PLACES, PANDEMIC AND MULTIPLE RISKS: NEW EMERGING URBAN CHALLENGES

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Introduction

The Covid-19 emergency, although in different manner and measure, is changing habits and use of places and cities at global level. In many cities, public spaces became completely empty for months and new urban landscapes have substituted the previous ones, transforming the private in public (Sepe, 2021). Children and young have interrupted the school in presence to start that by internet; adults started the smart working; elderly begun to meet their sons through the computer. Houses and balconies were used for work and study, allowing people to go inside the private life of everyone. The reopening of public spaces has happened after months of closing, allowing again "live" social interactions, although in respect of the physical distance, confirming the importance for all people of these places (Carmona, 2019; Crappsley, 2017; Gehl, 2010). The new challenges concern facing the presence of multiple risks (Sepe, 2022a), improving health, integration, and liveability of places for more flexible and adaptive uses. Accordingly, to provide a sustainable regeneration meant in its three-fold meaning, it needs to use new methodological approaches, including: the 15-minutes city (Moreno, 2020) that is a city able to offer all its inhabitants everything they need to live, work and have fun to be reached on foot in no more than 15 minutes; the flexible one (CRA, 2019) that is based on tools for architectural and urban planning and design, which are able to allow changes in the course of implementation of those projects; the Soft City (Sim, 2019) that is based on the idea that from the union of density and diversity a more liveable and healthier city can be obtained, as proximity of an environment can be translated into time; the Health-Liveable city (Sepe, 2022b) is a city in which public spaces are considered the main places to enhance and health and liveability issues the first factors to improve; and the smart city (Karvonen et Al., 2019) in which the whole range of technologies are at the service of the place both to improve its liveability and health and ensure its sustainability.
Starting from these premises, this study, carried in the framework of the Prin 2020 - Research Projects of National Relevance titled "Sustainable modelling of materials, structures and urban spaces including economic-legal implications" – ISMed-CNR Unit with the author's responsibility, is aimed at illustrating: a new method of analysis and design of public spaces, the original Healthy Place Design – within the Health-Liveable city approach - (Sepe, 2022b) and an emblematic case study, characterized by both flexibility and accessibility at different level. Conclusion concerning both critical and positive issues of the case study will complete the paper.

The method

The Healthy Place Design method aims to identify urban healthy, liveability and happiness and the factors which make places healthy, happy and liveable from the user's point of view. This method is of particular interest in the case in which many risks occur simultaneously, and health issues have to be particularly taken in account.

The part of analysis of the method – five phases - consists of different kinds of surveys, observations, and questionnaires. The part of design is composed by three phases and include the check of consistency with the 25 principles of the Charter of urban health, liveable and happy design.

Phase 1 of the method consists in the definition of the study area; it needs to go on the site in question and decide, through an inspection, whether to confirm the delimitation decided beforehand or modify it.

Phase 2 is characterized by the observation of the characteristics of the place through three surveys concerning the kinds of activities, the perceptions, and the elements which contribute to the perception of healthy, happiness and liveability.

In the survey 1, the types of people - locals, visitors, professionals - and activities - enjoyment, passing by, work – are observed. It needs to observe these activities from the quantitative point of view, in order to collect data concerning in what percentage the activities are present in that place and how influence its liveability and healthy. Then, it needs both measure and observe the presence of persons from the quantitative point of view. Accordingly, the frequency with which the activities are repeated or implemented and with what pace is measured: it is observed if that activity is carried out with a rapid, slow or moderate pace.

The survey 2 consists in identification of singular and mixed perceptions. The singular perceptions include the visual, auditory, tactile, olfactory, taste perceptions, while the mixed one include chaos, serenity, disorder, joy, harmony, disorientation, uncomfortability and so on, deriving from the sum of one or more perceptions. Their quantity is expressed as light, medium and high amount percentage; the quality is expressed as pleasant, non-influential and annoying perceived perception.

The survey 3 of this phase consists in the observation of the elements which contribute to the health and happiness sensation such as constructed and natural elements, suitable pedestrian areas, transportation modes, good quality equipment and services (furniture, pavement, wireless, etc).

Finally, from the intersection of these data, a first result on the degree of healthy, happiness and liveability is obtained, resulted from surveys on the place in object.

Phase 3 consists in a questionnaire to the people who use the sites aimed at identifying factors and elements which give them the sensation of healthy, happy and liveable place.

Questions may include the following and will be modified in accordance with the place characteristics: This place gives you a feeling of happiness or sadness/ liveability or discomfort/ health or unhealthy; What are the elements that give you the above sensations?; What are the main facilities that give quality to this place?; What are the activities that you act in this place and how often?; What do you think about the presence of many or few people here? Do you think that it is capable to improve the pleasantness or unpleasantness of the place?; According to the place healthy, liveability and happiness what could be done in order to improve this place?; What is a healthy/happy/liveable place that you remember in this city or elsewhere?; How the weather condition might influence the perception of liveability or happiness this place?

Phase 4 is that of the analysis of the traditional cartography in order to understand the elements that compose the place in terms of the type of the historical and architectural elements, urban fabric, the natural environment (green areas, sea, hills, etc ..), and other public spaces in the surrounding area. A collection of projects of urban design in development on these areas can complete this analysis.

Phase 5 involves the construction of the map of healthy, liveability and happiness with the identification of spaces and features that give to the people who use that place the perception of these factors.The map will be the result of the different survey operations, analysis and observation, which were collected on the sites in object.

In phase 6, the check of the degree of healthy, liveability and happiness is carried out. This is obtained through the study of both intrinsic and extrinsic factors contained in the map which are capable to determine urban healthy, liveability and

happiness. The intrinsic factors include the perceptions, tradition and culture. Extrinsic factors include the architecture, facility, and urban furniture. The aim is that of identifying a map of those areas where there is a minor presence of healthy, liveability and happiness, which are underused with respect to the place in general and where the project interventions have to be concentrated. These areas could be represented by both perceived empty spaces or physical empty spaces – such as a non-utilized square, an area destroyed following an environmental disaster. Furthermore, these areas can be marginal with respect to the place or central or can also be constituted by the whole study place. The check is carried out through the 25 principles of urban health, happy and liveable design concerning the aforementioned Charter.

1. A healthy, liveable and happy place is a space which can transmit feelings of healthy, liveability and happiness to everyone who uses it.

Accordingly, it is important:

2. To encourage the use of the place by people of different age groups, from children to the elderly

3. To eliminate architectural barriers which might discourage people from frequenting that space

4. To create a suitable balance between the elements of nature, landscape and equipment in the composition elements of the space

5. To have both in streets and public spaces natural lighting during the day and artificial at other times, avoiding artificial light in daily hours.

6. To retain an adequate state of cleanliness and maintenance

7. To create suitable spaces for dogs and domestic animals

8. To create a sense of security and safety to those who walk, cross, rest, and so on in the public spaces

9. To minimise or eliminate the noise generated by public transport

10. To improve suitable cycle lines

11. To fully perceive naturally occurring smells - e.g. wood, grass, sea

12. To have direct contact with natural materials, preferably local, used in the design of the space

13. To have the presence of water in different shapes (e.g. fountains) which promotes the vitality of the place.

14. To have the possibility of doing actions – such as walking, watching, etc.. - with a moderate or slow pace, promoting opportunities to take breaks in the space

15. To have the possibility of using the space in different weather conditions and seasons, contributing at the same time to its good state of maintenance

16. To preserve both the place identity and the intangible characteristics of the site and its surroundings

17. To both allow an promote different types of functions such as games, breaks, walking, etc..

18. To facilitate gymnastic activities – also slow - with the presence of small equipment or a designated space.

19. To have the possibility of doing actions that normally are not permitted – such as walking barefoot in the water or in designated public areas -, improving a feeling of freedom and joy.

20. To encourage the presence of art in its different forms.

21. To promote sculptures, games, or other elements and amenities which can bring a smile to a person's face promotes a state of liveability and happiness.

22. To promote participation, namely the feeling of being able to contribute to the life of that place increasing the sense of belonging.

23. The consideration of the place as symbolic of the neighbourhood improves the perception of its identity.

24. To promote the educational function which a place has – e.g. clearly displayed information about history of the place etc. or suitable ways to use it - increasing its intrinsic value.

25. To facilitate the use of new technology to increase the knowledge of its intangible values and history, offering a more profound experience of the place.

Phase 7 concerns the check of the emerged first design ideas - with the users of the place to obtain a mosaic of degree of pleasure on these. Two typologies of questionnaires are carried out: the questionnaire on site that must be administered to the different kinds of users and visitors of the place; the research on the websites with the user requests. In the first kind of questionnaire, the design hypothesis are verified with demands selected by who carried out the study, *ad hoc* with respect both to the place and the results of the phase 7.

The second kind of questionnaire is constituted by or the study of web reviews concerning booking of tourist services (e.g. booking or trip advisor) already on-line or *ad hoc* created tool, such as the realization of blogs or other social network tools to support this and other phases of the project.

Answers to the different questionnaires administered on site and online will be overlapped, constituting the participative part of the project, but also the possibility of comprehension of the place in a wider manner.

Following the check of consistency with the Charter of phase 6 and the results of the phase 7 questionnaire, the identification of project interventions for the realization of the principles is carried out. In phase 8 – the last one - the insertion of the project interventions in the areas in object is carried out trough: the overlapping of the results of the previous phases; a check of consistence with spaces and urban furniture and equipment already present; the identification of the use of the traces – urban, cultural, etc., already present in the place.

By way of example the case of the riverfront of Dublin will be illustrated in the following section.

The case study

The case studies of the Healthy Place Design Method were carried out in Europe, USA and China, including Bordeaux, Hamburg, Newcastle, Nice, Dublin, Vancouver and Wuhan. In the following the emblematic case of Dublin in Ireland will be synthetized, illustrating the healthy factors of phase 5 and the project interventions of phase 8.

Dublin is bathed by the River Liffey, whose banks and related bridges characterize this city and whose regeneration - together with that of the Docklands - are elements of interest and subject of the case study.

The area that has been decided to be analysed is the Liffey waterfront between Grattan bridge and Samuel Beckett Bridge (first stretch) and the area between Samuel Beckett Bridge and Grand Canal Quai-Grand Canal Bridge (second stretch).

The spaces and activities which make the place liveable, healthy and happy from the users point of view include as follows.

The waterfront of the River Liffey is a liveable and healthy place that offers people the opportunity to do different types of activities. The river serves as a scene for walking, cycling, running, stopping for a break, having a hot drink at the café, gazing at the view, sitting, relaxing and take a sightseeing tour by boat. Seats, benches in wood and stone of different

shapes and oriented in different ways to allow both the view of the river and for conversation, trees, green flower beds, decorative flowerpots, bike parking racks. The stretch with the wooden walkway separates the walk from the noise of road vehicles giving people an even closer view of the river with the possibility of sitting on the benches. The bronze statues along the waterfront, as well as artistic bird tracks and footprints, embedded in the pavements at O'Connell Street, visual perceptions of historic buildings such as the Custom House, the bridges and the sailing ships contribute to the perception of liveability of the place, but also to the enhancement of its identity, as well as the outdoor exhibition panels that illustrate the history of the area constitute important factors for the liveability of this place.

The long river ends with the docklands, where the second stretch of the study area is located, between the Samuel Beckett Bridge and Grand Canal Quai-Grand Canal Bridge. This part is characterized by a pedestrian stretch in continuity with the long river, but wider, with seats, trees, bike parking racks. Here people walk, take a break, observe the river, run, and ride their bikes.

The walk reaches the Grand Canal Plaza with contemporary architecture and public spaces that offer a perception of surprise and almost discovery, heralded by the Samuel Beckett Bridge. The Grand Canal Plaza is made up of a contemporary design with seats, paths marked by pavement, and stylized red lamp posts. Here people walk, take a break, ride a bike and rent a bicycle, take pictures of the square, the theatre and the panorama. The perception is of liveability, healthiness, happiness.

The whole area is routinely frequented by locals and tourists of all ages, both for its beauty and liveability and for its centrality and proximity to areas of interest such as the historic Temple Bar district and the docklands.

From the information gathered in this phases and in the project phases including the consistence with the principles of the Charter mentioned in the method's section, the following project interventions were identified.

The first project intervention is to create a cycling and pedestrian dedicated line. The Liffey waterfront is a place used by many people and to create both a cycle and pedestrian line could make this place still more liveable. Where the street dimension is not suitable, this project intervention could be carried out with the enlargement of the current pavements and consequent reduction of the car line. The dedicated bike and pedestrian lanes could continue until the Grand Canal Square and along the docklands.

The second project intervention is to create new spaces, widen the game areas and inserting playgrounds and places for games for people of all age and with disabilities. Also in this case, these could be inserted in the wider parts of the area including the Liffey walkway and the Grand Canal Square. Playgrounds could also be of little dimensions and made by natural materials. This project intervention could further increase the liveability and healthy of this place.

The third project intervention is to insert artworks to improve the presence of art in this place. Art products could be of different kinds, including sculptures, video and murals that could be inserted in the whole site and could be permanent or temporary. These, together with those which are already present in the area could be engaging and further improve the liveability of the place.

The fourth project intervention is to add equipment for gymnastic exercises. This could be inserted in the part of the waterfront that is wider, including the Liffey walkway and in the Grand Canal Square. The equipment could allow people of different age and ability to make physical activities and further improve the perception of health of this place.

The fifth project intervention is to add an area for dogs. This means to insert an off-leash space in which dogs can run and play freely in a dedicated area of the waterfront and could be carried out with an enlargement of the pavements or the pedestrianization of the whole or parts of the Liffey River. Alternatively, an off-leash area could be inserted in the Grand Canal Square.

The sixth project intervention is to minimize the sound of vehicles. Along the Liffey riverfront the sound of the vehicles in some hours of the day are quite aloud; the speed limit reduction of the means of transport, the pedestrianization of some parts or the whole waterfront, the introduction of green barriers are the project interventions which could minimize the impact of the vehicular traffic.

The seventh project intervention is to insert public light structures to use the place in all the seasons. The structures should be mobile, made with natural material and in continuity with the identity of the place. Furthermore, these could be used in both very warm and cold period, further improving the use of the place all over the year.

The eighth project intervention is to add information about the area, and it is strictly related with the idea to insert wireless information points. Although some information points are already present in the area adding some more information with the history, equipment and activities of this place could improve its liveability and happiness. These information could be inserted using totem, qr codes, dedicated app and so on.

The nineth project intervention is to identify suitable sites for participation. This is important to create major sense of belonging of the place and could be temporary, namely according with a general identification of the suitable sites, could change in relation to the kind of activities. These could include the wider part of the riverfront, the boardwalk and the Grand Canal Square.

The tenth project intervention is to insert or enhance the green. The Liffey riverfront and Grand Canal Square present trees and green in different forms. In some parts where the pavements are of little dimensions, there are not trees or green; the insertion of trees, green or flowerpots could further improve the health and happiness of this place.

Observation and Conclusions

The paper illustrated the original Healthy Place Design method and the emblematic case of the riverfront of Dublin. In the last years, many risks are occurring simultaneously, and health, integration and liveability issues are becoming more and more important. Accordingly, the proposed method is useful to identify project interventions that can regenerate places from the health point of view, making spaces more liveable, and, at the same time, more flexible to different uses.

The Dublin area that was analysed is a place of great interest because there are elements of tradition and elements of innovation. The chosen route starts from the Grattan Bridge and ends in the Grand Canal Square. In this path, the River Liffey constitutes the natural element that characterizes the place and determines its activities and the flow of people and means of transport on the two banks, on the bridges and along the docklands.

The good quality of the materials used for the streets, the good maintenance, the presence of trees and greenery, the sculptures contribute to this general perception.

The entire route is experienced by locals of all ages and by visitors from all over the world for walking, cycling, running, stopping for a break, having a hot drink at the café, gazing at the view, sitting, relaxing and take a sightseeing tour by boat.

The check of the degree of healthy, liveability and happiness is carried out through the 25 principles of urban health and liveable design concerning the Charter. By the check of the principles, those which could be improved include: 7. To create suitable spaces for dogs and domestic animals; 9. To minimise or eliminate the noise generated by public transport; 10. To improve suitable cycle lines; 15. To have the possibility of using the space in different weather conditions and seasons, contributing at the same time to its good state of maintenance; 17. To both allow an promote different types of functions such as games, breaks, walking; 18. To facilitate gymnastic activities – also slow - with the presence of small equipment or a designated space; 20. To encourage the presence of art in its different forms; 22. To promote participation, namely the feeling of being able to contribute to the life of that place increasing the sense of belonging; 24. To promote the educational function which a place has – e.g. clearly displayed information about history of the place etc. or suitable ways to use it -

increasing its intrinsic value; 25. To facilitate the use of new technology to increase the knowledge of its intangible values and history, offering a more profound experience of the place.

Accordingly, the project interventions which were identified include: to create a cycling and pedestrian dedicated line; to widen the game areas; to insert artwork to improve the presence of art in this place; to add equipment for gymnastic exercises; to add an area for dogs; to minimize the sound of vehicles; to insert public light structures; to add information about the place; to identify sites for participation events; and to insert or enhance the green.

These actions have as a file rouge to give more space for different activities for people of all age and less to cars, improving flexibility, accessibility, and adaptation, while maintaining place identity (Sepe, 2013).

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