“While disease describes a body’s pathological state, space of disease is the spatio-temporal condition that allows disease to come into existence.”

– Gunnar HARTMANN, New Dialogues, Berlin

Image Source: Wikimedia Commons. Ukraine evacuates Ukrainian and foreign citizens from Wuhan at the Kharkiv International Airport, border clearance for 94 people arriving by special flight from China. February 20, 2020. Image by Державна прикордонна служба України. https://fr.m.wikipedia.org/wiki/Fichier:Ukraine_evacuates_Ukrainian_and_foreign_citizens_from_Wuhan_16.jpg

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The space of disease

When an epidemic occurs, whether moving rapidly or slowly, its impact can be more devastating than any war. Unlike in the aftermath of a war, however, the fabric of a city remains largely intact even after an epidemic has run its course. Besides the loss of numerous people and the memories of those who survived, there is no trace of physical destruction within the city. Traces of an epidemic emerge only later. On a time scale of years, a disease leaves traces within ill bodies, but on a time scale of decades and centuries, a disease leaves traces within our urban practices, which in turn shape and reshape our cities. The outbreak of the ongoing COVID-19 pandemic made vividly apparent the role of space as an agent of medical-therapeutic measures against disease.

While disease describes a body's pathological state,[1] space of disease is the spatio-temporal condition that allows disease to come into existence. Conceptually speaking, a space of disease both preconditions a disease and holds it in place for a certain time. For example, in the case of the bubonic plague in Europe, the space of disease persisted for over five centuries. It relied on a number of intermediate hosts operating over great distance, that is, the flow of countless rats (carriers of bacteria-infected fleas) that eventually linked the Mongolian steppes with European cities.[2] Once the space of disease expanded to include these cities, the bubonic plague was transformed from a chronic disease in rodent colonies to an epizootic disease, eventually becoming an epidemic disease in human settlements. The space of disease for the plague encompassed a vast realm, from the pathways of the Silk Roads to the cramped quarters of the European cities.

Medicine's aim, now as always, is directed toward not only diagnosing and treating disease in the body, but also apprehending and, if at all possible, dismantling the space of disease; the latter requires interventions beyond the discipline of medicine. The human body remains the primary beneficiary of medical research and practice. Yet, if our built environment allows various spaces of disease to form, treating individual bodies seems like an endless task. In the late nineteenth century, medicine developed greater means to find disease-related evidence, i.e., with advances in microbiology.[3] Although physicians continue to view the human body as an autonomous and operationally closed system, such evidence suggests that the body is interacting with its environment in ways that are not always obvious.

By shifting ever so slightly the focus of medical diagnostics from bodily symptoms to body risk factors, medicine can frame a great number of spaces of disease. Diagnostics originally directed entirely toward the body's abnormal pathological condition accordingly have started to expand in the course of clinical medicine to include the spatio-temporal precondition of a disease. Medicine's investigations and interventions now encompass not only the physical body, but also its genetic history, its social climate, and its environmental context.

Bodies moving, interacting, and coming into physical contact with one another, as well as the mining or growing of materials to be moved, joined with other materials, and consumed or reshaped to suit a human purpose, are all processes of increasingly meshed complexity. Historically, disease has flourished in environments that emerge out of this blending process. Because urbanization relied on large concentrations of bodies and a vast amount of material flows, it generated spatial conditions that led to the proliferation of disease. Therefore cities were the first places that formed unprecedented habitats for diseases.[4] Even as certain urban conditions allowed diseases to become endemic, however, the outcome of urbanization, the city, also gave rise to organized medicine with its greater treatment efficacy.

Although the majority of the widespread diseases that European cities have encountered over the last three hundred years are highly treatable by medicine today, the spatial measures that were once essential to countering these epidemics still form the conceptual base upon which numerous spatial devices continue to operate, especially during the COVID-19 pandemic. While various spaces of disease were subject to continuous change, the spatial concepts themselves persisted. Rather than ascribing these spatial concepts to medical requirements alone, their implementations were instead a form of urban defense.

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1. "A definite pathological process having a characteristic set of signs and symptoms. It may affect the whole body or any of its parts, and its etiology, pathology, and prognosis may be known or unkown." Miller-Keane. Encyclopedia & Dictionary of Medicine, Nursing, & Allied Health (Philadelphia: W.B. Saunders Company, 1992), 433.

2. William H. McNeill, Plagues and Peoples (Garden City, NJ: Anchor/Doubleday, 1976), 134.

3. Wolfgang Eckart, Geschichte der Medizin (Berlin: Springer-Verlag, 2009), 284-326.

4. Manuel DeLanda, A Thousand Years of Nonlinear History (New York: Zone Books, 1997), 157.