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Mapping Uses, People and Places: Towards a Counter-Cartography of Commoning Practices and Spaces for Commons. A Case Study in Pavia, Italy

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ABSTRACT

The agency of mapping has been an increasingly relevant area of enquiry at the very least since James Corner published his seminal paper on the agency of mapping in 1999. A few projects aiming to map the commons in cities have since developed, providing critical or counter-cartographies in which information on local groups and communities, activities and other informal evidence is collated.

This paper draws on the concept of urban commons as third places in the sense of being beyond market or state control and management, on the notion that commons cannot exist without commoning practices and on the idea of common spaces as distinct from public, private or communal ones. As such, urban commons should be mapped not as static or invariable but rather as dynamic entities that evolve over time. From that perspective, the agency of mapping should take into consideration both current commoning practices and places suitable for these agencies to happen. Spatial features and architectural configurations may also play a role in calling for, or hosting, those agencies.

This paper proposes a methodology based on both primary and secondary data collection. The former is based on a variety of methods and tactics including psycho-geographical tours, non-interactive and interactive forms of observations and mapping. The process of mapping aims to showcase both what is already taking place and possibilities for future uses as a "hidden potential." The findings include the identification of specific places where several layers converge: these may become case studies to be further investigated.

Introduction: commons as third spaces

Commons may be described or defined in several ways. Commons have historically been recognised, especially in Common Law countries (e.g. England), as land on which local groups or communities, whose members are called commoners, are granted specific rights to access and share resources.[1] In the Italian context, there are some historical precedents of commons as land and/or its natural resources, such as high mountain pastures (e.g. *communalia* in the province of Parma), usually paired with collective uses (*i.e. usi civici*). While Roman Law accepted these pre-existent rights, it also recognised distinct categories of goods, including public and common ones (*res publicae, res communiae*). However, twentieth-century legislation erased earlier notions of common property and collective rights. This development not only left Italy's national panorama with a gap in terms of acknowledging existing commons but also prevented the creation of new ones.[2]

Over the last couple of decades, the notion of the commons has expanded towards the global and the digital, which have joined other dimensions like the urban commons. However, a review of the scholarly literature indicates that there is not yet agreement on how to define these new phenomena, even if it is possible to track certain key features that could be shared among them.

A first attempt was undertaken by Foster and Iaione and embedded into the several city-wide regulations on common goods and in the Co-City project.[3] For example, Bologna defines common goods as "the goods, tangible, intangible and digital, that citizens and the Administration, also through participative and deliberative procedures, recognize to be functional to the individual and collective wellbeing, activating consequently towards them […], to share the responsibility with the Administration of their care or regeneration in order to improve the collective enjoyment."[4]

For other scholars, urban commons are recognised as forms of spaces that are beyond both state and market logic.[5] As such, we consider them as a type of "third space," although with a slightly different meaning

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1. See, for example, 'What is Common Land?' https://foundationforcommonland.org.uk/a-guide-to-common-land-and-commoning, accessed January 28, 2020, and Christopher Rodgers and Duncan Mackay, "Creating 'new' commons for the twenty-first century: Innovative legal models for 'green space,'" *Journal of Environmental Planning and Management* 61, no. 5–6 (2017): 1051–69.

2. See Giuseppe di Genio, Eugenio Benevento, Elena Conte, *Beni comuni e usi civici*, (Limena: Edizioni libreriauniversitaria.it, 2016).

3. Sheila Foster and Christian Iaione, "The City as a Commons," *Yale Law and Policy Review* 34, no. 2 (2016): 281–349.

4. Municipality of Bologna, "Regulation on Collaboration Between Citizens and the City for the Care and Regeneration of Urban Commons," accessed January 22, 2020, http://www.comune.bologna.it/media/files/bolognaregulation.pdf.

5. See Mary Dellenbaugh et al., eds., *Urban Commons: Moving Beyond State and Market* (Berlin: Birkhäuser, 2020).

from how that term was originally used.[6] Current literature supports this statement and expands it in several directions: land ownership, governance, degree of accessibility and activities and functions that urban commons may host or support. In relation to land ownership and its role in urban transformations, for example, the concept of commons goes beyond the traditional dichotomy between state and market. The idea of the commons exists beyond ownership-based functions and rules, as it refers to specific uses by groups or local communities, uses that are temporary rather than permanent.[7]

In terms of accessibility, the spaces of commons work differently from both public spaces and private spaces, although access may be still limited in time and/or to specific groups and communities. As to activities and uses, urban commons may involve forms of production, or better, co-production. The traditional activities of grazing or fishing are replaced in urban areas by the idea of sharing resources for communal purposes. This applies to urban agriculture and to spaces for creative or cultural production. Self-defined groups of people gather to share not only space but also infrastructure, technical equipment, machinery and whatever else is needed to co-produce art, culture and even goods. New forms of governance are usually needed to self-manage resources and enable peer production.[8]

Agencies of mapping, counter-mapping, mapping the commons

The agency of mapping has become an increasingly important area of enquiry in several disciplines, including architecture and urban studies.[9] It is described as a "creative practice" in which agency lies in "uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds."[10] When it applies to current territories, it "re-makes [them] over and over again, each time with new and diverse

6. See Ray Oldenburg, *The Great Good Place: Cafes, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts and How They Get You Through the Day*, 1st ed. (New York: Paragon House, 1989). The concept of third spaces originally referred to spaces other than homes (first places) or working places (second places) and included a wide variety of spaces with varying degrees of publicity: parks, squares, malls and soon. More recently, co-working and co-living spaces have been interpreted as mixed or hybrid forms of third spaces. For some authors, third spaces should include "informal public places in which we interact" and those that "offer places of interaction—promoting togetherness."

7. Ioanni Delsante, "The Temporary City, Urban Commons and Commoning Practices" (Keynote Speech, University of Brescia, September 4, 2018).

8. Nadia Bertolino and Ioanni Delsante, "Spatial Practices, Commoning and the Peer Production of Culture: Struggles and Aspirations of Grassroots Groups in Eastern Milan," Journal of Peer Production 11 (January 2018), http://peerproduction.net/issues/issue-11-city/peer-reviewed-papers/social-practices-commoning-peer-production-of-culture/.

9. James Corner, "The Agency of Mapping: Speculation, Critique and Invention," in *The Landscape Imagination: Collected Essays of James Corner* 1990–2010, ed. James Corner and Alison Bick Hirsch (New York: Princeton Architectural Press, 2014), 197–240.

10. Ibid., 197.

consequences."[11] This capacity to reformulate what already exists is a key point in Corner's narrative; he describes it as "more than just the physical attributes of terrain (topography, rivers, roads, buildings)," by encompassing "the various hidden forces that underlie the workings of a given place."[12] These may include historical events and local stories, economic and legislative conditions and even political interests. In light of the renewed interest in mapping towards design, "the map is first employed as a means of 'finding' and then 'founding' new projects."[13] Maps are "sites for the imaging and projecting of alternative worlds"; as such, the map "'gathers' and 'shows' things presently (and always) invisible."[14] Corner makes clear that, for him, "maps have very little to do with representation as depiction."[15] And the implications for architectural, urban design and planning are significant, as mapping is an "operational" tool that can enable critical understanding and reading, thanks to its "liberating efficacy" and its "exploratory" character, which can actualise "new territories and prospects out of pervasive yet dormant conditions."[16]

In the Italian context, several recent projects have produced markedly new cartographies. Mapping the Urban Voids[17] was a project delivered in 2012 by the not-for-profit organisation Temporiuso in partnership with the City Council of Milan and the Politecnico Milano. Partially set up in response to the social movement called Macao and its activities in that city,[18] the project maps - for the very first time - both private and public spaces that are vacant or underutilised. It maps not only availability but also the demand for space in town through an online form to allow wider participation. It goes beyond the traditional idea of function(s) in the planning process, looking forward to temporary uses and interventions that could take place under new local regulations approved later in 2012.

Along similar lines, a project to map underused or vacant buildings in Pavia has been underway since 2016, producing a detailed map that includes open spaces and buildings spread all around town.[19] It also provided an opportunity for public audiences to identify places by filling in forms and issued a tentative call for re-using spaces. However, mapping urban voids or vacant places in cities does not in itself provide a map of commoning actions or of urban commons.

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11. Ibid., 197.

12. Ibid., 198.

13. Ibid., 208.

14. Ibid., 208.

15. Ibid., 209.

16. Ibid., 235.

17. See also http://www.temporiuso.org/?page_id=8, accessed January 22, 2020.

18. Ioanni Delsante and Nadia Bertolino, "Urban Spaces' Commoning and Its Impact on Planning: A Case Study of the Former Slaughterhouse Exchange Building in Milan," *Der Offentliche Sektor - The Public Sector* 43, no. 1 (June 9, 2017): 45–56.

19. https://ateliercitta.com/ex-vuoto-pavia/, accessed January 22, 2020.

A few initiatives or research projects have aimed specifically at mapping the commons in urban contexts. Some provide counter-maps as an alternative to those produced by political or institutional authorities. Counter-maps aim to unfold power relations that are hidden or not made obvious by institutional cartographies. Natural resources at risk, migrations, refugees, social or environmental inequalities and the like emerge through counter-mapping activities.[20] We hold that the agency of mapping urban commons may well represent an agency of counter-mapping for at least two reasons: commons (in the traditional meaning of land or land use) are not self-evident if they are not attached to a specific land ownership status, and planning tools and maps do not traditionally include commons at all, as they map functions attached to property rights.

Some relevant projects have aimed to map commons in urban and rural contexts: among those targeting cities, it is worth noting the ones undertaken in Athens, Istanbul and several cities in Brazil, among others.[21] Commons as interpreted in this paper are dynamic entities that cannot be constrained within only two or three spatial dimensions; rather, they embed more information in terms of urban history, governance and the like. Some research projects, like the one developed in Athens,[22] have explored the idea of having a geographic information system (GIS) based form of cartography that can overlay the physical map with other kinds of information such as the name of a space, the date it was established and the groups or community who have taken ownership; GIS tools allow users to embed multi-dimensional information on specific places. The common feature in these projects is having a fully and freely accessible resource to be shared among commoners and the wider community.

In examining the Italian context, we find a mismatch between the state of play of policymaking, which appears very advanced, and the current cartographies that are produced. The Bologna regulations and the Co-City project have produced traditional forms of cartographies that provide a useful tool to local communities and authorities, including city councils. However, they largely adopt an institutional perspective that does not fully reflect the complexity and dynamic conditions of what is happening on the ground. To expand this point, we articulate on two factors. The first is the idea that spaces are mapped only once they have been identified by the City Council or a Collaboration Act has been agreed to with local groups. The evidence for this is that other self-managed spaces in town (including

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20.   Hazen, Helen D., and Leila Harris. "Power of Maps: (Counter) Mapping for Conservation," *Acme International E-journal of Critical Geographies* 4, no. 1 (2006).

21.   Pablo de Soto et al., "Mapping the Urban Commons: A Parametric and Audiovisual Method," *V!RUS* 11 (2015), http://www.nomads.usp.br/virus/virus11/?sec=7&item=1&lang=en; kollektif orangotango+, ed., This Is Not an Atlas (Bielefeld: transcript Verlag, 2018), https://notanatlas.org/book/, accessed January 28, 2020.

22.   de Soto et al., "Mapping the Urban Commons."

social centres or XM24) do not appear in the same database.[23] Second, most of the spaces are publicly owned, so the map does not include the privately owned spaces—even if vacant—for which local groups or communities may have proposals or intentions to re-use.

Moreover, we observe that the current state of the art of commons-oriented mapping underrepresents places and spaces in terms of their spatial configuration and features. If this is a minor issue in rural contexts, we regard it as a major shortcoming when mapping agencies refer to dense contexts rich in urban history, culture and architectural heritage. Planning tools and cartographies also suffer from this, as they have traditionally focused on other aspects, sometimes on a larger scale. However, spatial configuration and features are an essential element of the agency of mapping urban commons, as they convey the relationship between people, uses and habits and specific places and buildings that are formal rather than informal. Buildings are characterised by typological and morphological features that have been studied from several perspectives. They have often been intentionally designed in relation to open spaces such as squares or in relation or opposition to other buildings in their immediate surroundings. As Aldo Rossi notes, we should look at the relationship between objects rather than at objects in themselves. Monuments, for Rossi, have a degree of permanence within the urban structure. Their significance is related to the richness of their relationships, whether tangible or intangible, rather than by their function. In fact, function may well change over time.[24]

On a different note, Herman Herzberger has underlined the importance of social relationships in connection to space and ultimately to architecture. His theories, along with his built works, show how space can better accommodate social uses and gatherings, formal or otherwise.[25] These contributions, and the gaps identified in current commons-oriented maps and cartographies, highlight the need to unfold social networks and agencies in relation to urban spaces and buildings in light of their physical features. Because buildings have a degree of permanence but serve varying uses and functions over time (Rossi) and spatial configurations can also inform or activate social relations (Hertzberger), urban commons should be described in relation to them.

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23.   Comune di Bologna, "Patti di Collaborazione," http://partecipa.comune.bologna.it/beni-comuni, accessed January 28, 2020.

24.   Aldo Rossi, *The Architecture of the City,* trans. Joan Ockman and Diane Ghirardo (Cambridge, MA: The MIT Press, 1984).

25.   Herman Hertzberger, *Lessons for Students in Architecture* (Rotterdam: 010 Publishers, 2005).

Mapping the urban commons in the current Italian context

Many Italian cities have recently approved regulations to manage and govern the urban commons, so it is understandable that more and more cartographies will soon be produced. However, the specifics of the Italian panorama and legislation should also be taken into consideration: Italian law, for example, does not recognise any form of collective property, which can be either public or private, but not collective.[26] In that respect, the action or project of mapping commons in an Italian urban context cannot follow traditional processes of mapping common land or resources, because commons would not be recognisable as such.

Even though a number of towns and cities have recently approved regulations, urban commons and commoning practices remain almost invisible to the planning process. Maps and cartographies produced by institutions and institutional agencies may not reflect either the current state of play or aspirations that could be expressed by grassroots groups or local communities. This invisibility is equally true of these maps' relationship to available places, including vacant or underused ones.

In such circumstances, the aim of mapping commons places or spaces, or places suitable for commoning actions, calls for an innovative methodology. In addition, because the transformations in most cities are ongoing or in the very early stages of development, the mapping process should not only document what is currently happening[27] but also showcase the networks and relationships through which new commons or commoning actions could be initiated.

Research questions

To what extent can the agency of mapping unfold the notion of commons in cities? To what extent do commoning actions and practices unfold in relation to places, spaces, buildings and their configuration towards the creation of commons? More specifically, in what form do the links between commoning agencies and spatial features emerge in urban contexts? Is it possible, through the agency of mapping, to explore the potential for common spaces? In the Italian context, in what sense does the agency of mapping urban commons differ from current institutionalised mapping processes? How does the hidden potential of mapping agencies emerge in relation to social practices, networks, spaces and places? Finally, what

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26. However, there are residual forms of shared uses or rights called "civic uses" (*usi civici*). These are rooted in past legislation and survive in a very few places, usually rural or high mountain areas.

27. In "Mapping the Urban Commons," de Soto identifies an effective methodology to map current and ongoing commoning actions in a town and then applies it to Athens. This effort produced a critical cartography of that city.

role does the urban scale play in highlighting relationships and networks towards the production of counter-cartographies?

An experimental methodology

Recalling Corner and his proposed agency of mapping, the present paper aims to reveal a hidden potential rather than to describe a phenomenon that is already self-evident. This aspiration is explicitly distanced from the usual practices of mapping and planning. The paper draws on relevant literature and consider urban commons as essentially composed of three sets or layers: common pool resources, social groups and local communities and sets of rules or governance models.[28] Several authors couple the noun "commons" with the verb "commoning" to describe more clearly its relation to actions or spatial practices, and this paper builds on David Bollier's position on commons and commoning as necessarily linked and reciprocally nurturing.[29]

The present paper describes an innovative methodology that is tested in Pavia. The methodology consists of a sequence of mapping exercises based on secondary data (archival work, databases, etc.) and primary data collected through fieldwork, psycho-geographical walks and sensing the city, interactive and non-interactive observations including photographic surveys, visual analysis and informal interviews.

Maps collate data and visually compose them at urban scale. Each layer is critically analysed both on its own and in its relation to the others. The resulting maps represent and visualise relationships between various elements and reflect the aspirations and needs collated from a wide range of social groups and communities. As a result, while each map represents only a sample, its content nevertheless originates with active citizens and grassroots groups.

The methodology is designed to achieve a twofold aim: the first is to acknowledge the co-existence of current uses and commoning practices, current social groups and proactive communities and available or underused spaces in town. The second, which results from the first, is to enable the emergence of the links, networks and potential for current practices to occur in specific places or spaces, with spatial configuration given due attention. The paper ultimately seeks to reveal the hidden potential of urban commons in Pavia through the agency of mapping.

The methodology and the application to a case study in Pavia do have certain limitations. The methodology is experimental, so it will need some refinement over time. As primary data collection is derived from direct observation, some elements may be missed. Moreover, the amount of

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28.   Dellenbaugh et al., *Urban Commons*.

29.   David Bollier, "The Commons, Short and Sweet," accessed January 22, 2020, http://www. bollier.org/commons-short-and-sweet.

fieldwork required is very extensive and potentially unlimited. Producing a detailed mapping of all groups and local communities is well beyond the scope of the proposed methodology. The choice of a case study allows for testing the methodology on the ground and helps identify significant case studies to be further developed via research-by-design and participatory processes.

A preliminary survey via psycho-geographical walks

Psycho-geographical walks seek to reveal urban areas and features from a new perspective.[30] By drifting around the city fabric, the observer uses this method to look at often familiar surroundings with fresh eyes and may allow unnoticed, unusual and unexpected details to be revealed. A number of psycho-geographical walks were undertaken in Pavia, following similar rules but going in different directions. As the historical city fabric is very regular and structured largely on the Roman grid (80 m x 80 m), very detailed instructions were provided at the beginning, such as changing direction at every corner (first right, second left, third right and so on).[31]

The walks revealed the richness of activities and uses in town, beyond the hierarchy given by open spaces like main squares and the key streets in the urban grid. Encounters happen in many places and reveal unusual or unexpected places, uses and users: The Third Age University, oratories and spaces for gathering, vacant or underused spaces, charities and not-for-profit and cultural associations are but some examples.

These urban encounters reveal agents, uses and practices that can all be further investigated. Beyond different types of casual encounters, more structured forms of observation and ethnography ensued, and it is necessary to better unfold what they do and how they relate to urban spaces, if in fact they do contribute towards the production of urban spaces. As noted above, it is important to acknowledge how secondary data such as current city council surveys and planning documents are not sufficient to reveal these [Fig. 1–4].

30.   Guy Débord, "Theorie de La Dérive," Les Lèvres Nues 9 (November 1956), trans. Ken Knabb as "Theory of the Dérive," https://www.cddc.vt.edu/sionline/si/theory.html, accessed January 22, 2020.

31.   These walks involved groups of three or four people and were carried out in collaboration with a group of students from the Architecture and Architectural Composition 1 course at the University of Pavia in the 2018–2019 academic year.
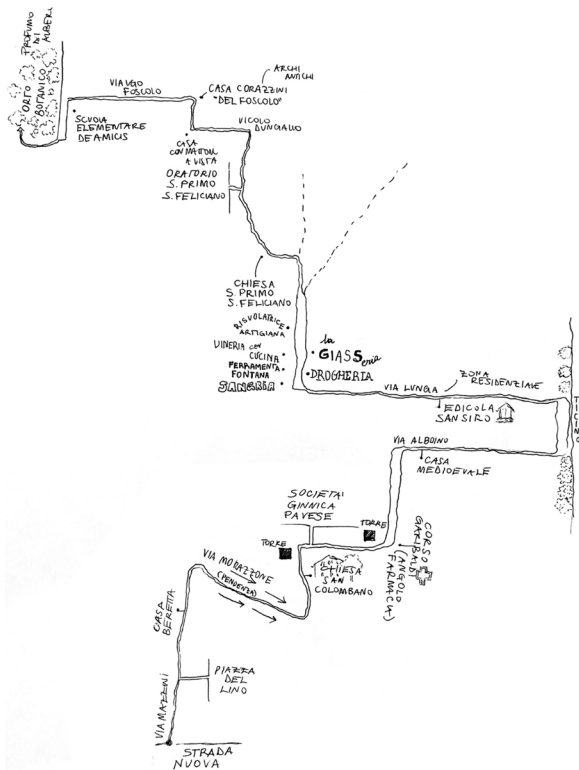
FIG. 1   Mental map produced during a psycho-geographical walk in Pavia (image by Anita Beluffi, Maddalena Duse, Linda Migliavacca, Michela Riboni).
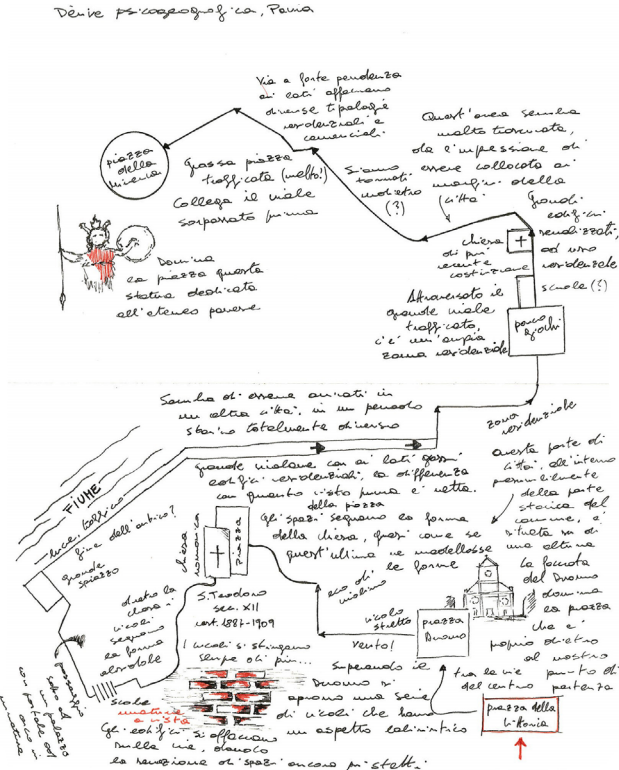

FIG. 2   Annotations from one of the dérive walks and drifting in town (image by Francesco Cavalloro, Alberto Pettineo).
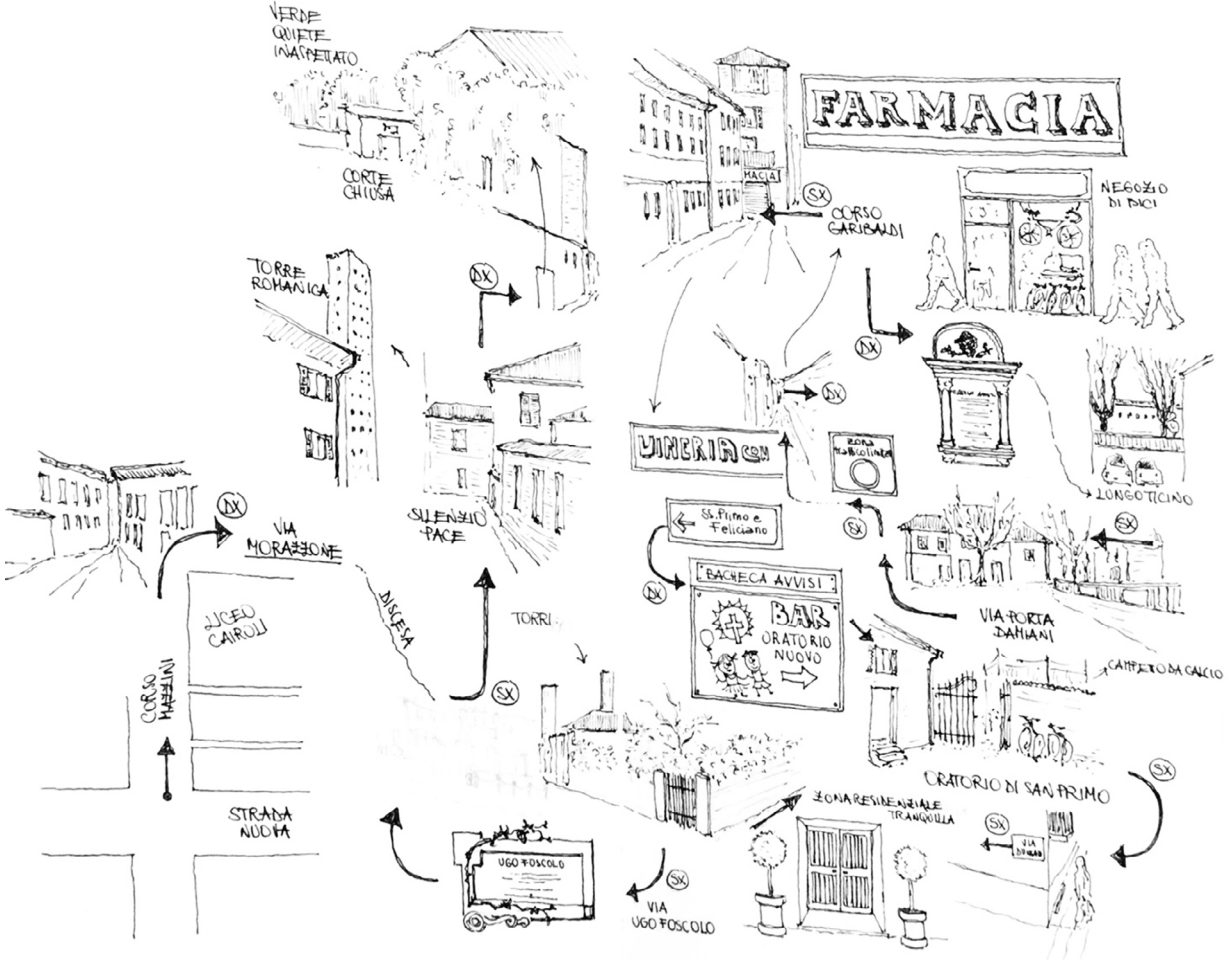

FIG. 3   Various sketches of buildings and urban spaces, as composed during a dérive walk (image by Anita Beluffi, Maddalena Duse, Linda Migliavacca, Michela Riboni).

FIG. 4   A picture taken during one of the city walks, in via Morazzone (image by Anita Beluffi, Maddalena Duse, Linda Migliavacca, Michela Riboni).

Mapping uses and habits beyond functions and zoning

By mapping uses and habits, the methodology aims to identify different forms of spatial uses and practices, including those that may be temporary or informal and thus independent of established functions and planning regulations. Temporary uses and appropriation of spaces are closely linked to the history and evolution of towns and cities. Market spaces, for example, often represent a vital element of urban life and structures. They may be formally defined as buildings but still only temporarily occupy urban spaces like streets with porches and squares. Relevant precedents such as the Campo dei Fiori in Rome, for example, still host trading activities in a weekly open-air market, a tradition that dates to medieval times.

Festivals are another well-established form of temporary appropriation of urban spaces that can reveal hidden meanings. The Palio di Siena and the Semana Santa in Sevilla, for example, display a completely different set of activities that may include gatherings and processions that appropriate urban spaces in an extraordinary way. If these are well-known examples of how traditions and historical habits can survive even through the present day, there are several other temporary uses or forms of appropriation in contemporary cities that deserve more careful observation and investigation.

The mapping exercise is based on fieldwork activity that was either preceded or followed by secondary data collection, including archival work. When an activity or use was identified, then the extent to which it is rooted in urban history became relevant (including exceptional circumstances such as periods of war or post-disaster recovery). Several spaces in Pavia were mapped as part of this exercise. It is possible to identify two sub-categories of uses and habits: the first refers to spaces that are temporarily used in a more or less formalised way. These include weekly or biweekly markets that usually take place in well-known squares (Piazza Petrarca) or other public spaces. They also include annual events such as fairs (Autunno Pavese) and other leisure or cultural events in town (Notte Bianca, Festival della Fotografia, Giocanda Festival and so on).

A second sub-layer involves temporary but informal activities. These are not usually rigidly defined and can have various levels of permission from local authorities. Relevant examples are some university spaces, certain public spaces in town, the riverfront (Lungo Ticino) and other informal occupations. For example, university courtyards are used in several ways: inner courtyards become spaces where to sit, read, reflect or simply spend some time observing people's comings and goings.

Viale Matteotti is a boulevard with a wide pedestrian area running down the middle. Located quite centrally, it connects several public spaces such as the gardens facing the Castello Visconteo, the Piazza Petrarca and the public spaces closer to the train station. On top of trade activities, informal gatherings take place in the pedestrian spaces. Specific ethnic groups populate them, especially those from Eastern Europe. Other types of informal gatherings and meeting places are recognisable in Pavia, such as the stairs facing the cathedral in Piazza Duomo, which are used by younger generations to meet up from early in the evening until very late at night. The riverfront is another space that is widely used by several different user groups. Especially where it is wider and less constrained by the old city walls, it hosts a range of different activities running from sport uses to leisure activities including self-organised picnics and barbecues.

This mapping exercise has revealed a richness of activities that planning tools do not capture and that are not usually mapped city-wide. Strikingly, most of them are strongly distinguished by user or age group. Further investigation also showed how some groups tend to identify one or more spaces in Pavia that best suit their needs [Fig. 5].
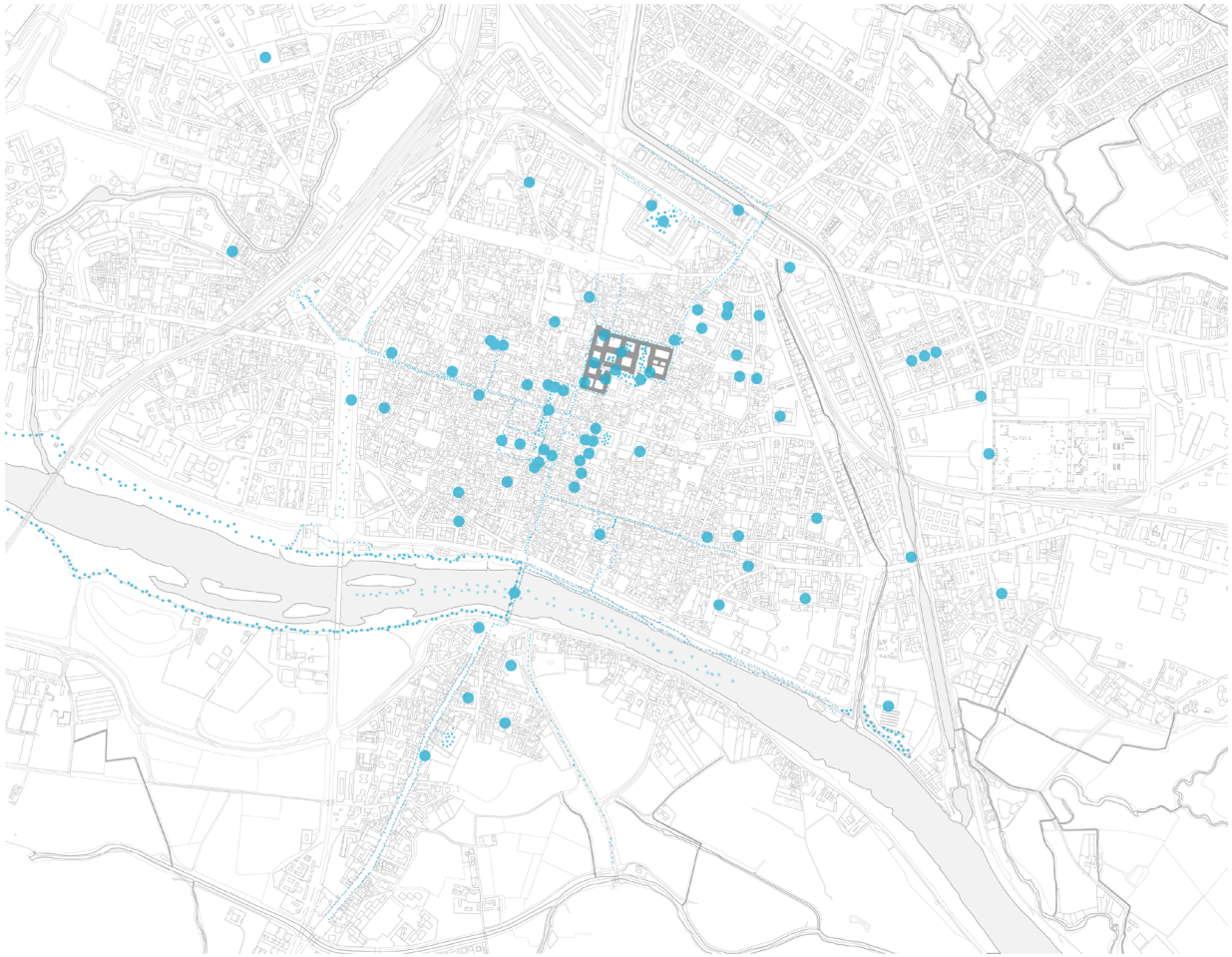
USES AND
FUNCTIONS
● markets, concerts, festivals, sporting and cultural events, temporary and informal gatherings
⋮ main pedestrian flows as mapped during field-work

FIG. 5   Mapping uses and habits in Pavia, beyond functions and zoning (drawing by
authors).

Mapping local networks, social groups and communities

The focus now shifts towards social groups and local and digital networks and communities that play a role in appropriating or producing space in Pavia. While the psycho-geographic walks and the mapping exercise provided a solid foundation from which to proceed, further investigation and data collection were needed, and secondary data were available to produce a preliminary list of actors and stakeholders. The findings showed a richness in terms of presence and variety of groups or networks in the town. They vary greatly in terms of history, governance and aims, but it was possible to identify at least three typologies.

The first is composed of local communities, not-for-profit organisations or groups that link their actions to very specific places such as a neighbourhood, the river, the Naviglio Grande canal or a specific place or building. One example is the association linked with the Borgo Ticino neighbourhood. The second typology is composed of groups, communities or network that self-identify in relation to a goal. These can be linked to local or global challenges (the natural environment, poverty, immigration, etc.) and can have a variety of focuses including social and environmental dimensions; the "Friends of the River Ticino" (Amici del Ticino) association is one example. The third typology self-identifies by the idea of doing or making something together: music, other cultural endeavours, sport and so on. There are many of these groups, some of which were established on the internet rather than in a physical space. The Giocanda Festival (2019) serves as an example, as do the bicycle repair sessions held in the Piazza delle Tre Torri.

The mapping exercise provided the opportunity to situate various agencies in the cartography, providing immediate visual evidence of where they operate in town. To do so, the mapping identifies not only the physical basis of each (and any intended to be permanent) but also the relationships with several other places in Pavia, where they take action or undertake activities which may be temporary or a depiction of what is going on at a given moment and thus evolve over time. Moreover, the mapping also provides an idea of density in terms of where they are based and the sites where they operate. It is interesting to note that the town centre, with its dense urban structure, does not reflect the distribution or density of these groups; on the contrary, they are more present and proactive beyond the edges of Pavia's historical centre.

An additional mapping drew on the first effort to focus on urban spaces and buildings, with the aim of analysing type and morphology and using tools such as maps, sketches, photographs of the elements or parts of cities taken into consideration. The specific aim is to understand how the form and the typology of a building or its level of openness and closure define its features according to its perception, use and potential for common appropriation [Fig. 6].
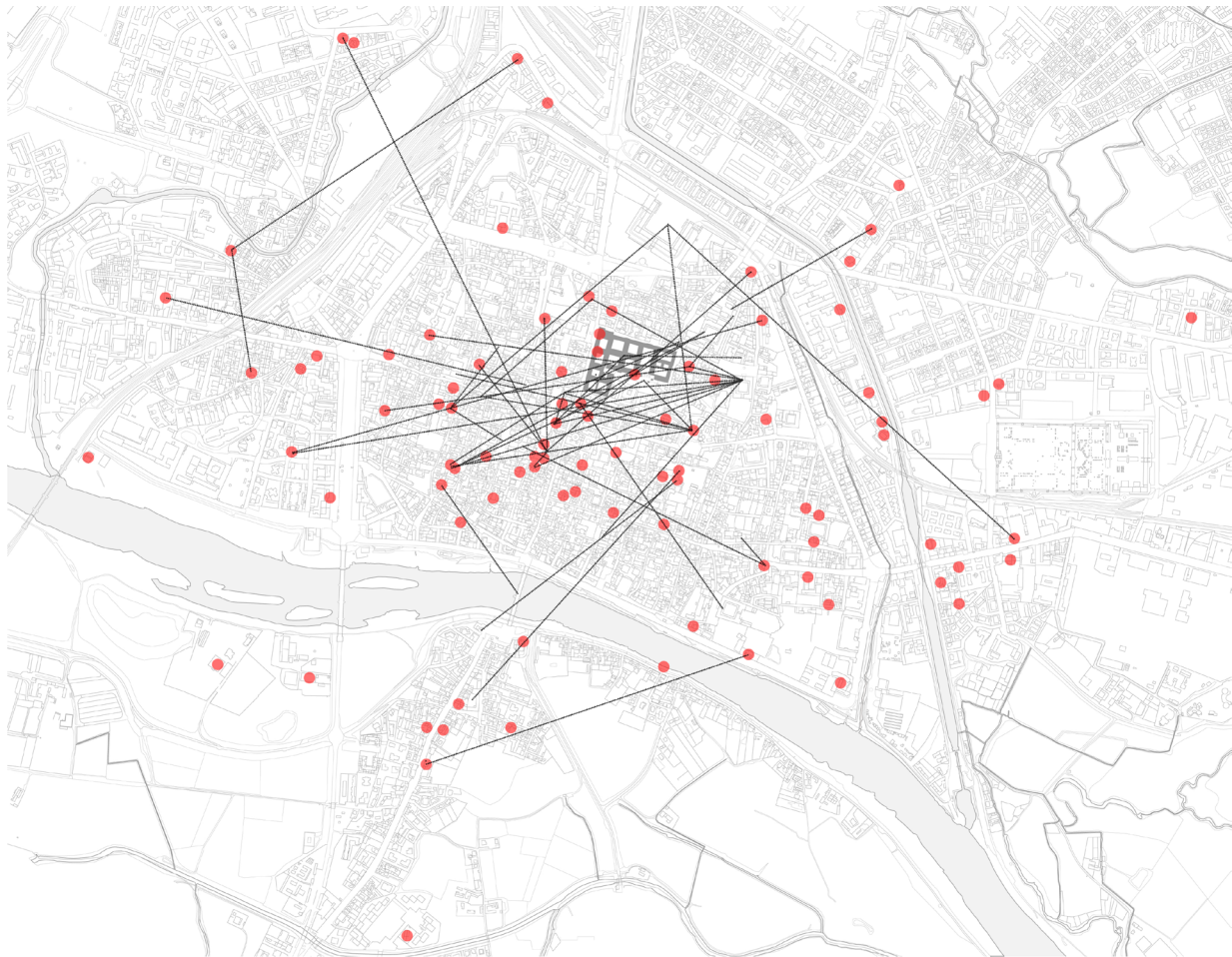
SOCIAL GROUPS AND COMMUNITIES ● not for profit organisations; charities; cultural, sport and leisure groups; self-constituted social groups of active citizens/communities

LOCAL NETWORKS   existing relationships between uses or functions and social groups/communities

FIG. 6   Mapping social and grassroots groups, local networks and communities in Pavia (drawing by authors).

Mapping spaces and buildings, including vacant or underused buildings

First, the reflection is based on the concept of the cityscape's apparent clarity or "legibility," which is defined by Kevin Lynch as the ease with which its parts can be recognised and organised into a coherent pattern.[32] This term is later recalled by Leon Krier in terms of a "clear legibility of the geometric characteristics and aesthetic qualities that allow the use of an outer space as a properly urban space"[33] that represents a useful step in understanding the degree of consciousness and acknowledgement of a specific given place. Legibility and acknowledgement translate into spatial qualities that, regardless of public or private ownership, invite accessibility and relationship.

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32.   Kevin Lynch, *The Image of the City* (Cambridge, MA: MIT Press, 1960).

33.   Rob Krier, *Stadtraum Urban Space* (Solingen, Germany: Umbau-Verlag, 2005), 24.

A different aspect to be considered is how urban spaces' typo-morphological features like shape, profile, scale or height specifically affect the pattern-network of relationships and hierarchies which—combined with the cultural awareness of groups or communities—let people perceive a place in the city as a reference and make it recognisable. Moreover, a critical association is sought between the characteristics of invariance inherent in the consolidated concept of "type"[34]—court, hall, line, block and so on—and the variables linked to the use or occupation of space, whether temporary or permanent, regulated or spontaneous. This may be connected, for example, to seasons or temporary events and to questions of identity and place, and provides a map in constant flux, where the fixed scene of the cityscape is constantly renewed and revised by collective appropriation.

For example, the complex of the Central University of Pavia is readable as a defined system within the medieval urban structure, despite the compactness of the streetfronts. However, thanks to the different access points to its courts, it is actually open and permeable, becoming a natural continuation of the surrounding network of streets and squares and encouraging its use for moving, meeting, standing and gathering. Another example is the system of public spaces that revolve around the buildings of the Duomo and the Palazzo del Broletto that produces different uses and appropriations of urban space. These are somehow instigated or shaped by architectural thresholds like arcaded galleries and access stairways that, at different points in the day or year, assume different degrees of publicity or accessibility for commoning practices.

These cases—which were among those analysed within the city of Pavia—can serve as models to understand the dynamics of legibility and appropriation of public spaces for communal uses or commoning practices; they proved useful for capturing the links between physical spaces and their perception—including in terms of value—by different social groups and communities [Fig. 7].

We add to the analyses above a mapping phase to find vacant or underused buildings and urban spaces that represent potential resources for the city. This kind of mapping is not strictly related to a particular typo-morphological feature but to current uses (or lack thereof). It is also, though not exclusively, based on existing secondary data such as the Ex-Vuoti database.[35] It aims to recognise buildings and open spaces (both private and public, as rightly pointed out by Temporiuso in Milan),[36] which are even partially vacant, abandoned or underused [Fig. 8].

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34. Carlos Martí Arís, *Le variazioni dell'identità. Il tipo di architettura*, ed. M. De Benedetti, trans. E. Laurenzi (Novara: CittàStudi, 2012).

35. Atelier Città has been conducting the Ex-Vuoti project in Pavia since 2016. Atelier Città, "Ex-Vuoto Pavia," accessed January 22, 2020, https://ateliercitta.com/ex-vuoto-pavia/.

36. See http://www.temporiuso.org/?page_id=8, accessed January 22, 2020.
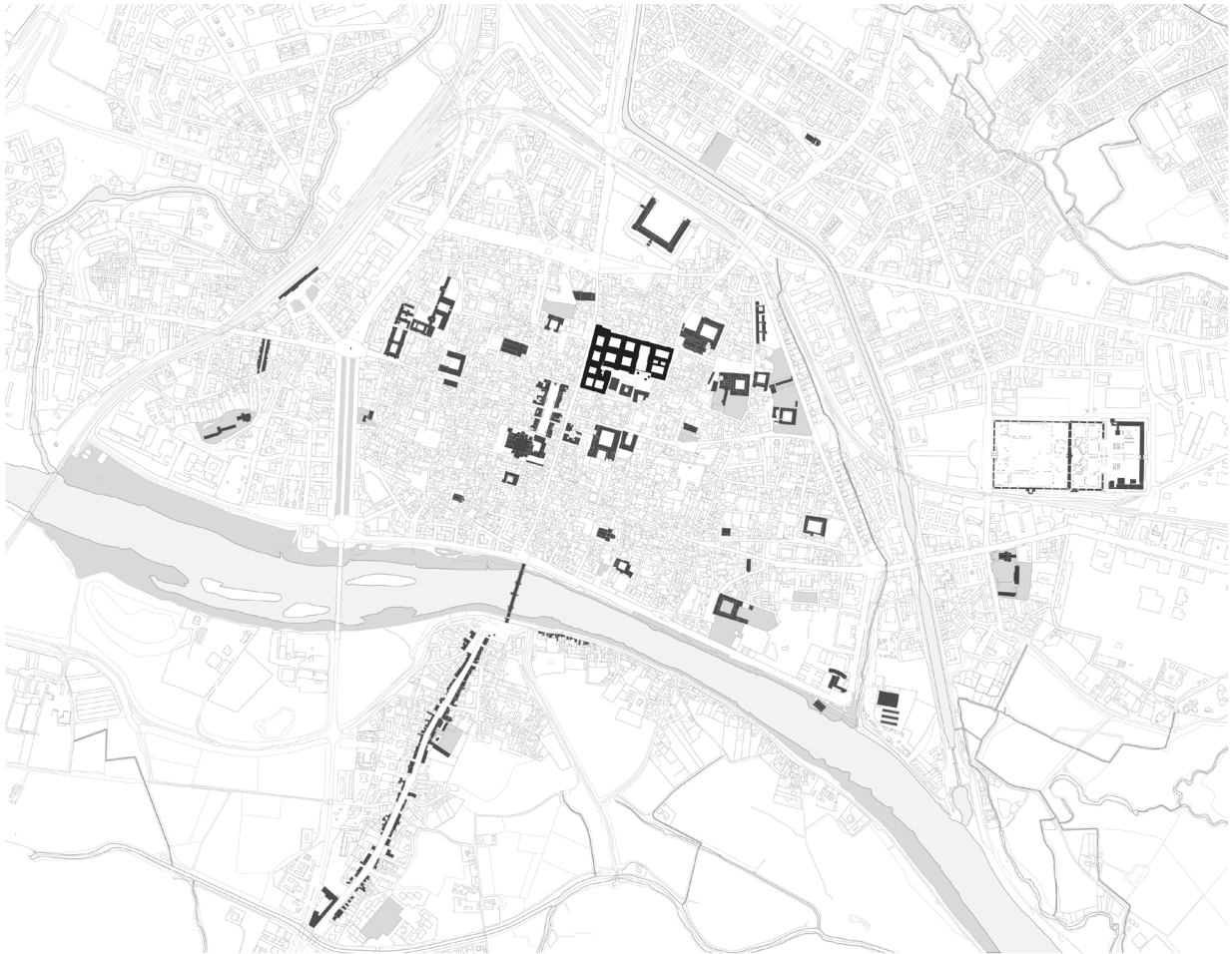
SPACES AND
BUILDINGS

morphological type analysis and open areas

FIG. 7   Mapping of significant spaces and buildings in Pavia through their typo-morphological Features (drawing by authors).
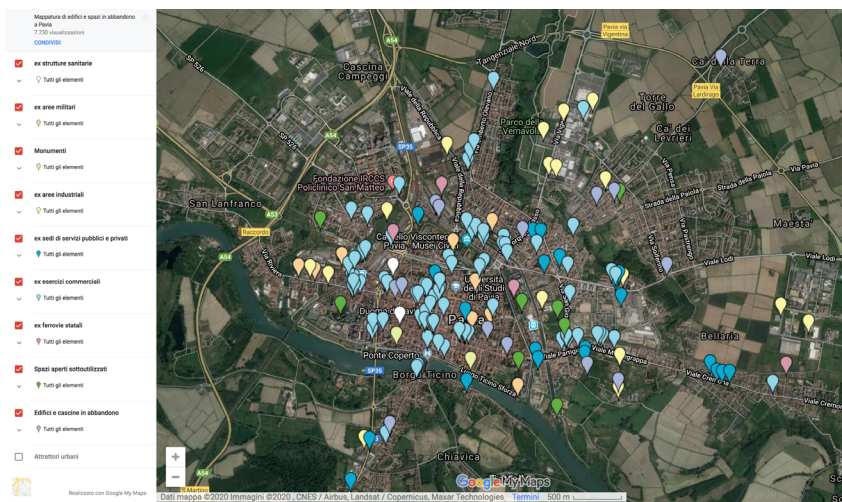

FIG. 8   Vacant spaces in Pavia from the Ex-Vuoti database undertaken in Pavia since 2016, https://ateliercitta.com/ex-vuoto-pavia/#mappa-dei-vuoti, accessed January 20, 2020.

Towards a counter-cartography of Pavia

The phases of data collection and mapping described above were followed by a critical re-elaboration of information, which we call critical mapping,[37] that moves towards the creation of a counter-cartography of Pavia that is based on critically analysing and finding relationships between the various layers of information that are overlaid on a physical map of the city. This kind of mapping exercise comes out of several iterations and refinements of the analysis process. The findings consist of tangible and intangible relations between uses, communities and spaces, all of which become evident through the mapping. They may be already in place or simply offer the potential for future scenarios [Fig. 9–11].

The mapping aims to show the multiple relationships between social groups or communities, uses and places; the places may have a relation of proximity to the social groups or fit needs or aspirations that they have expressed or are self-evident from the groups' agendas. These spaces can thus accommodate or host actions of commoning, through which they have the potential to become urban commons. They are highlighted in light of the co-presence of space that is interpreted as a resource by a group or a community that has a degree of self-regulation in delivering their agenda in the form of rules or regulations. It is important to note how this cartography reproduces an image of the city that is completely independent from the either public or private ownership and from fixed functional uses. As such, the map provides a picture of what the city could be rather than what it is.

This cartography shows that these spaces are as present in the historic centre as in the more peripheral areas and involve a wide variety of places in terms of accessibility, legibility, land ownership and maintenance. These include commercial arcades like the Galleria Manzoni, vacant shops and underused spaces in residential neighbourhoods, as in the Città Giardino, some public buildings including a university complex and surrounding spaces (the Botanical Garden complex) and other well-known private buildings like the nineteenth-century Cupola Arnaboldi. They also include urban voids and underused spaces like a former fuel distribution station, the Naviglio Pavese banks and the residual spaces around them, the Ticino riverbanks and underused infrastructures and buildings along them, such as the former Idroscalo.

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37.   The term is sometimes used as synonymous with radical cartography or experimental geography: "Critical mapping acknowledges that maps are not neutral conveyors of fact; more importantly, it embraces the idea that maps have agency" Kian Goh, "Critical Mapping," MVMTBLDG (blog), February 20, 2011, https://mvmtbldg.wordpress.com/2011/02/20/critical-mapping/. Critical cartography is defined as "a one-two punch of new mapping practices and theoretical critique. Critical cartography challenges academic cartography by linking geographic knowledge with power, and thus is political"; Jeremy W. Crampton and John Krygier, "An Introduction to Critical Cartography," *ACME: An International Journal for Critical Geographies* 4, no. 1 (2005): 11.
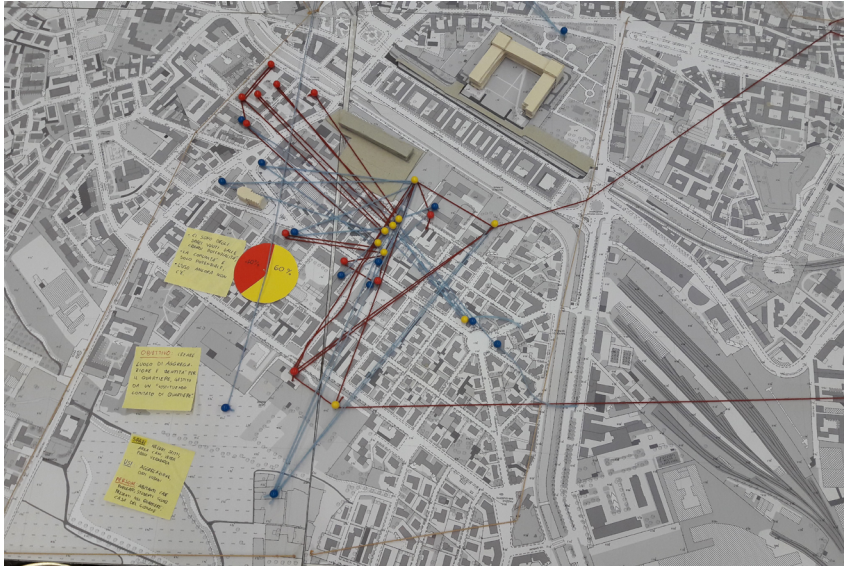
Picture of the mapping performed on the physical model of Pavia, including annotations on Città Giardino neighbourhood (Image by the authors).

Picture of the mapping performed on the physical model of Pavia. Detail from the south-east part of the town centre, between the Collegio Borromeo and the Idroscalo (image by the authors).
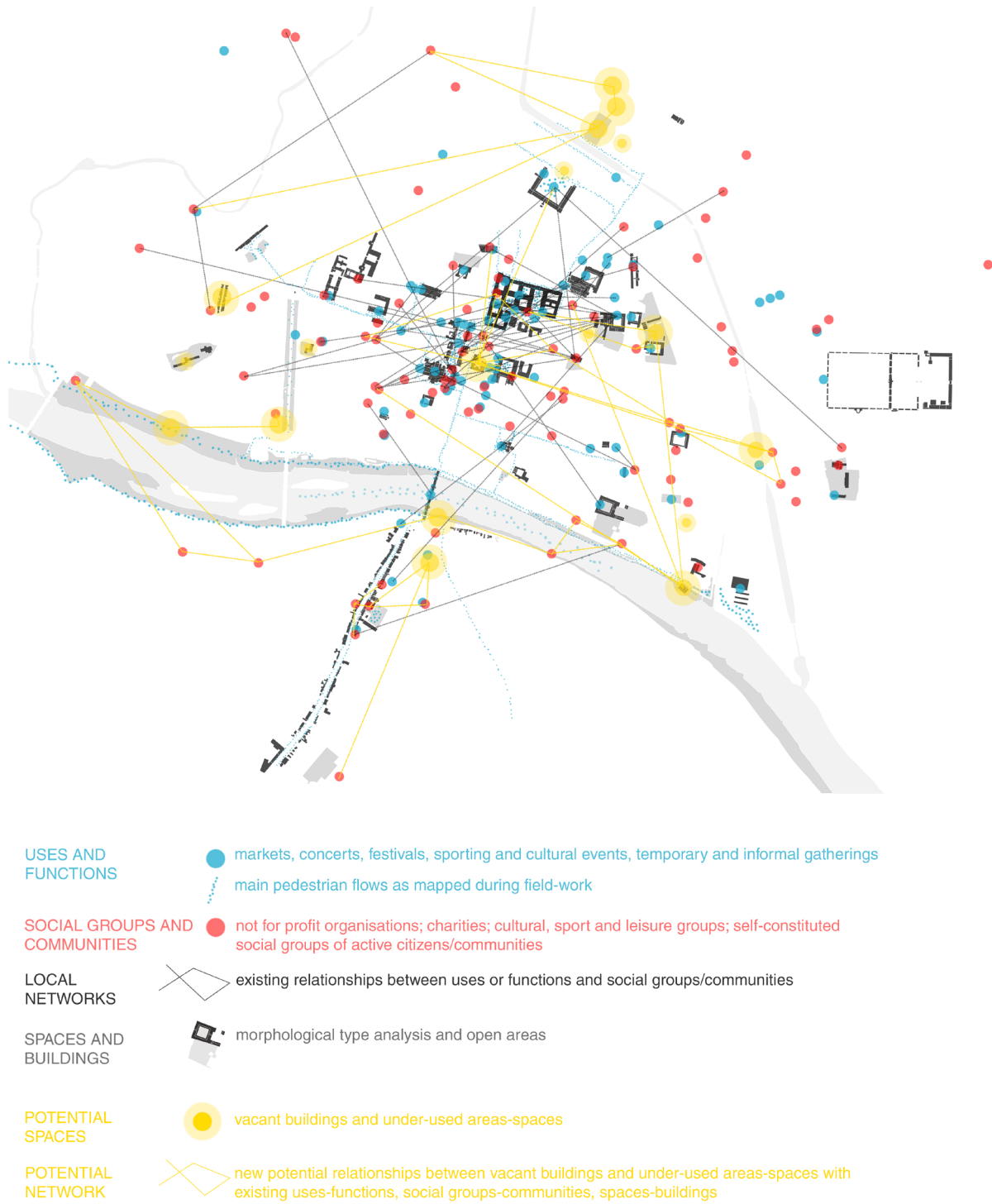
USES AND
FUNCTIONS
● markets, concerts, festivals, sporting and cultural events, temporary and informal gatherings

⁞ main pedestrian flows as mapped during field-work

SOCIAL GROUPS AND
COMMUNITIES
● not for profit organisations; charities; cultural, sport and leisure groups; self-constituted
social groups of active citizens/communities

LOCAL
NETWORKS
⬦ existing relationships between uses or functions and social groups/communities

SPACES AND
BUILDINGS
⬛ morphological type analysis and open areas

POTENTIAL
SPACES
● vacant buildings and under-used areas-spaces

POTENTIAL
NETWORK
⬦ new potential relationships between vacant buildings and under-used areas-spaces with
existing uses-functions, social groups-communities, spaces-buildings

FIG. 11   Iterative mapping and overlapping of several layers reveals links and relation-
ships between the various categories (drawing by authors).

Two cases unfolded: the central university and the Cupola Arnaboldi

The University of Pavia's central building is organised around a series of open-air courtyards with porches, most of which are enclosed on all four sides, although others are open towards the city and its public space. Because the university is fully integrated within the urban structure, its spaces have a number of crossings. The survey showed how spaces are strongly polarised between those dedicated to urban flows and crossings and those dedicated to gatherings and social activities. The findings also revealed how these spaces are used by a wider community of users, well beyond university students. The uses themselves also varied: informal ones like a bicycle repair workshop, group discussions, free or leisure time and temporary homeless shelters complement more institutional uses like lectures, study rooms and the like [Fig. 12–16].

By acknowledging both formal and informal uses, the paper tries to situate them in relation to the physical configuration of the spaces in which those uses occur. A conventional figure-ground and typological analysis supports this approach and recalls the idea of how architecture can encourage social networks. Architectural spaces become available for multiple, open-ended uses. Spaces are related to uses rather than to the fixed functions on which urban planning regulations are so focused. Spaces obtain meanings in relation to specific uses and groups or communities who take ownership, so the meaning we attribute to them is relative rather than absolute.

While a more in-depth analysis would be necessary to reveal the full potential of the University of Pavia's spaces, it is clear how various groups use them for informal, temporary activities. It is also worth noting how architectural elements and devices such as courtyards, thresholds and benches come into play in hosting commoning practices. They become third spaces in the sense that these informal uses take place neither due to nor in spite of but beyond the facts of ownership.

The Cupola Arnaboldi case study involves a currently underused nineteenth-century building. The gallery is covered by an iron and glass dome - inspired by remarkable examples such as the Galleria Vittorio Emanuele in Milan - and was built in 1872, intended by the mayor of the day to serve as a meeting place where farmers and breeders could negotiate exchanges and prices for goods. The architectural value of the building, the role of public utility for which it was conceived and built, its position in the heart of the city and its character of openness and porosity with respect to the surrounding urban context are just some of the aspects that reveal its commoning potential.

Today, the space is mainly used as a simple walkway. However, it occasionally hosts temporary events like the Ticino Festival or a farmers market mounted by the Italian Farmers Confederation.
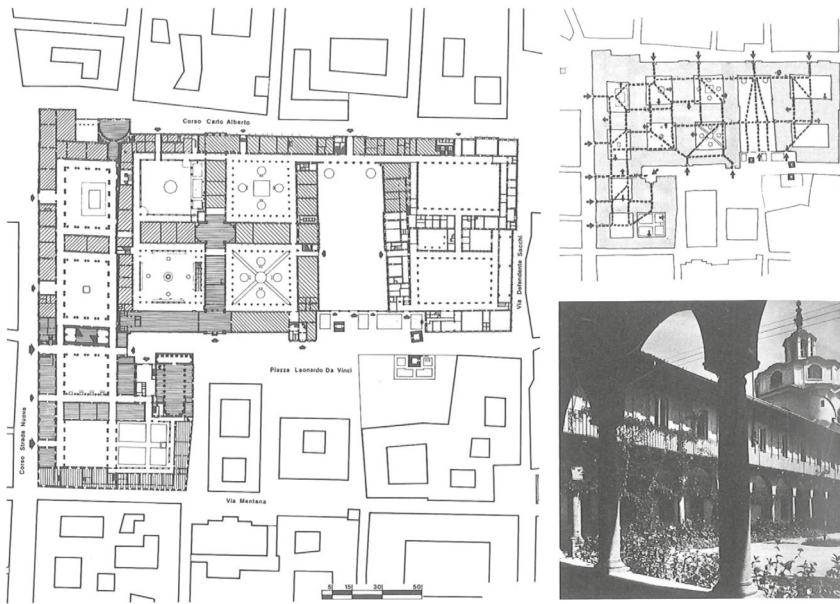
FIG. 12   Map of the university and its courtyards in relation to the city of Pavia. From Giancarlo de Carlo, "Pavie: la ville et le modèle multipolaire,"*L'Architecture d'Aujourd'hui* 183 (January–February, 1976): 52–62..

FIG. 15   University of Pavia central building: walking and seating along one of the covered porches (image by Anita Beluffi, Maddalena Duse, Linda Migliavacca, Michela Riboni).

FIG. 16   Sketches derived from non-interactive observation of the University courtyards
(image by Francesco Cavalloro, Alberto Pettineo).

FIG. 13   Piazza Leonardo da Vinci, bike repair session and temporary uses during the Giocanda Festival (photo no. 13 by Ciclofficina Pavia, photo no.14 by Giocanda Festival).

FIG. 14   Piazza Leonardo da Vinci, bike repair session and temporary uses during the Giocanda Festival (photo no. 13 by Ciclofficina Pavia, photo no.14 by Giocanda Festival).

More interestingly, it occasionally hosts informal gatherings, as with the Festival Giocanda. The City Council did not support the 2019 edition and proposed moving it from the city centre streets to the institutional setting of the Visconteo Castle courtyard. However, the organisers preferred to maintain the spontaneous and informal nature of the festival, which is based on street games and gatherings. The Cupola became one of the main places identified by festival participants, who gathered and performed spontaneously in the arcade [Fig. 17–20].

FIG. 17   Picture of the Cupola Arnaboldi used as a temporary market. From Roberto Leydi, Bruno Pianta, Angelo Stella, *Pavia e il suo territorio* (Milano: Silvana Editoriale, 1990): 212

FIG. 18   Cupola Arnaboldi, an image from the national festival of grape, 1925 – 1945.
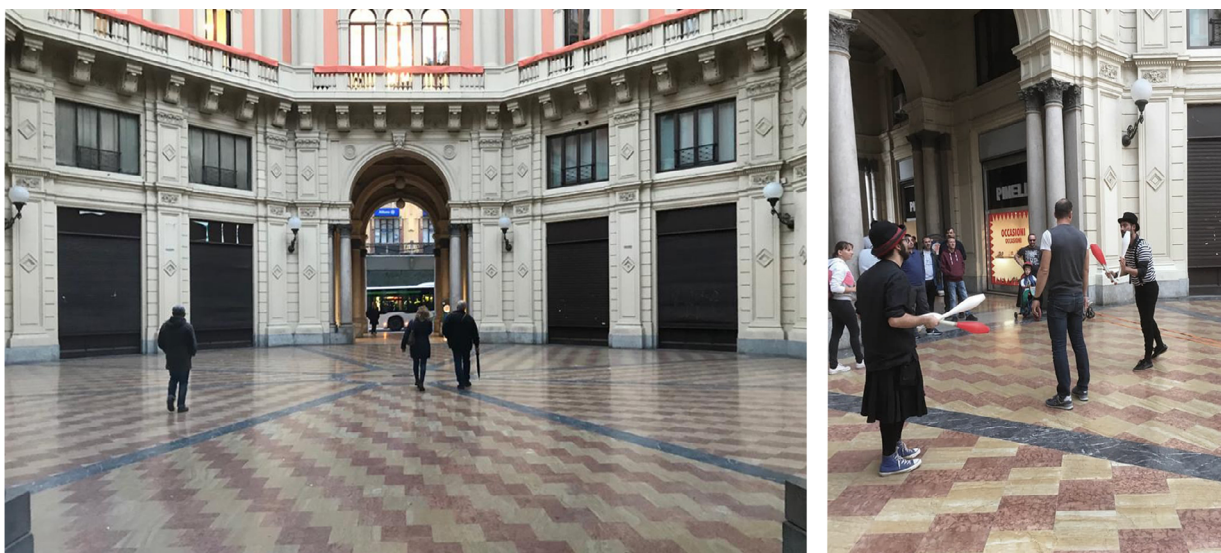Musei Civici di Pavia, fondo Fondo Guglielmo Chiolini.

FIG. 19-20   Current picture of the Cupola Arnaboldi, with most of the shops and spaces left
vacant. However, temporary uses and informal events still take place occasioan-
lly, as it has been during the Giocanda Festival in 2019, which was a not formally
authorised by the City Council (image 19 by the authors, image 20 by Giocanda
Festival).

Concluding remarks

The proposed methodology—a dynamic and iterative mapping process that reveals several different layers—aims to acknowledge spaces for their current and potential commoning practices and moved towards acknowledging an urban commons. The outcome took the form of a critical cartography that could support the development of bottom-up, economically viable and environmentally sustainable urban actions. A participatory event open to experts and the general public was organised to showcase and discuss preliminary findings,[38] following which the methodology was refined and adapted to fit a wider urban context.

By working towards the identification of a network of both tangible and intangible relationships, we present an open-ended tool that accommodates collaborative work and peer-to-peer processes. In fact, participation and bottom-up processes can be easily integrated. Moreover, the methodology is strongly interdisciplinary and can thus accommodate professionals from any number of disciplines who are seeking to find common ground.

The emerging counter-cartography of Pavia ultimately identifies places, spaces and buildings through matches with uses and social groups or communities. It ultimately aims to provide a foundation for creating future scenarios. In that respect, various hypotheses were then preliminarily explored in the form of design-oriented actions or proposals[39] that drew on relevant precedents, the regulation of urban commons in Pavia approved in June 2016 and participatory tools like crowdfunding or the participatory budget (bilancio partecipativo).[40]

The proposed mapping methodology is still in an experimental phase, but it has already proven to be relevant beyond the academic purposes of this study. In fact, the findings may prove to be useful to support public administrations in driving participatory and community-based projects based on more accurate matches between spatial features and socio-economic drivers. Moreover, the mapping shows the presence of various stakeholders that have multiple and complex links with one another. The mapping

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38. Preliminary findings were showcased during a participatory event included in the 2019 Sustainability Festival (Festival della Sostenibilità) that took place on May 17, 2019 and was hosted by the Department of Civil Engineering and Architecture of the University of Pavia.

39. Developed within the course Pavia: Urban Commons and Architectural Design (academic year 2018–2019). Professors: Dr. Ioanni del Sante, Dr. Serena Orlandi; Tutor: Andrea Vittorio Sellaro; Students: Taha Alorabi, Francesca Antoniacci, Anna Maria Apetrei, Giulia Bellani, Riccardo Bellati, Anita Beluffi, Leonardo Carannante, Francesca Carrara, Francesco Cavalloro, Melanie Cedeno, Karla Cruz, Chiara Cutarelli, Beatrice Dell'Orco, Maddalena Duse, Gianluca Forges, Francesca Fracazzini, Siria Franchini, Giovanni Giunta, Intissar Guizani, Carmine Isi, Alex Kanev, Osmancan Korkmak, Linda Migliavacca, Alberto Pettineo, Lorenzo Quaglini, Michela Riboni.

40. A practice related to the effective participation of the population in taking decisions in some areas of collective spending. See relevant experiences in Porto Alegre (Brazil), which is cited in Ioanni Delsante and Luciana Miron (2017). Citizens usually identify several requests that the city council undertakes to implement according to type and spending limits. It is usually an ongoing process on an annual basis that involves co-planning and financing projects that are selected by public vote.

may instigate additional research questions, such as how to manage potential conflicts among different actors or issues of replicability and the scalability of individual experiences.

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