Urban Health Multidisciplinary Actions Promoting Health in an Urban Environment

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1 Urban Health: The Link Between Well-Being and the Urban Environment

The crisis faced by the Western lifestyle model when dealing with problems associated with climate change and the new roles that cities and buildings must play in a world of globalisation fosters the rise of a new approach that marks a necessary turning point for our civilisation. For decades now, the fight against climate change has seen many of the world's most important countries committing themselves to agreements—from the Kyoto Protocol of 1992 to the Paris COP21 in 2015—that are gradually getting better at establishing goals, strategies and actions for improving quality of life and protecting the entire planet, even if some venture doubts on the concrete possibility of achieving them [1].

Today, over half the world's population lives in an urban environment (a proportion that is estimated to reach 70% by 2050) [2]. Moreover, as part of this evolving scenario, modern-day cities are experiencing an era of considerable contradictions not only in terms of demographic growth but also as regards the unequal distribution of wealth, social inequality, unequal exposure to risk, unbridled consumption of land and energy, high levels of pollution and the exponential increase in associated diseases.

Urban sustainability is one of the significant themes of the 2030 Agenda for Sustainable Development [3], which considers urban space one of the crucial factors for development. In this document, the analysis of this issue does not limit itself to urban sustainability in the 'strict' sense, but rather applies it across the board and

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takes into consideration, wherever possible, the level of urbanisation as regards other indicators linked to sustainable development as well. Thus there are many facets that should be considered in a systemic, inclusive and integrated way in order to analyse urban sustainability, such as poverty and exclusion, which for some time now have no longer been merely urban or metropolitan phenomena typical of less developed cities or in so-called 'underdeveloped countries'; instead they are also clearly visible in more developed countries and cities, significantly diminishing the proportion of traditional urban middle classes and average conditions of wealth and well-being. According to studies and research carried out by the world's foremost international organisations (the OECD and the UN) who have been following the transformation of large urban and metropolitan areas as well as the main trends found there for over a decade, the acceleration of urbanisation has strengthened the importance of big cities and metropolitan areas. Thanks to their role as centres managing and responding to demographic and epidemiological change, they are in the front line when tackling the issue of public health, one of the most pressing problems in global development. Increasing cases of chronic-degenerative diseases, the constant threat of epidemics (take the recent case of the coronavirus epidemic, which forced the Chinese authorities to 'seal off' entire cities with millions of inhabitants) [4] and the constant risk of violence (particularly against women) and injury (take the number of road accidents) are the main concerns as regards public health in urban areas, where progress in health not only depends on the strength of health care systems but, above all, on the creation of healthier urban environments.

This awareness of the positive and negative effects of urban demographic growth (particularly as regards the adult population) and social change, as well as those of innovation and technological development, should not merely result in the abandonment of policies fostering growth and the competitive appeal of cities and territories. Instead, it means not simply considering the links between economic-urban development, public health and social integration as natural and therefore given, but rather as a political objective that must be continually reconstructed and which must complement policies, living spaces and services that adapt to changing circumstances.

It means no longer considering urban health a side issue of public housing policies, and going beyond actions that are strictly focused on social welfare, making the issue of public health one of the lynchpins of policies to do with local development, town planning redevelopment, housing policies, policies addressing safety, education services and employment opportunities, as well as those designed to increase social capital. In the end, it means considering such actions a response to the rights of citizens and residents, particularly as regards the weakest and most vulnerable groups and, furthermore, as a response to the increased need for social cohesion and an acceptable quality of life in cities and on the planet. To this end, the WHO's longstanding, gradual redefinition of the concept of health has shifted its focus from a bio-medical model, centred on individuals and limited to the health sector, to a bio-psycho-anthropo-social model where health is the result of a number of different political, socio-economic, cultural and environmental factors (known as 'determinants').

Now, more than ever before, health is no longer an issue that is strictly associated with medical services; instead, it is a priority goal that is strongly influenced by the environment in which people live and therefore a product of fundamental development strategies implemented by local authorities using intersectoral policies that converge.

We need healthy cities that are 'continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life', as stated by the WHO in 2012 [5], while a year later another WHO publication stated: 'the current arrangement of cities and urbanisation in general create as many risks as opportunities for public and individual health. If cities were properly planned, well organised and conscientiously managed, it would be possible to foster synergy between institutions, citizens and experts that could improve the living standards and health of the population' [6].

All this therefore requires a democratic and intersectoral approach that allows us to implement improvements that considerably boost individual and community empowerment and create environmental conditions that foster a change in unhealthy lifestyles and objective improvements in health that can be detected in the spirit of the Ottawa charter [7]. Interrelated strategies for regions, cities, citizens, communities, businesses and civil society are required, such as: a shift from a linear economy to a circular economy that can reuse resources, reduce the need to resort to the planet's natural capital and at the same time reduce greenhouse gas emissions; a guarantee of sustainability as regards energy and mobility from producers to consumers; and the technological, structural and demographic evolution of a more interconnected world in order to ensure sustainable equality. In recent years, an awareness of the need to look more closely at the link between health and the built environment has increased, and not just in the academic world, as part of a framework created by a new 'urban question' [8]. As regards this matter, we cannot overlook the strong moral boost provided by Pope Francis with the publication of his encyclical Laudato Si', which aims to awaken a deep consciousness amongst all people and at all levels and trigger nothing short of a revival of the neo-humanistic ethic of responsibility [9].

Reflections regarding health and the urban environment have adopted many of the assumptions, approaches and instruments of analysis typical of what is known as Global Health: the paradigm that stresses the many different dimensions of health, which depends to a large extent on context and on 'Social—later termed "structural"—determinants of Health' [10]. This model not only includes working and living environments as determinants of health, but also the built environment with its particular characteristics [11] and, above all, intangible characteristics affecting communities, particularly urban communities, such as 'social cohesion' and 'social capital' [12]. The unequal distribution of social determinants, as highlighted by the model proposed by Global Health, generates 'social inequalities in health'. The impact of inequalities in urban environments is a growing problem and a source—as in the mid-nineteenth century—of extreme social injustice [13]. The social epidemiologist Michael Marmot is currently a particularly important researcher on the world

stage who, above and beyond his scientific commitment to demonstrating the existence, nature and scale of health inequalities, is flagging up the real possibility of combining responsibilities and improvements at a local level with all institutional and non-institutional players involved, as shown by his ground-breaking 'Marmot cities' experiment [14].

This is why a systemic and integrated approach is necessary if we want to guarantee sustainable urban development that takes into account climate change, factors of economic growth and of social and environmental development, as well as issues regarding urban health.

This is the orientation of global policies inspired by the clear and tangible objectives found in the UN's Sustainable Development Goals [15, 16], particularly the possible achievement of Goal 3 ('Ensure healthy lives and promote well-being for all at all ages') and Goal 11 ('Make cities and human settlements inclusive, safe, resilient and sustainable').

Goal 3 aims to guarantee health and promote the well-being of 'all at all ages'. This aim focuses on various objectives: reducing maternal and infant mortality, eradicating epidemics, fighting both infectious and chronic diseases, promoting well-being and mental health. Much progress has been made, as demonstrated by the continual increase in life expectancy and the positive results obtained in the fields of reproductive health and mother and infant health. The widespread improvement of hygiene and, generally speaking, the care taken over environmental factors have proved to be the backbone of these improvements, particularly as regards reducing infectious diseases. Some of this Goal's targets refer to the health conditions and risks faced by populations experiencing the early stages of a health transition, where mortality is still high. In contrast, there is less margin for improvement in Italy when it comes to maternal mortality and infectious diseases, while the more pressing issues concern the new epidemiological and environmental situation, not to mention the aging population. The spread of chronic-degenerative diseases (including, for example, chronic obstructive pulmonary disease-COPD and bronchial pneumonia, which are perhaps the most variable sensors of urban health) are of more concern, as are access to prevention and the correction of unhealthy lifestyles (alcohol consumption, smoking and drug addiction).

In contrast, Goal 11 addresses the issue of urban sustainability. Cities are responsible for the largest proportion of carbon emissions and energy consumption, for the increasing pressure put on the environment and problems associated with public health. The administration of the urban environment is therefore a crucial development factor that poses challenges and offers opportunities. There are many aspects that should be considered in a systemic, inclusive and integrated way so as to ensure that cities prosper in a sustainable way. The safety of people who live, work or pass through cities should be guaranteed both as regards the structural conditions of buildings and private and public infrastructure and as regards protection from crime, violence and/or public or domestic maltreatment. As regards public health, the reduction of pollution and the improvement of air quality are central aspects, combined with the proper management of waste, the water supply and sewage. The most underprivileged groups (which also include people with disabilities, the elderly,

children, immigrants, the homeless, etc.) should be guaranteed the same access to services, universal access to public gardens and parks that are safe and accessible, support involving positive economic, social and environmental links between urban, periurban and rural areas, strengthening regional and national development planning, access to mobility and adequate, safe and low-cost housing, adopting and implementing integrated policies and plans that foster inclusion, the efficient use of resources, climate change adaptation and mitigation and resilience when faced with natural disasters.

Today's continually evolving cities are having to deal with much greater social diversity than before. 'We are the 99%' was one of the slogans of the Occupy Wall Street protest movement, which became its motto after the publication of Noam Chomsky's book, who chose it as the title when writing about the movement that first emerged in New York in 2011 and then spread to other American cities such as Los Angeles, Boston and Chicago. The slogan refers to the inequality with which the economic crisis of recent years has hit most Americans. A small minority is flourishing, sharing amongst its members over a third of the country's wealth. The slogan means: we are the 99% and we are suffering because of you, the 1% [17]. Furthermore, the borderline between 'centre' and 'periphery' or between 'rich' and 'poor' areas is often invisible, and yet city residents are often grouped into those who use services and benefit from urbanisation and those who find it hard (or fail) to meet their needs for reasons to do with—for example—the availability of resources, cultural characteristics, ethnic origins, gender or age. In other words, this separation of groups of city residents—known as the 'urban divide'—is basically linked to socio-economic status [18].

2 Interdisciplinarity and Multiprofessionality When Practices Meet

A series of different perspectives and interests regarding this issue are incorporated in this vision, perspectives that have encouraged the experimental and practical work presented in this book. Such work is geared towards developing a model of planned improvements that, in doing away with any type of 'greenwashing',[1] efficiently links up the various approaches emerging from field literature: from bottom-up approaches linked to the needs of the individual and the resident community (and therefore greatly affected by the problems of a society that is rapidly evolving, with a particular focus on social inclusion), to top-down approaches that address policies that develop integrated actions of a physical or economic nature.

The shift in attention that takes place in this book is inspired by an awareness that the link between health and the urban context creates complex problems that require appropriate answers, answers that must take into account the peculiarities

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[1]A term that describes projects that appear environmentally sustainable but whose sustainability is only superficial.

and features of the urbs as object—i.e. the physical city—and at the same time those of the civitas as subject—understood to mean urban society, the community. Throughout the book, one consideration remains constant: an awareness that the issues for which we are trying to find and propose possible solutions for future scenarios and development are complex problems. The situation is therefore one of enormous diversity and has to tackle interdependent problems caused by a range of different factors that often don't suggest an obvious solution or easily foreseeable results and instead imply, first of all, the borrowing of know how and tools from a number of different disciplines, including social sciences such as technosciences [19], applying them within a theoretical framework and, secondly, changing the point of view and behaviour of town planners and residents themselves.

Above and beyond the required planning instruments and guidelines, the book also envisages: the use of coordinating measures that can apply improvements within a common approach; commonly adopted guidelines in favour of an intersectoral project, where strong commitment and support from political and administrative decision-makers is necessary in order to achieve authoritative institutional governance; a systemic approach that guarantees the inclusion of policies from different fields and fosters the involvement of a number of different players with clearly defined goals, roles and responsibilities; the health service's will/ability to carry out a role of advocacy and guide people towards a process of change and growth, helping the various different stakeholders to make choices that will have beneficial consequences on residents' health; and the recognition of health as a right that must be protected, considering the centrality of individuals, their rights, choices and living circumstances.

To this end, the wide range of multidisciplinary contributions found in the research presented in this book has proven extremely useful. Such research makes it possible to assess and analyse using tools that have been tried and tested in different professional fields: from the medical field of public health to architecture and town planning as well as the socio-anthropological field.

In short, the challenge is to 'interpret' this combination of social, economic, engineering and planning mechanisms within a unified approach. This has been made possible thanks to exchanges between authors and researchers concerning theoretical concepts, practices and methods, taking advantage of the specific expertise of each contributor when examining a particular aspect of urban life and working on a specific facet of the communities involved. Opportunities for discussion and sharing have created greater know how, and that is why it was decided to gather all this in a book. This has led to the description of individual improvement projects in a spirit of sharing not only approaches but above all practices that have been tried and tested in the field and through constant cooperation with the communities involved. The text focuses on individual examples and attempts to highlight their potential, their limitations and the problems that emerged during the various phases in which such projects were implemented. This has been done with a view to improving the efficacy of those projects as well as contribute the experience gained from practical applications to a field that has promising prospects for future development. This operation required a cross-contamination between different cultures and experiences (getting

to know one another so as to understand each other, sharing and building alliances without one attempting to dominate the other, developing a common terminology and intentions that are in tune with each other); cooperative relationships, alliances and enduring and systematic collaboration in order to achieve the goals of sectors that, though different, also improve health and well-being. Given the need to interpret the combination of different mechanisms that affect urban environments and the need to inform, enhance and improve existing field work as part of a unified approach, the book also aims to compile templates—for each example of research-action— arranged in a mutually agreed form. This has been done so as to discuss and compare the implementation methods and content of the five multidisciplinary urban health projects presented here, addressing: (1) the methodological/experimental aspects, i.e. the study methodologies and examination of context, with a view to integrating tools (qualitative and quantitative methodologies), particularly as regards the possibility of analysing the state of health and needs of populations suffering from housing problems and high levels of unauthorised housing turn-over; (2) the relationship with residents, i.e. the ways in which a community can be involved, not merely using passive information channels, but also in ways that inform people and encourage them to get actively involved in projects (ensuring that the population can understand the technical language used and can autonomously tackle the problems of its environment, identifying the priorities and interacting in an organic and independent way with institutions such as local authorities, health services and universities); (3) the relationship with and between institutions (what is known as horizontal and vertical 'subsidiarity'), i.e. the measures that various working groups have at their disposal (institutional protocols, regular meetings, etc.), so as to share positive experiences of cooperation with a view to promoting health, advocacy processes, etc.

3   Conclusions … Combining Technical Expertise and Humanity

Alongside the methodological approach the book has chosen and the contribution made by various different disciplines to the comprehension of the complex issue tackled, the book also includes a review of the results of research that recommends turning to the weight of a systemic paradigm and sees cooperation between disciplines as a necessary process of development if we want to manage not only the future of town planning, but also that of our way of inhabiting the Earth. As Howard Zinn once said: 'To be hopeful in bad times is not just foolishly romantic. It is based on the fact that human history is a history not only of cruelty, but also of compassion, sacrifice, courage, kindness. What we choose to emphasize in this complex history will determine our lives. If we see only the worst, it destroys our capacity to do something. If we remember those times and places—and there are so many—where people have behaved magnificently, this gives us the energy to act, and at least the possibility of sending this spinning top of a world in a different direction. And if

we do act, in however small a way, we don't have to wait for some grand utopian future. The future is an infinite succession of presents, and to live now as we think human beings should live, in defiance of all that is bad around us, is itself a marvelous victory' [20].

References

1. Morin E (2015) Penser global. L'homme et son univers. Editions Robert Laffont, Paris. [trad. it. '7 lezioni sul pensiero globale'. Raffaello Cortina Editore, Milan]
2. UN (2014) World urbanization prospects. United Nations, Department of Economic and Social Affairs, Population Division, New York
3. UN (2017) New urban agenda. United Nations. Available at: http://habitat3.org/documents-and-archive/new-urban-agenda/. Last accessed: Sept 2019
4. World Health Organisation (2020) China leaders discuss next steps in battle against coronavirus outbreak. Available at: https://www.who.int/news-room/detail/28-01-2020-who-china-leaders-discuss-next-steps-in-battle-against-coronavirus-outbreak
5. World Health Organisation (2012) Health 2020: a European policy framework supporting action across government and society for health and well-being. WHO Regional Committee for Europe, sixty-second session. WHO Regional Office for Europe, Copenhagen
6. World Health Organisation (2013) European Healthy Cities Network. Phase VI (2014–2018): goals and requirements. WHO Regional Office for Europe, Copenhagen
7. World Health Organisation (1986) WHO: Ottawa Charter for Health Promotion. First International Conference on Health Promotion, Ottawa, 21 Nov 1986. Available at: https://www.who.int/healthpromotion/conferences/previous/ottawa/en/. Last accessed: Nov 2019
8. Harvey D (2015) Città Ribelli. Il Saggiatore, Milan
9. Pope Francis (2015) Encyclical Letter 'Laudato si" on care for our common home. Libreria Editrice vaticana
10. World Health Organisation (2008) Closing the gap in a generation: health equity through action on the social determinants of health. Final report. WHO, Geneva
11. Barton H, Grant M (2006) A health map for the local human habitat. J R Soc Promot Public Health 126(6):252–261
12. Cattell V (2001) Poor people, poor places, and poor health: the mediating role of social networks and social capital. Soc Sci Med 52(10):1501–1516
13. Gelormino E, Melis G, Marietta C, Costa G (2015) From built environment to health inequalities: an explanatory framework based on evidence. Prev Med Reports 2:737–745
14. Marmot M (2015) The health gap: the challenge of an unequal world. Bloomsbury Ed., London
15. UN (2015) 17 goals for sustainable development. Available at: http://www.un.org/sustainabledevelopment/sustainable-development-goals/
16. UN (2018) Global indicator framework for the sustainable development goals and targets of the 2030 agenda for sustainable development. Available at: https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202019%20refinement_Eng.pdf. Last accessed: Sept 2019
17. Chomsky N (2012) Siamo il 99%. Edizioni Nottetempo, Milan
18. UN-HABITAT (2010) State of the World's Cities 2010/11. Cities for all: bridging the urban divide, 1st edn. United Nations Human Settlements Programme, Earthscan, Sterling
19. Corburn J (2004) Confronting the challenges in reconnecting urban planning and public health. Am J Public Health 94:541–546
20. Zinn H (2002) You can't be neutral on a moving train and a power governments cannot suppress. Beacon Press, Boston