PANDEMICS AND THE CHANGING BUILT ENVIRONMENT

LEARNING FROM HISTORY, PLANNING OUR FUTURE

Edited by Alessandro Camiz

Dynamic Research on Urban Morphology books - 7

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Proceedings of the First International ONLINE conference, on Pandemics and Urban Form, PUF2022, April 28th-30th 2022, Istanbul, Turkey

Edited by

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DRUM Press
Istanbul, 2024

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Table of contents

A small investigation on the effects of applying market rules in public spaces and architectures in everyday life and during a pandemic crisis

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Keywords: Urban Environment, Environmental Hygiene, Social Architecture

Abstract

Until the Pandemic, public spaces saw two contrasting trends. The first trend focused on maximising commercial spaces, especially in railway stations and airports, where areas for people to move and rest were minimised. Older stations, designed after the Spanish Flu with ample space for air circulation, were deemed wasteful and ripe for redevelopment in recent years. The second trend aimed to curb the expansion of outdoor areas for pubs, restaurants, and other food-related activities, particularly in major tourist cities. This expansion cluttered public spaces with tables, umbrellas, and temporary structures, obstructing access and views of historic sites. Municipalities implemented rules to limit these expansions until the pandemic in 2020 drastically reduced tourism and public transportation use. The resulting economic crisis relaxed restrictions, allowing eateries to expand into public spaces with little regard for urban quality. This raises questions about the long-term health of public spaces, the role of market forces in shaping them, and whether older principles of environmental hygiene should be revisited. The proposed contribution will examine the current state in Italian cities' public spaces through imaging techniques applied in a post-pandemic context.

Introduction

Until 2019-early 2020 the Italian tendency for public spaces was oriented to two opposite trends, one aimed to maximise the market spaces, with a specific demonstration in the railway stations and airports with a reduction of the space left to people for moving and resting strictly reduced to the minimum allowed by rules and safety reasons. Some "old" stations, like Milan or Rome, looked perfect for better exploitation of the space; they were mostly built in the decades immediately after the "Spanish Flu" of the early XXth century. The second one was the one trying to contain the expansion in the "outside" of pubs, restaurants and other "food" activities aimed both at tourists and local users. This second one was evident in the main "city of arts" where the load from the visitors was constantly increasing. The subject of over-tourism is well documented in a variety of studies (Séraphin et al., 2020) and the annihilation of the cultural values that it brings is well known if not when it is a matter of making proper strategic, operative and political choices. The transformation from a variety of shopping activities towards a food and drink fair or a generic "shopping mall" in most of the large public transport stations and downtowns brought an increase of tables, umbrellas, temporary structures, and various "alien" items. These elements, completely disconnected from the context, started populating the sides of squares, cathedrals, and streets and creating settlements of the so-called "dehors" cutting away 24h the access to spaces, causing people to crowd and limiting or polluting the sights towards minor and major built heritage elements. Various municipalities have developed rules for limiting these improper expansions up to the beginning of 2020 (Redazione Cronaca, 2015). With the pandemic event from 2020, two previously "incredible" events happened, the reduction to zero of tourism and the extreme reduction in the use of public transportation. The economic

crisis caused by these conditions brought the need for introducing some balancing measures in the periods of re-opening, producing restaurants and pubs to expand more than ever before their activities in the public space nearby with a significant "comprehension" of their needs from the institutions and only occasional respect to the quality of places. A system of things, in the end, which is quite honest and understandable in times of emergency. But is this behaviour guided by market reasons helpful in obtaining healthy public spaces? The large railway central stations were created just to be filled by shops or do these poor interventions reduce the possibility of having better air flowing, and better social distance? The rules from the manuals of "Igiene Ambientale" (Environmental Hygiene) were good just for the past century (Abba, 1936) or are worthy of some re-reading in the present?

Urban spaces during the pandemic

During the Pandemic, public spaces, restaurants, hotels, and commercial areas in Europe underwent significant changes. Italy had one of the early cases of the virus outbreak in Europe, with mournful and dramatic events starting in the northern areas and soon extending to the whole country. The needed countermeasures to contain virus spreading were largely based on social distancing, quarantine and reducing people travelling. A condition pushing down to zero the tourist load and the presence of people on the move for work and other activities. A direct effect was causing a strong crisis in the whole temporary residence and catering sectors. The immediate visual transformation of the cities and towns was immediately visible. Empty squares, streets, and removal of most of the furniture placed outside pubs and restaurants showed a disquieting, but dramatically beautiful series of cityscapes (Verdiani & Giraudeau, 2021). During this period and with a variety of options, public spaces became crucial for maintaining social life while adhering to social distancing guidelines. However, the re-organization of these spaces was mostly operated in emergency, often applying criteria aimed at keeping people at home rather than creating the risk of contact. In this context restaurants, pubs and cafés were among the hardest hit by the pandemic. Indoor dining was heavily restricted or banned during lockdowns, leading to a surge in outdoor dining setups. Many establishments expanded onto sidewalks, streets, and public squares, often with temporary permits. The use of "dehors" became widespread. Delivery and takeout services became extremely popular, with many businesses adapting to these models. Retail spaces adapted to the pandemic by shifting toward online shopping and services due to lockdowns, leading to some permanent closures and the replacement of failed stores with more lucrative businesses like food and drink outlets, which altered the urban landscape. When stores reopened, they managed capacity limits, social distancing, and safety rules, incorporating changes like wider aisles, barriers, health checks, signage, and sanitizing stations. These adaptations were later removed as the pandemic waned. Expanding outdoor dining areas was logical during the pandemic due to better ventilation, but this became problematic with the return of over-tourism, as it restricted street and square space, hindering pedestrian and vehicle flow, ultimately countering the original intent. At the time when these measures were applied, they were presented and justified as necessary to prevent economic breakdown and to serve the restart of tourism. Most of all, they were presented as temporary, but...

Urban spaces after the pandemic

As Europe transitioned out of the pandemic, some of the changes in the public spaces became permanent, while others reverted to pre-pandemic norms, in a lot of cases, the public space "conquered" by food and commercial activities remained occupied.

Restaurants, pubs and coffee recovered their full use of the interiors, with all their seats, but **kept their generous space outside. The fairy tale of the "Hybrid and Flexible Use of Space"** was told to justify how the pandemic rules accelerated trends toward exploitation and private use of public urban space (Palmer, 2021; Mischke et al., 2023). For example, streets that had been closed to traffic during lockdowns were kept for pedestrian activities, with some significant, but occasional, social activity, just to be soon reduced in quality with an aggressive expansion of shops, restaurants and pubs with their external accretions.

During all the pandemic events the topic of "pandemic and post-pandemic" architecture and urban spaces has largely been debated and presented to a wide public (Barbarossa, 2021; Boyce & Katz, 2020; Capolongo et al., 2020). In front of this potential transformation, a certain number of theories and procedures were developed to help new interventions aimed at better living standards and more practical approaches (Galimberti et al., 2020). After two years what remains of this looks more than everything the invasion of public spaces by dehors and any kind of commercial trashy element. If something was learned from the outbreaks it seems now completely forgotten, the long quarantines and the heavy limitations to p**ersonal freedom are left behind in a "forgive and throw away" process. Which is** perfectly understandable for people after a disaster but is known for being a wrong psychological and social approach (Gist & Lubin, 2013). Visiting any downtown, train or airport stations in Europe and the nearby countries a more intense exploitation of the space comes out clear, with full use of the option for adding tables, umbrellas, dehors, the option for reducing the public space and the correct perception of the townscape in front of eating, drinking, sitting and most of all, paying. The period 2022-2023 saw a rapid increase in tourism, which went back quickly to a condition similar to the pre-pandemic one but keeping the vantages of public space exploitation. Some studies put evidence of how the **lockdown has even caused weird new desires and choices in people, like the "revenge tourism" phenomenon (Mohanty et al., 2023). Which in general is quite a sad and poor** approach to sociality and cultural spaces, something strongly promoted by the consumer market and truly unable to enhance the quality of life. Something ongoing before the pandemic event just took vantage of the events and enhanced its presence, with hard-to-revert conditions. It is a problem of culture, it is a problem of economic advantage, it is a **problem of ignorance and selfishness that the market society can't solve, but only promotes.** This series of events has converted something extremely pleasant in itself, like a dehor, into a disturbing and invasive element, a sort of pollution of the urban environment that has now **valuable aspect if not the economic one. How the relationship between "catching the opportunity" and the emergency was applied seems exemplary in one Italian case: during** the first year of the Pandemic, it was mostly forbidden to have dinner at restaurants. Thus, with the first opening to moving around and travelling for work reasons, the Government opened the option for hotels to serve meals for their guests (while the curfew at 18.00 was creating issues for people in hotels to find a meal after that time), as an immediate result, **many hotels offered "free room for the restaurant's customers" (Vesco, 2020), and this came** often with the option to cancel the room reservation after the dinner was done, an ideal condition for allowing personal satisfaction in that hard period, while the curfew was not **preventing the "coming home movement". A trick, and a demonstration of skills that do not** help social growth, neither during a pandemic nor in regular times. So, it seems that the urban public space was widely left in the hands that mostly needed to get money and turn to vantage any odd situation. It is not a moral problem, it is just an unpractical result, when it came the moment to revert the conditions to the pre-pandemic state, all those honest dealers started mourning, blaming fate, declaring how under stress and in difficulties they were and how important was keeping the public soil occupied with their trashy setup. In many Italian cities, the situation is still to be reversed and the use of the soil has been kept in situations similar to the pandemic period applying postponements. At the moment of writing,

the only large city hypothesising a review of the public soil occupation seems to be Rome, announcing interventions for September 2024 after about three years (Torrioli, 2024). For other "cities of arts", the review of the occupation program looks like not an immediate problem, for example, Florence is postponing the review until 2025 (Redazione Cronaca, 2023). The good business for the municipalities of getting money from the soil usage tax and the strong intentions about keeping the grip on the conquered spaces from the commercial operators prevail on any quality rules of the context.

Reading the invasion

The documentation of this invasion of public space can be documented in three different ways: quantitatively, getting the data from a municipality or other local operators. In a graphic way, surveying and drawing the presence of temporary setups. In a perceptive way, gathering impressions and evaluating the impact of the accretions in front of the view sight and perception of the context. In this small investigation the method in use is the third with a post-processing aimed to enter the second. This approach is preferred to make it easily replicable and practical in establishing a first read that moves behind impression and defines the state of public spaces. The issues to solve in this direct information gathering are mainly two: quick capturing of the full complexity; operating with small tools without altering the normal relationship of urban setup and people (for example, the use of a tripod may alter movements and get too much attention). So, it was preferred to use a photographic procedure, based on the criteria of "street photography" (Duckett, 2023). The use of a small size camera (a Fujifilm XT100 with interchangeable lens and 26 Mp APS-C sensor) easily solved the portability of the tool, allowing stable shooting even in poor light conditions (mirrorless cameras have minor vibration than reflex cameras allowing slow shutter speeds with minor risk in producing shaking-blurred images). Due to the specific needs of capturing the visual blocking of these elements and their relationship with pedestrians and vehicles, the completeness of the captures was enhanced using a fisheye lens. This specific lens, named "fisheye" from its first theoretical definition (Wood, 1911) is a type of wide-angle lens that creates a hemispherical image without correcting visual distortions. In this way, the optical construction offers an ultra-wide field of view: fisheye lenses have a very short focal length, typically between 6mm and 16mm on full frame sensors (shortened on APS-C and smaller sensors), allowing them to capture an extremely wide field of view, ranging between 180 and 220 degrees. This kind of lens in the past has been used for a variety of creative and technical uses, like capturing of the whole sky hemisphere in a single shot, or the creation of panoramic HDRI images for digital graphic uses. The spherical image may cover the full frame at 16mm (or equivalent) giving back the 180-degree field along the diagonal of the frame, while the 8mm generates a full sphere with 180 degrees of field in the diameter. The missing correction of the curvature in the projection allows it to adopt compact optical schemes, keeping the lens in small sizes and allowing good speeds (most of these lenses have a maximal aperture of 2.8 that comes with extended depth of field because of the minimal focal length). The 16mm corresponds to a 10 to 7.5mm on APS-C sensors, and this wide-angle (a 7artisan 7.5mm f2.8) was used for the investigation, allowing the capture of a broad scene in a single shot, the lens was set on f2.8 or f4 and focused at about 3 metres of distance, allowing full focus in a range from about 2 metres and up to infinity, and without the need of pointing directly at the main subjects, avoiding the capture of attention and then leaving all the human subjects in their natural poses. The investigation was conducted in Florence, Italy, along a path starting from Piazza Santa Croce, passing from Piazza Santo Spirito, then Piazza della Signoria, Piazza del Duomo and finishing at the Santa Maria Novella railway station. The shots taken along the path were about 50, later sub-selected to 20. These shots were the base for graphical post-processing aimed to put in evidence the various parts

of the image. A sequence of homogeneous areas was defined and filled with flat colours to identify: Cars and vehicles, Temporary elements, General buildings, Valuable buildings, and permanent urban furniture. Putting side by side the original shot and the post-processed one shows well the full effect that all the temporary/permanent elements cause in the context, with the specific features of the fisheye lens capturing in a single image the full impression of the human sight moving around the urban environment. The overall result underlines how the various installations are poorly compliant with the quality of the context, how they downgrade the urban features, and how they impeach pedestrian circulation causing bottlenecks and narrow passages. The overall procedure may also allow to perform more accurate image analysis, like computing the areas of the various parts and their ratio, but the result at its first stage is so evident that the impression can be only one: most of these elements should be removed to re-established the quality of urban space.

Conclusions

The invasion of public spaces with improper elements is a loss of quality in the urban comfort, it is stealing space from the communities and is a grass way of favouring an approach that has nothing to do with the historical, cultural, artistic and logical system of downtowns, the original characteristic that guided the construction of a place, that made it interesting for people and now made it attractive for massive tourism are betrayed by a logic of interest that will never pay back the stolen value. Is it possible to invert this tendency? Accordingly, to a large variety of opinions, the answers may be positive, the process was defined even **before the pandemic event, just to quote from a proper approach: "It is, therefore, a** question of thinking and building conditions and places that contribute to preserving the different qualities and support transitions towards minimum necessary levels of specialisation in the relationships between uses and forms of open spaces and maximum possible levels of functional capacity. This can progressively "free" cities from excessive occupation with encumbrances and obstacles, first of all public spaces, making them "breathe" with a sufficient capacity to represent their role, increasingly eroded by various actors, factors and processes, of particular occupation at the expense of general use. Thus, urban landscapes can become more welcoming and more capable of responding to the normal variation in pressures of frequentation and use of spaces, throughout the day, the month, and the year. In this way, they can express conditions that are more favourable to the psycho-physical well-being of individuals, be more inclusive, and thus improve the social welfare conditions **of urban communities." (Paolinelli, 2014).**

The need to "make breath" the urban space meets well the idea that empty spaces are not vacuums in need of being filled by anything an administration may invent but are for people and should be appreciated for their values, not exploited for commercial uses or for hosting a never-ending series of improper elements. Large parts of the downtown are complete in themselves, and their spaces are needed for observing, when an adjustment or an addition is needed it should be first of all public. Only when the needs of the visitors (seeing, sitting, getting access to shelters from rain or sun, getting access to drinkable water) are satisfied with free solutions, there should be space for payment elements. Public spaces should be public, not subject to public or private exploitation.

In this possible scenario, better, healthier behaviours may enhance the quality of life even without been forced by a pandemic event. The urbanscape should work for human health and safety, not for selfish vantages and shameful gain.

A better approach may start from knowledge and quick investigations. Techniques for easily reading the balance in the qualities of spaces should be introduced in the learning/teaching experience of the architects and of any urban operators, a better technical approach may bring to more efficient interpretation and not to a mere application of rules and laws. At the

same time a better consciousness and knowledge about the context should be mandatory for any politicians or administrators operating in the scenario of the downtowns, otherwise, little by little the original value of these contexts will be eroded and thwarted by a mere logic of gross exploitation.

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Fig.1 Roma Termini train station atrium, design by E. Montuori and P. Nervi (1947-1950), in a postcard from the '50 and in 2019 state from Google Street View.
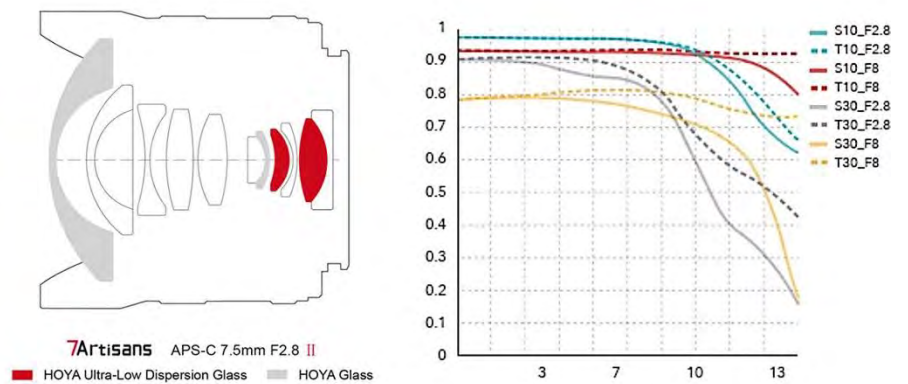

Fig. 2 The Fujifilm XT100 camera used for the investigation with the 7Artisan fisheye lens, optical scheme and MTF (Modulation Transfer Function) scheme of the lens.
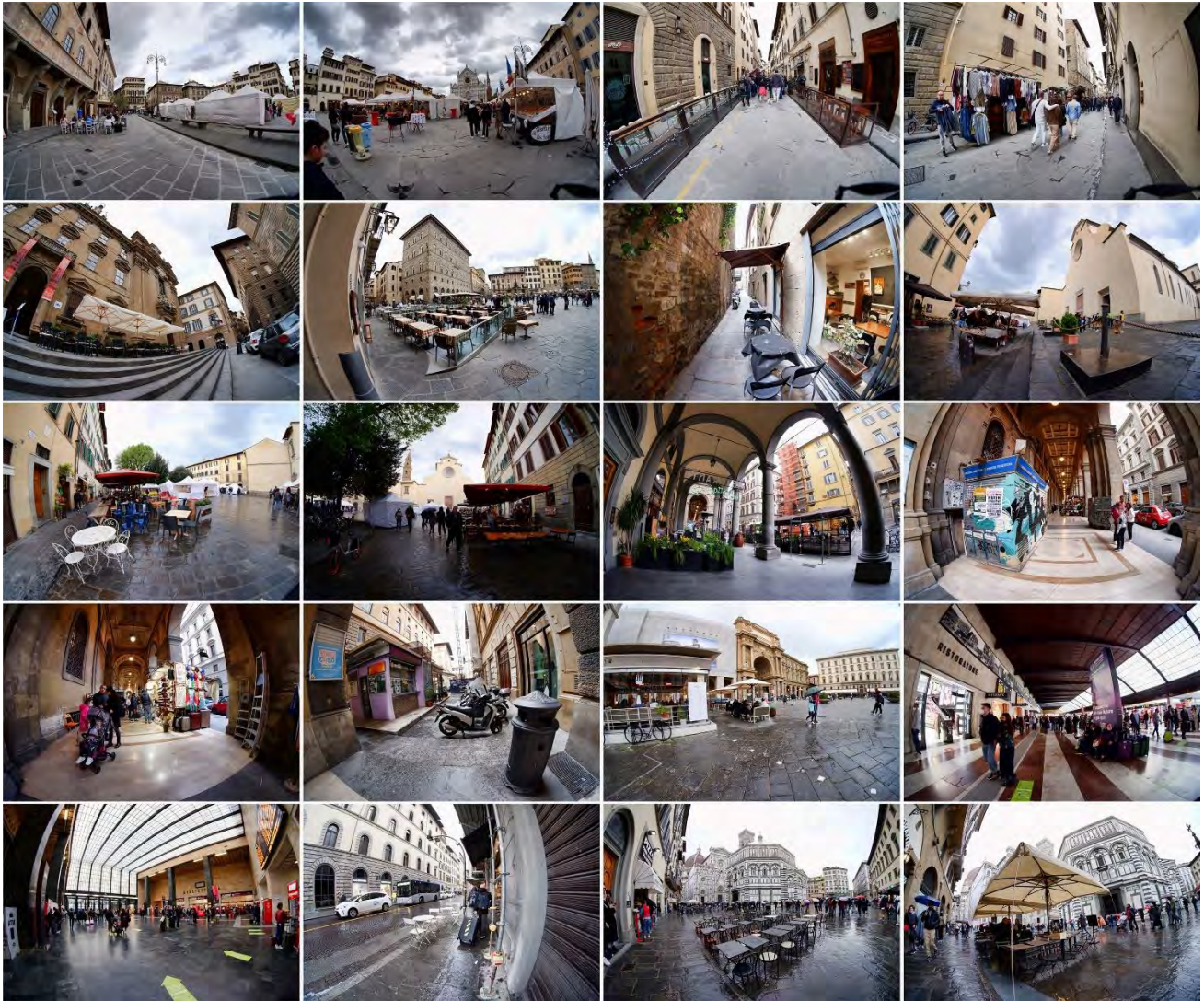
Fig. 3 The whole set of shots selected along the path followed during the investigation.
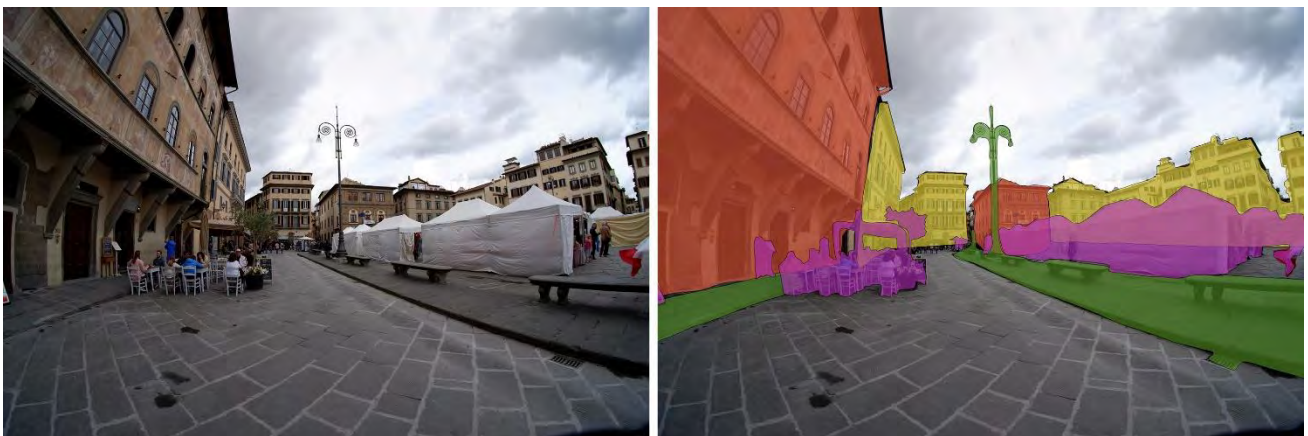

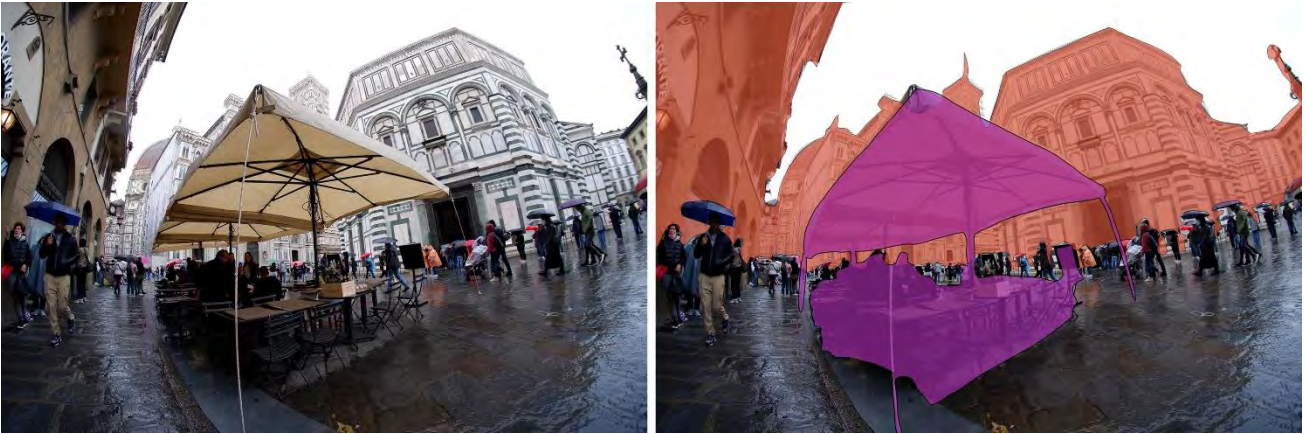Fig. 4 Original and processed picture from Piazza Santa Croce.

Fig. 5 Original and processed picture from Piazza del Duomo.

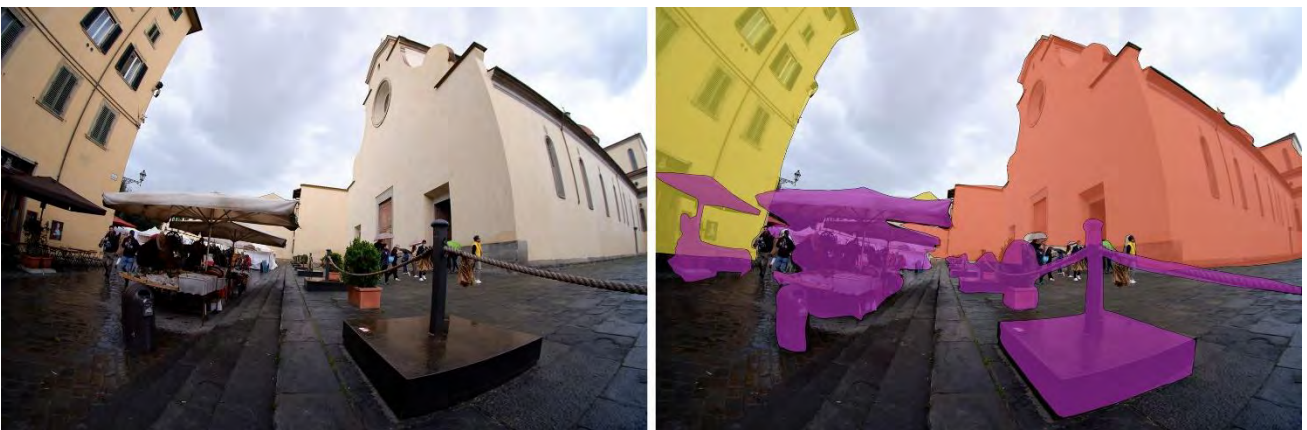Fig. 6 Original and processed picture from Piazza della Repubblica.

Fig. 7 Original and processed picture from Piazza Santo Spirito.

Fig. 8 Original and processed picture from Santa Maria Novella train station.

Giorgio Verdiani, (Carrara, 1968), PhD (2004), Researcher (2006) and then Associate Professor (2020) ICAR/17 SSD 08/e (architecture drawing and representation) at the Dipartimento di Architettura. Starting from 2000 he had classes at the University of Florence and for other universities and institutions. He has been extremely active in the front of the thesis, tutoring, and co-tutoring for more than 650 years, since 2008. He completed his PhD in 2004 with one of the earliest studies about digital surveys and built heritage. Author of about 250 papers, articles, books, and chapters, mostly about digital and built heritage. From 2006 he was active in various international conferences about Cultural Heritage and Digital Media, participating in Scientific Committees and as a speaker/participant. Expert in digital surveys for cultural and built heritage, he was coordinator of the DIDALABS System in his Department in 2013-2021, director of the Architecture Informatic Lab (2011-2021), of the Architecture Photographic Lab (2013-2021), coordinator of the Extended Realities Laboratory since 2019.

Pandemics and the changing built environment. Learning from history, planning our future
Edited by Alessandro Camiz
DRUM Press, Istanbul, 2024
Imprint: Lulu.com
ISBN: 978-1-4452-2385-8
264 pages
DRUM BOOKS n. 7

All the papers in this volume were double blind peer-reviewed by the conference's scientific committee.

First International online conference, on Pandemics and Urban Form, PUF2022. Pandemics and the changing built environment. Learning from history, planning our future, April 28th-30th 2022, Özyeğin University, Istanbul, Turkey.