Social and Spatial Inequalities: mapping youth conditions and spatial practices in an Italian neighborhood

Marco Ingrassia ^a* ⓘ, Davide Leone ^b

^a University of Enna "Kore", Enna, Italy

^b U'Game, Palermo, Italy

Abstract

The relationship between social inequalities and territorial dimensions is characterized by phenomena of interconnection, interdependence, and co-evolution: spatial factors play a decisive role in producing conditions of social marginalization and go beyond mere allocative factors, intertwining with the ways people inhabit private and public spaces. Conditions of marginalization can also be linked to a subordinate role of actors in the processes of representation and identity construction, and they are particularly significant for the adolescent and preadolescent population.

This contribution describes an action research activity focusing on territorial dynamics and spatial practices related to the adolescent and preadolescent population (11-17 years old) residing in an area of the city of Palermo characterized by socio-economic distress and educational poverty. The study (i) analyzes lifestyles, forms of inhabiting, and social practices in relation to public space, semi-public space, and proximity services, as well as flows; (ii) investigates the role of spatial factors in perpetuating or overcoming conditions of marginalization; and (iii) identifies ongoing processes and transformations at the local scale and in relation to the broader urban and metropolitan context. The research combines the analysis of quantitative and qualitative data, collected through an innovative methodology that integrates morphological analysis and gamified participatory exploration to support participant observation and unstructured interviews. The research results are presented through thematic maps, both to make the complexity of the results accessible to the broad audience of territorial actors involved in future actions and to support a new participatory representation of the territory.

The findings show a close connection between social and spatial inequalities and their capacity to influence the perpetuation of marginalization conditions. Nevertheless, there is evidence of grassroots advocacy by the engaged youth through practices of appropriation and placemaking. The research provides reflections on methodological tools and a complex reading of the territory capable of supporting future regeneration actions.

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* Corresponding author. Marco Ingrassia. E-mail: *marco.ingrassia@unikore.it*.

1.Introduction

The relationship between social inequalities and territorial dimensions is characterized by phenomena of interconnection, interdependence, and co-evolution. If the spatial articulation of cities is the result of complex dynamics that include processes of exclusion and differentiation (Secchi, 2013), spatial dynamics and relationships are decisive in generating marginality, intergenerational reproduction of disadvantageous conditions, and stigmatization (Mela and Toldo, 2019).

The spatial factors determining the production of conditions of social marginality are multiple and extend beyond the relative location to the urban system. Limited approaches to the concept of *periphery*, corresponding to conditions of distance from the city center or the presence of physical boundaries, have finally been overcome, extending the concept to the description of territories which can be proximate to central areas, but are characterized by social and political marginality. Among the determinants of social inequalities, spatial factors of various types can be encompassed, including (i) the density and quality of public space, (ii) the presence and accessibility of territorial services, (iii) the multifunctionality of territories and the accessibility of spaces for social interaction, (iv) the variety of settled communities, also describable with the concept of *cultural biodiversity* promoted by UNESCO (2011), understood both as the recognition of local specificities of settled communities, and as the presence of different groups and communities that allow individuals to relate to communities different from their own, avoiding closed or endogamous communities; (v) inclusion in urban flows; (vi) inclusion in transformation processes determined by urban policies.

The city represents the outcome of a process of physical and social stratification, capable of promoting specific forms of inhabitation and relationality, enduring over time. In this sense, it educates citizens to citizenship, according to specific and local forms (Lefebvre, 1974). From this perspective, the study of urban morphology is a fundamental element to analyze behaviors, habits, and representations by citizens. As stated by Urbani (2003) the analysis of urban form and its stratification through socio-spatial practices can support a deeper understanding of society.

Conditions of marginality can also be linked to a subordinate role in the processes of representation and construction of identity. When the narration and representation of the territory are carried out by external subjects, they can determine processes of stigmatization that perpetuate existing power dynamics and are unable to recognize and convey values, qualities, and ongoing innovation processes (Forester, 1982).

Methodologies of participant observation and ethnography- or sociography - can therefore be strengthened by participatory strategies, actively involving local actors. On one hand, these strategies provide information and construct a more accurate imagery, aligned with the perceptions and values of the communities, and on the other hand can promote emancipatory processes capable of restoring an active role to social actors.

Community mapping practices have proven particularly effective in promoting participatory processes of analysis and representation of the territory. According to Banini

(2011), these practices simultaneously serve as a tool for future territorial actions and projects and as an achievement capable of promoting processes of collective meaning-making and the construction of imagery and identities through cartographic representation. The identity function of cartographic representation can, therefore, be crucial in building urban identity where it is fragile and x.

Both phenomena described so far, both spatial inequalities and the subordinate role in constructing the imaginary, are particularly relevant in relation to the age range of preadolescence (11-13) and adolescence (14-18). As observed by Palmonari (2001), this is indeed the age at which the individual defines and confronts themselves in relation to the environment and groups of which they are a member, as well as with the transformation of their representations of the world.

Moreover, the forms of inhabiting urban space vary in relation to the process of growth and contribute to the construction of the self. Antonelli (2021) observes that in preadolescence, individuals predominantly move within the neighborhood context, attending lower secondary school, and inhabiting familiar and identity-rich public spaces populated by non-strangers—such as peers, family members, shopkeepers, educators. In adolescence, the transition to upper secondary school, selected based on individual preferences and perspectives, not solely on proximity factors, encourages the exploration of urban space beyond the neighborhood. This transition also leads to encounters with diverse groups and communities.

In contexts characterized by conditions of marginality and social and cultural homogeneity, this can lead to conditions of self-imposed physical and cultural isolation, reinforced by school dropout: *"Almost self-relegated to the neighborhood, male adolescents develop a heroic narrative of themselves, accentuating, in the way they experience the places in their neighborhood, those elements drawn from street culture that they consider carriers of winning models of masculinity"* (Antonelli, 2021: p.27). Therefore, urban space plays a crucial role in educational and growth processes, both in promoting lifestyles and access to different cultural models, and in facilitating the exercise of rights through access to quality services and public spaces. This is even more significant in an age where dependence on the family nucleus is such that it does not guarantee other individual forms of exercising or asserting rights.

This contribution describes methodology and results of a research-action activity focusing on territorial dynamics and spatial practices in relation to the adolescent and preadolescent population (11-17) residing in an area of the city of Palermo characterized by socio-economic distress and educational poverty - the Zisa, Noce, and Danisinni neighborhood. The study (i) analyzes lifestyles, forms of inhabiting, and social practices in relation to public space and relational spaces, (ii) investigates the role of spatial factors in perpetuating or overcoming conditions of marginality, and (iii) simultaneously identifies ongoing processes and transformations at the local scale and in relation to the broader urban and metropolitan context. Research utilized a complex methodological approach that combines quantitative and qualitative analysis, participant observation, and participatory methodologies. The research output is presented through a set of maps and analytical sheets.

The research was carried out by a multidisciplinary team composed of urban planners, sociologists, psychologists, and educators. It represents the preliminary phase for the development of a broader social innovation project called "Traiettorie Urbane," aimed

at combating educational poverty. In this perspective, the research and mapping activities served as tools for understanding the territory and engaging local actors. They also supported subsequent activities for young people (11-17), including: supporting the creation of networks among local actors, participatory design, and *placemaking* in public spaces through games and sports, as well as promoting artistic languages among young people - such as street art, music and video production, and radio - as a means of expression.

2. The context of the Research

The analyzed territory is situated in a central position within the city of Palermo, immediately west of the walled city and its 19th-century expansion. It consists of three ancient peri-urban hamlets named Zisa, Noce, and Danisinni. Over the course of the 20th century, these neighborhoods were incorporated into the urban fabric through processes of speculative and unregulated building densification. The approximately 150-hectare territory features a wide variety of building and urban structures, resulting from layered growth. It combines neighborhood buildings, informal constructions, multi-story buildings, major road infrastructures, and informal small-scale paths. The area includes green spaces associated with suburban vacation buildings and undeveloped areas earmarked for transformation. Additionally, it houses historical and monumental buildings of international significance.

The complex evolution of the territory is accompanied by complex social dynamics and transformations. Starting from the Second World War, there has been a gradual settlement of communities and groups of different origins alongside the historically established population in the agricultural hamlets (Pedone, 2019). This includes the small bourgeoisie from the provinces who moved to Palermo due to its administrative capital status, families displaced from the historic center following the bombings of World War II, and sub-proletariat in conditions of economic and social distress.

Today, this territory exhibits conditions of socio-economic distress, encompassing economic, housing, energy, and educational poverty, with a high rate of school dropout. Additionally, there are deviance phenomena linked to the territorial rooting of organized crime. However, these phenomena are not uniformly observable across the territory due to its complex stratification and historical evolution. Disadvantaged conditions associate and catalyze according to intricate territorial dynamics, juxtaposing areas characterized by average socio-economic condition. The territorial complexity is further accentuated by the presence of two international monumental landmarks, attracting both the local population of Palermo and tourists: the Zisa Palace, part of the "Arab-Norman Palermo and the Cathedral Churches of Cefalù and Monreale" UNESCO World Heritage Site, and the "Cantieri Culturali alla Zisa", an industrial archaeology site covering over 5 hectares, now converted into a cultural and artistic center managed by various public, private, and third-sector actors.The context of the city of Palermo is characterized by low administrative capacity and a general lack of public resources for local social, welfare, cultural, and sports services, leading to the perpetuation of socio-economic distress. However, there is a general vitality of the third sector in the Palermo context, with numerous non-profit entities and private associations with civic, solidarity, and social utility purposes. This sector has a particularly rooted presence in the Zisa, Noce, and Danisinni territories.

3. Research Questions, dimensions and territorial domains analysed

The conditions of stratification and complexity in the examined territory demanded the development of an equally complex methodological framework capable of supporting the analytical process and simultaneously providing shared narratives and representations. The research does not aim to provide a comprehensive reading of the territory but rather seeks to identify emerging themes and offer a different perspective that will be integrated into future design practices.

The research thus analyzes the social and spatial dynamics related to the preadolescent and adolescent population in the areas of Zisa, Noce, and Danisinni, involving local actors - individuals in the target age group and social actors engaged in activities for this age group - in a process of analysis and subsequent narration and representation. This contribution views urban space not merely as a physical infrastructure but also as a "place," characterized by emotional investment (Gieryn, 2000) and capable of generating a sense of belonging (Agnew, 2011). In this perspective, various dimensions are examined in response to specific research questions:

- *Which urban spaces are inhabited and frequented by the young people in the area? What are the emerging physical and morphological characteristics? What imbalances exist in the allocation of resources and accessibility to services in the territory?*
  localization of public and semi-public spaces, accessibility, density, urban morphology and historical stratification, and the quality of space are analyzed.

- *How does the territory respond to and get modified based on the needs of the resident youth? Is it capable of promoting equity and positive lifestyles, or does it perpetuate conditions of marginalization and denial of rights? How do physical and morphological characteristics connect to behaviors, lifestyles, and forms of inhabiting space?*
  Forms of inhabiting space, activities and functions performed, practices of transformation and appropriation, competition between groups, and forms of defense are analyzed.

- *How is the territory perceived, and what emotions does it evoke? Can different perceptions and emotional responses influence urban practices related to inhabiting or navigating the territory? What values and resources are recognized, and what challenges are highlighted by young people?*
  The perception and emotional responses in relation to space are analyzed.

The *research ambit* of analysis are as follows:

- Public space,
  understood as the system of urban voids of public access or public property within the examined territory, configuring both a realm of social interaction and the domain for the exercise of activities and forms of inhabiting different from those in the private context of residence, as well as a pivotal place in defining identity.

Specifically analyzed are: Streets, Squares, the Ecological System, sports facilities, and urban morphology in general.

- *Semipublic* spaces and urban services

indicating spaces managed by public entities or institutions to provide educational, cultural, or welfare services, and those spaces affiliated with third-sector entities that serve as relational spaces for the young people in the examined age group. The analysis focuses on the spaces, the social actors managing them, and the activities taking place; the origins of the users; proximity and density factors, as well as local and supra-local networks to which they belong.

- Urban flows

analyzing the relationship between physical space and the mobility of individuals and communities, both at the local and supra-local levels, diachronic and synchronic. The research observes the territory's capacity to generate and support movements and access to services and functions. It also considers the different perceptions and experiences of space connected to navigating the territory and its relationship with identity construction, the exercise of independence, and the emotional well-being of young people. The analysis includes pedestrian and public mobility, emerging paths, systems of interconnection between territorial poles and centralities, internal and external urban nodes capable of attracting supra-local flows.

- Territory and Boundaries

In general, the analysis focuses on the territory in relation to the construction of identities and the recognition of physical or perceived boundaries.

The research activities described in this article were carried out over a period of 5 months, employing a methodology that combines quantitative and qualitative analysis:

- Statistical data and urban spatial structure
- Participatory observation and unstructured interviews, supported by (i) morphological analysis and (ii) gamified exploratory walks.

4. Methods and Results: Quantitative data and spatial structure analysis

A traditional analysis method has explored various dimensions related to public space, semipublic space, networks, and flows, in relation to socio-demographic characteristics. Different components have been analyzed and mapped, including the ecological system, public space (streets, squares, parks, urban voids), the sports infrastructure system, and the location and typology of semipublic spaces. The latter are categorized into schools and training institutes, university training centers, socio-health services, places of worship, volunteer and solidarity associations, cultural centers, and community spaces managed by other actors and NGO.

The analysis of demographic data reveals a heterogeneous territory characterized by high levels of population density along the ancient hamlets and lower levels in areas of more recent construction. These differences may be linked to both smaller housing units, leading to housing discomfort, and a lower presence of public space and green areas. In general, it is one of the areas with the highest population density in the city of Palermo. Similar observations can be made regarding the presence of foreign residents, mainly settled in the historic buildings of the Noce and Danisinni neighborhoods. Additional

analyzed data include unemployment and the percentage of young people in the population, showing high levels in specific areas.

The mapping of public space in relation to pedestrian mobility has revealed a complex system of streets and urban spaces of varying scale and quality. The analysis was conducted in reference to the walkability of streets, meaning their capacity to support and facilitate pedestrian movement. Evaluation criteria include (1) the presence of sidewalks, (2) the presence of parked cars on sidewalks and pedestrian crossings, (3) the quality of public space, (4) the size of the road, (5) visibility, and the perceived safety from passing cars. The territory exhibits invisible boundary lines, spaces that are not safely walkable, and a lack of interconnection. In some cases, the absence of sidewalks does not necessarily result in unsafe spaces due to the limited presence of cars and a moderate level of public space; this is evident in the case of the Danisinni square and some areas of Noce neighborhood.

The analysis of potential flows determined by public mobility is based on mapping tram and bus routes and the varying density of public transport stops in the territory using an interpolation or "heatmap" method. The data reveal an internal territory characterized by the sole presence of stops on a road axis (Via degli Emiri) and an eastern area with significant accessibility to public transportation. Paradoxically, this is the least densely populated area of the territory (see demographic maps). The low frequency and reliability of bus lines represent a significant issue. When denied, the right to mobility can foster processes of segregation and marginalization.

An additional analysis of flows is conducted concerning the attractiveness of the resident population in the city and tourists to the two attracting poles represented by the Palazzo della Zisa and the Cantieri Culturali alla Zisa. However, tourist presence data do not include information related to other, smaller-scale attractors capable of exerting an impact. In particular, the Danisinni neighborhood, also due to its proximity to the historic center and ongoing social innovation patterns, can attract visitors from outside the territory (Giubilaro, 2023).

A specific dimension of analysis is that of the ecological system, examining the location of gardens, green spaces, and non-impermeable but uncultivated spaces, highlighting the presence of barriers that prevent access or even simple visual fruition.

The mapping of semi-public spaces and urban services reveals the location and types of activities available to young people in the area. The picture that emerges is one of a territory dotted with resources capable of supporting educational processes and fostering social connections through various activities: from after-school programs to recreational and educational activities, from family support to cultural events such as theater and contemporary art, and even associative and political activities. A fundamental issue highlighted in the interviews with local actors (further explored in the next chapter) is the ability of demand to meet the supply. In many cases, young people are unaware of the services and activities offered or are not adequately engaged. This can also be linked to a critical aspect examined in the mapping: the accessibility of semi-public spaces and urban services in relation to their distribution in the territory, visibility, and proximity. The accessibility map (fig.2.c) shows a high density in the two areas: the Cantieri Culturali alla Zisa – although closed with only two entrances, remaining partially excluded from urban flows – and the Danisinni area. The maps also reveal an imbalance among different types of services. The case of socio-assistance services is particularly relevant, as they are

located on the outskirts of the neighborhood, making them less accessible. On the other hand, there is a balanced distribution of places of worship, volunteer associations, and community spaces managed by third-sector entities. While primary and infant schools are scattered throughout the urban fabric, secondary schools of I and II degree are predominantly located on the outskirts of the territory. For first-grade secondary schools, this positioning encourages the creation of geographically heterogeneous class groups, promoting the overcoming of the "shell" neighborhood but limiting flows and synergies in the territory. The presence of a second-degree secondary school attracts flows at a metropolitan scale.

Sport is a fundamental activity to ensure the balanced growth in young age, socialization, and physical and emotional well-being. In the territory, sports facilities are mostly inadequate or inaccessible: some school fields are unused because they do not comply with safety standards, while others are not open in the afternoon except for European projects and events. In some cases, these fields are informally used after school hours. The types of sports are limited to soccer and basketball, with minimal female presence. It reveals a territory of denied potential where boys and girls exercise their right to sports informally (as observed in the territory description in the next paragraph), inhabiting public spaces and gardens and bypassing the fences of school fields.
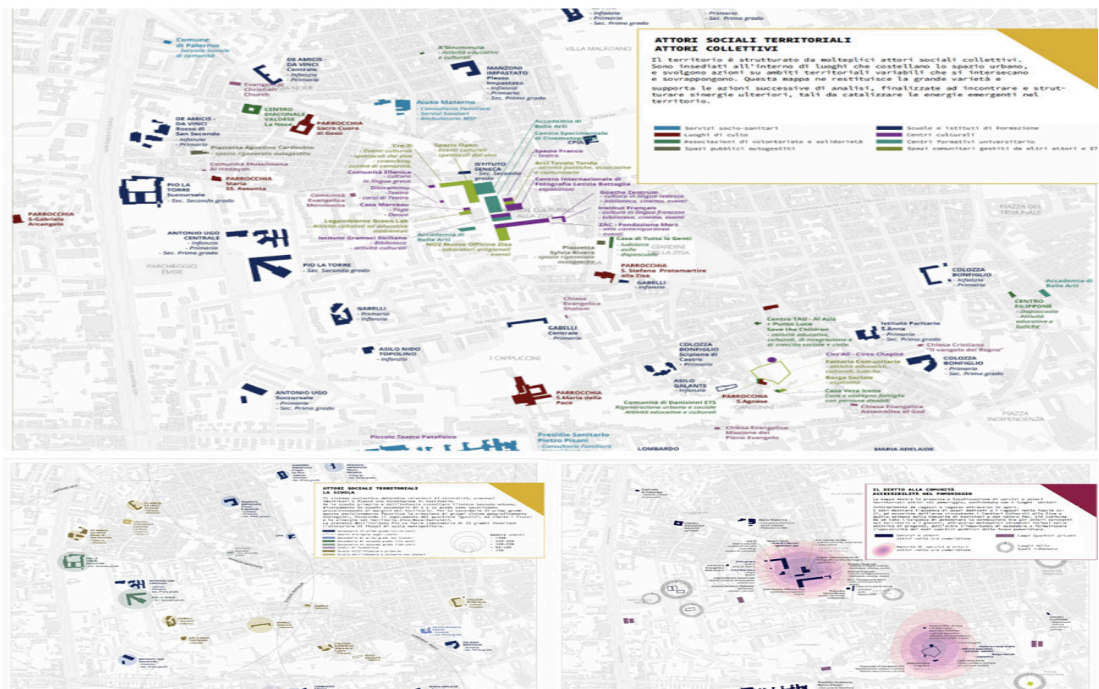

Fig 1 - Maps
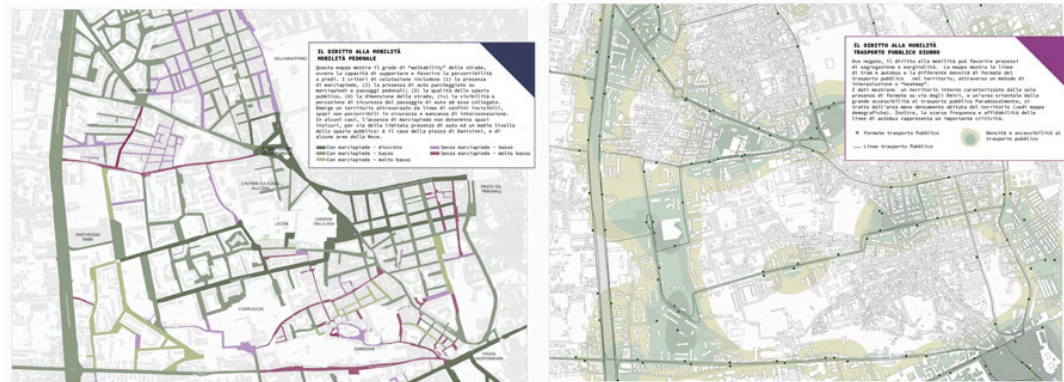1.a: Semipublic spaces and services, 1.b: Schools, 1.c Density and Accessibility

Fig 2 - Maps
2.a: Pedestrian mobility, 2b: Public mobility

The dimensions analyzed through quantitative data define the image of a territory constellated with resources, including public spaces, semi-public spaces, and services. However, these are not evenly distributed, are poorly accessible, and constitute a fragmented system. This initial level of analysis has served as the foundation for further research actions based on qualitative data.

5. Methods and Results: Qualitative data through Participant observation and unstructured interviews

The qualitative analysis through participant observation and unstructured interviews relied on two fundamental methodological devices: morphological analysis and gamified exploratory walks.

5.1 - Morphological analysis

Morphological analysis is a method introduced in the field of urban studies since the last century. Urbani (2003) describes morphological analysis as the ability to analyze the form of the city and urban fabrics, identifying the correlation, layered over time, between this configuration and specific behaviors and lifestyles. In other words, urban space can influence specific behaviors and forms of living. Morphological analysis guided an initial level of observation of the territory, where we analyzed the characteristics of public space - and its relationship with the domestic space of residence - considering the historical evolution of the city. On one hand, this analysis supported the creation of a map describing a section of the landscape (fig.4), and on the other hand, the development of analytical sheets for public spaces and green systems recognized as key areas.

The analysis and interpretation considering the territorial evolution show that the three neighborhoods of Zisa, Noce, and Danisinni, being originally three hamlets, had more of a relationship with the city than among themselves, despite covering a distance on the order of a few hundred meters. Palermo developed, starting from the 1600s, in a dialogue between the city and the hamlets. The city center was a magnet towards which the hamlets turned, without any relationship among themselves. From the 1960s onwards, the entire city, but especially the hamlets, underwent a chaotic and intensive speculative

growth process, known as the "Sack of Palermo," similar to what happened in other Italian cities like Naples. The building fabric of the hamlets was interrupted, stifled, and distorted by multi-story construction and a dysfunctional system of mobility and public space.This process has therefore generated a space that is not only dysfunctional but also diseducational and a constant warning discrediting public action. Every time a citizen encounters a senseless and dysfunctional place, they have physical evidence that they cannot rely on public action, much less on a sense of community. Public space is often the result of building accumulations and processes of appropriation, characterized by defensive actions and reactions. For example, the unauthorized parking on sidewalks is associated with processes of delimitation and demarcation of space or with the presence of barriers that young people react to in multiple ways, either by overcoming or ignoring them (see fig.3).

The landscape section (fig.4) identifies various spatial features along an axis that crosses the neighborhood and describes three landscape areas, named *groundscape, cityscape, skyscape*, in order to provide an image that can support subsequent design actions.

fig.3
Public space

fig.4

Landscape section

5.2 - *Participatory and gamified exploratory walks.*

One of the key innovations in the analysis process described in this contribution is the development of participatory and gamified exploratory walks. These activities involved approximately 100 male and female participants aged between 11 and 17, starting from school and accompanied by a team of professionals, including sociologists, psychologists, urban planners, and educators.

The use of *flanerie* as an analytical device is a method extensively studied in sociological discipline (Nuvolati, 2013). In the context of this research, exploratory walks were conducted through participatory practices and energized through gaming strategies. The goal was to promote the exploration of space, playful reflection on urban space and its collective function, as well as the sharing of experiences and perceptions. These walks served as a crucial tool to support participant observation and the collection of unstructured interviews, enabling the exploration of urban space in the company of members of the social group under study.

Through a methodology similar to that of the *flipped classroom*, the walk is guided by the participants themselves. Each of them, in turn, was asked to identify a place associated with an emotion (happiness, sadness, surprise, disgust, fear, anger, or pride) and lead the group to that place using a chosen urban route. Upon reaching the designated location, other participants were asked to write their emotions associated with that place on a cardboard and, if possible, explain the reasons for these emotions in relation to the

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location. Along the journey, the participants were encouraged to observe the places through various methods, including observing writings on walls that convey positive messages, to understand how these represent the feelings, visions, and perspectives of other citizens, and how the community needs forms of expression and social interaction, which can find a response in a shared use of public space. The subsequent classroom activity allowed for the construction of a narrative by the students that connected places and emotions. This complex mechanism has allowed the creation of a space for sharing and *ludic* discussion, which, as such, facilitates more freely expressed thoughts compared to direct interviews (Abt, 1970; Mayer, 2016). It represents an exploration of the neighborhood with multiple objectives. Firstly, it aims to understand the places from the diverse perspectives of participants, collecting information (audio, video, photos, textual) related to: (i) Emotions linked to places; (ii) Perception of places: individual views, perception of boundaries (how far do you consider your neighborhood to extend? What is the access point of your neighborhood?); (iii) Experiences, informal activities usually carried out in urban space, places of collective interest (potentially relevant for project activities), individual paths (which route do I take, why, do I feel safe?); (iv) Desires and perspectives.

Secondly, the objective is to promote spatial education and awareness: A critical and conscious exploration can stimulate awareness processes regarding the value and function of public space, whether it be an identity space, a place of conflict and coexistence, or an opportunity space to meet one's needs. Finally, it allows for the strengthening of bonds among individuals, as exploring the neighborhood collectively enhances group dynamics, recognizes common issues, and identifies similar desires.

Walks have allowed us to observe how the perception and emotions evoked by public space significantly differ based on the different individuals observing it: those involved often recorded different emotions in the same place. While this may be related to individual sensitivities, it is also connected to a sense of belonging: during walks, a public space characterized by poor spatial qualities tended to evoke positive emotions in those who recognize it as their own. In this sense, it can be observed that despite unfavorable objective conditions, young people tend to develop formal and mental appropriation practices of space. Green spaces and sports areas represent the types of public spaces more capable of generating positive emotions and a sense of belonging, even where this is based on processes of assertion through overcoming barriers and boundaries. These observations proved crucial for subsequent project activities, which focused on practices of transformation and appropriation of public space through street art, sports like parkour, play, the exploration of new languages to describe the neighborhood such as rap and trap music, etc.

Through the gamified walking activity, the young participants had to choose the routes to reach the locations, thereby sharing their personal geography and mental map of the territory. Indirectly, mental references similar to those described by Lynch (1960) emerged, such as *paths, edges, districts, nodes, landmarks*, emerged. This provided information related to the perception of boundaries, territorial identity, and familiar routes within the neighborhood.

It was possible to observe a knowledge of the territory primarily based on landmarks (monumental landmarks like the Palazzo della Zisa and Piazza Indipendenza) and nodes represented by the school and public space, along with some fundamental routes. However, there was a limited understanding of the overall urban fabric. While this

highlights the need for greater awareness and knowledge of the territory, it also reveals the existence of main routes that could serve as privileged areas for future urban regeneration actions.

This lack of a general knowledge about the territory is linked to a low level of awareness of the territorial actors operating within it, especially in semi-public spaces that can represent areas of interaction and socialization. As mentioned in paragraph 4, demand and supply often do not align. This is particularly significant in the case of the two primary nodes of urban and extra-urban attraction, namely the Palazzo della Zisa and the Cantieri Culturali alla Zisa. It is evident that these flows remain separated today.

Public spaces and semi-public spaces appear crucial in the construction of collective identity. The physical boundaries between different neighborhoods have been weakened by urban growth, but it is the space of relationships that generates mutual recognition as members of the same community. This could be a street where football is played in the absence of any sports infrastructure, a garden with a play area where people meet, or the reference church or parish.

These spaces, which Lynch conceptualized as nodes, have been represented through mapping that describes the density of Points of Interest (POIs) and provides a geography of identity spaces inhabited and embraced by preadolescents and adolescents. Substantial differences between the two age groups, as observed by Antonelli (2021), are confirmed. For the 11-14 age group, there is an attraction to places dedicated to play and informal sports, as well as the frequenting of semi-public spaces related to associations and NGOs. However, a divergence between males and females is observed, with females showing a preference for certain streets characterized by the presence of shops. This could be related to forms of exclusion and self-exclusion of the female population from sports activities (Ferez, 2012) and the promotion of consumeristic models related to leisure time (Bauman, 2010), as well as issues related to the perception of greater safety in a public space characterized by commercial activity. Lastly, a difference emerges between urban areas where young people widely inhabit the street space (mostly areas with borgata housing) and areas where this happens less, corresponding to zones of more recent urbanization.

For the age group of 14-17, the emergence of centripetal forces is observed. Areas outside the neighborhood such as the historic center recognised as urban nodes (Politeama or Tribunale Squares) are the primary poles of attraction, fostering potential interaction with peers from other parts of the city. The commercial axis continues to have an attractive function. Lastly, the facilities of high schools, informally used in the afternoons, also represent a strong focal point of attraction for individuals from outside the neighborhood.
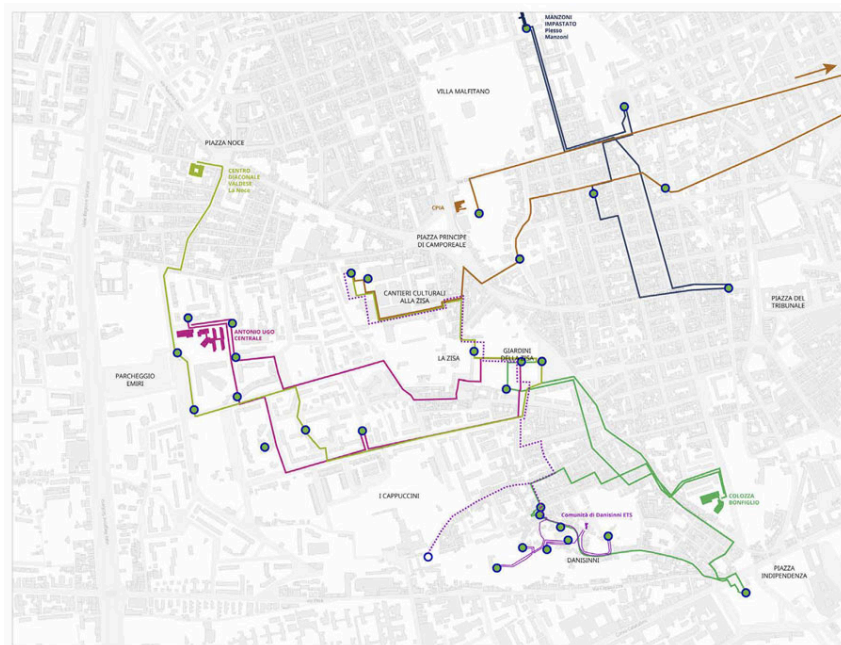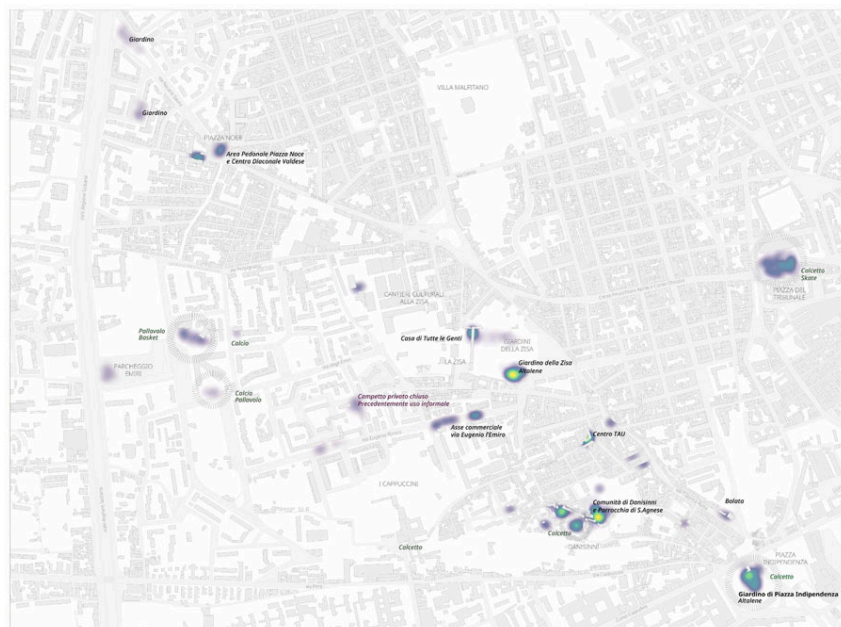
Fig.5
Exploratory walks

fig.6
Map of Public spaces based on POI (Points of Interest)

6. Discussion

The results of the research describe a profound correlation between social and spatial dynamics, empirically confirming some foundational statements in the sociological and urban planning discipline proposed by scholars such as Lefebvre, Secchi, or De Carlo in the local context. It particularly emerges that territorial challenges constitute a fundamental barrier to the development of adolescents, often presenting themselves as denied spaces, of low quality, or even violent. Limited levels of territorial knowledge and the absence of forms of self-representation can represent additional barriers to promoting actions supporting the social development of younger generations, perpetuating conditions of inequality and stigmatization.However, the presence of multiple territorial actors promoting regeneration and social innovation is observed. It highlights the ability of adolescents and preadolescents to respond to disadvantaged conditions through informal processes of advocacy and appropriation of public space. This capacity represents a latent resource that requires, nonetheless, project-based and policy-driven support. Furthermore, it should not be overlooked that the social and spatial research has been focused on the definition of educational devices. The city of Palermo is revealed to the young participants for what it is: the schizophrenic outcome of a growth strategically oriented towards the profit of a few. In this sense, the outcomes of the mapping serve as the starting point to build citizenship exercises extensively used throughout the project, with an educational intent undoubtedly inspired by Lefebvre. The mapping is also a foundational act. It defines an urban trajectory that connects three different neighborhoods that begin to see themselves together thanks to the foundational act of mapping.

Future activities of the project, currently in the design and development phase, aim to intervene on one hand in the creation of networks and alliances among social actors working with adolescence and preadolescence. On the other hand, the project seeks to engage a large number of young people in projects promoting virtuous and collective appropriation of public space. This includes direct transformation practices and placemaking, as well as new forms of storytelling and self-representation, incorporating web radio, documentaries, and music.

7. Conclusions

The action research process described in this contribution aims to analyze the relationship between space and society in an area characterized by socio-economic distress and marginalization, with a specific focus on the preadolescent and adolescent population (11-17 years old). Given the size of the territory under examination and the breadth of the target population, the study does not seek to be exhaustive but rather intends to highlight research themes, deepen the interconnection of the city as a complex ecosystem, and bring forth new readings and territorial narratives through the involvement of local actors.

Through a complex methodological framework, incorporating both quantitative and qualitative tools, responses to the research questions guiding the study were identified and presented through the development of maps, supported by analytical sheets. In terms of tools, an exploratory gamified walking methodology was experimented with, proving to be a valid instrument that can be applied in similar studies. Finally, it is observed that the presentation on maps is essential, on one hand, to make the complexity of the results

accessible to the broad audience of territorial actors involved in future actions, and on the other hand, to support a new *participatory* representation of the territory.

ORCID ID

Marco Ingrassia 🔟 https://orcid.org/0000-0001-7209-1384

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Author's biography

Marco Ingrassia is Research Fellow (Department of Architecture), University of Palermo and PhD Fellow at "Kore" University of Enna, Italy.