

16 | November 2020



Brief

Can the sanitary emergency be a trigger to rethink our cities?

Marta Marini, Fondazione Eni Enrico Mattei and Politecnico di Milano

Abstract

FEEM Policy Brief

The Covid-19 pandemic lays bare several problems of livability in our cities. Most of the largest cities are losing the people-oriented characteristic in order to pursue growth and attract investments. Conversely, the sanitarian emergency reminds us that the essence of cities is to enhance the quality of life of its inhabitants, and build local resilience and sustainability, also through well-planned urbanization. The question we raise in this policy brief is whether this period of emergency could be a springboard to rethink city renewal, allowing the capacity of tackling future challenges – as novel epidemics or climate change effects. Trying to answer this question we provide some historical examples of how sanitarian crises have changed the urban environment in the past. Furthermore, we highlight policy suggestions for policymakers and urban planners to foster a sized and liveable city. Multifunctionality, polycentrism, and slow mobility must be key targets to achieve the urban trends of resilience, circularity and sustainability. The tool to realize this bold improvement could be the recent concept of “15 minutes neighbourhood”.

ISBN 9788894369465

01

Introduction

Sanitarian crises bring urban drastic change

History shows how we conceive changes of the urban environment mainly due to the sanitarian crisis. From the medieval age to the past century urban planning leveraged public health to impose its enhancements. Around the XV century, preventative measures were taken in Venice to stop the spread of the plague; the quarantine – from Latin “forty days” – was the isolation period imposed on all the foreigners. Still in the Venetian city, the first neighbourhood for plague victims only – the “Lazzaretto” – was built. Those neighbourhoods, together with the poorest districts, were planned with few open spaces, with narrow streets, and no light or fresh air was capable to reach the overcrowded houses. In the XIX century most of them were destroyed, in fact, this century witnessed a sanitary reform movement worldwide that led to straighter, smoother, and wider streets, in order to install underground pipe system and to wash them deeply (Budds, 2020).

In particular, during the Industrial era, Doctor John Snow demonstrated how the cholera epidemic, that outbreak in London around the 1850s, was spread through contaminated waters, despite the medieval belief of “miasma” – the prevailing theory whereby diseases spread through “bad air”. Hence, the authorities began to build the sewage infrastructure throughout the city, with a consequent improvement of the health conditions of

inhabitants. Another outstanding urban renovation was the planning of Central Park in New York City, in 1857. The famous rectangle was designed by Frederick Law Olmsted, a landscape architect who was also head of the Sanitary Commission during the Civil War. Olmsted used public health to convince the mayor, claiming that its open spaces would become “the lungs of the city”.

Until the last century, the sanitary reform movement invested several fields. Suffice it to think of sanatoriums modernist architecture that treated tuberculosis by isolating ill people in buildings purposely designed with large windows, balconies, and flat surfaces that wouldn't collect dust and which were easy to clean. Also Le Corbusier, one of the most famous modernist architect, “was notorious for his obsession with cleanliness in his designs” (Budds, 2020), he calculated the exact amount of square meters of air and square footage of windows that a chamber should have to be healthy. Today, those indexes rule the construction of our house and neighbourhoods.

Nowadays, the globe is once again in a sanitarian emergency and we come across a real-time laboratory full of living examples (Chatterton, 2020) of urban transformation to restrict contaminations. Which kind of teaching are we learning from this pandemic? How our cities and policymakers can benefit from it in the near future?

This brief investigates the role of urban planning as an enabler of urban liveability, and how it affects the city response to the pandemic emergency. Moreover, it also tries to clarify the differences between the main trends of urban development in order to suggest moves to decision-makers. The targets of circularity, resilience, and sustainability could be achieved through a different arrangement

of neighbourhoods, in particular, the recent concept of “15 minutes neighbourhood” may be used as a practical tool to facilitate the improvement. Lastly, the tool guide principles illustrate how fostering neighbourhoods’ autonomy, allowing an adaptable response to the need for new functions, and strengthen nonpolluting mobility.

02

Urban planning influences the liveability of cities

It is common knowledge that most of the world population lives in urban areas and that the urbanization trend is increasing: by 2050, one-third of the global population will dwell in cities (UNEP, 2011). The pandemic emergency shows us whether cities are on the front line to face extraordinary phenomena (Wahba, 2020), in fact, this event has caused harder consequences in urban contexts, revealing their weaknesses. Even if the full impact on our cities remains to be seen, can be advocated that there are already several city types where Covid-19 has hit harder (Florida, 2020), and it depends also from the quality of their planning. As Florida (2020) asserts, typologies can be resumed in large, dense cities like New York or London; industrial centres highly polluted as Wuhan or Northern Italian cities; global uber tourist cities. Among the three, the first causes to be blamed was density and clustering. Since the outbreak of the pandemic, cities with high urban population density seemed to be

more at risk because of frequent interpersonal contacts. Despite, “a number of hyperdense Asian cities – Singapore, Seoul, Hong Kong, Tokyo, have succeeded in managing the outbreak” (Florida, 2020), not solely due to early lockdowns or severe social distancing measures, but because of the high quality of spaces as well. Indeed, some studies on the US and Chinese cities reveal whether the key determinant is the kind of density: places can be dense and still provide space for people to be socially distant. Broadly, better planned cities have fewer confirmed cases (Fang & Wahba, 2020) than smaller cities with less planned urbanization.

Having spatial clarity and well-organized urban planning will necessarily be reflected in the administrative organization and capacity of services distribution. The pandemic showed how a well spatially organized city can cope better with emergencies, both at a municipal and local level. With a better knowledge of its

spaces, a municipality is able to mobilize fiscal resources, providing higher-grade facilities and services to citizens (Budds, 2020).

Before the pandemic lays bare the spatial weakness of cities, a plethora of studies and initiatives already aims at upgrading urban infrastructures and services to pursue enhancement of better environmental, social, and economic conditions (De Jong et. Al., 2015). Reflecting this trend, newborn categories are coined to individuate and catalogue the several approaches applied in cities: 'green city', 'smart city', 'knowledge city', 'sustainable city', 'resilient city', 'functional city', 'eco-city', 'low carbon city', 'circular city', etc. Despite having slight differences in meaning, these definitions are generally used interchangeably in order to focalize on key aspects of ongoing urban sustainable efforts. Even if the application of these terms responds to specific policy developments, there is an ample risk of misunderstanding. For example, the city of Melbourne is considered a world leader among 'knowledge cities', but its policy is largely defined in terms of 'greenery' the built environment (De Jong et. Al., 2015). The Chinese city of Guangzhou, in collaboration with the Singaporean government, has launched a large scale urban development program named 'Guangzhou Knowledge City', yet the indicators used to support the program are 'eco-city'

indicators (Crane et al. 2012). In the same way, last year the ranking of the most 'circular' cities of Italy was published, still, the indicators used to establish the grade of 'circularity' are referred to a 'sustainable' behaviour of the urban community.

Therefore, this confusion of definitions brings lots of difficulties in establishing the final goals whether municipalities should advocate and later achieve. Moreover, the issue is stressed by the habit of wanting to associate a unique category (as green, smart, knowledge, resilient, etc.) to an urban framework, limit the policy vision. Instead, what the pandemic reminds us is the necessity of a holistic approach to tackle a bold changeover in city improvement, municipalities, and local governments' responsibilities should be more incisive with a shift from facilitators to financiers (Paiho et. Al., 2020), policymakers should invest funds to allow new practices and prevent hoary habits by enacting specific measures. Consequently, the city we should aim to built should respond simultaneously to sustainability, circularity, and resilience, in order to face future challenges. Figure 1 compares the meaning of the three categories to clarify the differences between them.

03

Sustainable, circular, and resilient urban development

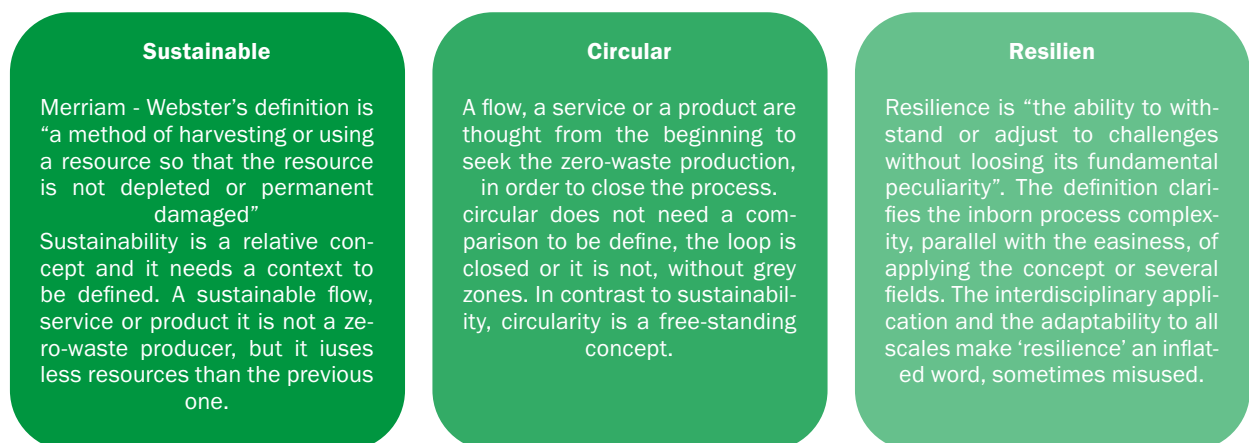
In order to be resilient, our cities should be 'multifunctional' and take care of its margins, 'polycentric' where interaction between smaller communities can facilitate circularity, and 'pedestrian' and 'cyclable' to be more sustainable.

"Cities' success is dependent upon their ability to anticipate global trends and transformations" (Wahaba, 2020). To pursue this, multifunctional spaces aim to satisfy the city's need for redundancy and robustness to absorb exceptional events (resilience). These days, communities need spaces with the capability to transform themselves to accommodate functions different from previous intended

uses. For example, tourist structures will change their usage, waiting for tourism to come back. Multifunctionality should also concern the refurbishment of abandoned suburban buildings, allowing a decrease in urban ground usage.

Furthermore, multifunctional buildings should be designed in the margins that have to be recovered. As abovementioned, margins are often poorly planned, and its recovery is fundamental (Chatterton, 2020) as an extraordinary event hit harder in spaces with a lack of planning. Suburbs have great opportunities not yet exploited: forgotten areas, unused buildings, and overgrown green space.

Figure 1. Comparison among the sustainable, circular and resilient concepts (author's own analysis).(analysis based on https://www.c40knowledgehub.org/s/article/How-to-build-back-better-with-a-15-minute-city?language=en_US).



Strengthen the margins also means to create attraction poles and connect them to the cities. The most hit parts of cities are the ones without a strong community that can

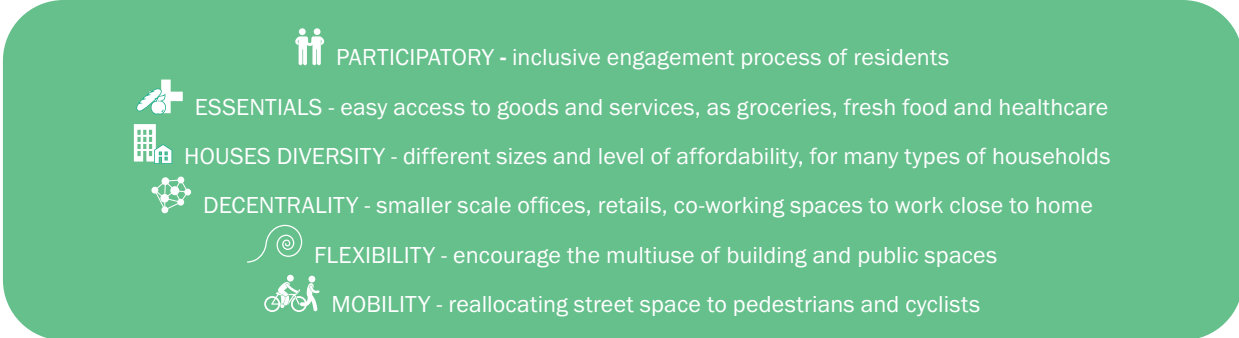
shield from economic and social crises. What we saw in these months is huge mobility by civilians to help their more vulnerable neighbours, including small shops that can

rely on retail and inhabitants that decide to shop downstairs (avoiding malls). A stronger district can improve the local economy and look at a circular society. Following that, is important to bring back manufacturers in the urban context, to create and boost employment. The polycentric city allows a reduction of public and private transports congestion. Decentralize the main services of a city means to change the flux of people needing to reach together the same area. It means to cut the distances and promote green transportation. Many municipalities designed kilometers of cycleway and pedestrian areas as first measures to promote a new sustainable mobility that supports the social distancing. Apart from the ecological benefits of a free car city, more pedestrian e cyclable paths can improve many different aspects of inhabitants life: fewer road accidents, less sound pollution, to shop during daily trips in local stores and supervise the changings of the neighbourhood, finally more social interaction when meeting an acquaintance (stop the car is not always possible) that strengthens the sense of community. All these practices can support an individual, healthy, more sustainable life.

in the newborn “15 minutes neighbourhood” concept. The concept is in direct contrast to the dominant urban planning paradigms where residential areas are separated from work, industry, retail, education, and entertainment (C40, 2020). Indeed, in a “15 minutes city” inhabitants are able to meet most of the essential facilities by an easy walk or a few minutes cycle. Therefore, municipalities and majors may tailor the guide principles (see Figure 2) of the concept to their city’s inner characteristics and to respond to specific local issues. The starting point should be establishing a vision for the city and setting out which goal we want to achieve in all city neighbourhoods, and gradually involving the residents in the process. Practically, the purpose of the “15 minutes neighbourhood” is to create a city composed of sized, people-friendly, complete, and connected neighbourhoods. These interconnected autonomous ‘islands’ may be easily unsewn as needed, without compromise the whole functioning of the urban system. Thereby the city acquires flexibility and resilience to respond to extraordinary phenomena, each island can better manage circularity in a confined area, and sustainability is promoted at different levels generally.

All these urban moves can be summarized

Figure 2. Guide principles of the 15-minutes city. (analysis based on https://www.c40knowledgehub.org/s/article/How-to-build-back-better-with-a-15-minute-city?language=en_US).



Conclusion

Over the centuries, the most radical urban changes happened due to the sanitarian crisis mainly. Today we are once again in a sanitarian emergency and this could be an opportunity to learn and rethink our urban spatiality. What came out from this recovery period is that urban density is not all the same. Indeed, few denser cities were abler to manage virus spread than others less or equal dense. In those cases, the difference lies in the quality of urban planning.

Even before the crisis, there was particular attention on the impact of urban planning on the life quality of inhabitants, and the debate on it led to specific policy developments, several times with confusing outcomes. Nowadays, experts and academics stress the urgency of necessity to transform our city into spaces whether actually enhance the quality of life. The solutions to achieve this bold changeover should be multiples and various, the measures should draw fully from the radical ideas of yesterday to transform them into new pragmatistical choices (Chatterton, 2020).

The tool that may facilitate the transition is the recent concept of '15 minutes neighbourhood', which leads to creating a city assembled by sized, people-friendly, complete, and connected neighbourhoods. The guideline for policymakers suggests to include residents in the engagement process of neighbourhood transformation, provide easy access to goods and essential services, supply houses diversity to accommodate many types of households, foster decentralization of activities by advocating smaller scale offices, retail, co-working spaces to ease working close to home, encourage the flexibility of buildings and public spaces and reallocate street space to pedestrians and cyclists.

The 'multifunctional', 'polycentric', 'pedestrian', and 'cyclable' concepts may be tailored worldwide, and, starting from that, our cities will be more resilient, circular, and sustainable.

References

Budds, D. (2020). Design in the age of Pandemics. Throughout history, how we design and inhabit physical space has been a primary defense against epidemics. Curbed. Available at: <https://www.curbed.com/2020/3/17/21178962/design-pandemics-coronavirus-quarantine>

C40 Cities Climate Leadership Group (2020).

How to build back better with a 15-minute city. Available at: https://www.c40knowledgehub.org/s/article/How-to-build-back-better-with-a-15-minute-city?language=en_US

Chatterton P. (2020). Coronavirus: we're in a real-time laboratory of a more sustainable urban future. The conversation. Available at: <https://theconversation.com/coronavirus-were-in-a-real-time-laboratory-of-a-more-sustainable-urban-future-135712>

De Jong, M., Joss, S., Schraven, D., Zhan, C., & Weijnen, M. (2015). Sustainable-smart-resilient-low carbon-eco-knowledge cities; making sense of a multitude of concepts promoting sustainable urbanization. *Journal of Cleaner production*, 109, 25-38.

Fang, W. & Wahba, S. (2020). Urban density is not an enemy in the Coronavirus Fight: evidence from China. World Bank. Available at: <https://blogs.worldbank.org/sustainablecities/urban-density-not-enemy-coronavirus-fight-evidence-china>

Floria, D. (2020). The geography of Coronavirus, What do we know so far about the types of places that are more susceptible to the spread of Covid-19? In the U.S., density is just the beginning of the story. Bloomberg CityLab. Available at: <https://www.bloomberg.com/news/articles/2020-04-03/what-we-know-about-density-and-covid-19-s-spread>

FEEM. (2019). Economia circolare: aprire lo sguardo per chiudere il cerchio. *Equilibri. Rivista per lo sviluppo sostenibile*. n.1

Paiho, S., Mäki, E., Wessberg, N., Paavola, M., Tuominen, P., Antikainen, M., ... & Jung, N. (2020). Towards circular cities—Conceptualizing core aspects. *Sustainable Cities and Society*, 102143.

UNEP. (2011). Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers. www.unep.org/greeneconomy

Wahba, S. (2020). Cities are on the front lines of Covid 19. World Bank. Available at: <https://blogs.worldbank.org/sustainablecities/cities-are-front-lines-covid-19>



The Fondazione Eni Enrico Mattei (FEEM), founded in 1989, is a non profit, policy-oriented, international research center and a think-tank producing high-quality, innovative, interdisciplinary and scientifically sound research on sustainable development. It contributes to the quality of decision-making in public and private spheres through analytical studies, policy advice, scientific dissemination and high-level education.

Thanks to its international network, FEEM integrates its research and dissemination activities with those of the best academic institutions and think tanks around the world.

Fondazione Eni Enrico Mattei

Corso Magenta 63, Milano – Italia

Tel. +39 02.520.36934

Fax. +39.02.520.36946

E-mail: letter@feem.it

www.feem.it

