rigorous study of the living and working conditions in various parts of the country allowed him to inspire a "law on child labour in factories", which limited the working age to eight years and regulated child labor in factories.

Villermé was the initiator of the first act on urban planning in France, which limited the rental of substandard housing. Furthermore, he launched the first steps towards the establishment of occupational >>>

>>> health care. His warnings and advice on the "work and conditions of children in the mines of Great Britain" were heard across the channel.

Rudolf Virchow, physician at the Charité in Berlin, was first and foremost a biologist interested in the fundamental mechanisms of life and disease. But he was open to anything that concerned man. This humanism was born out of the empathy he felt for the Berlin revolutionaries of 1848, out of his participation in the fight against typhus in Silesia, which was triggered by the German government and out of his interest in the Public Health and hygiene in Dresden and Berlin. Being a member of the Municipal Council in Berlin, he called for the construction of hospitals in the poor neighbourhoods of Friedrichshain and Moabit, so that the medical condition of the disadvantaged sections of the population would become a public concern. He insisted that "medicine becomes a social science." Rudolf Virchow also weighed on decisions made by the German government regarding medicine. He was committed to the development of the up to then overlooked disciplines such as epidemiology and Public Health.

Rudolf Virchow had an exceptional humanist vision. Member of the Chamber



Construction of the sewage radial system in Berlin. Since 1878 the waste water of the City was sent to sewage fields outside Berlin and no longer in the Spree.

of Deputies and member of the Prussian Reichstag from 1880 to 1893, he pleaded the cause of the Polish and Jewish minorities, advocated the peaceful resolution of human conflicts and wished for the creation of a United States of Europe.

Unlike many contemporary scholars, he had

no nationalistic attitude during the War of 1870 and devoted himself to care for the wounded. With half a century in between and without any scientific support, Villermé and Virchow have significantly contributed to the same public health need. Their work was complementary despite the political differences of the time. ●

THE CENTRE VIRCHOW-VILLERMÉ

The Directors & the Team



Antoine Flahault

Professor of Public Health, Université Paris Descartes, Co-director of the Centre Virchow-Villermé



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Susanne Stöckemann - Project Coordination and Communications

Patrick Zylberman - Professor of Health History, EHESP School of Public Health

Visiting Professor

Ian Pool - Emeritus Professor of Demography, University of Waikato / New Zealand

EDUCATION

Conceptualising MOOC: forms, practices and uses

The educational team at the Centre Virchow-Villermé has chosen a reflexive approach in producing MOOCs.

The Centre Virchow-Villermé provides courses in Public and Global Health to an international audience. Without a physical space dedicated to in-person-classes, the project is focused on a digital learning model: MOOCs.

The Centre's "MOOC factory" embodies an enriching field of enquiry for the researchers of the Centre, Anneliese Depoux (GRIPIC, Paris Sorbonne-CELSA), Célya Gruson-Daniel (Centre de Recherche Interdisciplinaire, Université Technologique de Compiègne) and Karl-William Sherlaw (Rennes 2). Being both researchers in Information and Communication Sciences and MOOC creators, they are able to observe parameters such as the role of the teacher, body language, and speech, to determine their influence on the production, the delivery and the receipt of a MOOC. The ongoing reflexions over the past months have led to a preliminary work in collaboration with Olivier Aïm (GRIPIC, Paris Sorbonne-CELSA): "Conquering a teaching contract, challenges with MOOCs in a knowledge-based society" [Link 1](#).

This contribution opens up a promising line of research within the Centre that considers the MOOC as an opportunity to transmit knowledge within and outside of academia. To find out more about the MOOC research of the Centre: [Link 2](#).

Consult the list of Centre's MOOCs: [Link 3](#).



[Link 1 - http://eda.shs.univ.paris5.fr/jocair_2014/AIM_jocair14.pdf](http://eda.shs.univ.paris5.fr/jocair_2014/AIM_jocair14.pdf)

[Link 2 - http://virchowvillermé.eu/blog/](http://virchowvillermé.eu/blog/)

[Link 3 - https://www.france-universite-numerique-mooc.fr/university/courses/VirchowVillermé/](https://www.france-universite-numerique-mooc.fr/university/courses/VirchowVillermé/)

IN SHORT

UPCOMING

Ian Pool, Professor Emeritus of Demography at the University of Waikato in New Zealand, prepares, with the help of the educational staff of the Centre Virchow-Villermé, a MOOC that focuses on the demographic transition in the world. How have the size, age, life expectancy, morbidity and mortality of the population evolved in the past 200 years? How have these changes influenced the health systems, both in the North and in the South? Answering these questions helps thinking health policies today. This MOOC will be available in 2015, in English.

Alex Broadbent, Professor of Philosophy and Head of the Department of Philosophy at the University of Johannesburg, prepares, with the help of the educational staff of the Centre Virchow-Villermé, a MOOC that uses a philosophical approach to question epidemiological concepts such as causality, prediction, risk relativity and determinism. This MOOC will be available in 2015 in English.

The MOOC "Digital and Health Research: new practices and challenges" was selected as one of the winning projects of the call for proposals that was launched by the University Sorbonne Paris Cité in March of this year. Designed by the educational staff of the Centre Virchow-Villermé, and in partnership with the CFDIP (Doctoral Training Centre for Professional Integration), INRIA (National Institute for Research in Computer Science and Control) and Laval University Québec, this MOOC is intended for researchers, research professionals and future researchers wishing to follow the changing practices of health research, transformed by digital technology (managing massive data research, participatory research, Open Access and Data, etc.). In a hands-on approach, it will impart key skills to facilitate the handling of these digital tools (Data Driven Research). The distribution of this MOOC, dedicated to the French public, is scheduled for spring 2015.

THE NUMBER

10 is the number of international collaborations* initiated by the Centre in 2013/2014

*Brazil, England, France, Germany, Morocco, New Zealand, Niger, South Africa, Switzerland, United States of America

RESEARCH

Virchow-Villermé ranking of health determinants

"Understanding health determinants remains crucial in Public Health research"

Stefanie Schütte, Juliane Knop, Stanley Lemeshow and Antoine Flahault, conducted a study, whose objective was to define an index ranking of 30 European countries (EU, Switzerland and Norway) based on their performance when analysing various health determinants. Mobilising multi-sectoral indicators, this ranking offers a com-

prehensive approach to the analysis of the health status of populations. It could help to gain a better understanding of how health is impacted by various determinants and could assist policy makers in their decision-making. Pending the publication of this study, we interviewed Stefanie Schütte and Juliane Knop.

How did you get the idea for this research project?

Juliane Knop: We wanted to improve the existing rankings, such as Bloomberg from 2013, which was the most recent study comparing health systems at that moment. Our study includes socio-economic factors, health behaviour, healthcare, environment and a variable of premature mortality as health outcome.

Stefanie Schütte: Using several determinants of health we wanted to follow the Health in All Policies approach, initiated in 2006 by Finland, in order to improve the health of a population by focusing on a set of various interacting factors. Our study takes into account multiple factors used to compare the performance of each country in different aspects.

How did you define these determinants of health?

Stefanie Schütte: There is a lot of literature on health determinants. The problem is that researchers are not in agreement regarding their influence: are socio-economic factors more important than health behaviour? We followed American methods, which are mainly used for the ranking of determinants, and adapted them to the data available for Europe.

Juliane Knop: Based primarily on these studies, we selected relevant indicators and assigned them a weight, a degree of importance.

How did you organise your work and what was your method?

Juliane Knop: We used data from the World Health Organisation, Eurostat and the World Bank. It was a priority for us to really compare each indicator for each country. Finally, we focused on data from 2010, because the data were more useful and more recent.

Stefanie Schütte: Let us say that this element represents one of the limitations of our work. If we continue this ranking in the coming years, we can only hope for better data accessibility, for example driven by the movement of Open Data.



"There are a number of rankings showing the performance of health systems in the world. The most well-known were made in 2000 by the WHO and in 2013 by Bloomberg. These rankings are useful because they always offer hints that can lead to ask questions about performances in some areas of health. It seemed interesting that the Centre Virchow-Villermé, with its interdisciplinary approach of health, provides a ranking that is not based on economic and medical factors,

but rather on multisectoral determinants of health, such as social, environmental factors and health behaviours, etc ... The results are extremely interesting because they allow to comprehensively assess the state of health in 30 European countries (EU, Switzerland and Norway). By reiterating this ranking with the same indicators, we could get trends and try to determine why a country is, in terms of health, performing well or badly..." **Antoine Flahault, Professor of Public Health, Université Paris Descartes, Co-director of the Centre Virchow-Villermé**

"This study was complicated by the fact that there is no "gold standard" for ranking the countries. Our decision to convert all the indices (such as rates of premature mortality, alcohol consumption and ten others) to z-scores created a scenario where all indices had equal means and variances. While choice of weights can never be completely objective, the weights we used seemed reasonable and were supported by other similar attempts in the literature. We look forward to feedback concerning our choice of weights and, hopefully, being able to modify them to provide a method for ranking that will help identify the most important ways a population's health may be improved."

Stanley Lemeshow, Professor of Biostatistics, Ohio University



Publications

Public Health

Flahault, A., Etter JF. (2014) *Electronic cigarettes: it is urgent to promote them to save lives. International Journal of Public Health. [Epub ahead of print]*

Martus, P., Ebert, N., van der Giet, M., Jakob, O., Schaeffner, ES. (2014) *An efficient approach for glomerular filtration rate assessment in older adults. Br J Clin Pharmacol. 2014 Aug;78(2):384-92. doi: 10.1111/bcp.12331.*

Schütte, S., Chastang, J.-F., Parent-Thirion, A., Vermeylen, G., & Niedhammer, I. (2014). *Social Inequalities in Psychological Well-Being: A European Comparison. Community Mental Health Journal. doi:10.1007/s10597-014-9725-8*

Health History

Zylberman, P. (2014) *Le délit d'imprudence sanitaire en France au XXe siècle, Les tribunes de la santé 43 : 93-10*

EXPERTISE IN GLOBAL HEALTH

Global Health and its implications in today's world

Interview with Elke Schäffner and Antoine Flahault, Co-Directors of the Centre

Prof. Flahault, please explain: what is Global Health?

There are two meanings for Global Health. The first one is geographical, Global means worldwide. The second regards the holistic perspective of health. Global means intersectoral (we would say in academic institutions "interdisciplinary"). When envisaging Health in All Policies, this is Global Health. When considering fighting against smoking tobacco not only the matter of behaviour changes, but

also taxation, regulation (e.g. ban on public areas, plain packaging), or social marketing (e.g. warning labels), in addition to epidemiology of lung cancer, this is also Global Health. To come back to this example of smoking tobacco, this is clearly a Global Public Health issue, which cross boundaries, from North to South, from West to East. Global Health does not mean (only) tropical medicine. Globalisation has dramatically changed the way people and goods are traveling. Most public health issues nowadays rapidly become the matter of the world and no more of any specific areas on Earth. Just remember West Nile Virus is no more confined to West Nile, but has spread today all over North America. Obesity, diabetes or cancer are not anymore diseases of developed countries.



Medical staff examine a child for signs of malnourishment

Dr. Schäffner, what is the role of academia in Global Health and more precisely of the Centre Virchow-Villermé?

Academia plays an important role in Global Health as universities also contribute to the Global Health discourse through their academic research. Developing countries connect with research universities to bring the expertise of the latter to work on solving development problems in low-resource environments. One concrete example of the role of academia is their engagement in the development of drugs. Unlike pharmaceutical companies they are non-profit oriented and are able to negotiate price conditions and thus improve access to drugs in developing countries. A second point is that universities promote research in the area of neglected di-

seases such as cholera for example – a disease that affects the poor in the first line.

In terms of the Centre, Global Health is one of the three main topics the center is engaged in. We aim to target topics that have some relation to France and Germany. Integrated in this year's World Health Summit for example there are two workshops, one discussing the role

of both countries regarding the millennium goals, and a second one comparing the structure, focus, and priorities of Global Health in both countries. These two workshops are part of a (4-part) workshop-series that pursues a comprehensive bilateral comparison (structure, anchoring of Global Health in ministries, direction, education, areas of research) of Global Health strategies in France and Germany.

Prof. Flahault, what are - from your point of view - the most important challenges in Global Health in the years to come?

It is always difficult to set priorities in health. For some people epidemiology should lead these priorities: the higher the rate of mortality and burden of disease, the more important the challenge. Some other would prefer to address social and economic issues, e.g. access to health, proposing universal health coverage as a preliminary step for further improvement in health. Other would support a more systemic approach, aiming at strengthening health care systems in all countries, rather than targeting any specific disease. Finally some other will argue that only intersectoral approaches can help solving global health issues, such as climate change and its impact on health. Maybe a mix of all these points of views could provide an appropriate set of priorities. The upcoming sustainable development goals (SDGs) will at least be an answer to that very question!

IN SHORT

ONGOING

The Centre Virchow-Villermé is supporting the creation of a school of public health and health systems management (ESPMSS) at the newly created University Mohammed VI in Morocco. The school has the objective to train high-qualified health professionals in Morocco and the region of North Africa, the Middle East and sub-Saharan Africa. Furthermore, it aims at promoting scientific knowledge for the improvement of health systems, and to contribute to public health policies. The Centre is involved in the development of Master programs at ESPMSS and will collaborate in research areas such as Big Data and Global Health with the objective of strengthening the South-South movement of knowledge and to foster the development of good practices in the area. The ESPMSS will provide its first "Master in Health Management" in fall 2014 and will open a "Master in Public Health" entirely in English in fall 2015.

[link: http://www.um6ss.ma/](http://www.um6ss.ma/)

ZOOM

The World Health Summit



developments and health challenges in an equitable way. The M8 Alliance is a collaboration of academic institutions of educational and research excellence committed to improving global health, working with political and economic decision makers to develop science-based solutions to health challenges worldwide. The central topics of the World Health Summit 2014 was "Climate Change and Health", "Universal Health Coverage" and "Physical Activity and Healthy Ageing".

The Centre Virchow-Villermé for Public Health Paris-Berlin hosted two sessions on Global Health with emphasis on French and German strategies.

Since its inauguration in 2009, the World Health Summit (WHS) has brought together opinion leaders from academia, politics, civil society, and the private sector to take responsibility in all health related challenges. It was based on the solid friendship of France and Germany and enjoys the high patronage of the President of the French Republic and the German Chancellor ever since. The WHS quickly became the pre-eminent forum for addressing global health issues and is effectively setting the Global Health agenda.

The World Health Summit is the annual conference of the M8 Alliance of Academic Health Centers, Universities and National Academies, organised in collaboration with the National Academies of Sciences of more than 67 countries through the Inter Academy Medical Panel (IAMP). This international network provides an outstanding academic foundation to the World Health Summit and acts as a permanent platform for framing future considerations of global medical

The special World Health Summit Public Day on Wednesday, October 22, will focus on questions such as the impact of increasingly aging societies on health care and healthy lifestyles in expanding cities and megacities. It was designed for broad public participation and provided a unique chance for participants to get in touch with leading international decision-makers and researchers from various health-related areas.

The World Health Summit wishes to encourage everyone to join in the discussion on how to ensure a healthy life both now and in the future.

Further information on speakers and topics: www.worldhealthsummit.org

Among the high-ranking speakers of WHS 2014 are:

Frank-Walter Steinmeier (Federal Foreign Minister, Germany),
Hermann Gröhe (Federal Minister of Health, Germany),
EL Houssaine Louardi (Minister of Health, Morocco),
Barry J. Marshall (Nobel Prize Laureate in Medicine, 2005),
Leroy Hood (President, Institute for Systems Biology, Seattle),
Klaus Wowereit (Governing Mayor of Berlin),
Sir Muir Gray (Director, National Knowledge Service and Chief Knowledge Officer, National Health Service),
Marie-Paule Kieny (Assistant-Director General, WHO),

Roger I. Glass (Director, Fogarty International Center),
Jacques Rogge (International Olympic Committee, IOC),
Ichiro Kawachi (Chair, Department of Social and Behavioral Sciences, Harvard School of Public Health),
Sarah Cook (Director, UN Research Institute for Social Development),
Mark Pearson (Head of the Health Division, OECD),
Hiroaki Kitano (President, Systems Biology Institute, Tokyo),
Nathalie Strub Wourgaft (Medical Director, DNDi),
Fatoumata Nafo-Traore (Executive Director, Roll Back Malaria Partnership)

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