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Nuancing student geographies: Studentscapes in post-industrial cities

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The article contributes to the debate that links student geographies with urban change. It has been argued that students reshape urban geographies through the creation of distinctive “student areas.” However, while the literature has substantially advanced our understanding of students’ role in urban change, it has often done so focusing on one specific component (e.g., accommodation or leisure) and one specific city or neighborhood. Therefore, we aim to nuance the debate over student geographies in cities. To this end, we use the “studentscapes” framework and propose a concurrent examination of students’ educational, residential, and leisure activities distributed in the urban space of Lodz, Poland, and Turin, Italy. We show that the presence of higher education students plays a role in the multifaceted and dynamic restructuring of Lodz and Turin as they transition from industrial to post-industrial economies. We also claim that the dichotomous distinction between “student” and “non-student” neighborhoods might miss the wide range of configurations of students’ activities in urban settings.

Keywords: Student geographies, Studentscapes, Post-industrial cities, Lodz, Turin.

Introduction

This contribution follows a line of articles and debates that link student geographies with urban change. In particular, we emphasize the connections between the varied forms of student geographies and urban restructuring processes (Smith, 2009), thus reflecting on students' impacts on cities' transformation.

Cities in which universities were established, whether centuries ago or in the recent past, have been profoundly impacted by student populations. It has been argued that students reshape urban geographies often by creating distinctive "student areas." However, while the contemporary literature has substantially advanced our understanding of students' role in urban change, we identify at least two knowledge gaps. Firstly, most of the available research in this area focuses on student accommodation issues, thus employing the framework of studentification (Collins, 2010; Calvo, 2018). This seems to limit our understanding of the ongoing student-influenced urban restructuring processes due to a variety of student geographies, where residential patterns are just a part of a broader set of students' spatialities. Secondly, observations made in the student geographies debate are often restricted to a particular city or even a single neighborhood (Nakazawa, 2017).

This paper addresses these two lacunae in the following ways. Firstly, to understand the complexity of student geographies, we turn to the notion of "studentscapes" conceptualized by Russo and Capel Tatjer (2007). In their contribution, student geographies of a city consist of "hardware" (i.e., classrooms and residences) and "software" elements (i.e., places of socialization). Therefore, this concept merges the areas of urban geographical research that focus on separate topics, such as geographies of student accommodation or student leisure. Using the studentscapes framework, we

look at student geographies in a three-component way, examining students' educational, residential, and leisure activities distribution in the urban space.

Secondly, we employ the evidence of such three-component student geographies gathering information among non-local students in Lodz, Poland, and Turin, Italy, two large and “archetypical” post-industrial cities regarding their national contexts. Nowadays, higher education institutions (HEIs) play a major role in their restructuring processes, and both cities host substantial student populations. Through a comparative perspective, this study allows us to look at the problem of student geographies in both cities. While they have many similarities, they also function in different economic, cultural, political, and physical contexts. Moreover, we deal with the entire scales of both cities, not limiting our observations to particular neighborhoods.

Our analysis starts from recognizing those spaces in which students learn, live, and socialize – and thus (co)produce urban space – and the extent to which these three geographical components overlap or remain separated. We then answer two questions: (1) Which conditions have shaped student geographies in both cities? (2) What do these geographies tell us about the broader trends that mark post-industrial urban restructuring in terms of higher education (HE) and leisure economy growth, and housing (re)commodification?

We begin by framing our study within the literature. We then explain our methodology for research on studentscapes in Lodz and Turin. Next, we turn to case studies presenting their three-component studentscapes. Finally, we discuss our cases in the light of the literature and provide methodological insights for researching student geographies in cities.

Framing student geographies

Post-industrial restructuring scenarios and the rise of a knowledge economy

Our contribution focuses on a specific city typology, i.e., post-industrial/post-Fordist city. Cities with an industrial, specifically manufacturing, past, have been widely analyzed to address and understand their transition towards a different specialization or a diversified economy, often within the framework of a renewed interest in the potential of the regional and local levels of government and governance (Logan and Molotch, 1987; Harvey, 1989; Amin, 1994). The whole policy arena was reconfigured, considering those economic transition processes, with a renewed role of public actors, among which we can count HEIs, and the emergence of private ones. This reconfiguration has been favored by the shift from a manufacturing economy to scenarios in which existing resources are commodified to support the transition towards a knowledge economy, e.g., specific competencies, skilled labor force, R&D facilities. The importance given to such resources has been crucial, both in the framework of the knowledge economy, and in the case of creative, leisure, or smart-oriented economies and cities (Florida, 2002; Hollands, 2008, 2015).

In this scenario, HEIs have often been normalized as entrepreneurs (Audretsch, 2014), with an important role given to them in general as a lever acting for the urban areas in which they are located. These leverage effects can be achieved by asking HEIs to play two main roles: as providers of skilled workforce and technological innovators, and as active actors in urban economic restructuring and regeneration processes. However, even if HEIs tend to be recognized as place-based actors, because of their characteristics of knowledge hubs and economic drivers, they also are involved in multiple scales as global players, not least for their capacity to attract students from

different countries, and their influence extends well beyond their immediate locale (Addie, Keil, and Olds, 2015). This tends to blur the actual potential of HEIs to support economic development and urban regeneration, thus making the need to better understand the urban and regional role of HEIs even more urgent.

The neoliberal turn of capitalist accumulation based on knowledge production is exemplified in cases that have promoted the idea of a successful transition from a grim industrial past to a bright research- and technology-driven present, e.g., Pittsburgh, USA, considered an important R&D center with a globally recognized university (Neumann, 2018). In such transition processes, one must consider the role of universities, and HEIs in general, as providers, suppliers, and creators of knowledge that can be immediately capitalized and translated in terms of economic development for the whole city. Post-Fordist cities that host university hubs can thus be seen as educational powerhouses and R&D magnets.

We can see this as a gradual process or as a mix of simultaneous actions, but in either case, we may recognize differences in how the actors are involved and the stakes each actor has. One important aspect to consider is the role of the public actor: if Smith (2009) highlighted state-induced strategies for HE systems, more recently we can witness processes in which the state is absent or has assumed a different role, whether at the central level of government or at the local, municipal one. This is the case of Turin, where universities have become relevant urban actors also because of the weakening of the traditional public ones. Turin's situation may be context-specific, within the Italian scenario (Ponzini and Santangelo, 2018), but we will also see how the state has played a different role in another context, that of Lodz. However, we should not focus only on the state or only on traditionally performing public actors. As we will see, while HEIs

play an entrepreneurial role and affect the city as a whole, other actors cannot be overlooked because of their role in implementing certain policies, as in the case of real estate investors, and/or because of the way they live through such policies, as in the case of students.

Students as an urban population

Knowledge-oriented socio-economic development goes hand in hand with a global widening in access to HE (Fuller 2005; Liu 2019). Calderon (2018) estimates that between 2000 and 2030, enrolments in HE will increase globally by 281%. The broadening of access has been a common policy and practice in European HE systems, and it will also be in an increasing number of countries in Africa, Asia, and Latin America. Broader access to HEIs has been identified as a factor that increases mobility, and students are moving across borders in greater numbers than ever before (Guri-Rosenblit, Šebková, and Teichler, 2007; Banks and Bhandari, 2012).

This does not pass unnoticed to the urban agendas oriented to capturing such mobility flows. The debate on high-skilled workforce and the attraction and retention strategies that cities adopt is strictly related to the knowledge economy paradigm (Moos, Revington, Wilkin, and Andrey, 2019; Russo and Arias Sans, 2009; Tan, Baum, and Horton, 2007). University students are “desirable migrants” (Raghuram, 2013) not just for the HEIs; they are also described as a part of the new creative class of cities (Wesselmann, 2019) and as future knowledge workers (Sokołowicz, 2019). However, the charming idea that students will move because of the effectiveness of such attraction strategies oversimplifies the mobility discourse (Lipura and Collins, 2020) because, in this prevailing narrative, the complexity of the student experience is partially missing.

Due to the common traits that students share – they are mostly young, becoming

highly skilled and mobile – and their specific needs and behaviors, students can be considered one of the mobile populations that also affect cities' social and ecological structure (Martinotti, 1996). What distinguishes Martinotti's four urban populations ("inhabitants," "commuters," "city users," and "businessmen") from students is that the latter seem to sum up some features of the established populations (van den Berg and Russo, 2004; Kotus, Rzeszewski, and Bajerski, 2018). Different types of student mobility, consumption patterns, and socio-economic characteristics set many ways to inhabit, commute or consume the city. Non-local students can be either commuters or long-stayers in the city. The student population that chooses to live in the city follows the concentration patterns through which they interact with other populations' public and private spaces. Some of these areas are, to a certain extent, lived in by "city users" and "businessmen" too, while others become recognizable as almost exclusively student areas. Consequently, the interpretation of students as a population allows us to look at them and their relationship with urban restructuring more comprehensively. What is relevant here is not the student population per se, but the specific geographies created by such a population.

Emerging student geographies

The main reason for students' presence in university cities is education. Therefore, student urban geographies are profoundly shaped by the location of HEI facilities, where students are expected to spend much of their time. Historically, HEI facilities in European cities were centrally located or in separate university towns (Brockliss, 2000; Wolaniuk, 2010). In the latter scenario, however, scholars and students lived culturally and physically separated from the rest of the urban population. This pattern was strengthened worldwide by the construction of modern university campuses (van den Berg and Russo, 2004), which often combined students' places of education and

residence. However, in the age of the knowledge economy, HEI facilities have sometimes expanded into new urban locations, becoming parts of technological districts, media hubs, and cultural quarters (Goddard and Vallance, 2013).

Students' residential geographies grabbed scholars' attention in recent years due to increased higher education enrollments and the consequent rise of buy-to-let landlordism, which focused on recommodifying housing stock for students' purposes due to the inadequate supply of public halls of residence (Chatterton, 2010). As evidenced worldwide, students have flocked to private housing in neighborhoods next to HEI campuses and facilities, occupying "what the housing market offers" (Garmendia, Coronado, and Ureña, 2012, p. 2664). However, some scholars emphasize that proximity to educational infrastructure is not necessarily a crucial feature for neighborhoods preferred by students. For instance, some prefer to live in amenity-rich city centers (Allinson, 2006) or in peripheral but cheaper neighborhoods (Sage, Smith, and Hubbard, 2012a).

A common concept used in studies that deal with student residential geographies is that of "studentification." This term, coined by Smith (2005), refers to the physical, cultural, social, and economic changes in neighborhoods that experience an inflow of students. This literature also shows that while studentification is a global phenomenon, it maintains a place-specific nature. Simply put, as housing and neighborhood typologies vary among cities, the residential patterns of students reflect their idiosyncrasies. For instance, in European cities, residential clusters of students have been identified in neighborhoods of terraced houses (e.g., Smith, 2005; Kinton, Smith, Harrison, and Culora, 2018) and in inner-cities (Fabula, Boros, Kovács, Horváth, and Pál, 2017; Garmendia, Coronado, and Ureña, 2012; Miessner, 2021), as well as in large housing estates (Murzyn-Kupisz and Szmytkowska, 2015; Kotus, Rzeszewski, and

Bajerski, 2018). Considerable attention has also been paid to PBSAs (Purpose Built Student Accommodation) constructed in different areas of university cities (Hubbard, 2009; Mulhearn and Franco, 2018). Therefore, due to the growing variety of off-campus student accommodation, Revington, Moos, and Henry (2020) suggest the term “urban dormitories” to describe students’ residential geographies in contemporary cities, referring to them as “all privately rented off-campus student housing within an urban region.”

Since students are a “lucrative, sizable, and dependable consumer population” (Chatterton, 2010, p. 511), university towns and cities have also experienced the emergence of the student urban service sector constituted by music clubs, pubs, and other consumption venues that serve mainly students. Such premises tend to cluster geographically near to HEI facilities (Chatterton, 2010; Grabkowska and Frankowski, 2016), in studentified neighborhoods (Munro and Livingston, 2012; Ackermann and Visser, 2016; Gu and Smith, 2020), or in city centers (Allinson, 2006; Murzyn-Kupisz and Szmytkowska, 2015; Calvo, 2018; Gant and Terry, 2017; Yu, Bryant, Messmer, Tsagronis, and Link, 2018). Moreover, the spatial distribution of the student urban service sector might take the form of pathways, along which students party (as in the “linear” night-time infrastructure described by Chatterton (1999)). Aside from that, the clustering of the student service sector might produce “playscapes,” which are urban areas for night-time entertainment (Chatterton and Hollands, 2002). In this vein, student entertainment geographies seem to be physical representations of urban restructuring processes with their roots in the rise of consumerism.

We identify two crucial notions regarding student geographies. First of all, university students are presented in the literature as a distinctive group compared to the rest of the urban population (Smith and Holt, 2007). It is not just a matter of students’

age or lifestyle, but also their distribution in urban space. In a binary view, university cities comprise student and non-student populations. Similarly, urban areas are dichotomously described as student or non-student areas (Sage et al., 2012a; Smith and Hubbard, 2014). Some scholars refer to the “town and gown” framework (Brockliss, 2000), while others report that in such cities, it is easy to identify a neighborhood, a street, or even a particular property of distinctive student attributes (Munro and Livingston, 2012). An argument that the areas of students’ residence or leisure are often exclusionary, therefore with a marginal presence of outsiders, is notable here (Chatterton, 1999; Smith, 2005). Nevertheless, not every city reflects clear demarcations of student and non-student areas (Wattis, 2013).

Secondly, student geographies are dynamic rather than static. The geographies of students’ education are the most time-resilient. Despite the massive investments in HEI facilities worldwide in recent decades, their locations within particular cities cannot be easily changed. By contrast, the geographies of student accommodation might change profoundly in a couple of years. Initially, the phenomenon was emphasized by the studentification literature, where attention was paid to the rapidity of neighborhoods being “taken over” by students (Sage, Smith, and Hubbard, 2012b) and its consequences (Smith, 2005; Allinson, 2006). However, more recent studies show that the previously “studentified” neighbourhoods might follow a pattern of “destudentification” in the same rapid way (Kinton, Smith, and Harrison, 2016).

The rise of student populations and the emergence of student geographies in cities are both inherent features of urban restructuring towards knowledge economies within the wider framework of neoliberal urbanism (Chatterton, 2010; Revington and August, 2020). However, despite a sizable literature, two methodological gaps need to be addressed. Firstly, most studies focus on student accommodation issues and therefore

employ the framework of studentification. This approach narrows our understanding of student-led urban restructuring to residential geographies (Calvo, 2018), while the variety of student spaces in cities stems from different sorts of student activities, not limited to the residence. Thus, although the studentification lens offers a useful perspective, it can narrow the general view on the role and place of students in urban transformations (Collins, 2010). Secondly, observations made in the student geographies debate are often restricted to single case studies of cities or particular neighborhoods (Nakazawa, 2017), and they come from traditional university towns rather than former manufacturing hubs that are transforming into academic centers. Therefore, comparative studies of student geographies in different locations remain a methodological and empirical challenge (Gu and Smith, 2020), although the first multi-city analyses have recently entered the student geography literature (Foote, 2017; Moos, Revington, Wilkin, and Andrey, 2019).

Methodology

In this study, we provide empirical evidence of the student geographies of Lodz and Turin. We have different perspectives regarding our experience within the two cities: we were all non-local students who attended an HEI, either in Lodz or Turin, we still live in the respective cities, two of us hold teaching positions in one of the cities' HEIs, while the other is a Ph.D. candidate. This position as insider-outsider in the two cities has been considered (Dwyer and Buckle, 2009), including both the personal and research-related knowledge that was already present at the beginning of our research.

To build on this knowledge, we decided to address the wider understanding of student geographies by turning to the notion of studentscapes ("student landscapes") conceptualized by Russo and Capel Tatjer (2007). They state that studentscapes are "the

spatial configuration of the interaction between students and their living and working environments” (Russo and Capel Tatjer, 2007, p. 1163). Such configurations involve three components: the places of students’ education, their residences, and places where they develop their social (leisure) activities. Thus, we find studentscapes a useful framework to study students’ urban geographies in a more complex way than was the case previously when student accommodation or leisure were analyzed separately. However, although the framework of studentscapes seems to be applicable to every city that hosts students, cities might vary remarkably by the type of studentscapes they develop. In brief, all of the three studentscape components can be concentrated in one area or, in contrast, they can be scattered across urban space and thus physically separated. Particular components can also spatially overlap in different configurations. Therefore, studentscapes seem to be city-specific because of the variety of factors in which they emerge and evolve over time.

With this in mind, the choice of Lodz and Turin was intentional since both cities share similarities that allow us to construct empirical evidence on student geographies. Firstly, both cities are of comparable size. Lodz, currently the third most populous city in Poland, was inhabited by 685,285 people in 2018 (Statistics Poland, <https://bdl.stat.gov.pl/>), while Turin, with 879,004 inhabitants, was ranked fourth in Italy at that time (Città di Torino, <http://www.comune.torino.it/>). Secondly, these cities are also the Polish and Italian “archetypes” of industrial cities, due to the importance of manufacturing for their development paths. Lodz was a hub of the textile and clothing industries, while Turin was a leading example of car manufacturing. The substantial deindustrialization of the 1980s and the 1990s led both cities towards economic decline, but it also started a long-term process of reinvention (Ponzini and Santangelo, 2018; Caruso, Pede, and Rossignolo, 2019; Zasina, Sokołowicz, and Nogalski, 2020).

The post-industrial change in Lodz and Turin is reflected by the remarkable growth of local HEIs. In Lodz, HEIs were established in the 1940s thanks to the post-war socialist modernization of the city (Zysiak, 2016), and fifty years later, their capacity was estimated at 20,000 students. However, the HEI entrepreneurial approach quickly surpassed this number, harnessing the Polish education boom of the 2000s by multiplying student enrollments. Between 2009 and 2018, the full-time student population in Lodz stabilized, and nowadays, the city hosts about 45,000 full-time students at its public HEIs (Statistics Poland, <https://bdl.stat.gov.pl/>).

In contrast, Turin has hosted a student population since its university opened in the 15th century. During the last decade, Italy's north-west HEIs have become crucial in leading the national enrolment growth. Between 2010 and 2015, no significant variations occurred in the number of students at Turin's public HEIs, while the Italian trend was dramatically negative. In recent years, the city's public HEIs have increased their enrollments, benefiting from massive student migration from southern regions. In 2018, the city was home to around 110,000 full-time students (OSSREG, <http://www.ossreg.piemonte.it>).

A common problem when researching student geographies is the lack of adequate data regarding the phenomena, which in some cases leads to approximations (Foote, 2017). Therefore, our analysis is based on original datasets that come from a purposely-designed survey conducted between March 2017 and February 2018 among full-time native Polish and Italian student populations in both cities. The students were surveyed directly at HEIs in Lodz and Turin using individual paper questionnaires. International students were omitted intentionally as they seem to create distinctive urban geographies (Calvo, 2018; Collins, 2010). In total, the survey included 1059 and 1042 students of all public HEIs in Lodz and Turin, respectively, who were sampled based on

their enrolment in individual HEI units and their education level. Therefore, the original datasets accurately reflected the structure of the student populations at the HEIs in both cities. In this light, the original datasets covered representative groups of Lodz and Turin students.

However, for this paper, we filtered the original datasets, applying the observations only to non-local students living without parents or legal guardians in Lodz or Turin, respectively. Our motivation was to focus on students who had the greatest degree of freedom in shaping their everyday geographies. A total of 457 Lodz students and 512 Turin students who met the criteria were included in our analysis. Table 1 shows the proportions of students in our datasets before and after applying the filter. The results in this paper are based on the filtered datasets.

[Table 1 near here]

Addressing the three-component complexity of studentscapes, we asked our respondents to provide three types of geographic data, namely their places of residence, educational activities, and social (leisure) activities. Regarding their accommodation and education, they were asked to name the intersecting streets closest to the buildings where they lived and to where they were taught, respectively. Regarding social activities, the students named the leisure venues they visited regularly (at least once per month) for each of the following categories: music and dance clubs (nightclubs), pubs and cafés, cultural venues, and sports venues. Our motivation in limiting the names given to the leisure venues categories they visited regularly was to avoid the possible bias from mapping places uncommon for the students or that they visited occasionally (e.g., once a year). Among all of the categories, our datasets showed that the most popular leisure venues among both sets of students are pubs and cafés (Zasina, 2020), despite the prior literature associations of student leisure with night-time entertainment

in clubs (Chatterton, 1999). Therefore, in our analysis, we chose the spatial distributions of pubs and cafés as a proxy of student leisure geographies, acknowledging, however, the potential of sport venues or nightclubs to expand the spatial extent and understanding of student leisure geographies.

Then, we manually assigned the data gathered from the students to geographical coordinates. First, we employed georeferenced data to create three types of heat maps. Each heat map represents one of three components of the Lodz and Turin studentscapes, respectively, namely the areas of the students' education, residence, and leisure. The heat maps (i.e., education maps, residence maps, and leisure maps) thus show the densities of students' activities across the two cities. Second, we combined these three separate maps into one for each city (studentscape maps), aiming to present and study the interrelationships between these three studentscape components. For the sake of readability, the final studentscape maps do not show observation densities; they simply exhibit the farthest spatial ranges of the particular student activity types. We ensured the comparability of the Lodz and Turin datasets and results by applying the same procedures of data sampling, gathering, filtering, analysis, and visualization.

Results

The studentscape in Lodz as an archipelago

A look into Lodz's studentscape requires a short introduction to the city's spatialities. Lodz developed primarily due to rapid 19th-century industrialization. Hence, its central layout is based on a utilitarian, manufacturing-oriented grid with a rather sparse street network along which numerous factories and tenements emerged. These components still define the image of Lodz's central neighborhoods. However, post-WWII, Lodz's boundaries were substantially expanded. The functionalist housing estates of high-rise

blocks, as well as industrial sites, were constructed in these newly incorporated peripheral areas. Therefore, contemporary Lodz's built environment consists of these two contrasting spatialities (Marciniczak and Sagan, 2011). Additionally, Lodz faced a dramatic and rapid shake-up due to the closure of its numerous state-run factories in the early 1990s with Poland's transition from a planned to a market economy. Thus, the vacated manufacturing sites defined much of the cityscape (even in the very center) during the first years of the economic transition, and they have gradually been repurposed (Zasina, Sokołowicz, and Nogalski, 2020).

As Lodz had not hosted an HEI until the 1940s, the city was not adequately equipped with HE-related infrastructure (Zysiak, 2016). The first wave of HE infrastructure development occurred due to the post-WWII socialist program to modernize the city. After initially adapting omnifarious buildings for educational purposes, the planning framework for HEI development was finally established. The second wave came with the educational boom of the 1990s and 2000s, during Poland's post-communist political and economic transformation (Danielewicz, 2010). Some of the newly established private HEIs harnessed the educational boom and entered the post-industrial areas to open their facilities. The public HEIs also expanded massively, finding financial support in EU funds. However, the investments generally continued the spatial pattern of HE facilities arranged by the socialist planning, which resulted in the densification of locations they already occupied. Each HEI followed its own logic of infrastructural development, mirroring the spontaneity of Lodz's transformation of that time. The geography of students' educational activities in today's Lodz reflects these processes.

[Figure 1 near here]

Our evidence shows that the educational component of the studentscape in Lodz

is divided into two large parts located on opposite sides of the city's urban core (Figure 1, Education Map). The highest concentration of students' educational activities is in the north-east part of the urban core, more precisely in the Radiostacja and Fabryczna neighborhoods. Some students attend university classes in HEI departments operating in 19th and early 20th-century buildings in Fabryczna, later repurposed for educational uses. However, the majority of students attend modern UŁ (Uniwersytet Łódzki) and UMed (Uniwersytet Medyczny w Łodzi) facilities in Radiostacja, a greenfield campus that has expanded since it was established in the 1960s (Wolaniuk, 2010). New constructions were also added to the campus in the 2000s in response to the HE boom. The second-largest concentration area of educational activities is within the PŁ (Politechnika Łódzka) campus, located to the south-west of the urban core in the Politechniczna neighborhood. Many PŁ facilities have been established on industrial sites since the 1950s (Muszyńska, Brzezińska-Kwaśny, and Glinkowska, 2008). Former factories were successfully transformed into teaching and research facilities, and new buildings have followed in recent years. In fact, establishing the PŁ campus in this location was one of the first examples of repurposing factory buildings into non-manufacturing uses in Lodz, taking place a few decades before the city's actual deindustrialization.

A look at the residential component of Lodz's studentscape reveals a very high concentration of student accommodation in Radiostacja (Figure 1, Residence Map). Its explanation is straightforward because the purposely designed Lumumbowo student estate was established in that area in the post-WWII period (Wolaniuk, 2010). This estate continues to operate, organized in numerous halls of residence run by Lodz's HEIs (mostly UŁ, but also PŁ and UMed). On a comparable basis, students reside in Politechniczna, where a few PŁ residences operate as well. Therefore, the residential

geographies of students in Lodz are still remarkably shaped by the public accommodation supply provided during the socialist modernization.

However, there are many other clusters of student accommodations in Lodz, and we associate them with private rentals. These clusters have been shaped more recently due to HE growth and the constrained supply of public student accommodation. According to our analysis, students rent private accommodation in the central or semi-central neighborhoods or in areas offering proximity to HEI facilities (e.g., Centrum, Fabryczna, Politechniczna, Radiostacja, Stare Polesie). Nevertheless, we also find clusters of private student accommodation in Lodz in the cheaper and somewhat peripheral neighborhoods, within which the existing housing stock is being recommodified for students' purposes. Popular locations include the large modernist housing estates constructed in the socialist period (e.g., Dąbrowa, Marysin-Doły, Nowe Rokicie, Zarzew), which are not deprived, as often happens in their Western-European counterparts (Szafrńska, 2014). However, the 19th-century neighborhoods that are deprived (e.g., Fabryczna-Widzew, Stare Bałuty, Stare Miasto) are also in demand. These two neighborhood types, which were once mostly home to the working class, are nowadays teeming with students. They are relatively remote and inexpensive but conveniently connected by public transportation with HEI facilities.

Finally, the leisure component of Lodz studentscape is the least dispersed across the city because students' leisure occurs almost exclusively in Centrum, along Ulica Piotrkowska, Lodz's main street (Figure 1, Leisure Map), mostly in its northern semi-pedestrianized course. It is an intriguing finding when we consider the historical traits of the city and its recent restructuring. Ulica Piotrkowska is the historical axis of Lodz and its most important public space, a "linear" central business district, along which the most elegant buildings used to house commercial and civic activities. However, the

street changed its face in the last two decades, with many of its shops and boutiques moving to the newly established shopping malls. After the mid-2000s decline, Ulica Piotrkowska regenerated through a transformation into a leisure area hosting restaurants, bars, pubs, cafés, and music clubs, once again becoming a popular area among Lodz's citizens and tourists. Our analysis shows that students' leisure plays an integral role in this restructuring. Additionally, but on a much smaller scale, we identify students' leisure activities also in the Politechniczna neighborhood, next to the PŁ campus.

We can thus conclude that particular student activities are often scattered across Lodz. Therefore, the city's studentscape resembles an "archipelago" that consists of islands used by students for education, residence, or leisure purposes alone (Figure 1, Studentscape Map). However, the fact that these three components of Lodz's studentscape rarely overlap raises further questions. Firstly, how does it affect the students' daily routines? They seem to spend limited time in particular neighborhoods because they have to move between them to undertake different activities. Thus, they, perhaps, live constantly on the move. If so, what consequences does it bring to how Lodz functions as a student city? On the one hand, it might reduce potential social conflicts between students and the rest of the Lodz population. Since students do not stay twenty-four hours a day in a single neighborhood, they are not wholly "exposed" to being appreciated or blamed for any particular behavior. On the other hand, such geographical patterns make it difficult to define a distinct student neighborhood in Lodz. Therefore, the current nature of Lodz's studentscape might limit its perception as a student city. However, these issues seem not to have been addressed and could constitute an interesting area for future research.

The sprawling studentscape of Turin

Turin is a former capital city of Roman origins that owes much of its current cityscape to the formidable industrialization process, thanks to which it was known for a large part of the 20th century as the Italian “one-company town.” Post-WWII, the city experienced an economic boom, mainly driven by car manufacturing industries (FIAT above all), which led to a doubling of the city population, as well as its built-up areas. In the last decades of the 20th century, however, the deindustrialization process started, and although several industrial sites were progressively reconverted, there are still many brownfields waiting for reuse (Picchierri and Pacetti, 2016). The city’s restructuring process started with the 1995 comprehensive plan to provide a new interpretation of the urban structure. The city’s spatial development would be based on three axes (Ponzini and Santangelo, 2018). The main axis, known as the “Central Backbone”, was the result of relocating the railway tracks. It occupied a large proportion of the city’s brownfield sites, and it also became one of the main attractors for HEI interests and investments.

Turin’s university tradition dates back to the early 15th century, when UniTo (Università degli Studi di Torino) settled in the historical core of the city (Centro). PoliTo (Politecnico di Torino), in contrast, was established in 1859 as the Royal School for Applied Engineering, in the San Salvario neighborhood, to the south of the city center. The HEIs evolved together with the city, following a scattered pattern that mostly depended on the availability of empty buildings and areas within the dense urban fabric.

In 2000, the first of three strategic plans of the city (the next were published in 2006 and 2015) outlined the urban policy agenda, which recognized the key role of HEIs in the desired urban development of Turin (Belligni and Ravazzi, 2012;

Mangione, 2019). The increase in student population, pulled by non-locals, together with the strategic objective of a knowledge-oriented reconversion made Turin's HEIs one of the most powerful actors of the urban "coalition." They became driving forces in revitalizing areas of the city in partnership with local actors, such as philanthropic foundations and companies. More recently, due to a lack of public funds and local strategic and urban planning, the HEIs have started to create their own urban development plans.

[Figure 2 near here]

The current distribution of students' educational activities in Turin follows a spatial concentration in three main areas (Figure 2, Education Map). The largest concentration is around the PoliTo campus, located along the Central Backbone and close to the new railway station of Porta Susa. Post-WWII, PoliTo moved its headquarters there from its historical site, while in the early 2000s, the campus area doubled by incorporating and repurposing the former railway yard. Close to the new academic buildings are various companies, start-up incubators, cultural centers, and student facilities.

The second area in terms of the density of educational activities is situated between the Centro and Vanchiglia neighborhoods (the latter, a former working-class neighborhood, is the newest trendy area for Turin's nightlife). That area brings together mostly students of UniTo and AA (Accademia Albertina di Belle Arti di Torino) as Turin's oldest university buildings are located along and in proximity to the historic axis of Via Po. The UniTo facilities have recently expanded further east, through Vanchiglia. The Campus Luigi Einaudi, built in 2012 on a former industrial site, has helped establish the image of Vanchiglia as a student area. Within the educational component of studentscapes in Turin, a third area of concentration emerges, i.e., San Salvario, to

the south of the city center. Close to the former main railway station (Porta Nuova), it is known as a multicultural neighborhood and where nightlife is concentrated.

The residential component of Turin's studentscape is, by contrast, mostly dispersed (Figure 2, Residence Map) since only a limited number of students can be hosted in public residences operated by the regional authority (EDISU). Most students tend to share rented private accommodation, also because of the widespread availability of such types of apartments in the city. Again, the area around PoliTo's main campus is denser on the map. In fact, the areas where HEIs are located also seem to be attractive for student accommodation. This is particularly true for the Vanchiglia and San Salvario neighborhoods. However, the residential component extends much further, beyond the zones of the HEI influence. The residential pattern seems to follow the Central Backbone, with the relevant concentration of students renting accommodation in residential neighborhoods that are well connected with other parts of the city via public transport, especially in areas located along the metro and railway lines. More generally, students in Turin live predominantly in the central and semi-central residential neighborhoods. On the other hand, an increase in PBSAs is expected and could potentially reshape the residential studentscape in the near future (Mangione, 2019).

The leisure and residential components of Turin's studentscape overlap (Figure 2, Leisure Map), which can be partly associated with the location of education facilities. It overlaps with the distribution of the city playscapes with the highest density of nightclubs (Crivello, 2011). Two main concentrations of popular pubs and cafés emerged. The first is close to the Porta Nuova railway station, between Centro and San Salvario neighborhoods; the second is in the student neighborhood of Vanchiglia, where, as described earlier, students currently tend to live and attend classes. The leisure component of the studentscape and the landscape of leisure activities correspond

to what is popular with locals and tourists in Turin.

More generally, students' geographical patterns in Turin seem to be related to the locations of HEI facilities rather than with any other spatial feature. In fact, the concentration patterns are related to the different location strategies of the two main HEIs: PoliTo is mainly concentrated around two poles (along the Central Backbone and in San Salvario), while UniTo has followed a more polycentric approach, with educational facilities located both within the city center and in the surrounding municipalities.

Students in Turin usually live in neighborhoods with a densely built-up urban fabric that are often characterized by relatively high rental prices, e.g., in the Centro and Crocetta neighborhoods (the latter is where the main PoliTo campus is located). On the other hand, fewer students live in peripheral or cheaper areas. Like the spatial distribution of Turin's playscapes observed by Crivello (2011), this pattern suggests a potential perpetuation of a center-periphery gap, also in the context of student geographies.

If we concentrate on the areas where the three components overlap most, we can see that they are the same as where conflicts between the student and non-student populations have recently been observed. In particular, two neighborhoods close to HEI facilities, Vanchiglia and San Salvario, are also popular areas where students occupy what the housing market offers. Nightlife and housing are the two areas where students have had the most visible negative impacts. The unregulated expansion of the youth and student playscape led to the formation of several committees of local, non-student residents. They blame the young population for the degradation of public spaces and night noise. Furthermore, preliminary evidence (Mangione, 2019) suggests a possible

student impact on housing rent growth, where short-term renting a single room to a student has become more profitable than the traditional pattern of long-term renting an entire apartment to a family. However, despite the intense and protracted local debate (in local newspapers and unsuccessful city council deliberations), few local scholars have approached these issues; thus, it remains a relevant topic for further research.

In conclusion, while Turin's studentscape is particularly visible, it blends with the neighborhoods within – or close to – the historical center. At the same time, however, students' presence can be seen “sprawling” within the wider urban area.

Discussion

Our evidence shows that the studentscapes of Lodz and Turin refer to different spatial configurations. The studentscape in Lodz can be described as a patchwork of neighborhoods that usually host one student activity, mixing them all only in limited cases. It contrasts with the studentscape of Turin, where the students' residential geographies span almost the entire inner-city area, and where educational, leisure, and residential geographies overlap in some neighborhoods. On the one hand, the studentscapes of both cities reflect broader economic and social changes, as with the global phenomenon of HE growth. On the other hand, the differences between the two studentscapes might be associated with their past, their idiosyncratic built environments, municipal planning (or lack thereof), and HEI investment approaches. Therefore, we discuss here both studentscapes through two problems introduced in the theoretical background, namely the dynamics of such geographical configurations and their distinctive student nature.

Studentscapes in the making

HEIs, whose facilities define the studentscapes' educational component, are the central agency in shaping student geographies in Lodz and Turin. The post-industrial transition that both cities have experienced has also been marked by the substantial enlargement of HEI infrastructure due to the rising demand for HE. Despite the contextual differences, it is clear that the remarkable inflow of students to Lodz and Turin has been one of the reasons to reuse industrial brownfields for HE purposes. Many formerly abandoned but centrally located post-industrial "urban voids" now successfully host students' educational activities, and they are the leading examples of how urban geographies might be restructured through students' presence.

As we have seen, a large share of the literature on students as actors of urban restructuring focuses on their residential geographies because of the rise in properties rented by students and the consequent studentification (Nakazawa, 2017). In this respect, although Lodz and Turin differ in terms of providing public student accommodation, our datasets show that student populations in both cities usually occupy off-campus private accommodation. The point is that the rise of student enrollments has not been matched by the strategic development of public halls of residence (Mangione, 2019; Zasina, 2017), as seen in other university cities worldwide. As a result, many neighborhoods in Lodz and Turin have almost completely accommodated the student populations within the existing housing stock, recommodified for their needs in often unplanned and unregulated ways. The student residential geographies in Lodz and Turin resemble "urban dormitories" that span each city (Revington, Moos, and Henry, 2020), even if they have different spatial models. The current stage of student-induced restructuring in Lodz and Turin is similar to those student cities whose housing markets are being transformed due to the emerging buy-to-

let landlordism (Hochstenbach, Wind, and Arundel, n.d.), with a still marginal role of PBSAs in meeting the student accommodation demand.

Although Lodz and Turin differ in terms of urban morphologies, our evidence shows that students in both cities live in neighborhoods with multifamily housing. In Turin, they are the historic or modern tenements in the central or semi-central neighborhoods. Although such neighborhoods in Lodz are also popular among students, the residential component of its studentscape exhibits post-socialist attributes (Szmytkowska and Murzyn-Kupisz, 2015). More precisely, students often rent accommodation in the large, prefabricated housing estates of the post-WWII period. Considered in this light, the residential components of Lodz and Turin's studentscapes generally follow the pattern of continental Europe, marked by students living in multifamily, 'vertical' housing (Fabula, Boros, Kovács, Horváth, and Pál, 2017; Garmendia, Coronado, and Ureña, 2012; Miessner, 2021) rather than the archetypical British pattern of occupying terraced, 'horizontal' housing.

Finally, the presence of students in cities worldwide is often associated with urban restructuring through the emergence of leisure time industries. Our evidence, although limited to pubs and cafés, demonstrates that leisure components in Lodz and Turin's studentscapes take a form similar to the so-called urban playscapes. Although they are typical of the central areas of these cities, they have different characteristics. In Lodz, students go out predominantly along Ulica Piotrkowska and the surrounding blocks. The student population and its demand for leisure services play a part in the consumption-led transformation of the city center. In Turin, however, students' leisure activities take place not only in Centro, but they also remarkably extend beyond it to the surrounding neighborhoods, which are showing signs of regeneration in terms of nightlife and leisure activities.

Drawing upon these findings, students have not been directly responsible for much of the restructuring. Although they themselves have not invested in the educational facilities, nor are they the landlords or owners of leisure venues, their increasing presence has induced many of the current changes that we have described.

“Student” and “non-student” labeling: A persisting dilemma

Numerous studies have claimed that HE students intensely concentrate in urban space, creating distinct student areas. However, our analysis suggests that labeling particular urban neighborhoods as student or non-student should be exercised with caution as it might lead to oversimplification. This view comes directly from our evidence that student activities span many neighborhoods in Lodz and Turin. We have also shown that different neighborhoods, to varying degrees, are home to the three types of student activities, namely educational, residential, and leisure, although few neighborhoods combine more than one of these activities. In light of this evidence, one could define a student neighborhood as one that combines all three. In contrast, a non-student neighborhood could be described as one that does not have any of them. Therefore, we claim that a dichotomous distinction between student and non-student neighborhoods might miss the wide range of configurations of student activities. Following this line of reasoning, perceiving student geographies as a continuum between student and non-student extremes is a more comprehensive research practice.

Finally, the trouble with labeling particular neighborhoods as student ones refers not just to the intensities and configurations of the particular student activities within them. It also refers to everyone else, besides the students, who lives, works, or spends time there. As Moos, Revington, Wilkin, and Andrey (2019) show, neighborhoods that are popular among students are also inhabited by other urbanites, such as “youthifiers”

or gentrifiers. Indeed, the neighborhoods in Lodz and Turin that are used for educational, residential, and leisure purposes are home to more than just students. Neighborhood-sharing occurs most clearly in Lodz's Centrum or Turin's Centro, San Salvario, and Vanchiglia districts. These central neighborhoods constitute the students' main residential and leisure geographies in both cities, although, in Turin, they also include the educational aspect. They are also popular for entertainment among the youth and tourists alike because of the clustering of landmarks, leisure venues, hotels, or short-term rental apartments.

Furthermore, some of these neighborhoods in Turin are popular places for immigrants to settle, making this case somewhat similar to the patterns identified by Foote (2017) in US college towns, where students inhabit racially diversified neighborhoods. Consequently, these neighborhoods from Lodz and Turin cannot be described as homogeneously student areas. With this in mind, students should be perceived as one of the several young or mobile urban groups whose presence contributes to shaping the social geographies of contemporary cities.

Conclusion

In this paper, using original datasets on student geographies in Lodz and Turin, we discussed how these two post-industrial cities are being reshaped thanks to the recent expansion of the HE system and the consequent inflow of students. More precisely, we investigated the spatial distribution of students' educational, residential, and leisure activities in these cities using the studentscapes framework, and interpreted them in relation to urban restructuring.

Our cases and findings add several nuances to the globally emerging literature on the role of students in the ongoing neoliberal urban restructuring that has been driven

by the rise in the knowledge economy. First, we revealed how student geographies play out in the urban contexts that were neglected in the prior literature on students as actors of urban change. We chose two relatively large cities from Central-Eastern and Southern Europe, respectively, which have not been described as traditional university towns due to their historical dependence on industry. Our evidence demonstrated that the presence of students might be an opportunity for post-industrial transformation. Moreover, it showed that students looking for accommodation in Lodz and Turin enter a wide range of multifamily housing neighborhoods, including ones relatively far from the educational facilities. The comparative approach led us to conclude that these cities share some common phenomena of student cities worldwide described in the literature, such as demand-driven recommodification of the private housing stock for students' residential needs and the creation of urban playscapes for their leisure needs. Furthermore, we emphasized the dynamic nature of the student-influenced urban restructuring in Lodz and Turin, as we found many of the forces behind them to be relatively recent.

Secondly, this paper has shown the value of looking beyond analyzing the educational, residential, or leisure student geographies in contemporary cities separately, which was often employed in previous studies. Our three-component approach to Lodz and Turin's studentscapes revealed that few neighborhoods in either city host all these student activities simultaneously. This phenomenon might hold true for university cities elsewhere that host multiple HEIs (Russo and Capel Tatjer, 2007), as well as for post-industrial cities that are now transforming into academic centers but have not yet shaped neighborhoods with a distinctive student atmosphere (Wattis, 2013). However, our evidence also shows that particular neighborhoods might experience a student-influenced restructuring in different ways, and labeling particular

neighborhoods as student or non-student areas should be exercised with caution in the debate over students' role in urban change. Therefore, urban studies need to consider how various facets of student geographies coincide because their boundaries are indeed fuzzy.

Our findings could be widened through methodological enrichments in future research. First of all, wider recognition of the temporalities of student geographies could be considered to reveal how much time students stay in different typologies of educational, residential, and leisure places and how often they move between them. To this end, the investigation of the “flows” between studentscape components addressed by Russo and Capel Tatjer (2007) would be put into research practice. Secondly, future analyses could examine youth, but non-student geographies (e.g., those of young graduates or non-graduates) in a similar way to our approach to researching studentscapes and then compare them. This would allow a better understanding of the youth geographies in cities, and in particular, the extent to which student geographies are distinctive or overlap with the ones of other young urbanites. Thirdly, as the studentification literature shows, the presence of students in urban space can remarkably affect the daily experiences of both students and non-students. Thus, adding both groups' perceptual insights into the mapping of studentscapes seems reasonable.

By way of a postscript, we see the need to address the COVID-19 pandemic issue. In its initial phase, the pandemic was expected to have a tremendous impact on urban economies and geographies (Batty, 2020). Gabriels and Benke-Åberg (2020) have already outlined the trend for students to return home, together with the overall disruptive effect on their mobility. However, as the pandemic continues, assessing its long-term effects remains difficult. It now seems that many of the potential transformations will depend on the duration of the pandemic (Florida, Rodríguez-Pose,

and Storper, n.d.). Therefore, future research should strive to examine the issues we covered in this paper and, in consequence, gauge the resilience of student-induced urban restructuring in the pandemic context, concerning the roles that both domestic and international students play in this process.

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Table 1. Structure of the sample

	Lodz		Turin	
	Original dataset	Filtered dataset	Original dataset	Filtered dataset
Size	1059	457	1042	512
Students by HEI*	54.4% UŁ 24.4% PŁ 16.2% UMed 1.9% ASP 1.7% AM 1.4% PWSFTviT	55.4% UŁ 19.5% PŁ 19.7% UMed 2.0% ASP 1.5% AM 2.0% PWSFTviT	61.1% UniTo 37.5% PoliTo 1.5% AA	47.1% UniTo 52.1% PoliTo 0.8% AA
Students by level of education*	55.6% undergraduate ¹ 44.4% graduate ²	59.5% undergraduate ¹ 40.5% graduate ²	66.9% undergraduate ¹ 33.1% graduate ²	58.6% undergraduate ¹ 41.4% graduate ²
Students by domicile	33.8% local ³ 66.2% non-local ⁴	0.00% local ³ 100.0% non-local ⁴	24.0% local ³ 76.0% non-local ⁴	0.00% local ³ 100.0% non-local ⁴
Students by residence	76.8% residents ⁵ 23.2% commuters ⁶	100.0% residents ⁵ 0.00% commuters ⁶	72.9% residents ⁵ 27.1% commuters ⁶	100.0% residents ⁵ 0.00% commuters ⁶

Notes: * Variables controlled in the sampling procedure; ¹ Students studying for a bachelor's degree or equivalent in the Bologna system; ² Students studying for a master's degree or equivalent in the Bologna system; ³ Students living in the city before entering HE; ⁴ Students not living in the city before entering HE; ⁵ Students living in the city permanently or temporarily; ⁶ Students commuting to the city.

HEI abbreviations: AA - Accademia Albertina di Belle Arti di Torino, AM - Akademia Muzyczna w Łodzi, ASP - Akademia Sztuk Pięknych w Łodzi, PŁ - Politechnika Łódzka, PoliTo - Politecnico di Torino, PWSFTviT - Szkoła Filmowa w Łodzi, UŁ - Uniwersytet Łódzki, UMed - Uniwersytet Medyczny w Łodzi, UniTo - Università degli Studi di Torino.

Figure 1. The studentscape of Lodz.

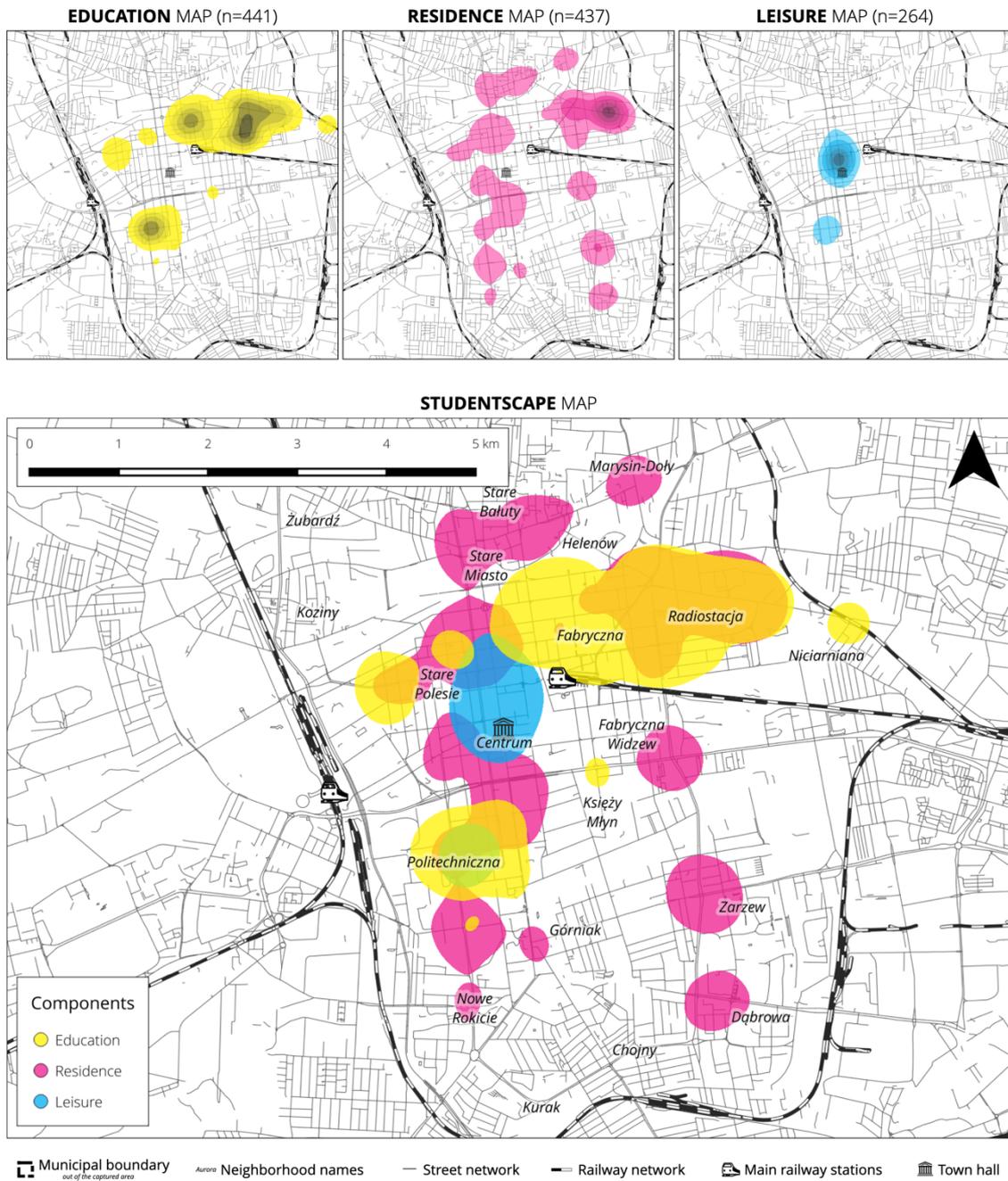


Figure 2. The studentscape of Turin.

