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Article

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Abstract
The fundamental structural, demographic, and socio-economic changes afflicting large housing estates in Eastern German cities raise questions about how these neighborhoods could be maintained and developed into attractive residential locations where people want to live and settle down. Besides personal, social, economic, and even administrative factors, individual location decisions are influenced by the physical conditions of space and how they affect a sense of "home"— a crucial precondition for long-term habitation. In terms of urban planning and regeneration activities, we ask: To what extent do the current physical and infrastructural conditions ("built space") of large housing estates encourage residents to "feel at home"? We understand home as an atmosphere of well-being and belonging that is based on the individual and communal appropriation of spaces, which in turn presupposes the possibility of contact and social exchanges among neighbors. The concept of "home" we present here is grounded in philosophical anthropology, new phenomenology, and architectural theory. It provides a specific spatial approach to housing from which we develop indicators to evaluate space. In particular, we apply the concept of "lived space" to evaluate infrastructural amenities, open and green spaces, as well as built structures in three case studies of large housing estates in East German cities. We aim to uncover local potentials for and obstacles to spatial appropriation and encounters in these settings. This allows us to draw conclusions on how urban regeneration policies and measures can make large housing estates more liveable in the long term by promoting encounters and appropriation.

1. Introduction

In the years after the Second World War, large housing estates, designed to provide affordable housing for the masses, were created across Europe (Wiest, 2011). Following the guiding principles of modernist planning, these estates featured high-rise residential buildings and functional buildings for the centralized provision of services such as education, shopping, health, and leisure facilities, ideally arranged in a well-designed neighborhood center (Wassenberg, 2018). In East Germany, about two million such dwellings were built between 1960 and 1990 (Grunze, 2017). Since 1990, over the course of the political turn and Germany's reunification, large housing estates in Eastern German cities have been subject to radical processes of change with socio-demographic, socio-economic, and spatial impacts (Kabisch & Pössneck, 2022).

So, what are the urban development prospects for these areas, given their specific physical and socio-economic conditions? In particular, are old and new residents likely to stay and might the former shrinking neighborhoods stabilize in the near future? The answer to these questions will depend on whether people feel

at home in their local areas (Hahn, 2008; Hanhoerster, 2015). A prerequisite for feeling at home, which is experienced in the private space of the residence as well as in the public space of the neighborhood, are opportunities for individual and communal appropriation (literally, making something one's own; Friedrich, 2011). The nucleus of individual appropriation is the residence. In public space, there are many more opportunities for encounters, which may be fleeting or take the form of observing as well as getting to know new residents or deliberately spending time with neighbors and friends. These encompass both random as well as desired and undesired situations with others. We approach this issue from a spatial perspective, addressing the research question: To what extent do current physical and infrastructural conditions of large housing estates encourage residents to "feel at home"?

While large housing estates were popular neighborhoods in the socialist era, they came to be regarded as unattractive in the 1990s (Hess et al., 2018). Additionally, almost all cities in Eastern Germany saw a demographic shift caused by economically driven outmigration, low birth rates, and migration to more attractive inner-city areas or new suburban sites. These processes drove down the demand for housing, commercial space, and social infrastructure, especially in large housing estates.

In order to protect housing companies from bankruptcy and preserve the steady parts of neighborhoods, a government program to subsidize the demolition of vacant buildings and unused infrastructure was set up in 2002 and continues to the present day. The original aim was to reduce the total area of settlements and to demolish buildings on the fringe. In many neighborhoods, however, this strategy failed due to a lack of oversight, insufficient attention to market mechanisms and owner interests, as well as the problem of diverse ownership (Leetmaa & Bernt, 2022). Additionally, functional buildings housing small youth clubs, restaurants, kindergartens, and schools were also demolished.

The demolition often left gaps and derelict sites that became green but were devoid of any special function or design (Rößler, 2008). A lack of adequate refurbishment measures worsened the housing supply. In the following years, the neighborhoods suffered increased segregation and marginalization. The areas were increasingly characterized by high unemployment rates, low incomes and dependency on government handouts, high rates of child poverty, and youth unemployment (Helbig & Jähnen, 2019). In recent years, the longstanding population loss has been partly reversed by dynamic immigration, especially by the large number of refugees who arrived in Germany around 2015 (Wiegand & Pilz, 2023). Consequently, demand is rising for housing as well as for related infrastructure and social services. At the same time, socioeconomic inequalities are worsening, especially compared to other urban areas (El-Kayed et al., 2020).

Recently, conviviality has been discussed as a crucial approach to understanding everyday encounters in urban public spaces (Horgan et al., 2022). Here we would like to add the perspective of "feeling at home" as a basic precondition for the appropriation of spaces and therefore opportunities for encounter. In this context, we start from the basic notion of habitation, which encompasses the conduct of life (Plessner, 1928) and the importance of the home as a refuge from where individuals can lead purposeful lives (Hahn, 2008). People's everyday lives bind them to a particular place and time, so people have to respond meaningfully in a context-specific way (Rothacker, 1982). Besides socioeconomic aspects, the decision to stay in a specific location depends on the favorability of conditions to create a "home" (a term which here implies not just a physical but also an emotional attachment; Hahn, 2008). A home stabilizes people by giving them a place where they feel they belong (Bollnow, 2011; Plessner, 1928). However, a true home is above all a feeling (Richardson, 2021; Schmitz, 2007), engendered through the individual and communal appropriation of space (Friedrich, 2011). Although feelings cannot be planned, we use "feeling at home" as a conceptual lens to analyze the specific conditions required for the appropriation of space. Using three case studies, conducted in large housing estates in East German cities, we evaluate space and show its potentials and obstacles for encounter and appropriation. Space here covers (a) the infrastructure facilities, (b) the open and green spaces, and (c) the built structure and residential buildings.

Section 2 outlines our analytical approach drawing on the concept of "lived" and "built space" and the theoretical strands of "sense of being at home" with regard to the appropriation of space and social encounter. The underpinning indicators to analyze these aspects and the case studies are presented in Section 3. In Section 4, the findings of the evaluation of the three case studies are presented. In Section 5, we name key conclusions for the urban planning and regeneration measures in large housing estates. Finally, in Section 6, we consider the interaction of built and lived space in the context of "home."

2. Analytical Framework and Theoretical Foundations

In order to examine the potentials and obstacles of large housing estates becoming a "home" for people from different backgrounds, we apply concepts from philosophical anthropology (Plessner, 1928; Rothacker, 1982), new phenomenology (Schmitz, 1998), and architectural theory (Friedrich, 2011; Hahn, 2008).

2.1. Lived and Built Space

Lived space describes people's everyday life which is composed of action space and mood space. Action space is related to active and engaged corporeality, where

observation and action intertwine (Waldenfels, 1984). Mood space reveals itself through being perceived and affected as a communication of the space and the *Leib* (the "felt" body), which addresses or communicates itself to the experiencing individual (Ströker, 1977). A human mood in this context is also called "feeling space" or "atmosphere."

Built space encompasses physical structures and services and is mathematically and geometrically measurable (Bollnow, 2011; Neufert et al., 2012). Built space facilitates the work of design and construction which culminate in buildings and open spaces that are a prerequisite for residential and communal space and activities.

Lived space, however, can only be experienced directly. Those designing and building spaces are limited in their anticipation of how such spaces will be used and experienced in the future. Buildings and their functions are only revealed when inhabited. The desired effect as in sacred buildings (Whyte, 2017) becomes perceptible as a mood only when humans are physically present. That is, without the presence of people, there is no mood, although architects should by no means neglect atmospheres in the design of buildings (Böhme, 2017).

Built spaces, such as in dwellings, grocery stores, or gardens, form our environment, but only individuals experience and feel such space. The human interpretation of built space in the form of everyday life, history, experience, and feeling awakens the lived space and creates a home or community.

2.2. The Sense of Home

A home is not built but rather emerges through individual and communal appropriations of various spaces by its residents. A *sense of home* thus describes an atmosphere of the self and feelings such as belonging and trust. The sense of home has no clear spatial boundaries but extends from the apartment into the stairwell and to the neighborhood, from where it has an effect back again (Friedrich, 2015; Sampson et al., 2002). Family and good neighborly relations as well as local basic services convey a feeling of safety and security (Bollnow, 2011).

To uncover the specific factors behind this sense of home, we turn to new phenomenology, which places corporeality at the center of its philosophy to explicate the phenomenon of feeling. For Schmitz, the *Leib* or "felt body" is our reference point of perception and thus the mediator between our relations to the self and the world. This ineluctable corporeality enables us to be present in the elemental and infuses us with a sense of our own significance. We are aware of this experience of presence, which forms the basis of our own identity (Schmitz, 1998, 2007). For Schmitz (1998), feelings are "spatial atmospheres" that can also be perceived intersubjectively, that is, shared with others. Feelings are liberated from the niche of purely subjective inner life, revealing their potential to create a sense of physical belonging or atmospheres in private and public spaces.

Feelings linked to the home, such as a sense of place and cohesion among people, are based on first, a sense of belonging; second, trust and close social relations; and third, joint action. Neighborhood cohesion and individual attachment to the neighborhood are mutually reinforcing (Sampson et al., 2002).

The sense of home as an atmosphere of one's own, where well-being and security are intertwined is especially useful if we wish to understand and ultimately design attractive homes. Richardson (2021) points out that a home goes far beyond the built "bricks and mortar" to include complex sensed references to history, culture, and the identities of places and people.

2.3. Appropriation of Space and Social Encounter

In the context of habitation, appropriation encompasses the meaning we give to all things and spaces (Bachelard, 1957; Baudrillard, 1996; Loos, 2008) through our use, habits, history (Schapp, 2004), experiences (Hahn, 2008), and atmospheres (Schmitz, 1998). In this context, the appropriation of space is seen as an incomplete process that has to be reoriented according to changes in one's life (family, financial, etc.) or changes in residential conditions (e.g., new landlords). The home reaches into private and public spaces in diffuse ways, encompassing the situational binding of the felt body together with all the entanglements of atmospheric, biographical, and practical aspects that occur within the processes of space appropriation. The successful appropriation of space engenders a feeling of well-being, which can only be created by the individual (together with their family; Friedrich, 2011). Within the home, private appropriations dominate and the primary focus in private space is on self-determination (Seel, 2002; Taylor, 1992). Proficient self-determined daily inhabitation, along with the design of private spaces which facilitates this, expresses each person's way of life, their "style," so to speak. This visible expression of one's own life through self-determined appropriation fosters a sense of self-awareness (Friedrich, 2011).

Appropriation includes the daily use of local infrastructures and services, such as walking on certain footpaths that lead to individual habits or exploring new paths that create greater orientation. These often trivial aspects of everyday life may rarely seem worth noticing, but they do in fact change us. We start to know our way around and become familiar with how things and places work (Lewis & Weigert, 2012). Sitting on the bench with a neighbor and watching children play together can be both meaning-giving and bond-generating. In the process, people develop relationships to each other as well as to the bench, to the playground, and to the neighborhood.

Community appropriations and possible encounters with acquaintances and strangers come to the fore in semi-public areas (e.g., within residential buildings) and public areas such as footpaths, playgrounds, parks,

gardens, or shops. This requires coordination between residents to accommodate different interests (Karimnia & Haas, 2020). At the same time, shared appropriation and encounters go hand in hand with expressions of community and collective efficacy. Public infrastructures and communal appropriation in neighborhoods enable the formation of intersubjective feelings such as a sense of home, belonging, identification, as well as of trust and community (Farwick et al., 2019; Richardson, 2021; Sampson et al., 2002; Schmitz, 2007). Private, semi-public, and public spaces have a different significance in regard to appropriation: In the former, the focus is placed on the atmosphere of the self, while in the latter two the spotlight turns to meeting and communing with others. Inhabitants' sense of home arises through the interplay of these two aspects.

Accordingly, we derived two key criteria for assessing the potentials and limitations of residential locations or settlements with respect to establishing a home: (a) opportunities for spatial appropriation and (b) opportunities for encounter.

3. Methodology

After deriving indicators for the two criteria (a) opportunities for spatial appropriation and (b) opportunities for encounter, we applied these to case studies of large housing estates in Eastern Germany. This allowed us to describe and evaluate preconditions for residents to develop a "sense of home" in the study areas while pinpointing potential areas where action is required.

3.1. Indicators for Evaluation

The first step was to investigate the main structural elements of large housing estates, considered manifestations of "built space." For each of the three fields of analysis—infrastructure, open and green spaces, and built structure and residential buildings—we devised indicators to describe concrete spatial features ("Elements of built space" column, Tables 1–3), based on fundamental knowledge of architecture and urban design (Gutting et al., 2021; Neufert et al., 2012).

The second step was to evaluate the residents' perspective of use, i.e., how they "inhabit" space in terms of the "lived space." In this way, the existing spatial conditions could be analyzed for their suitability (or lack thereof) for appropriation and encounter in everyday life ("Characteristics of lived space" column, Tables 1–3). For the three fields of analysis, we developed corresponding indicators that extend beyond the structural conditions to capture intersubjective atmospheres. These acknowledge the inherent subjectivity of perception and the situational moods of our respondents but are nonetheless relevant for behavior in urban space. These indicators were based on general criteria that focus on people as social beings. Furthermore, diverse principles of urban design were incorporated into the indicators along with theoretical concepts relating to a sense of home (Alexander, 1977; Bollnow, 2011; Gehl, 1987; Jacobs, 1961; Lefebvre, 2009; Lynch, 1960). We focused our investigation primarily on those conditions outside the apartments that facilitate a sense of home through appropriation and encounter.

3.2. Case Studies

The study is based on analyses of three large housing estates in eastern German cities, each representing the typical challenges of this settlement type, described in the introduction. The neighborhoods of (a) Schwerin Neu Zippendorf/Mueßer Holz, (b) Halle Südliche Neustadt, and (c) Cottbus Sandow were selected as case studies in a research project dealing with the developmental

Table 1. Indicators to evaluate infrastructure for appropriation and encounter.

Elements of built space	Characteristics of lived space
Basic services (e.g., supermarkets, small grocery stores, bakeries), small businesses, health-related services	Urban location (connection to public paths, parking spaces, public transport, visibility)
Neighborhood and cultural centers, community centers	Ease of access, visibility, and location within the building (floor, barrier-free access)
Services for children and young people (e.g., schools, daycare centers, sports facilities, playgrounds, youth centers)	Street furniture suitable for use (e.g., outdoor seating)
	Accessibility of services (costs, target groups, opening hours)
Leisure and cultural facilities (e.g., cafés, restaurants, clubs, public sports facilities, parks, religious buildings)	Diversity of infrastructure (selection, range of services, number of local businesses)
Healthcare facilities and retirement homes	Type of business (e.g., privately-run stores)
	Designed for multiple uses (equipment, state of maintenance)
	Group-specific services (e.g., women or migrants)
	Services independent of target groups

Table 2. Indicators to evaluate the provision of open and green space for appropriation and encounter.

Elements of built space	Characteristics of lived space
Forest and dense greenery, trees, green spaces, parks, gardens	Environmental conditions (shade, noise)
	Street furniture suitable for use (e.g., seating, skating)
Urban plazas, pedestrian zones, sealed parking lots, paved zones	Perception of safety (e.g., underground walkways)
	Negative use (e.g., places for drug consumption)
Fenced special facilities (e.g., schools, daycare centers, nursing homes)	Fencing of plots
Sport areas and playgrounds	Open and green spaces for community appropriation (e.g., educational projects in natural areas)
Ownership of open and green spaces	
	Variety of functionally assigned open spaces (e.g., playgrounds, sports fields) as well as functionally unassigned designs
	Gardens (e.g., neighborhood/community gardens, tenant gardens, private gardens, allotment gardens)
	General condition as well as attractive or unattractive appearance (e.g., wastebaskets, state of renovation, flowers, or trash)
	Needs and functionality (e.g., playgrounds, skate parks)
	Infrastructural, cultural, and commercial services that complement open space (e.g., bus stops, kiosks, cafés)

perspectives of large housing estates in Eastern Germany whose contraction was being reversed through an influx of immigrants (StadtumMig, 2023). The selection criteria were as follows: (a) The areas have been suffering massive population loss for many years (currently 15.000–16.000 inhabitants); (b) considerable demolition work has been carried out to remove vacant building stock and underutilized infrastructure; (c) the areas have experienced a massive influx of refugees in recent years (Wiegand & Pilz, 2023); (d) the municipalities must determine how the estates will develop over the next decades and examine the feasibility of long-term investments in infrastructure and services.

3.3. Data and Methods

The cities' basic geodata and open-source geodata were used to create maps showing the structure and physical elements. In addition, we relied on aerial photographs and other spatial databases, for example, those providing information on infrastructure locations or ownership.

Via extensive site visits, we mapped additional spatial information (e.g., forms of use and the condition of green spaces, the provision of local infrastructure and services) and recorded usage patterns and special features as well as our own perceptions of the local situation. Here we applied our skills as landscape architects

Table 3. Indicators for the evaluation of built structure and residential buildings for appropriation and encounter.

Elements of built space	Characteristics of lived space
Meeting spaces for residents in and around the apartment building, on the roof, and at the front and back of the buildings (e.g., seating in the entrance areas) as well as service facilities (e.g., concierge, fitness rooms, childcare, libraries)	Visible signs of community (e.g., self-made seating, barbecue areas)
	Location and access of areas that potentially can be used communally
Specifical functional spaces (e.g., party room, workshop, community kitchen)	Presence of and access to a garden (e.g., tenant gardens directly beside the apartment)
Rooms without specifications for usage (e.g., vacant rooms, foyers)	Visible signs of appropriation (e.g., plant pots and individual designs at entrance areas)
Ownership of the residential buildings	

to read, interpret, and generalize spaces, their usage (or absence of usage), and the possibilities for appropriation and encounter at each location. Random encounters with residents allowed us to record further information, assessments, and moods through short conversations. Multi-layered information on current and past problems as well as on activities and everyday processes was collected and discussed in joint walks and digital workshops with estate managers and municipal urban planners.

Planning documents and urban concepts of the three cities and study neighborhoods were evaluated through document analysis with the aim of understanding local planning and conceptual history, framework conditions, and goals.

Additionally, local knowledge about the neighborhoods and their specific challenges was obtained through investigations conducted by the partners within the interdisciplinary research project:

1. Expert interviews with 54 representatives of city administrations, housing companies, and local initiatives and associations provided insights into the structural, open, and green space and infrastructure situation (Pilz, in press);
2. From a standardized survey of residents' perspectives being conducted in the Schwerin study area (*N* = 1,300; El-Kayed et al., in press) and individual interviews with residents in all three neighborhoods (*N* = 35; El-Kayed et al., in press), we borrowed findings on the perception of the structural, open, and green space and infrastructure situation.

As a result, we constructed the following: (a) inventory maps for all three areas showing open space and green space use, infrastructure/services provision, and ownership (Figures 1–3 show, for example, the maps of the case study Schwerin); (b) photo documentation; and (c) detailed site descriptions. Together, these formed the basis for our indicator analysis (Tables 1–3) of the opportunities for space appropriation and social encounters.

4. Results

Below we present our findings on the evaluation of the potentials for and obstacles to space appropriation and encounter in relation to the three fields of analysis: infrastructure/services, open and green space, and built structure and residential buildings.

4.1. Potentials and Obstacles of Infrastructure/Services Provision

The basic supply of food, health, education, care, and transport facilities is ensured. However, the absence of infrastructure/services in the peripheries of the estates (Figure 2) is exacerbated by transportation and natural barriers limiting access to alternative service locations. In the peripheral areas, this means inadequate provision for those with limited mobility. There exist subareas where only a few specific services for target groups are available, such as playgrounds for small children, although some of these are substandard. For the residents in these areas, there are hardly any opportunities to meet other people when running everyday errands. In addition, there is a lack of other opportunities to meet close to home (see Section 4.3).

A few of the private stores are owned by immigrants, who also assume networking functions for their newly arrived compatriots. These small stores are located in the few detached special-use buildings that have not been demolished, or, sometimes, in existing historic buildings along the street front. In the long residential buildings, public infrastructure like shops is integrated on the first floor only in exceptional cases. Thus, there are no opportunities for encounters or appropriations along these buildings. In addition, the very long walks for errands seem even longer due to the lack of any attractions along the way.

All areas have several discount stores. These are places where people shop and meet every day, but they do not meet the dire need for public areas to linger, seek entertainment, and get to know other people (Figure 4). The asphalted areas merely provide access to the shops for private vehicles. Often there are no safe footpaths for pedestrians. The open spaces around these shops usually do not offer seating or shady places to linger.

In all three estates, there are very few sites with a concentration of services. Those that do exist can be regarded as neighborhood centers. Alongside commercial services, these sometimes contain the offices of dedicated district managers or civic associations. These neighborhood centers are usually dominated by a large supermarkets built after 1990, sometimes accompanied by smaller stores, and are easy to reach by public transport. However, it is rare to find well-designed and maintained public open spaces which are so vital for successful neighborhood centers. For example, the original neighborhood center in Halle (Figure 5) consists of one- to two-story buildings that house various stores with some outdoor dining and restaurants. In 2021, a new shopping complex opened on the site of a demolished original department store, facing its windowless rear to the existing plaza. While the focus on car access is typical for all wholesale chains of the post-reunification period, it would have been sensible and easy to link this spatially to the existing ensemble. The existing plaza is frequented by people, either intentionally or when walking through the neighborhood, and—even without its large commercial neighbor—functions well with its own services like restaurants, markets, and pleasant spatial relationship (assessed as the relation of square area to the height of surrounding buildings; Gehl, 1987). In addition, trees, shrubbery, and street furniture such as fountains serve to structure the open space.
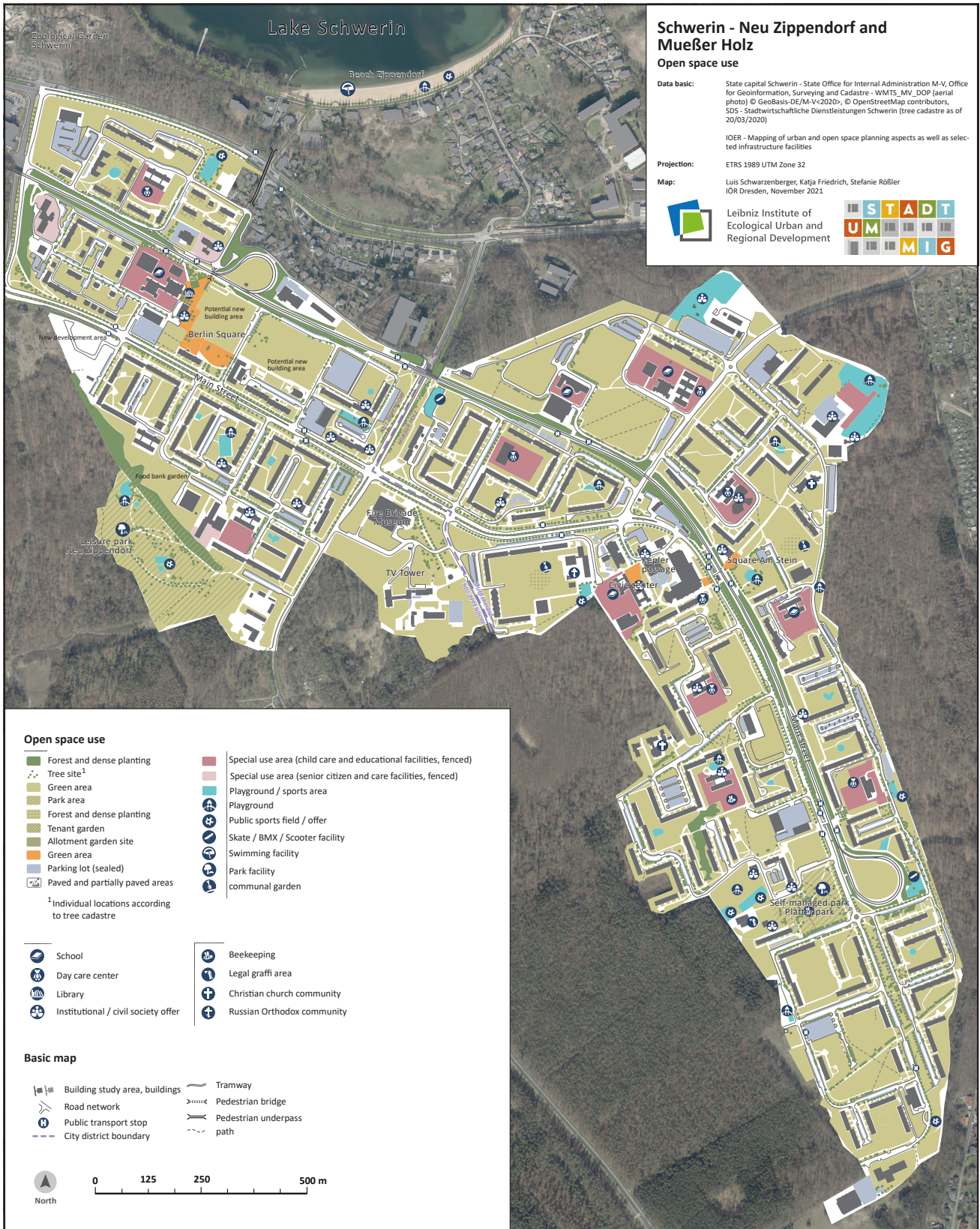
Figure 1. Schwerin Neu Zippendorf/Mueßer Holz: Open space and green space use.
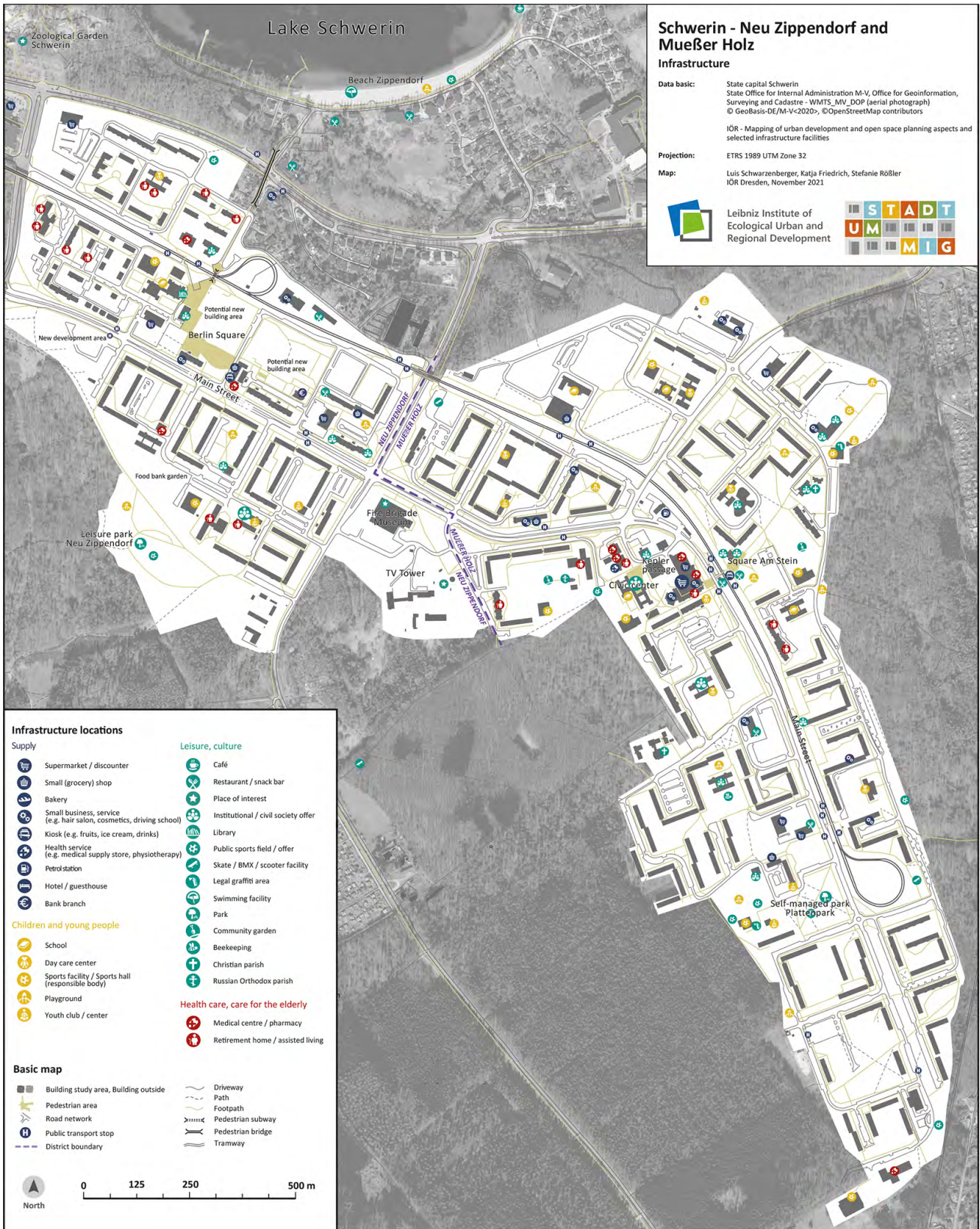
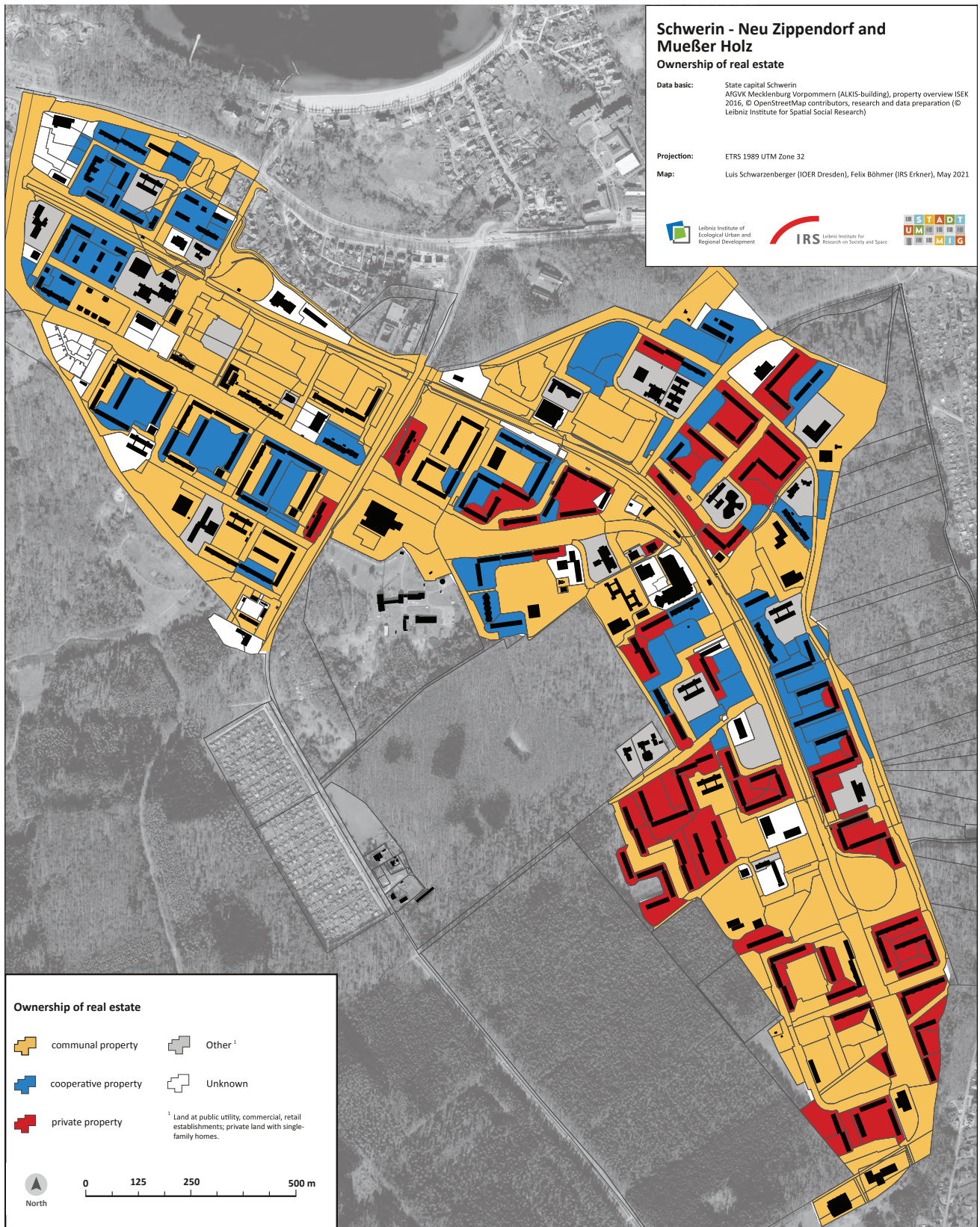**Figure 2.** Schwerin Neu Zippendorf/Mueßer Holz: Infrastructure.

Figure 3. Schwerin Neu Zippendorf/Mueßer Holz: Ownership.

Figure 4. Unsociable entrance situation in front of a discount store in Cottbus. Photograph by Katja Friedrich.

All neighborhoods lack infrastructure such as cultural or neighborhood centers, where people can come together at the neighborhood level and beyond, express themselves, and experience themselves as a community. In general, there is also a lack of meeting places such as cafés and stores. A few recreational opportunities for fitness or dance are available but there are no music clubs or movie theaters. Large extents of the estates offer no opportunities for shopping or eating out.

Some local groups organize attractive recreational services but these are only for children and young people. Neighborhood clubs for bicycle repairs or centers providing help to refugees are often tucked away in inconspicuous locations. Considering the large scale of the estates and the populations of roughly 15,000 inhabitants each, these scattered services for particular groups end up reaching only a few people. Additionally, they are unknown to many residents and do not exert any uplifting effect on public open spaces due to their out-of-the-way location.

4.2. Potentials and Obstacles of Open and Green Spaces

The neighborhoods have extensive green spaces and parks. Some estates border forests and attractive landscape areas (Figure 1). Although they possess very good environmental conditions, these green spaces do not leverage their potential for appropriation and encounter.

The housing estates have large open spaces between buildings as well as along the streets. Demolition work has further increased the extent of open space (Figure 6). Generally, the green spaces between buildings seldom have designated uses. Some residential courtyards feature small, unattractive playgrounds, which are used by families with small children due to the lack of any alternatives. For all other residents, the undeveloped green spaces offer no opportunities for local gatherings or activities. Opportunities for and evidence of appropriation appear absent beyond functional allocations, such as a sandbox for children. Additionally, any appropriation may be hindered by ownership and related regulations, which are not apparent to residents (Figure 3).

In Schwerin, a civil society association was engaged in developing a neighborhood park on a large former built-up site (Figure 7). Other associations established themselves nearby, addressing the needs of specific target groups, e.g., providing free lunches for children or sports activities for adolescents. The associations use containers for their premises owing to a lack of suitable rooms outside the residential buildings. In the absence of the associations' employees or activities, however, this area remains very quiet. It lacks services or attractions
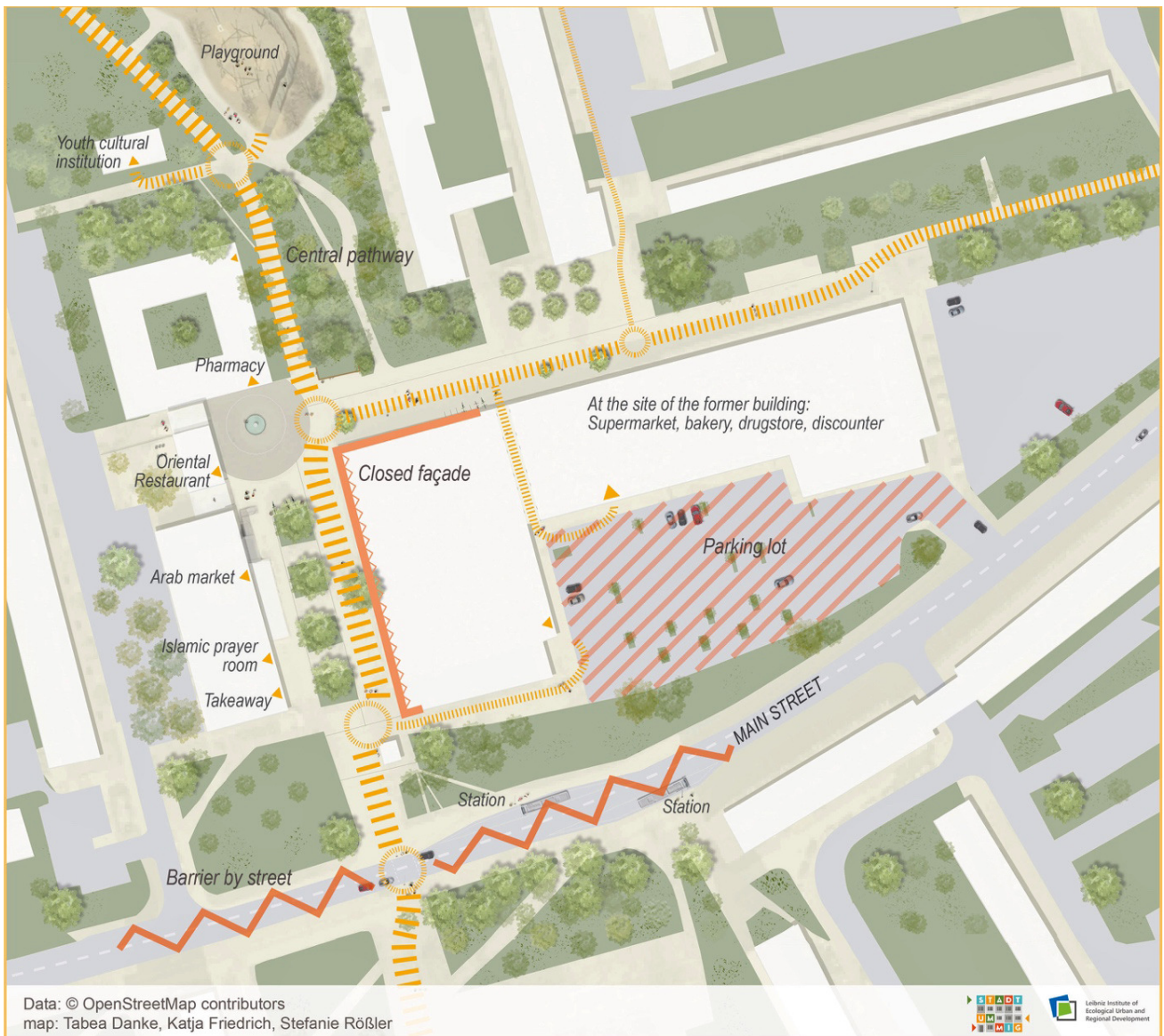
Figure 5. Neighborhood center "Am Treff."

that are relevant to a broad swathe of the local population and has not become a public focal point for this neighborhood. Aside from the few targeted groups, the park offers few options for random or intentional meetings and encounters with different community members. The impression of feeling lost on the site results both from the absence of other people and the spatial configuration of the park (size, missing spatial relations to the adjoining buildings, and few design elements).

Most of the open and green spaces within the estates lack infrastructure such as water or electricity connections to accommodate larger public events. All (public) services such as schools, daycare centers, and nursing homes are fenced. For example, school buildings and their open spaces primarily serve teachers, students, and parents as meeting places; they are occasionally available in the evenings for other target groups, e.g., for sports activities, but do not offer open spaces for public encounters.

Traditionally, extensive allotment garden sites for individual garden activities were provided on the fringe of the housing estates. It is rare to find fenced tenant gardens directly beside or between residential buildings, which allow individual green space appropriation near the flats. In recent years, a few community gardens were established, mainly addressing specific communities such as migrants, women, or students.

4.3. Potentials and Obstacles of the Built Structure and Residential Buildings

The residential buildings are used almost exclusively for housing and may go up to 300 m in length. Each building entrance serves between 10 and 33 apartments. The few dedicated residential concepts such as housing for the elderly are always located in separate buildings with some (albeit rare) integrated services such as a hairdressing salon. In general, there is neither functional mixing

Figure 6. Large demolition site in Schwerin, currently designed as a bee-friendly lawn. Photograph by Katja Friedrich.

nor diversity with regard to the housing concept, from which spontaneous encounters among residents and customers could result. In particular, local stakeholders and residents complain that there are no suitable spaces for community purposes.

There are no meeting places for residents within the residential buildings, except for the rare organized services mentioned in Section 4.1. The flat roofs are completely unused. The cellars are usually occupied by laundry drying rooms. Narrow stairwells encourage casual encounters between residents but are not suitable for several residents to chat together. There are no rooms for communal uses such as for workshops, childcare, etc., nor for service providers in or around the residential building.

The areas at the entrances or the rear doors do not offer any particular features for communal appropriation. Very rarely, flower beds may be observed directly beside the building entrances. They appear inviting and friendly to passers-by compared to the usual lawns, encouraging some individuals to stop, which could provide an opportunity for conversation, for example. There are occasional indications of the need for community meeting places near the residential buildings (Figure 8).

4.4. Obstacles to the Appropriation of Space and for Encounters

The following factors hinder potential appropriation and encounters with regard to infrastructure/services, open and green spaces, and built structures and residential buildings.

The very large plots and building scales exacerbated by demolition, together with the original structural-aesthetic mono-functionality, lead to fragmented neighborhoods with very long walking distances through monotonous open and green spaces. The strict separation of residential and service functions undermines the opportunity for chance encounters through overlapping usage. The undesigned, often functionless, and wide sites between buildings hinder appropriation by residents.

The basic service infrastructure dominated by a few discounters, the very low proportion of privately-run stores, and the lack of small eateries, for example, means that there are very few public places, where people can meet in different situations in the course of their everyday lives.

Demolition has weakened existing neighborhood centers or left them in poor condition. This is not

Figure 7. "Plattenpark Schwerin": Neighborhood park with robust design elements and some functional elements, intending encounter and appropriation.

remedied by the presence of international retail stores which show no architectural or personal connection or commitment to the local estate. Cultural or community centers are entirely absent.

Finally, residential buildings and adjacent open spaces offer almost no structurally and functionally suitable spaces for encounters and appropriation.

5. Discussion

Within the current context, two central strategies can be derived to overcome challenges and make use of the potentials of the estates to promote encounter and appropriation, making them valued and attractive neighborhoods: first, create new and diverse places for encounter and exchange, and second, make targeted use of the potential of extensive green spaces for appropriation and encounter.

5.1. Creating Places for Encounters

Neighborhood centers are ideal for the purpose of encounters because they are centrally located places and simultaneously a clear expression of the values and spirit of the neighborhood. Additional local infrastructure such as cultural, social, or commercial services must be established. This includes designing the public open spaces of the neighborhood centers and the existing discount stores in a way that encourages people to linger. The promotion of new (small) business ventures by migrants in the form of kiosks, street cafés, or snack bars would expand the range of local services while also enlivening the locality and creating small meeting places (Sandoz et al., 2022). In the process, local operators can play an active role in the community by building relationships with their customers and neighbors (and vice versa; Steigemann, 2019).

Figure 8. A rare case of an entrance situation appropriated by residents, in Halle. Photograph by Katja Friedrich.

Synergies can emerge when temporary structures or businesses dovetail with newly designed spaces such as publicly used first floors of residential buildings or garden initiatives as well as with existing public facilities such as bus/tram stops. In terms of "urban islands," specific sites can be created with new offers, initiating concentration of people and serving as meeting points. These can be small-scale sites for diverse forms of use, oriented to the human scale and the everyday life of the residents (e.g., small marketplaces). This requires cooperation between municipal and local actors as well as targeted enhancement of the public open space to create inviting and attractive features. Aesthetically designed kiosks or construction trailers with flap elements can structure the open space and help to distinguish local sites. Features such as canopies, awnings, benches and tables, and small playground equipment can also be introduced to promote usage, communication, and comfort. Facilities should ideally be open to usage by non-customers as well.

At the neighborhood level, there is a need for places to promote identity and create community, such as cultural centers and smaller meeting places where informal encounters and exchanges can take place, and where, through the interaction of different actors and multipliers, diverse new services and meeting opportunities can arise within a heterogeneous neighborhood. This can, in turn, promote community expression at the neighborhood level. First-floor apartments could be repurposed for this at strategic locations. New buildings are also a way of showing that the neighborhood is valued. A good investment would be to create robust designs and floor plans which may be flexibly interpreted, encompassing a broad array of future uses. New gathering places, both within residential buildings and in the public open space, could foster related outdoor activities, mutually reinforcing their impact on the neighborhood (e. g., repair cafés using the adjoining open space, and mobile kitchens).

5.2. Creating Potential for Community Appropriation

While many cities and neighborhoods are characterized by high density, crowding, and noise, the studied estates have extensive open and green spaces that would be considered a luxury elsewhere. However, in the absence of people and activities, outdoor spaces do not provide opportunities for encounters or the shared experience of space. We recommend that the currently unused undeveloped areas be redesigned with diverse appropriation possibilities depending on their location and given "recognizable addresses." Overall, the dominant owners of open spaces are the municipalities, and thus there is considerable scope for them to make open spaces available for public use or community appropriation.

To strengthen the "urban islands" mentioned above, open spaces designed for public encounters and meetings should be linked with mutually reinforcing infrastructural services such as kiosks or the public use of first floors in residential buildings.

Community gardening is particularly suitable at sites that are less public. These could be residential or open garden projects as well as those designed for specific target groups, e.g., migrant women or teenagers. This requires the involvement of residents, as gardening projects generally fail if planned from above or brought in from outside (Nikolaidou et al., 2016). An institutional connection via owners, schools, or associations is helpful to source equipment and to moderate any conflicts.

The great potential of areas adjacent to the housing communities to support individual and community appropriation should be leveraged. This could be through gardens linked to residential buildings or green spaces for sports, childcare, and joint outdoor activities. Small open spaces could be allocated explicitly to each stairwell and given a robust design, the individual shaping and the maintenance could be taken over by the residents. This would give residential communities legitimate access to the spaces and encourage them to design and implement appropriate shared uses together. However, this requires committed stakeholders, legal safeguards, a high degree of self-management, supporting moderation, and financial support.

Encounters could be encouraged by furnishing the entrance areas of the residential buildings for short meetings. Shade-giving elements, planters, and seating may be beneficial. A variety of features could break up the monotonous architecture and give each entrance a unique design.

6. Conclusion

A sense of home is created by an atmosphere of complex, not entirely measurable interactions between interior and exterior spaces and between various appropriation processes. The feeling of being at home includes identification and belonging as well as social networks and ties within the neighborhood.

What does this understanding mean in the context of the large housing estates studied here? Can we make people feel comfortable in these areas, fostering a conscious wish to stay and shape their homes and lives in a self-determined way? For this, we recommend establishing ways of appropriating space and creating places for encounters. This is certainly not the case at present. While the studied estates offer affordable housing, educational and shopping opportunities, as well as vast green spaces, residents often move away as soon as they have the opportunity (Bernt et al., 2022). One particular problem here is the low level of participation in public life (Meeus et al., 2018).

Vulnerable groups such as immigrants cannot develop an atmosphere of safety within a residential building or in the neighborhood without participation and a means of encounter. These neighborhoods need to provide a high level of integration and this requires meeting places close to home for the transfer of resources between neighbors (Farwick et al., 2019). Only when people come into contact can they resolve conflicts and help each other. If neighbors do not even know each other, there will be no trust.

Our arguments highlight the obstacles within the built space of large housing estates for the creation of a home as lived space. A variety of measures are needed to encourage sociability in residential urban spaces. Resident participation is central to targeted and needs-based implementation (Masterson et al., 2017). If the municipality and building owners succeed in integrating people into their localities by involving them in design, decision-making, and implementation processes, this will also promote appropriation and encounters as a form of neighborhood cohesion (Sampson et al., 2002). Furthermore, it will trigger other positive effects such as self-empowerment (Adams, 2008). The low level of local, private resources could be compensated by community-based funding. Participatory approaches for new housing, ownership, and community concepts should be pursued for the future development of the neighborhood with committed rather than for-profit actors.

Of course, a community space is not necessarily created when an apartment on the first floor of a residential building is opened for public use; instead, diverse meeting places only emerge when a space is used by people with suitable equipment for making music, repairing bicycles, eating, and cooking together or when they strive to set up a community group. These new meeting places can provide further impetus for individuals to feel comfortable in their homes and neighborhood.

Good housing conditions are a prerequisite for a functioning society. Here we are talking about various "felt" dimensions of the home (Richardson, 2021). Even though atmospheres cannot be built, they are indispensable when considering housing situations (Waldenfels, 2001). Unfortunately, planning principles do not encompass pleasant places for encounter and attractive conditions for space appropriation. But, as we argue in this article, perhaps it is time they do so.

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Conflict of Interests

The authors declare no conflict of interests.

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