

The political economy of epidemics

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Summary

The determinants of old and new epidemics, including the increase of non communicable diseases in an epidemic fashion, are deeply rooted in the way societies are structured. Populations' aspiration to the highest attainable standard of health is in constant conflict with the dominant modes of production, distribution and consumption of goods and services, which are driven by profit and unsustainable economic growth goals. The acceleration of globalization has modified the spatial and temporal spread of diseases, increasing the complexity of the analysis and adding challenges to possible responses to epidemics.

The paper analyses power and influence relations of various societal sectors, and their shaping of social and environmental determinants of epidemics. Related global governance and public policy issues are equally presented. It argues that response to epidemics cannot be reduced to merely a biomedical or technical problem, seen in isolation and dealt with only through medical rescue processes and public health interventions. Upstream causal processes need to be addressed. This requires questioning the hegemonic development model, and a combined global, national and local action to modify the drivers of human development, making populations' health the priority of public policies in all sectors.

Introduction

The inclusion of infection in a broader environmental and social context dates back to Hippocrates¹. Some 150 years ago Rudolph Virchow pointed out “Do we not always find the diseases of the populace traceable to defects in society?”. Since then, the association between “defects in society” and disease has been widely documented. However powerful economic interests and the dominant ideology have favoured a biomedical approach to health, orienting research and national, and international policies accordingly.

The work of the World Health Organization (WHO) Commission on social determinants of health (CSDH) offered a new opportunity to focus on the social determinants of health, i.e.: “the conditions in which people are born, grow, live, work, and age” and the “structural drivers” behind those conditions, such as the unequal distribution of power, income, goods, and services, globally and nationally².

¹ G. Pappas, I.J. Kiriaze, M.E. Falagas, *Insights into infectious disease in the era of Hippocrates*, “International Journal of Infectious Diseases”, 12, 4, 2008, pp. 347-350.

² CSDH, *Closing the gap in a generation: Health equity through action on the social determinants of health*, World Health Organization, Geneva 2008.

Old and new epidemics, including the spread of previously unknown, scarcely studied or rare infectious diseases, and the increase of non-communicable diseases in an epidemic fashion, as well as the response to the threat they pose, offer a good example of health conditions whose determinants are deeply rooted in the way societies are structured.

Understanding the political economy of epidemics is an indispensable step in building adequate, efficient and effective prevention and response.

Such an analysis cannot be purely technical; it needs to be based on the values of its actors and the interests they hold³. Indeed, in the health field, possibly with more evidence than in any other area, also economy is indissolubly political⁴, as per Virchow's famous quote: "Medicine is a social science, and politics is nothing more than medicine on a grand scale."

Virchow indeed believed that medicine and public health practices, applied politically, could transform society; and that in turn politics and social systems have profoundly positive or negative effects on public health. In the same perspective he was convinced that all epidemics are social in origin. Reporting the 1847-48 typhus epidemic in the Prussian province of Upper Silesia, Virchow stated that the proper response to the epidemic was political, not medical⁵.

In line with that observation, the response to epidemics cannot be reduced to merely a biomedical or technical problem, seen in isolation and dealt with only through medical rescue processes and public health interventions. Upstream causal socio-political processes, as well as interests and influences determining the modalities of response need to be addressed.

Thus, the nature of power relations and control over resources must be studied, as well as the institutions that challenge or reinforce their distribution⁶. In other words who controls whom, and how these factors influence health and access to health services, in the specific circumstances of epidemics.

The modification in space and time of the spread of disease determined by the acceleration of the globalization process increases the complexity of the analysis requiring a transnational viewpoint, and correspondingly adds challenges to possible responses to epidemics.

This paper shortly describes the development of the political economical environment that gave rise to the forces that transnationally shape the social and environmental determinants of health and epidemics, exemplifies the social roots of epidemics, and analyses the power relations influencing the global governance of the response, and the public policies for epidemics prevention and control.

It concludes highlighting the link between epidemics and the hegemonic neoliberal development model, and calls for a combined global, national and local action to modify the drivers of human development, making populations' health the priority of public policies in all sectors.

³ B. Boidin, *Économie politique de la santé comme bien public mondial*, "Revue de la régulation" [online], 17 | 1er semestre / Spring 2015, published online on the 17th of June 2015, URL : <http://regulation.revues.org/11128> (last accessed on the 29th of September 2016).

⁴ P. Batifoulier, J.-P. Domin, *Économie politique de la santé. Un exemple exemplaire*, "Revue de la régulation" [online], 17 | 1er semestre / Spring 2015, published online on the 29th of June 2015, <http://regulation.revues.org/11361> (last accessed on the 29th of September 2016).

⁵ Harvard University, *Rudolf Virchow, 1821-1902*. "Contagion", Harvard University Library Open Collection Program, <http://ocp.hul.harvard.edu/contagion/virchow.html> (last accessed on 29th of September 2016).

⁶ V. Navarro, *The political economy of social inequalities: consequences for health and quality of life*, Baywood Publishing Company, Amityville, NY 2002.

The political economical and social roots of old and new epidemics

Traditionally epidemics, i.e. an increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area⁷, were exclusively related to infectious diseases. Modern societal changes and their drivers have allowed many chronic non-communicable diseases to spread in a similar epidemic fashion, although through different modalities summarized in the term “industrial epidemic”⁸.

Infectious diseases are mostly associated with poverty and inequality, and so are their epidemics. Although heat and humidity play a role, especially in the distribution of vector borne diseases, and are related to the unprecedented challenges posed by climatic change, the concept of ‘tropical diseases’ is absolutely inappropriate as those pathologies and their distribution are not bound up with latitude, but mostly with socio-economic conditions⁹, their diffusion in poorer countries shows a clear parallel with nineteenth century Europe, where they disappeared thanks to improvements in hygienic and environmental conditions, and standards of living of the population. ‘Tropical medicine’ was conceptualized at the end of the XIXth century to support colonial powers and colonial expansion¹⁰.

The extent of today’s health problems in low income countries and their failure to control the spread of both infectious and non communicable diseases in an epidemic fashion were largely a consequence first of the imperialist and capitalist expansion and the wars that accompanied it, and later of the establishment of an hegemonic neoliberal societal model.

The establishment of the colonial economy involved the deliberate transformation of the socio-economic organization of the colonial territories to supply world markets with raw materials and agricultural commodities, with the destruction of the pre-existing vital social and ecological relationships and far-reaching effects on the health of affected populations¹¹.

In the post-war period the de-colonization process was accompanied by a new phase of economic domination by industrialized countries. ‘Development’ was soon established as a metaphor for economic growth, and market expansion.

The UN Charter (1945) engaged all members in international economic and social cooperation in pursuit of “higher standard of living, full employment, and conditions of economic and social progress and development”. However ‘development’ soon became the password for imposing a new kind of dependency, shaping other societies to meet rich countries’ commercial and political needs.

In the view of United States’ President Harry Truman, progress would be linked to the export of the American model (and products) through “a bold new program for making the benefits of our scientific advances and industrial progress available for the improve-

⁷ <http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section11.html> (last accessed on the 29th of September 2016).

⁸ R. Moodie, D. Stuckler, C. Monteiro, N. Sheron, B. Neal, T. Thamarangsi, et al., *Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries*, “The Lancet”, 381, 9867, 2013, pp. 670-679.

⁹ E. Missoni, M. Di Gennaro, F. Vichi, S. Swartz, G. Bertolaso, *Remedies for Third World diseases*, “The Lancet”, 332, 8605, 1988, p. 282.

¹⁰ L. Doyal, *The political economy of health*, South End Press, Boston (MA), 1981.

¹¹ *Ibid.*

ment and growth of underdeveloped areas”¹². According to that view: “Greater production is the key to prosperity and peace”¹³, a doctrine which found theoretical support in the Modernization Theory elaborated in Walt Rostow’s (1960) “The Stages of Economic Growth: A Non-Communist Manifesto” predicting that economy would flourish in a capitalist system, characterized by mass production and consumerism.

Along the same line in 1960, the Organization for Economic Co-operation and Development (OECD) was established with the objective “to achieve the highest sustainable economic growth” and “maintain and extend the liberalisation of capital movements” contributing to the economic development of non-member countries in the process of economic development, whereby the accent was put on “securing expanding export markets” of assisted countries. ODA also served to oppose similar attempts made by the Soviet Union in the name of “socialist internationalism” to affiliate newly independent developing countries¹⁴.

In the 1980s the Reagan administration in the United States and the Thatcher government in Great Britain championed the neoliberal ideology, with the International Monetary Fund (IMF) and the World Bank serving as their global implementers. “There is no alternative” was Margaret Thatcher’s support to the spread of market fundamentalism that would soon feed neoliberal globalization. Following that view, the ‘Washington Consensus’ financial institutions, i.e. the International Monetary Fund and the World Bank group, imposed macroeconomic Structural Adjustment Programs (SAPs) to indebted countries with dramatic social consequences, such as the dismantlement of relatively equitable health systems and their substitution with inefficient and costly, unregulated commercialized health systems, setting health care up as a private good for sale rather than a public good paid for with taxes¹⁵.

The world as a whole was progressively involved in the process of development and the establishment of a consumerist growth-society without borders, with aggressive marketing of unhealthy behaviours and consumption; characterized everywhere by privatization and commodification of public services; tax cuts for the wealthy; the dismantling of public health, education and social systems; financial and corporate deregulation and unrestricted movement of capital across borders; unrestricted exploitation of environmental resources and export-oriented production, with externalization of environmental and social costs. Leading to rising inequality, with the accumulation of the proceeds of the expansion of economy at the upper end of the distribution of income, neoliberal policies framed the structural drivers of old and new epidemics, whatever their proximal pathogenesis.

Epidemics of infectious diseases

Traditionally infectious diseases were mostly associated with poverty, while non-communicable, chronic diseases characterized more developed countries. Today this relation is not true anymore: infectious diseases are emerging or re-emerging in industrialized coun-

¹² H. Truman, *Public Papers of the Presidents of the United States. Harry S. Truman, Year 1949*, vol. 5, United States Government Printing Office, 1964, p. 114.

¹³ *Ibid.*

¹⁴ A. Cossetta, *Sviluppo e cooperazione. Idee, politiche, pratiche*, Franco Angeli, Milano, 2009.

¹⁵ R. Labonté and D. Stuckler, *The rise of neoliberalism: how bad economics imperils health and what to do about it*, “Journal of Epidemiology and Community Health”, jech-2015-206295-7, 2015.

tries, while poor countries are increasingly facing a double burden.

Independently from their aetiology, infectious diseases follow four main routes of transmission: faecal-related, air-borne, direct contact, and vector-borne. Nevertheless a single pathogen may follow multiple routes. Whatever the route, environmental and socio-economic determinants – including the health system's capacity to cope – influence higher transmission, incidence and fatality rate.

Cholera epidemics rapidly and widely spreading along the faecal-related route were common in the past all over the world. With the improvement of sanitation and hygienic conditions cholera outbreaks became uncommon in advanced industrialized countries in the 20th century. However, cholera still represents an important threat in less developed countries, especially in concomitance with events, such as conflicts, and natural disasters complicating already precarious health and sanitary situations; an example being the on-going epidemic of cholera, which started in Haiti after the 2010 earthquake. Indeed, before the earthquake (2008) almost 40% of Haitian population had no access to an improved drinking water source, and only 12% were receiving piped, treated water; 83% had no access to adequate sanitation. Thus cholera, which had not been seen in Haiti for more than a century, could easily spread¹⁶.

Influenza possibly represents the most well known example of an epidemic-prone airborne infectious disease. The 1918 flu pandemic, so called “Spanish flu” the first of the two pandemics involving H1N1 influenza virus, infected 500 million people across the world resulting in the deaths of three to five per cent of the world's population, one of the deadliest natural disasters in human history¹⁷. Several surveys have shown that there were indeed clear differences between social classes in influenza incidence and that case fatality rates from influenza also varied according to socioeconomic status. Studies of more recent influenza epidemics have also shown that there can be clear class differentials in mortality in this type of illness¹⁸. Life and working conditions (human-animal promiscuity; overcrowded dwellings; bad hygienic conditions, etc.) have been clearly associated to more recent variants of influenza virus, including in facilitating the sporadic transmission of influenza viruses between animals and humans. Even in most developed countries, such as the United States, social and racial/ethnic group disparities in exposure, susceptibility, and access to timely and effective treatment have been well documented, and avoidable disparities can be expected in pandemic preparedness plans in the absence of systematic attention to differential social risks¹⁹.

Ebola and sexually transmitted diseases such as HIV/Aids are important examples of epidemic-prone infections spread through direct contact.

HIV/AIDS affects many different populations, and occurs in every country in the world; however, a disproportionate number of those affected live in the poorer countries of the world. At the global level there is a positive correlation between HIV prevalence and poverty, whether this is measured by gross domestic product per person, income in-

¹⁶ E.J. Barzilay, N. Schaad, R. Magloire, K.S. Mung, J. Boncy, G.A. Dahourou, et al., *Cholera Surveillance during the Haiti Epidemic – The First 2 Years*, “N Engl J Med” 368, 7, 2013, pp. 599-609.

¹⁷ J.K. Taubenberger, D.M. Morens, *1918 Influenza: the mother of all pandemics*, “Emerging Infectious Diseases”, 12,1, 2006, pp. 15-22.

¹⁸ S.E. Mamelund, *A socially neutral disease? Individual social class, household wealth and mortality from Spanish influenza in two socially contrasting parishes in Kristiania 1918-19*, “Social Science & Medicine”, 62, 4, 2006, pp. 923-940.

¹⁹ P. Blumenshine, et al., *Pandemic Influenza Planning in the United States from a Health Disparities Perspective*, “Emerging Infectious Diseases” 14, 5, 2008, pp. 709-715.

equality, or Human Poverty Index, and poverty is one important factor in increasing susceptibility to HIV/AIDS, and facilitating its spread²⁰. The distribution of HIV did not follow national borders, but rather the contours of a transnational socioeconomic order and its spread moved along international steep gradients of inequality, which are also paths of migrant labour and sexual commerce²¹. Although some studies have revealed that in poorer regions/countries, individuals with more wealth were more likely to be infected with HIV, the same studies have reaffirmed the association between the spread of epidemic and inequality in wealth²².

During the 2014-2016 Ebola epidemic the virus claimed thousands of lives in Sierra Leone, Liberia and Guinea Conakry, three among the poorest countries of the world, at the bottom of the UN's Human Development Index. Poverty and social exclusion, as well as changing patterns of land use are clearly linked to the Ebola crisis and its severity. Expansive 'land grabs', encouraged by reforms designed to attract international investment in large-scale extraction and agribusiness activities, disarticulated people from their homes and livelihoods, reshaped ecological system dynamics, reducing biodiversity and altering the habitats of wild bats which then modified their feeding behaviour attracted by anthropogenic local environment. Populations thus face increased risk of exposure, while the lack of functional surveillance and ability to cope of the health care sector, weakened by decades of macroeconomic adjustment policies, leaves them without sufficient means to cope^{23,24}.

Zika virus (ZIKV) previously believed to cause only a mild and self-limiting illness, recently emerged as a new public health threat with great impact on the media. Its possible association with microcephaly and Guillain-Barré syndrome prompted the World Health Organization (WHO) to declare on 1st February 2016 that this epidemic is a "public health emergency of international concern" (PHEIC). Yellow fever is currently (September 2016) causing a massive outbreak, although WHO has declined to deem this outbreak a PHEIC, while African countries are trying to face the epidemics with unprecedented efforts in recent history of yellow fever control measures²⁵. ZIKV infection and Yellow fever share their transmission route and vector, *Aedes* spp. mosquitos, with Chikunguya, Japanese Encephalitis and Dengue. Since *Aedes* spp. has very limited spatial dispersal, overlapping high population densities of mosquitoes and humans sustain a focus of infection. These conditions are associated with rapid expansion of poor urban peripheries with un-insulated homes, inadequate hygienic and sanitary conditions, piling up of non-biodegradable waste, and lack of adequate public health infrastructure²⁶.

²⁰ L. Fenton, *Preventing HIV/AIDS through poverty reduction: the only sustainable solution?*, "Lancet", 364, 9440, 2004, pp. 1186-1187.

²¹ P. Farmer, *Social inequalities and emerging infectious diseases*, "Emerging Infectious Diseases", 2, 4, 1996, pp. 259-269.

²² A.M. Fox, *The HIV-poverty thesis re-examined: poverty, wealth or inequality as a social determinant of HIV infection in Sub-sabaran Africa?*, "Journal of Biosocial Science", 44, 4, 2012, pp. 459-480.

²³ A.R. Huff, T. Winnebah, *Ebola, Politics and Ecology: Beyond the "Outbreak Narrative"*, IDS Practice Paper in Brief, 2015, pp. 1-4.

²⁴ A. Kentikelenis, L. King, M. McKee, D. Stuckler, (2015), *Comment The International Monetary Fund and the Ebola outbreak*, "The Lancet Global Health", 3, 2, 2015, pp. e69-e70.

²⁵ E. Baumgartner, *Could Yellow Fever Become the Next Pandemic?*, "Scientific American", 15 August, 2016.

²⁶ A. Castro, Y. Khawja, J. Johnston, *Social Inequalities and Dengue Transmission in Latin America*, In: Herring, A. and Swedlund, A. (Eds.) "Plagues and Epidemics: Infected Spaces Past and Present" Berg, NY, 2010, 201, pp. 231-250.

Epidemics of non-communicable diseases

The link between new non-communicable diseases (NCDs) epidemics and socio-economic condition is equally well documented; as well as the impact on health systems.

“The epidemic of NCDs poses devastating health consequences for individuals, families and communities, and threatens to overwhelm health systems. The socioeconomic costs associated with NCDs make the prevention and control of these diseases a major development imperative for the 21st century”²⁷.

In 2012 the leading causes of NCD deaths were cardiovascular diseases (46.2% of NCD deaths), cancers (21.7%), respiratory diseases, including asthma and chronic obstructive pulmonary disease (10.7% of NCD deaths) and diabetes (1.4% of NCD deaths)²⁸. The distribution and impact of NCDs and their risk factors is highly inequitable and imposes a disproportionately large burden on low- and middle-income countries, affecting people in the prime of their lives and putting more pressure on already stretched health systems and government and family budgets.

The prevalence of obesity and other NCDs is directly related to the level of income inequality, whatever the country’s GDP²⁹.

People who have a low socioeconomic status and those who live in poor or marginalised communities have a higher risk of dying from non-communicable diseases (NCDs) than do more advantaged groups and communities. Poverty is closely linked with NCDs in a dangerous vicious cycle: poverty contributes to rising rates of NCDs, while NCDs and their risk factors worsen poverty. WHO recently reported that air pollution represents the biggest environmental risk to health. In 2012, one out of every nine deaths was the result of air pollution-related conditions, with high-income regions of the Americas, Europe and Western Pacific recording decreasing air pollution, while the other regions have increasing levels³⁰.

Obesity, which was historically associated with wealth and is a fundamental risk factor for most NCDs, has reached the characteristics of a pandemic and increasingly affects developing countries and poor populations, sharing most of the social determinants of other “industrial epidemics”³¹.

The common political-economic determinants of epidemics

The robust association between the process of globalization dominated by neoliberal economic ideas and policies of privatization, deregulation, and liberalization, and unsatisfactory health trends has been widely described.

The global spread of commercialization and commodification of almost any area of social life associated with the economic growth dogma, generated inequality, negative im-

²⁷ <http://www.who.int/ncds/introduction/en/> (last accessed on the 29th of September 2016)

²⁸ WHO, *Global status report on non-communicable diseases 2014*, World Health Organization, Geneva 2014.

²⁹ R. Wilkinson, K. Pickett, *The Spirit Level: Why Equality is Better for Everyone*, Penguin Books, London, 2010.

³⁰ WHO, *Ambient air pollution: A global assessment of exposure and burden of disease*, World Health Organization, Geneva 2016.

³¹ Moodie et al., 2013.

pacts on health, and deep health inequities³².

The growth-economy's consumption imperative is not compatible with the finite space and resources of the planet, and has led to environmental disruption and climatic change inevitably linked with negative impact on human health, including the rapid spread of both infectious and non-communicable diseases³³.

Global phenomena such as climatic changes and local environmental transformation may act synergistically. In the coastal area of Bangladesh, for example, increased tropical storms and deforestation promoted by agro-industrial projects produced the increase in salinity and the consequent multiplication of *vibrio cholerae* with increased risk for cholera epidemics³⁴. In other countries the increased sea level due to climatic change, favoured the expansion of intensive industrial fish farming, which reduced access to local sources of drinking water³⁵. Changes in the ecosystem are also modifying the geographical limits (latitude and altitude) as well as seasonality of certain infectious diseases, especially vector borne (such malaria or dengue) or food-borne (for example salmonellosis).

In addition health consequences of climatic changes will possibly affect significantly more the health of population in the poorest areas of the world, exacerbating inequity. WHO estimations show that 99% of the burden of disease due to climatic change will be in developing countries³⁶.

The steady increase in many chronic diseases is related to environmental degradation due to pollutants and waste from uncontrolled or scarcely regulated production cycles which, pushed by the profit maximisation imperative, externalise societal and environmental costs.

Privatization and trade of water reduced water security and increased incidence of water-related diseases and related epidemics³⁷. Inadequate investment in safe water, sanitation and waste management systems and weak public health inspection are determinants of the spread of cholera and typhoid epidemics in Africa.

In many parts of Africa large-scale export-oriented mineral extraction, timber extraction and agribusiness activities, especially palm oil production, involving expansive 'land grabs', were implicated in massive ecological perturbations associated with ecological 'phase shifts' resulting in increased risk of disease spill over events for rural communities. International investments contributed to exceptional economic growth, yet the majority of the populations have received little benefit, while the related ecological dynamics have often contributed to the spread of zoonotic diseases with rural and sylvatic origins that, until recently, tended to remain in rural areas, as in the case of Ebola or Yellow Fever. Urbanisation with vast urban peripheries, characterised by poor housing, inadequate water supplies, hazardous conditions and dense concentrations of people all exacerbate the potential for zoonotic disease spread³⁸.

³² CSDH, 2008

³³ T. Greenham, J. Ryan-Collins, *Rethinking the role of the economy and financial markets*, "J Civ Soc", 9, 2, 2013, pp. 162-177.

³⁴ R.J. Lara, S.B. Neogi, M.S. Islam, Z.H. Mahmud, S. Yamasaki, G.B. Nair, *Influence of catastrophic climatic events and human waste on Vibrio distribution in the Karnaphuli estuary, Bangladesh*, "Ecohealth", 2009, pp. 279-86.

³⁵ P. Vineis, Q. Chan, A. Khan (2011), *Climate change impacts on water salinity and health*, "Journal of Epidemiology and Global Health", 1, 1, 2011 pp. 5-10.

³⁶ J.A. Patz, *Climate Change and Global Health: Quantifying a Growing Ethical Crisis*, "EcoHealth", 4, 2007, pp. 397-405.

³⁷ M.M. Huynen, P. Martens, H.B. Hilderink, 2005.

³⁸ A.R. Huff, T. Winnebah, *Ebola, Politics and Ecology: Beyond the Outbreak Narrative*, "IDS Practice Paper in Brief", 2015, pp. 1-4.

In today's consumerist society, extremely aggressive global marketing strategies are put in place by industry to push for increased consumption of their products. Transnational trade in harmful processes and products contributes to rising levels of chronic conditions in many poor countries.

Among others, the food industry has direct responsibilities in the current obesity pandemics and the growing burden and high mortality deriving from related chronic diseases³⁹. These are equally associated with the tobacco and alcohol industry, which take special advantage of potential for growth in developing countries and especially push for increased consumption among already vulnerable population groups⁴⁰.

The looming global threat of antibiotic resistance to levels where infections that were easily kept under control over decades may originate catastrophic epidemics, led the UN assembly to adopt in September 2016 a political declaration committing governments to raise awareness about antimicrobial resistance and to better monitor the use of antibiotics in the health and farming sectors⁴¹. The rise in antibiotic resistance is primarily being driven by inappropriate overuse of lifesaving antibiotics in both the health and agricultural sectors.

In the former, rising antimicrobial resistance is deeply linked to how health systems function and interact with the public and with the pharmaceutical industry. Trade related mechanisms also play a significant role. The Trade Related Intellectual Property Rights agreement has created a global system of patent protection that may increase pharmaceutical prices and reduce access to drugs and vaccines⁴². Remaining unaffordable to public health systems, the cost of essential medicines may contribute to the trade of substandard and counterfeit drugs, especially in low-income countries, posing enormous social, economic, and political challenges to health security, and undermining capabilities to curb both infectious and non-communicable diseases⁴³. At the same time lack of access to appropriate and timely treatment adds to the problem, allowing diseases such as tuberculosis to develop multi-drug resistance in later stages.

In agroindustry, antibiotics are widely used in meat and fish production as a growth promoter, and besides Europe, its use in animals remains unregulated, with transnational industry taking advantage of regulation gaps. For example, although the same companies operate in both countries, the use of antibiotics in salmon production is significantly lower in Norway than in Chile, where regulation is weaker and consumer organisations are considered to be less powerful⁴⁴.

International trade agreements are scarcely influenced by health concerns and may in fact prevent countries from regulating the import of health-damaging products (e.g. tobacco, alcohol, and unhealthy foods). Such measures are likely to be seen as trade restrictive under these agreements, which are managed under a highly structured and demanding

³⁹ B.A. Swinburn, G. Sacks, K.D. Hall, K. McPherson, et al., *The global obesity pandemic: shaped by global drivers and local environments*, "Lancet" 378, 9793, 2011, pp. 804-814.

⁴⁰ M.M. Huynen, P. Martens, H.B. Hilderink, *The health impacts of globalization: a conceptual framework*, "Glob Health" 1, 1, 2005, p. 14.

⁴¹ UNGA, *Endorsed Political Declaration on AMR-1616108*, United Nations General Assembly, 21 September 2016.

⁴² R.D. Smith, C. Correa, C. Oh, *Trade TRIPS and pharmaceuticals*, "Lancet", 373, 2009, pp. 684-91.

⁴³ R. Labonté, *Global Health Policy: Exploring the Rationale for Health in Foreign Policy*, Globalization and Health Equity Institute, Population Health, University of Ottawa, Ottawa, Canada, 2010, pp. 1-108.

⁴⁴ L. Rowlands, *Governments Band Together to Address Antibiotic Resistance*, "Interpress News Services", September 25, 2016.

governance system. In contrast, the global health governance domain exhibits little structural coherence, a greater diversity of actors, and weaker legal obligations on states^{45, 46}.

Finally, also prevention of and response to epidemics heavily relies on well functioning health systems, and individual health security largely depends on access to safe and effective health services, products, and technologies.

Notwithstanding the global commitment to universal access to care, in many countries health systems have been weakened over the years, including through financial cuts, privatization and increased but fragmented funding of selective approaches to disease control. In addition, neoliberal macroeconomic policies continue to impose severe cuts on health systems leading to rising unmet need for care. Over the period 2007-2012 even in European countries that have long benefited from universal access to care, unmet care needs increased, appearing concentrated in deprived groups. In addition recent policy reforms, which restrict access of migrants and other vulnerable groups such as homeless persons and drug users, may have taken a toll beyond what can be recorded⁴⁷.

Global health governance and the response to epidemics

The upstream causal socio-political processes of epidemics, as well as the interests and influences determining the modalities of the response are intimately related with global health governance.

The well known holistic definition of health, and the recognition of health as a fundamental human right stated in the Constitution of the World Health Organization (WHO) were influenced by the growing political support for the ideals of social medicine in the interwar period. WHO served a vital human rights leadership role in the first five years of its existence, however soon the political constraints of the Cold War led WHO to reposition itself as a purely technical organization, focusing on medical intervention and disease eradication to the detriment of rights advancement⁴⁸.

During the 1960s and 1970s, Keynesian economics, with its call for greater government role in the economy and equity prone economic and social policies, allowed the development of social welfare and universalistic health systems. In the context of the emergence of 'basic needs approach' development policies and the debate around a New International Economic Order, under the leadership of the Dane, Halfdan Mahler (1973-1988) also WHO revitalized its health right discourse and shifted to more comprehensive approach to health and inclusive health care, namely through the Alma Ata Declaration and the Primary Health Care strategy to achieve the 'Health for all' objective. In that period WHO was established as the "global health conscience"⁴⁹ openly challenging the commercial practices of transnational pharmaceutical and food industries. With the changing political

⁴⁵ DP. Fidler, N. Drager, K. Lee, *Managing the pursuit of health and wealth: the key challenges*, "Lancet", 373, 2009, pp. 325-31.

⁴⁶ R. Labonté, *Global Health Policy...* 2010.

⁴⁷ A. Reeves, M. McKee, D. Stuckler, *The attack on universal health coverage in Europe: recession, austerity and unmet needs*, "The European Journal of Public Health", 25, 3, 2015, pp. 364-365.

⁴⁸ B.M. Meier, B. M., W. Onzivu, *The evolution of human rights in World Health Organization policy and the future of human rights through global health governance*, "Public Health", 128, 2, 2014, pp. 179-187.

⁴⁹ *Global Health Watch*, "Global Health Watch 2005-2006." An alternative world health report, Zed Books Ltd, London 2005.

climate of the 1980s and the progressive globalization of neoliberal economics, health care began however to move towards more selective approaches, WHO lost its influence and political profile. Over the last two decades the leadership of WHO as the “directing and coordinating authority on international health work” was increasingly challenged by the numerous players now playing a direct or indirect role in the field of global health, such as other organizations of the UN system, above all the World Bank, regional development banks and funds, the transnational corporate sector, a growing number of NGOs and an increasing number of global multi-stakeholder initiatives and public-private partnerships.

Under the growing influence of private foundations (over all the Bill and Melinda Gates Foundation) and public-private partnerships (especially the Global Fund to fight against HIV/Aids, Tuberculosis and malaria, GFATM, and the GAVI Alliance for immunizations) the global health arena became increasingly fragmented through the mushrooming of ‘vertical’ initiatives. Their arguable sustainability, and the waste of resources due to duplication and lack of alignment to national health plans, gave rise to increasing doubts about effectiveness and appropriateness of that approach among very diverse observers and raised new questions about global health governance and the role of WHO. The new initiatives mobilized significant resources, mainly from traditional governmental donors, but also through new market based financial mechanisms. These, just like the above-mentioned global initiatives, are all product oriented. For example, UNITAID raises resources for medicine and diagnostics for the three target diseases of the GFATM (i.e. HIV/Aids, Tuberculosis and Malaria) through an ‘air ticket levy’. The International Financial facility for Immunizations (IFFIm) issues bonds, which are guaranteed by the long-term commitment of participating governments. Sold on the financial market they generate consistent amounts of capital to be spent in advance for vaccines provided by GAVI. With the Advance Market Commitment (AMC), participating governments pledge availability of funds that will assure bio-medical manufacturers a stable, long-term market for products, specifically a pneumonia vaccine, which otherwise would have no adequate market, thus incentivising related research and development.

The multiplicity of actors driving the global agenda also acts as a structural driver in the response to epidemics, as it is well exemplified by the HIV/AIDS pandemic in Africa. Here the many specificities of the Region intersect the near hegemony of United States public health discourse – its premises, its policies, its institutions – in global HIV/AIDS policy. “The shifting debates within institutions such as UNAIDS, the World Bank, WHO or the Gates Foundation normatively shape how HIV/AIDS is to be known, how its causes will be understood, who will be treated and which treatments they will receive. The dependence of many regional health budgets on donor funding, the scale of earmarked funding for HIV/AIDS and the dependence of HIV/AIDS organisations on external funding mean that a neoliberal normative vision of health care suffuses HIV/AIDS prevention and treatment”⁵⁰.

Despite an increase in participants and an increased interest in the global health arena, the political space for a comprehensive approach to health and a systemic approach got progressively narrower.

In this changing global scenario, the WHO has faced increasing challenges in playing its original leading role derived from its constitutional mandate.

⁵⁰ B. O’Laughlin, *Trapped in the prison of the proximate: structural HIV/AIDS prevention in southern Africa*, “Review of African Political Economy”, 42, 145, 2015, pp. 342–361.

Although the resolutions of the World Health Assembly are not binding, they are still regarded as a reference for international action, so much so that on more than one occasion when a decision was perceived as contrary to individual interests, single member states and/or external actors acted to derail the decision-making process, including constraining WHO's regular budget. With the regular budget frozen since the early 1980's, the prevalence in the overall budget of donors' earmarked voluntary funds (80% of total budget) remains the most visible obstacle to WHO autonomy. External private actor's influences on WHO's orientation are also evident; the most powerful influencer being the Bill and Melinda Gates Foundation, who ranks second only to the United States of America as a contributor to WHO's total budget and global health financing in general (with 7% of the total amount of development assistance in health)⁵¹ and is today the single most important non-institutional player on the global field.

The Gates Foundation also contributes to several GPPPs and sits on various boards including of the GFATM and the GAVI, heavily influencing global policies. It promotes and supports investment in research for the development of drugs and vaccines for the control of epidemics, and the improvement of surveillance systems, however, in relation to its overall impact on global health in recent years the contradiction between its health mission and the fact that grant money is generated from investments in industries whose processes and products may have very negative impacts on health, such as Coca Cola, Exxon, and Monsanto has been highlighted. Similarly palpable conflicts of interests exist between the Foundation and bio-medical industry⁵².

Considering the rising weight of non-state actors and the change in weights and power in the global scenario, it becomes evident that WHO is facing dynamics for which it was not designed. Nevertheless, besides its non-binding resolutions, WHO can still recur to binding normative and regulatory instruments, seldom used until today, to affirm and defend the right to health, influence the response to old and new epidemics, and to influence their socio-economic determinants.

The case of the Framework Convention on Tobacco Control (FCTC) perfectly illustrates this potential. Allying with wide civil society movements, the WHO was able to promote and attain a binding international agreement, despite the harsh opposition of the United States and of the powerful tobacco lobbies⁵³.

The International Health Regulations (IHR) are the only other historical example of WHO's use of its regulatory capacity. The IHR were adopted globally by member states in the WHO in 2005. They seek to prevent, protect against, control and provide a public health response to the international spread of diseases "...in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade." Over the last decade, epidemics of international concern such as SARS, Ebola, and Zika have given new attention to the implementation of IHR and have raised the focus on responses to health emergencies, as 'global health security'.

Significant new global resources are being proposed and mobilised for emergency re-

⁵¹ IHME, *Financing Global Health 2103: Transition in an Age of Austerity*, Institute for Health Metrics and Evaluation, University of Washington, 2014.

⁵² A.E. Birn, *Philanthrocapitalism, past and present: The Rockefeller Foundation, the Gates Foundation, and the setting(s) of the international/global health agenda*, "Hypothesis", 12, 1, 2014.

⁵³ J. Collin, K. Lee, *Globalization and the Politics of Health Governance: The Framework Convention on Tobacco Control*, In: "Innovation in Global Health Governance: Critical Cases", edited by A.F. Cooper and J. J. Kirton, Surrey, Ashgate, 2009, pp. 219-241.

sponses. Assessment tools and reporting systems are being discussed in the WHO, with some proposals for new global mechanisms, global financing facilities and independent assessment by global actors. However “global health security” appears to be reduced to emergency responses and infectious disease control, without considering necessary measures to be taken at local and national level within countries, and cross border, to strengthen health systems’ capacity to provide universal access to care, starting with primary health care and health promotion at community level.

For example after the Ebola epidemic the most notable improvements were in surveillance and laboratory capacities. There has been investment in surveillance and laboratory capacities in Africa through an Integrated Disease Surveillance Response, and international support for African and sub-regional communicable disease control centres for detection and early warning of infectious disease risks. However, scarce if any progress was seen, for example, in capacities to deal with chemical and food safety risks, suggesting that while the region may be better prepared to deal with infectious disease epidemics, this may not be the case for other public health risks, including NCDs, whose anticipated unaffordable costs will threaten individual and collective health security⁵⁴.

In addition, the global health security approach gives no attention to the promotion of public health through public policies beyond the immediate competence of the health sector, to control or at least to reduce the impact of the determinants that we have described above.

In this context, the international response to epidemics is also biased by the *need* to “avoid unnecessary interference with international traffic and trade”.

The epidemic of Bovine spongiform encephalopathy (BSE) in British cattle that started in 1986, reached its peak in 1992. When the first cases of human BSE appeared in 1987 the attempt by a government veterinarian to publish a paper describing one of the first cases of BSE, in the south west of England, was suppressed, with the argument “of possible effects on exports and the political implications”⁵⁵.

Too often epidemics also elicit international public interest and mobilization only when they spread beyond the limits of the poorest countries. The global response to the recent Ebola epidemic (2013-2016) has been reportedly slow. It was not until August that the WHO declared the 2014 Ebola outbreak a Public Health Emergency of International Concern; this was five months after the first cases were reported to the WHO, 1,779 people already had become infected, 961 had died, the outbreak had spread to Nigeria, and two American aid workers infected in Liberia had been evacuated to the United States. It was only at this time that the outbreak could no longer be seen as a humanitarian crisis affecting a few poor countries in Africa, but instead began to be viewed as an international security threat to developed countries. In September an emergency meeting of the U.N. Security Council was held and the U.N.’s first-ever emergency health mission, the United Nations Mission for Ebola Emergency Response (UNMEER) was established, as “the unprecedented extent of the Ebola outbreak in Africa constitutes a threat to international peace and security”. Even colonial legacies became obvious in the organization of Ebola response, with military assistance being delivered along old colonial lines⁵⁶.

⁵⁴ R. Machededze, R. Loewenson, *Implementing the international health regulations cannot just be about epidemic emergencies*, “EQUINET Newsletter”, 182, 1 May 2016.

⁵⁵ H. Pennington, *Science, policy, and politics: the case of BSE*, “The Lancet”, 366, 2005, pp. 885-886.

⁵⁶ A. Benton, K.Y. Dionne, *International Political Economy and the 2014 West African Ebola Outbreak*, “African Studies Review”, 58, 01, 2015, pp. 223-236.

The emphasis on the technological response is another common aspect of global response to epidemics, that distracts from the underlying causes of the outbreak, and from much needed strengthening of health systems, facilitating access to services and public health interventions. The current system of drug and vaccine development follows the market and favours chronic diseases that primarily affect people in the developed world, rather than neglected and infectious diseases likely to cause epidemics. However, in presence of ‘transnational’ epidemics emphasis is put on search for a vaccine or a drug, often perceived as a ‘magic bullet’. It was not until the ‘transnational’ Ebola epidemic that investments were mobilized in search of a ‘last-minute’ vaccine, and eminent personalities such as Bill Gates, Jeremy Farrar of the Wellcome Trust, and Seth Berkley of GAVI The Vaccine Alliance called for funding additional research into drugs, vaccines, and diagnostic tests, as well as creating a system for accelerating the approval of these interventions during a crisis⁵⁷.

Similarly, as soon as the Zika epidemic hit the top news, much emphasis was put on the need to develop a vaccine, rather than on the relation of the disease and its vector with poor urban peripheries and the urgent need to intervene with sanitation and waste control, and to provide adequate global investments for that purpose.

When an effective vaccine is already available, as in the case of yellow fever, and epidemics could be avoided or immediately controlled through mass vaccination, the question arises why the disease remains a major threat.

In May 2016 the IFRC called for immediate action to control a deadly yellow fever outbreak in Angola, which had already spread to the Democratic Republic of the Congo, Kenya and China, and could continue to spread internationally. Three main lessons emerged from the West African Ebola crisis such as investing in local health systems and community surveillance; engage local communities in developing and driving the response and provide early response targeted to local circumstances is critical. Nevertheless, according to IFRC, months later lessons are not being applied in response to Angola’s yellow fever outbreak, while an urgent and coordinated response must urgently be made available and targeted to local needs and concerns⁵⁸, and – as mentioned above – WHO has declined to deem this outbreak a PHEIC⁵⁹. Structural health system weakness (inadequate disease surveillance systems, limited access to care, lack of financial and human resources) remains the real challenge to timely and adequate response. Although an effective vaccine exists, it appears to be in limited supply. In the absence of a market for it (people at risk for yellow fever are poor, and traditionally live in isolated rural areas) production has been limited (only four factories produce yellow fever vaccines globally) and slow (old low-tech process)⁶⁰.

In controlling non-communicable diseases the role of the market in limiting adequate prevention and response is even more dramatic. As declared by WHO’s Director General: “Efforts to prevent non-communicable diseases go against the business interests of powerful economic operators [...] Market power readily translates into political power. Few gov-

⁵⁷ J. Kaner, S. Schaack, *Understanding Ebola: the 2014 epidemic*, “Globalization and Health”, 2016, pp. 1-7.

⁵⁸ E. As Sy, *Yellow fever in Angola: Are we repeating the mistakes of Ebola?*, 1 July 2016, <http://www.ifrc.org/es/noticias/discursos-y-articulos-de-opinion/articulos-de-opinion/2016/yellow-fever-in-angola-are-we-repeating-the-mistakes-of-ebola-72340/> (last accessed on 29th of September 2016).

⁵⁹ E. Baumgartner, 2016.

⁶⁰ *Ibid.*

ernments prioritize health over big business”⁶¹. Most effective strategies for the control of NCDs, are also politically the most difficult to implement⁶².

In the context of free trade agreements, governments introducing measures to protect the health of their citizens are being taken to court, and challenged in litigation. Industries vehemently challenge public health policies and strategies that may affect their interest and if they are involved in policy-making, the most effective control measures are downplayed or left out entirely⁶³.

Indeed, the health consequences of trade policies and agreements have been too often neglected. Under the World Trade Organization (WTO) multilateral trade regime the rigid regulation of international agreements may serve an important function in the free circulation of goods and services, but may simultaneously have catastrophic impacts on health and access to health services. In the last decade the multilateral trade system has been additionally challenged by the increasing tendency of major economic powers to privilege bilateral and regional trade agreements. Lack of transparency in their negotiations and power asymmetry among stakeholders increase the chances that public interest and hazards to health are not taken into consideration. The weakening of legislation is ultimately detrimental for the protection of the environment, agriculture, the food chain, and, subsequently, citizens and their health⁶⁴.

Conclusions

The determinants of old and new epidemics, including the increase of non-communicable diseases in an epidemic fashion, are deeply rooted in the way societies are structured. With the acceleration of globalization and the hegemony of the neoliberal development model, not only infectious diseases spread faster without borders, but also new pandemics linked to unhealthy lifestyles and environmental degradation have become part of humanity’s common planetary destiny.

Clearly, the global fight against XXIst century epidemics cannot be narrowed to one of emergency responses to infectious disease. Instead, it also needs to extend to NCDs and identify, and act on their social, economical, political and environmental determinants.

Medical rescue processes and public health interventions in response to epidemics are last resort measures. Technical fixes to health problems tend to leave the social and economic determinants of health, and the relationships that underpin them, untouched.

Resources are indeed needed to deal with emergencies and their economic and social impacts, nevertheless a health sector response to preventing and controlling epidemics needs to be based on long term health systems strengthening. This starts locally, within countries and particularly with the comprehensive primary health care, universally accessible services, social protection, and public health approaches capable to identify, prevent and manage risk before it grows into an epidemic.

However, many determinants of epidemics, and in general of global health security, lie

⁶¹ M. Chan, *Opening address to the 8th Global Conference on Health Promotion*, Helsinki, 10 June 2013 http://www.who.int/dg/speeches/2013/health_promotion_20130610/en/ (Last accessed on the 29th of September 2016).

⁶² B.A. Swinburn, G. Sacks, K.D. Hall, K. McPherson, D.T. Finegood, M.L. Moodie, S.L. Gortmaker, *The global obesity pandemic: shaped by global drivers and local environments*, «Lancet», 378, 9793, 2011, pp. 804-814.

⁶³ M.Chan, 2013.

⁶⁴ A. Cattaneo, 2015(in print), *Bilateral free trade agreements and health*, «Sistema Salute», 58, 4, 2014, pp. 431-439.

outside the health sector and the traditional domain of health authorities, and are heavily related – as global health in general – with processes of production and consumption, with societal structure and social, economic and political processes, interests and influences, prompting the need for a global governance that would make equitable health the priority in all sectors (e.g. agriculture, commerce, industry, education, environment) in which public policies are developed and negotiated⁶⁵. Prevention of epidemics must thus bring epidemiological knowledge to bear on political processes that are collective and involve challenges to economic and social institutions that will certainly meet political opposition⁶⁶, and will thus require appropriate strategies and alliances to be faced.

To modify the structural drivers of epidemics will require a combined global, national and local action redirecting the hegemonic growth-based development model which is not sustainable, socially inequitable, and globally unhealthy. Such a paradigm shift necessarily needs a substantial reorientation of policies at national level in addition to citizens' engagement at community level. Local and national action in turn, cannot leave out the complexity of the globalized world and the need to control transnational forces influencing our everyday life and finally our health, through institutions and policies able to do so⁶⁷.

Worldwide action for healthy global policies is needed. The formulation of global health policies, i.e. the mandate and action of WHO, must be protected from distortion by commercial or vested interests⁶⁸, and 'the directing and co-ordinating authority on international health work' should be strengthened with the full implementation of its mandate, allowing its regulatory capacities to correct socio-economic determinants of health in alliance with organizations and transnational social movements which share a common genuine public health interest.

Keywords: epidemics, health determinants, growth-economy, development, political economy, global governance.

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⁶⁵ J. Frenk, S. Moon, *Governance Challenges in Global Health*, "N Engl J Med", 368, 10, 2013, pp. 936-942.

⁶⁶ O'Laughlin, 2015.

⁶⁷ E. Missoni, *Degrowth and health: local action should be linked to global policies and governance for health*, "Sustainability Science", 2015, DOI 10.1007/s11625-015-0300-1.

⁶⁸ M. Chan, 2013.